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EVALUATION

USAID/Uganda's District-Based Technical Assistance (DBTA) Model as Applied under Strengthening Tuberculosis and HIV/AIDS Responses (STAR) Projects in East, East-Central, and South-West Uganda

July 2015

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Cover Photo: A STAR-E ART client at Sipi HCIII in Kapchorwa District being interviewed as part of the DBTA/STAR evaluation client exit interviews. Photographer: Unknown

EVALUATION OF USAID/UGANDA'S DISTRICT-BASED TECHNICAL ASSISTANCE (DBTA) MODEL AS APPLIED UNDER STRENGTHENING TUBERCULOSIS AND HIV/AIDS RESPONSES (STAR) PROJECTS IN EAST, EAST-CENTRAL, AND SOUTH-WEST UGANDA

JULY 2015

USAID/Uganda's District-Based Technical Assistance (DBTA) model was designed with a regional technical assistance focus to improve accessibility, quality, and availability of integrated health service delivery as well as to improve health system financing and management. The USAID/Uganda funded STAR (Strengthening TB and HIV/AIDS Responses) projects in East, East-Central, and South-West Uganda were designated as the first of USAID/Uganda's projects to implement the DBTA model. The three DBTA programs were implemented by Management Sciences for Health (MSH) in East Uganda (STAR-E, 2010), by John Snow International (JSI) in East-Central Uganda (STAR-EC, 2010), and by Elizabeth Glaser Pediatric AIDS Foundation (EGPAF) in South-West Uganda (STAR-SW, 2011). Originally, all three projects ended together in March 2015, but USAID/Uganda subsequently approved extensions to the life of each of the projects for another twelve months. As DBTAs, the three programs are expected to strengthen decentralized service-delivery systems for improved uptake of quality HIV/AIDS and TB services.

DISCLAIMER

The author's views expressed in this publication do not necessarily reflect the views of the United States Agency for International Development or the United States Government.

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LIST OF ABBREVIATIONS AND ACRONYMS

| | |
|--------|---|
| AIDS | Acquired immunodeficiency syndrome |
| ANC | Antenatal care |
| ART | Antiretroviral therapy |
| ASSIST | Applying Science to Strengthen and Improve Systems Project\|Uganda |
| BCC | Behavioral change communication |
| BMU | Beach management unit |
| CAO | Chief administrative officer |
| CBDOTS | Community-based directly observed treatment short course |
| CBO | Community-based organization |
| CD4 | Cluster of differentiation 4 |
| CDO | Community development officer |
| CPHL | Central Public Health Laboratories |
| CSA | Community support agent |
| CSO | Civil society organization |
| DAC | District AIDS committee |
| DAT | District AIDS taskforce |
| DBM | District-based mentor |
| DBTA | District-Based Technical Assistance |
| DDP | District development plan |
| DFPP | District focal point person |
| DHO | District health officer |
| DHT | District health team |
| DHMT | District health management team |
| DHIS2 | District Health Information System 2 |
| DMC | District management committee |
| DOP | District operational plan |
| DOTS | Directly observed treatment short course |
| DQA | Data quality assessment |
| DTLS | District tuberculosis and leprosy supervisor |
| EGPAF | Elizabeth Glaser Pediatric AIDS Foundation |
| EMHS | Essential medicines and health supplies |

| | |
|-------|--|
| EID | Early infant diagnosis |
| eMTCT | Elimination of mother-to-child transmission of HIV |
| FBOs | Faith-based organization |
| FGD | Focus group discussion |
| FLEP | Family life education program |
| FP | Family planning |
| FSG | Family support group |
| FSW | Female sex worker |
| GIPA | Greater Involvement of People Living with HIV/AIDS |
| GIS | Geographical information system |
| GoU | Government of Uganda |
| HC | Health center |
| HFA | Health facility assessment |
| HIV | Human immunodeficiency virus |
| HMC | Health management committee |
| HMIS | Health management information systems |
| HSS | Health systems strengthening |
| HTC | HIV testing and counseling |
| HUMC | Health unit management committee |
| IEC | Information, education, and communication |
| IP | Implementing partner |
| IPT | Isoniazid preventive therapy |
| JSI | JSI Research & Training Institute, Inc. |
| KII | Key informant interviews |
| KM | Knowledge management |
| KYCS | Know Your Child's Status |
| LC | Local council |
| LMIS | Logistics management information system |
| LSM | Logistics and supply management |
| LQAS | Lot quality assurance sampling |
| MARP | Most-at-risk population |
| MCH | Maternal and child health |
| MCPs | Multiple concurrent partnerships |
| MDR | Multidrug resistant tuberculosis |
| MEEPP | Monitoring and Evaluation of the Emergency Plan Progress |

| | |
|-----------|---|
| MIPA | Meaningful involvement of people living with HIV/AIDS |
| m2m | mothers2mothers |
| MMS | Multimedia messaging service |
| MoH | Ministry of Health |
| MoLG | Ministry of local government |
| M&E | Monitoring and evaluation |
| MSH | Management Sciences for Health |
| MSMTG | Men who have sex with men and transgender women |
| NACWOLA | National Community of Women Living with HIV/AIDS in Uganda |
| NAFOPHANU | National Forum for People Living with HIV&AIDS Networks in Uganda |
| NMS | National medical stores |
| OCA | Organization capacity assessment |
| OPD | Outpatient department |
| OVC | Orphans and vulnerable children |
| PACE | Program for Accessible Health Communication and Education |
| PCR | Polymerase chain reaction |
| PEP | Post-exposure prophylaxis |
| PEPFAR | President's Emergency Plan for AIDS Relief |
| PLHA | People living with HIV/AIDS |
| PLHIV | Person living with HIV |
| PMP | Performance monitoring plan |
| PMTCT | Prevention of mother-to-child transmission of HIV |
| PNFP | Private not-for-profit health facility |
| PWID | People who inject drugs |
| PY | Program year |
| QI | Quality improvement |
| RHITES | Regional Health Integration to Enhance Services |
| RTC | Routine testing and counseling |
| S&S | Surveillance and surveys |
| SACCO | Savings and credit cooperative |
| SCMS | Supply chain management system |
| SCORE | Sustainable comprehensive responses for vulnerable children |
| SCHW | Sub-county health workers |
| SDA | Special duty allowances |
| SDS | Strengthening Decentralization for Sustainability |

| | |
|---------|--|
| SI | Strategic information |
| SLAMTA | Strengthening Laboratory Management Toward Accreditation |
| SMC | Safe male circumcision |
| SMS | Short message service |
| SOP | Standard operating procedure |
| SOW | Scope of work |
| SPAI | Service performance assessment and improvement |
| SPARS | Sparsely populated areas |
| SRH | Sexual reproductive health |
| STAR-E | Strengthening TB and HIV/AIDS Responses in East Uganda |
| STAR-EC | Strengthening TB and HIV/AIDS Responses in East-Central Uganda |
| STAR-SW | Strengthening TB and HIV/AIDS Responses in South-West Uganda |
| SURE | Securing Ugandans' Right to Essential Medicines |
| SUSTAIN | Strengthening Uganda's Systems for Treating AIDS Nationally |
| TB | Tuberculosis |
| TSR | Treatment success rate |
| UGX | Ugandan shillings |
| UHMG | Uganda Health Marketing Group |
| URHB | Uganda Reproductive Health Bureau |
| USAID | United States Agency for International Development |
| VFM | Value-for-money |
| VHTs | Village health teams |
| VMMC | Voluntary medical male circumcision |
| WAOS | Web-based ordering system |
| YCC | Young child clinic |

EXECUTIVE SUMMARY

PROJECT BACKGROUND

The USAID/Uganda's District Based Technical Assistance (DBTA) model features integrated service delivery with a regional focus on improving accessibility, quality, and availability of integrated health service delivery, as well as health system financing and management. The USAID/Uganda-funded Strengthening TB and HIV/ AIDS Responses (STAR) projects in the Eastern, East-Central, and South Western regions of Uganda were the first opportunities to implement the DBTA model. Implementation of the STARs projects began in 2010.

EVALUATION PURPOSE

This evaluation was commissioned in October 2014 to establish the extent of efficiency and effectiveness of the USAID/Uganda's DBTA project model as applied across the three STAR projects. The purpose of the evaluation was to comprehensively analyze the implementation process and results achieved through USAID/Uganda's DBTA model.

Evaluation Questions

The evaluation aimed to establish the extent of efficiency and effectiveness of the DBTA project model as applied across the three STAR projects pertaining to improved capacity and sustainability, service delivery, and cost efficiency. The evaluation questions were as follows:

Improved Capacity and Sustainability

1. Approaches utilized by the STARs to strengthen districts and local governments to deliver health services, differed and evolved over time. What are: a) the most successful and b) least successful approaches applied by STAR-E, STAR-EC, and STAR-SW respectively towards strengthening the institutional, management, and human capacity of CSOs and local governments to deliver health services? What are the facilitators and barriers of these approaches to achieving results? Are the approaches used and results achieved for old/established and relatively new/naive districts significantly different?
2. What was the effect of transition of direct implementation of district led health care management activities from the STARs projects to district grants through SDS?
3. To what extent has the STARS program developed, established and/or strengthened management and technical structures at the local government and health facility levels that will sustainably improve quality, availability and accessibility of HIV/AIDS and TB services?
4. What technical capacity in strategic information have the STARs developed, built and/or strengthened? Where has this capacity been developed, built and or strengthened? How is it manifested/ demonstrated? How sustainable is this capacity after the STARs' exit?

Service Delivery

1. How has the support by the STARs contributed to improved health service delivery? What are the Service delivery outcomes attributed to the DBTAs?
2. What was the effect of integration of HIV/TB, HIV/Family Planning, HIV/AIDS and health on overall health outcomes?

Cost Efficiency

- I. To what extent can the DBTA design be considered cost efficient in strengthening capacity of districts and CSOs to improve health service delivery?

Methods

The evaluation applied a cross-sectional design that used both quantitative and qualitative methods for data collection and analysis. Key informant interviews (KIIs) and focus group discussions (FGDs) were conducted with informants from the Ministry of Health, USAID/Uganda's health office staff, and representatives of programs and projects allied with the DBTA/STAR projects. More than one hundred people were interviewed, and thirty-eight focus groups were conducted. Additionally, more than six hundred client exit interviews were conducted at a random sampling of facilities visited by the three sub-teams.

KEY FINDINGS AND CONCLUSIONS

This section presents a synthesis of the key findings and conclusions of the evaluation, structured around the seven evaluation questions.

- **Approaches implemented under the DBTA/STAR programs:** The most successful approaches toward strengthening the institutional, management, and human capacity of CSOs and local governments to deliver health services included mentorship and training, integration of HIV/AIDS and TB services at lower-level health facilities, establishment of community linkages for HIV/AIDS and TB services, a commodity-tracking system to reduce stock outs, and the strengthening of laboratory services. Success was attributed to the supportive national HIV/AIDS policy environment, the competence of the STAR technical teams, and the availability of resources for the interventions.

The evaluation team identified a limited focus on empowering district health teams and health facility leadership as a primary shortcoming of the programs. It was also noted that an inadequate emphasis on systems strengthening was compounded by ambitious targets for service-delivery outputs. Incentives undeniably increased demand for and utilization of antiretroviral therapy (ART) sites but undermined sustainability. Other barriers included a heavy focus on biomedical components of HIV prevention and serious health system constraints, including inadequate human resources, irregularly scheduled and single-issue vertical training programs, and central-level stock outs.

Lastly, there were no significant differences across the three regions in terms of approaches applied or results achieved between old/established and relatively new/naive districts.

- **The effect of transition:** Transition of direct implementation of district-led healthcare management activities from the STARs projects to district grants through SDS was more difficult in STAR-EC and STAR-E. In these regions, SDS was preceded by the STAR projects, whereas in STAR-SW, SDS was launched together with the STAR project, resulting in better collaboration during early implementation. The evaluation notes that there was a much stronger collaborative relationship between SDS and STAR-SW compared with the other STAR programs. This manifested in stronger district leadership in planning and management of HIV/AIDS services, as well as improved partnership with other DBTAs.
- **Sustainability:** The STAR program developed and strengthened management and technical structures at the local-government and health-facility levels. To ensure sustainability, the

district health management teams (DHMTs) were integrated into SDS grant A to enhance a sense of ownership of HIV/AIDS and TB efforts, especially in STAR-SW. Technical structures to support HIV/AIDS service decentralization including teams of regional and district-based trainers, clinical mentors, supervisors, as well as multilevel quality improvement (QI), are expected to sustainably improve quality, availability, and accessibility of HIV/AIDS and TB services.

- **Strategic information:** SI technical capacity was strengthened through health management information systems/District Health Information System 2 (HMIS/DHIS2) and lot quality assurance sampling (LQAS) implementation. The revised HMIS, which integrated previously vertical reporting and introduced new forms for HIV treatment, was new to lower-level facilities. STARs supported the roll-out of the new HMIS forms and established internal district structures and processes for improving the quality of HIV/AIDS and TB data collection. Additionally, STARs improved the timeliness and completeness of HMIS reporting and its use at community, facility, and district levels. Among the mechanisms introduced were district platforms for performance reviews, data dissemination, and learning. District capacity to implement and use results from annual LQAS surveys was increased, although implementation of LQAS still depends on external funding.
- **DBTA contribution to improved health service delivery and related health outcomes:** The DBTAs' contribution to service delivery included rapid expansion of ART services to lower-level facilities, from 88 to over 330 sites within three years of implementation. This increase in service availability included infrastructure improvements at health centers to accommodate an increased number of clients, management of associated commodities, and improvements in laboratory support services. The DBTAs also supported the roll-out of new clinical guidelines and built adaptive capacity of districts for any new changes in guidelines through the establishment of local training teams and on-site training approaches. Other critical areas addressed in expanding services to lower facilities were the strengthening of logistics and supplies management (LSM) and SI management.

There were significant improvements in HIV/AIDS and TB service-delivery outcomes and access to services. These included significant improvements in HIV testing and counseling (HTC) uptake, with the percentage of people that had received HIV counseling and testing and knew their HIV results rising from 25% in 2010 to 47% in 2014. Furthermore, couples testing during the antenatal period increased from 76% to 94%, and individuals' disclosing HIV results to their spouses increased from 80% to 93% over the same period. There were also significant improvements in ART enrollment and initiation. There was increased ART enrollment, with new patients enrolled in HIV care doubling from 23,600 in 2011 to 40,100 in 2014. The number of new patients started on ART almost tripled from 10,821 in 2009 to 30,920 in 2014. However, though pre-ART enrollment and ART initiation improved, retention on ART and improvements in quality of care remained stagnant.

- **Integration of HIV/AIDS care:** Integration of HIV/AIDS services with other health areas had the greatest impact on TB outcomes and uptake of ART among TB patients. There were also improvements in uptake of antenatal care (ANC) services, births in health facilities, and child health outcomes. However, there was no significant impact on practices like household sanitation, hygiene, and nutrition practices.

- **Cost efficiency:** While each of the STAR projects has been able to achieve substantial progress over the life of the projects, inefficiencies in program management suggest that more could have been achieved with the level of investment.

RECOMMENDATIONS

The evaluation team recommends the following changes to improve the design of future DBTA projects:

1. To strengthen DBTA capacity-building approaches, design future DBTA projects to address the strengthening of multiple components of the health system, since many factors affect technical assistance uptake.
2. Clearly delineate roles, responsibilities, and programmatic parameters among multiple programs working in the same district to improve coordination and collaboration.
3. Invest in developing the leadership capacity of existing health management committees (HMC) at the health-facility level to improve the quality assurance linkage between the health services and the communities served.
4. In collaboration with the DBTA's participating districts, establish and maintain a database to determine the extent of cost sharing among districts, with reference to DBTA interventions to improve long-term sustainability.
5. Continue to support maintenance and utilization of the LQAS methodology for data collection, strategic planning, and improvement of programs.
6. Continue to support community QI initiatives to strengthen linkages between health facilities and the communities they serve and to improve quality of care in service delivery.
7. Expand HIV/AIDS service integration to include other key health areas, such as chronic care and adolescent health.
8. Design DBTA programs with rigorous focus on the reduction to minimal necessary levels of the percentage of administrative support costs required to sustain DBTA technical assistance and DBTA operations to promote cost efficiency and value for money (VFM).

I. INTRODUCTION

USAID/Uganda's District Based Technical Assistance (DBTA) model was designed with a regional technical assistance focus to improve accessibility, quality, and availability of integrated health service delivery, as well as to improve health-system financing and management. The USAID-funded STAR (Strengthening TB and HIV/AIDS Responses) projects in East, East-Central, and South-West Uganda were designated as the first of USAID/Uganda's projects to implement the DBTA model. The three DBTA programs were implemented by Management Sciences for Health (MSH) in East Uganda (STAR-E, 2010), by John Snow International (JSI) in East-Central Uganda (STAR-EC, 2010), and by Elizabeth Glaser Pediatric AIDS Foundation (EGPAF) in South-West Uganda (STAR-SW, 2011). Originally, all three projects were scheduled to end in March 2015, but USAID/Uganda subsequently approved 12-month extensions for each one.

Under a contract with USAID/Uganda, QED LLC, a consulting firm based in Washington, DC, with a base in Uganda under the USAID-funded Monitoring, Evaluation, and Learning Contract, recruited a professional team of eleven consultants supported by six research assistants to undertake an evaluation of the DBTA model as implemented by the three STAR projects. As defined by the evaluation's scope of work (see Annex A), the purpose of the evaluation was to assess the efficiency and effectiveness of the USAID/Uganda's DBTA project model as applied to the design and implementation of STAR project initiatives. The focus of the evaluation was on learning from experiences gained in the process of implementing the model. The evaluation, launched on October 27, 2014, was divided into two phases: October–December 2014 was dedicated to data collection while January–February 2015 was dedicated to final data validation, analysis, and preparation of the evaluation report.

EVALUATION PURPOSE

The purpose of the evaluation was to establish the extent of efficiency and effectiveness of the USAID/Uganda's DBTA project model as applied across the three STAR projects.

EVALUATION QUESTIONS

The evaluation was designed to provide answers to a number of questions pertaining to improved capacity and sustainability, service delivery, and cost efficiency of the DBTA projects. A key element of the evaluation was a comparison of what was in place before and after the STAR projects in order to understand changes that could be attributed to the program.

The evaluation strived to answer the following questions:

Improved Capacity and Sustainability

1. Approaches utilized by the STARs to strengthen districts and local governments to deliver health services, differed and evolved over time. What are: a) the most successful and b) least successful approaches applied by STAR-E, STAR-EC, and STAR-SW respectively towards strengthening the institutional, management, and human capacity of CSOs and local governments to deliver health services? What are the facilitators and barriers of these approaches to achieving results? Are the approaches used and results achieved for old/established and relatively new/naive districts significantly different?
2. What was the effect of transition of direct implementation of district led health care management activities from the STARs projects to district grants through SDS?

3. To what extent has the STARS program developed, established and/or strengthened management and technical structures at the local government and health facility levels that will sustainably improve quality, availability and accessibility of HIV/AIDS and TB services?
4. What technical capacity in strategic information have the STARS developed, built and/or strengthened? Where has this capacity been developed, built and or strengthened? How is it manifested/ demonstrated? How sustainable is this capacity after the STARS' exit?

Service Delivery

1. How has the support by the STARS contributed to improved health service delivery? What are the Service delivery outcomes attributed to the DBTAs?
2. What was the effect of integration of HIV/TB, HIV/Family Planning, HIV/AIDS and health on overall health outcomes?

Cost Efficiency

1. To what extent can the DBTA design be considered cost efficient in strengthening capacity of districts and CSOs to improve health service delivery?

As specified under the scope of work (SOW), the evaluation report was expected to include two distinct but linked sections, one of which (Section A of this report) was to focus on a comprehensive discussion of the overall DBTA approach, and the second of which was to consist of standalone pullouts for each of the three DBTA projects being evaluated (Sections B–D of this report).

II. PROJECT BACKGROUND

Working closely with the Ugandan Ministry of Health and through district health management teams (DHMTs), district councils, health facilities, and communities, the projects' general objective was to increase the accessibility, coverage, and utilization of quality comprehensive HIV/TB prevention, care, and treatment services within district health facilities and their respective communities. This general objective was expected to be achieved through the following specific objectives: (a) strengthening decentralized HIV/AIDS and TB service delivery systems; (b) improving the quality and efficiency of HIV/AIDS and TB service delivery within health facilities; (c) strengthening networks and referrals systems for HIV and TB services; and (d) increasing demand for comprehensive HIV/AIDS and TB prevention, care, and treatment services.

All three STAR projects were designed to strengthen systems at the decentralized level to facilitate improved delivery and uptake of HIV/AIDS and TB services. District-led performance reviews helped to identify coverage and service gaps. Anticipated service-delivery enhancements included, but were not limited to, issues associated with leadership, management, health management information systems (HMIS), and human resources for health care, supply chain management, SI, infrastructure, and laboratories.

In addition, under USAID's SDS project (started in 2010), the three STAR projects were expected to link their implementation with SDS grants to fund and provide technical support to CSOs to facilitate the uptake of comprehensive services. While the SDS project itself was not part of the STAR project configuration, STAR collaboration with the SDS project was considered of significant importance with respect to the impact of SDS on anticipated STAR project outcomes.

III. EVALUATION METHODS AND LIMITATIONS

METHODOLOGY

The evaluation applied a cross-sectional design that used mixed-method approaches, which included both quantitative and qualitative methods. The evaluation questions provided the framework around which the evaluation team developed evidence to support conclusions both about lessons learned in implementing the DBTA model and about the value of the DBTA approach. Various data collection techniques, such as structured observations, key informant interviews (KIIs), client exit surveys, and reviews of existing secondary data were used.

As detailed in Annex B, the evaluation methodology comprised nine distinct organizational steps:

Step 1: Document Review: Documentation reviewed and consulted through the evaluation were drawn from a significant volume of information available to the evaluation team. Among those documents consulted were documents that addressed DBTA and project design, planning and management, national policies, strategies and other kinds of related documents. (Please see Annex C for a complete list of principal documents reviewed and consulted.)

Step 2: Team Management: The fifteen-person evaluation team was divided into multiple technical teams with distinct responsibilities: a team leader dedicated to project management and to the management of national-level government and USAID interviews; a two-person team, each member of which was supported by two research assistants (“sub-teams”) for each of the three project areas and was dedicated to managing KIIs and focus group discussions (FGDs) within each project area; a two-person team that addressed issues associated with project-related information management and logistics and supply management (LSM); a specialist in economic analysis who assessed the DBTA model’s cost efficiency; and a specialist who conducted client exit interviews. (Please see Annex B for a detailed description of the team management methodology.)

Step 3: Review of Secondary Data: The sub-teams’ review of secondary data was supported by the evaluation team’s statistician, who focused on the collection and analysis of project-related statistics including, but not limited to, reports on lot quality assurance sampling (LQAS), annual program reports compiled by Monitoring and Evaluation of the Emergency Plan Progress (MEEPP), health facility assessment data, and the three projects’ operational statistics contained in annual reports and other documents.

Step 4: District Sampling: Given the large number of districts across all three projects, the evaluation team adopted purposive sampling, which included a mix of both the old and new districts. As indicated in Table 2.1.4, the districts were categorized as either old or new. New districts face markedly greater health system challenges than old districts, and those challenges may have affected DBTA programs. For the purposes of this undertaking, new districts are those established from July 2005. Table 1 provides an overview of the sampling frame for STAR districts.

Table 1. Sampling Frame for STAR Districts

| STAR SOUTH-WEST | | STAR EAST-CENTRAL | | STAR EAST | |
|-----------------------------|-----------------------------|-----------------------------|----------------------------|-----------------------------|-----------------------------|
| Old Districts | New Districts | Old Districts | New Districts | Old Districts | New Districts |
| Bushenyi | Buhweju | Iganga | Luuka | Kapchorwa | Bukwo |
| Kabale | Ibanda | Bugiri | Namayingo | Mbale | Kween |
| Kanungu | Isingiro | Kamuli | Buyende | Pallisa | Bulambuli |
| Kisoro | Kiruhura | Kaliro | Namutumba | Busia | Kibuku |
| Ntungamo | Mitooma | Mayuge | | Sironko | Budaka |
| Rukungiri | Sheema | | | | Bududa |
| | Rubirizi | | | | Butaleja |
| 33% sample (2 districts) | 33% sample (2 districts) | 33% sample (2 districts) | 50% sample (2 district) | 33% sample (2 districts) | 33% sample (2 districts) |

Building on the above sampling frame, it was decided to survey two districts per cluster, with a mix of old and new districts in each project area. Table 2 indicates those districts that were sampled as part of the STAR evaluation.

Table 2. List of Sample Districts for the STAR Evaluation

| STAR SOUTH-WEST | | STAR EAST-CENTRAL | | STAR EAST | |
|-----------------|---------------|-------------------|---------------|---------------|---------------|
| Old Districts | New Districts | Old Districts | New Districts | Old Districts | New Districts |
| Bushenyi | Buhweju | Iganga | Luuka | Mbale | Kibuku |
| Ntungamo | Mitooma | Kamuli | Namayingo | Kapchorwa | Bulambuli |

Finally, the evaluation team assigned to each project area selected an appropriate mix of HCIV, HCIII, and HCII (i.e., high client load to low client load) facilities to be visited. In addition, as private not-for-profit health facilities (PNFPs) are partially subsidized by the government of Uganda, the sample survey also included three HCII PNFPs. (For a detailed description of the sampling methodology employed for this evaluation see Annex B.)

Step 5: Key Informant Interviews (KIIs) and Focus Group Discussions (FGDs): In each project area, sub-teams interviewed district-level chief administrative officers (CAOs), district medical officers (DMOs) and district staff, and DBTA/STAR project officers and their staff using standardized KII instruments. At the level of health facilities, the health worker in charge and other relevant healthcare providers were interviewed using similarly standardized instruments. Persons in charge of medical supply management and laboratory supply management were also interviewed. As beneficiaries of grants under the STAR programs, representatives of civil society organizations (CSOs) were jointly interviewed through structured FGDs. As representatives of the communities and as service beneficiaries, persons living with HIV/AIDS (PLHIVs) were organized with the assistance of the implementing partner (IP) project officers to participate in FGDs, all of which were recorded and transcribed for later reference by the evaluation team's research assistants.

At the national level, the evaluation team’s leader conducted KIIs with representatives of the Ministry of Health, allied ministries, USAID, and IPs working in collaboration with the STAR projects. As in the project areas, standardized instruments were employed for the interviews.

At both project and national levels, evaluation team members prepared daily summaries of interviews and of FGDs to serve as references during subsequent analyses, as indicated in Table 3.

Table 3. Summary of Number of KIIs and FGDs

| Method | Category of Informant | Central Level | STAR-E | STAR- SW | STAR-EC | Total |
|---|---|---------------|--------|----------|---------|-------|
| KIIs | Central Govt. | 12 | NA | NA | NA | 12 |
| | USAID | 8 | NA | NA | NA | 8 |
| | ADPs | 1 | NA | NA | NA | 2 |
| | IPs | 3 | 1 | 1 | 1 | 3 |
| | CAO | | 3 | 4 | 3 | 10 |
| | District DHT Staff | | 3 | 5 | 6 | 14 |
| KIIs - Health In-Charge and Staff (# of Districts /Hard to Reach) | HCIV Groups | | 12 | 6 | 10 | 28 |
| | HCHH Groups | | 12 | 6 | 10 | 28 |
| | Hospitals | | 1 | | | 1 |
| | District planner, CDO, other groups | | | | 6 | 6 |
| FGDs | - PLHA - Adult Male Groups | | | 2 | | 2 |
| | - PLHA - Adult Women Groups | | 15 | 6 | 6 | 27 |
| | - PLHA - Young Men Groups | | | | 3 | |
| | - PLHA - Young Women | | | | | 3 |
| | - Other Groups(CSOs, CSW,VHTs,MARPS ,VQIT) | 2 | | 2 | 2 | 6 |

Step 6: Review of DBTA’s Cost Efficiency: In response to question 7 of the evaluation’s SOW, the evaluation team’s economist reviewed and analyzed USAID/Uganda’s President’s Emergency Plan for AIDS Relief (PEPFAR) expenditure analyses reports for the three STARS. MEEP APR 2011–2014 reports as submitted by the STARS were reviewed.

Step 7: Client Exit Interviews: Using the same base of facilities selected for the facility-based KIIs, the evaluation team conducted client exit interviews. The client exit interviews were conducted during the month of January 2015 in the interest of triangulating the findings from the project KIIs and project reports, as well as collecting citizen perceptions on the quality of services.

At the health-facility level, the interviewers selected at least nine clients from each of the HIV/AIDS services (prevention of mother-to-child HIV transmission (PMTCT), HIV testing and counseling (HTC), and antiretroviral therapy (ART)) as they exited the facility. An average of twenty-seven respondents per facility were interviewed from either one HCHH or one HCIV in each district. Overall, a total of 661 clients were interviewed. (Please see Annex B for a complete description of the methodology, Annex E for a list of instruments, and Annex D for a complete list of respondents.)

Step 8: Data Analysis: Building on the qualitative and quantitative data collected during the month of November 2014 and a preliminary analysis presented to USAID and the project's IPs in early December 2014, each of the three field teams returned to the field in January 2015 to further refine and validate its findings associated with the project area in which the team had been working. In addition, each team drew upon the findings of the team's economist and the exit interviews to expand its findings related to the viability of the DBTA model. Section A of this report's consolidated findings and the project-specific pullout sections (Sections B–D) of this report focus on the evaluation's findings, conclusions, recommendations, and lessons learned.

Step 9: Information Dissemination: As specified in the evaluation's SOW, the evaluation team's findings are to be disseminated. (Please see Annex B for a detailed discussion of the evaluation's information dissemination requirements.) A preliminary debriefing of the findings was held in December 2014, and the results were used to improve the dissemination of findings.

LIMITATIONS

Evaluating the efficacy of the DBTA model as it was applied across three different DBTA projects represented significant organizational and analytical challenges. The principal challenge was in reaching conclusions that were relevant across all three STAR projects. While every effort was made to validate such conclusions through consultations with each of the three IPs, the generalized conclusions reached by the evaluation team did not receive total agreement from all IPs.

ETHICAL CONSIDERATIONS

Much of the evaluation's data collection process entailed having access to informants whose willingness to respond to the evaluation's inquiries was predicated on the evaluation's adherence to its pledge to uphold their anonymity. Accordingly, verbal consent was obtained from all respondents prior to their interviews. (Please see Annex E for a sample of the verbal consent form.) In addition, no financial or other incentives were provided to participants. Finally, any information that could identify respondents was removed from the documentation associated with the interviews.

IV. FINDINGS

IMPROVED CAPACITY AND SUSTAINABILITY

What are the most successful approaches applied by the DBTA/STAR Programs towards strengthening the institutional, management, and human capacity of CSOs and local governments to deliver health services?

The most successful approaches used by the DBTA/STAR programs were the mentorship program, the integration of HIV/AIDS and TB care at lower-level facilities, and the strengthening of community linkages for HIV/AIDS and TB services.

Mentorship and Training

The mentorship program included off-site training as well as on-site practical support of local health staff by a team of trained, qualified, and experienced health workers. In all KIIs conducted with the local health workers across the DBTA regions, they reported mentorship as the main process through which they learned and mastered skills and practices for their work. The mentorship approach also helped local health workers to:

1. Improve their cognitive and practical capacity when handling HIV/AIDS and TB services and accelerating transition of clients from high-volume, standalone, higher-level sites to lower HCIII and HCII levels;
2. Gain skills in reporting processes and mechanisms, which in turn positively impacted the quality of services provided; and
3. Provide services in technical areas that they were originally not able to deliver, such as safe male circumcision (SMC) and Option B+.

Across the DBTA projects, mentorship was applied as an ongoing, capacity-building process rather than a one-time event. The mentorship process was mainly a frontline, health-worker-centered approach and did not focus closely on system management at the health-facility level. The mentorship program targeted HIV/AIDS service delivery points, providing on-site training and hands-on practice and imparting skills to the local health workers. The kinds of training and mentoring activities varied from project to project, with some programs emphasizing on-site training and others combining both approaches.

For STAR-SW, on-site training was emphasized because the process was cheaper and did not divert health workers from their stations. The STAR-SW mentoring teams were established at regional, district, and HSD levels to address key HIV/AIDS and TB service areas like ART, data management, laboratory services, and clinical performance. STAR-SW initially established a regional team of clinical mentors, as no single district would have

“We have seen improved baseline CD4 from 34% to 95%; update CD4 from 66% to 95% and have enabled streamlined services for follow-up.”

(Service provider KII, HCIV)

“We have been able to maintain twenty-seven mothers with increased quality of data from 0 to 54% ... routine visits are at 85% now.”

“One hundred sixty exposed babies were graduated to negativity, and this was 100%.”

(Service provider KII, HCIII)

been able to create such a team. Working alongside the STAR-SW technical team, the regional team established district clinical mentorship teams, members of which were selected from various facilities and included clinical officers and nurses.

In the STAR-EC region, the mentorship approach included a combination of on-site training at high-volume health facilities able to mobilize adequate trainees for cost-efficient training as well as off-site training, usually at centers of excellence in specific HIV/AIDS and TB service elements within or outside the region. In each of the four districts visited, seven to fifteen health workers were trained. Senior health workers were trained on how to teach their juniors and continue to mentor them in various HIV/AIDS and TB service areas.

In the STAR-E program, mentorship included training of sixty district-based mentors (DBMs) selected from the district health teams (DHTs) and various cadres of service providers at HCIV and HCIII levels. The districts in the region were divided into four clusters of three districts each. A clinical mentor was devoted to each cluster and was supervised by a STAR-E staff member, referred to as the district health adviser. The various cadres of service providers were taken for off-site training.

“We have gained from on-the-job training and mentorship. We started ART just last year in 2013 and have graduated clients to ART—312 adults and children...”

(Service provider, HC III)

“Before STAR intervention there was no HIV enrollments. In the ART clinic we had one technician, one nurse. After the training, staff can now freely rotate and perform other duties.”

(Service provider, HCIV)

Findings from the KIIs conducted with the district health managers and health providers showed that through the mentorship program, the DBTA did a commendable job strengthening the skills of service providers in the realms of ART and TB services. For STAR-E, the principal benefit of the mentorship program was the improvement of the individual and collective capacity to provide HIV and TB services with confidence.

An additional advantage of this approach was that training was tailored to the real working context and mentoring was on-site and did not disrupt service delivery. The facility-based mentors were readily available to transfer skills to new recruits.

“Seven of us have been trained in HIV patient management, and I am confident that any one of the seven can run the ART clinic.”

(In-charge, HCIII, Bulambuli District)

As an expression of appreciation, the district health officer (DHO) Mbale wanted the number of technical mentors to be increased to enable them to spend more valuable time at each facility. Some of the trainees also attested that the mentorship was beneficial.

Strengthening the Integration of HIV/AIDS and TB Care at Lower-level Health Facilities

Prior to the STAR projects, HIV/AIDS and TB services were provided solely at higher-level health facilities. The DBTA STAR projects emphasized the expansion of HIV/AIDS and TB services to the lower-level health facilities (HCII and HCIII) as well. This increased accessibility and utilization of HIV/AIDS and TB services, which led to increased opportunities for early detection of HIV/AIDS and TB and early initiation of treatment. This, in turn, prolonged the lives of both TB and HIV/AIDS patients.

Strengthening Community Linkage for HIV and TB Services

The strengthening of community linkage cut across all three projects, with some variations. Under the DBTAs, a common and successful approach to strengthening demand for and supply of HIV/AIDS services focused on the establishment of extensive networks of community health workers. In STAR-E, this network was created through the identification and training of linkage facilitators, who were identified as experts within the population of clients accessing clinical services. Linkage facilitators were mandated to mobilize community members for service delivery, conduct client follow-up visits, and provide non-clinical HIV/AIDS-related services, including counseling, organization of client records, and linking clients with health facilities. Village health teams (VHTs) were mainly used to provide TB services, which included community-based (CB) directly observed treatment short courses (DOTSs) and other non-HIV-related services such as immunization and family planning. In the STAR-EC region, VHTs were critical in intensified TB case finding and treatment referrals in hard-to-reach sub-counties and island communities. In other STAR program areas, a similar pattern was observed. In the STAR-SW region, VHTs, family support groups (FSGs), and peer educators were used to mobilize the delivery of HIV/AIDS services at the community level. Through community structures, STAR-SW reached over 120,000 clients and had a referral completion rate of 70%. Importantly, referral mechanisms among the STAR-supported facilities, CSOs, community members such as linkage facilitators, VHTs, FSGs, and mentor mothers were strengthened in all the three STAR projects. At the time of the evaluation, the DBTAs were in the process of curtailing their activities in the districts; however, during the FGDs with the expert clients it was noted that in the selected sampled facilities where the discussions were conducted, expert clients actively engaged in the delivery of HIV/AIDS and TB services, providing reasonable expectations for the sustainability of this important initiative.

Commodity Tracking System to Reduce Stock Outs

The STAR programs strengthened logistics and supply chain management at district and health-facility levels by introducing systems for tracking medicine orders and stock outs. The approaches varied across the DBTA/STAR program areas, but the intentions were the same. For example, STAR-SW introduced a range of systems, including an order tracker, a supply tracker, a commodity tracker, and a short message service (SMS)-based weekly report on stock status. STAR-E relied on a multimedia messaging service (MMS) to provide bimonthly reports and orders to the logistics advisor. The logistics advisor combined the reports to generate a consolidated report that detailed transfers of medicines between health facilities and districts. STAR-EC relied on a spreadsheet that was shared by focal persons at the districts to update and monitor the supply of medicines and indicate the quantity to be ordered or transferred. These interventions reduced stock outs of the relevant HIV/AIDS and TB commodities, excess accumulation of stock, and waste and expiration of health commodities at the district level.

Strengthening Laboratory Services

Support to laboratory services included space modifications as well as the provision of equipment, stationery, and staff training to enable the efficient delivery of quality HIV/AIDS and TB diagnostic and monitoring services, thereby improving the quality and accessibility of health care.

One of the vital interventions for strengthening laboratory services was the implementation of the hub system under the coordination of the Central Public Health Laboratories (CPHL) on

behalf of government of Uganda. As described by Kiyaga, et al,¹ the hub laboratory support system relied on the following: “Using Geographical Information System (GIS), a catchment area of 30 to 40 km radius was mapped around each hub. Using the same GIS, health facilities within that catchment area were identified with respective road networks. Motorbike routes were demarcated such that a hub rider collecting samples and returning results would visit facilities in the catchment area at least once a week. Each hub was provided with a motor bike and equipped with the required supplies to perform the daily routes. Each hub served between 20 to 40 health facilities.” The role of the STAR programs in the process was to strengthen district laboratory systems through infrastructure development (building and refurbishing labs), the recruitment and capacity building (through districts) of staff including hub riders, and initial operational support, including payment of salaries and the provision of fuel for hub riders. The DBTA projects also provided operational support to the external quality assurance programs of the Uganda Virus Research Institute (UVRI).

The success of the STAR programs is exemplified by the strengthening of labs under the Strengthening Laboratory Management Toward Accreditation (SLAMTA) program. An officer from CPHL noted that the hub system was especially successful in expanding and scaling up access to early infant diagnosis (EID) and viral load laboratory services.

What are the least successful approaches applied by the DBTA/STAR Programs towards strengthening the institutional, management, and human capacity of CSOs and local governments to deliver health services?

Although there were a number of successful technical approaches, the evaluation team identified the following as shortcomings of the programs: (1) limited focus on empowering health facility leadership; (2) limited focus on empowering DHT leadership; (3) limited education for clients about the role of sexual risk behaviors in HIV/AIDS transmission; and (4) limited orientation to day-to-day quality improvement.

Limited Focus on Empowering Health Facility Leadership

While the DBTAs achieved significant progress in implementing technical assistance approaches that focused on improving service delivery, there was limited attention directed toward upgrading health facility management capacity. Findings from the KIs with health facility management staff indicated that most of the technical support provided was considered to be one-time and subject-specific (e.g., accounting, finances, human resources), with a focus on performance of immediate objectives rather than on long-term sustainable management development. Moreover, for all of the approaches and initiatives introduced by the STAR programs, there was limited documentation left behind at the facility to assist the facility managers in guiding the process of long-term knowledge management (KM) for the facility’s management as well as the facility’s staff.

Empowerment for District Health Team (DHT) Leadership

As defined in the evaluation’s scope of work, the DBTA was “designed to strengthen decentralized service delivery systems for improved uptake of quality HIV/AIDS and TB services.” Based on discussions during the KIs with USAID staff, it was evident that the launch

¹ Kiyaga C, Sendagire H, Joseph E, et al. (2013) Uganda's New National Laboratory Sample Transport System: A Successful Model for Improving Access to Diagnostic Services for Early Infant HIV Diagnosis and Other Programs. *PLoS One* 8(11): e78609. doi:10.1371/journal.pone.0078609

of the DBTA projects consisted of two complementary elements associated with the model: service delivery improvements at all levels and health systems strengthening, predominantly at the district level.

The first initiative, direction for which should have been more clearly included in the technical assistance contracts of the three STAR IPs, was to focus on the provision of technical assistance to develop the HIV/AIDS and TB health service delivery capacity of the selected district health facilities with a peripheral, but empowering, linkage to district management.

The second initiative (SDS), under the direction of a separate IP, was to focus on the provision of technical assistance to strengthen the management capacity of the districts in which the three STAR projects were providing technical assistance to health facilities. SDS grants were intended to improve the linkage between the district systems, the facilities, and the community. According to USAID/Uganda respondents to the evaluation, both components of the DBTA model were to work together toward realizing the potential of a Ugandan DBTA model. Unfortunately, the timing of the launch of the second initiative under SDS was delayed, and by the time SDS assumed full operations in 2011, two out of the three DBTAs (STAR-E and STAR-EC) had already assumed, with the approval of USAID/Uganda, many of the district capacity-building responsibilities that eventually fell to SDS to undertake. In addition, the process by which SDS eventually assumed responsibility for district capacity development served to undermine the importance of the DBTAs' role in empowering and strengthening the technical and managerial relationships and linkages between the district health authorities and the health facility in-charges. Consequently, with the exception of STAR-SW, which had the programmatic planning advantage of starting up at the same time as SDS, interviews at health centers revealed staff generally looked to the DBTAs for technical, fiscal, and material support when addressing the needs of their HIV/AIDS and TB programs.

Limited Emphasis on Systems Strengthening in the Program Design and Program Implementation

A critical examination of the STAR program descriptions, with a focus on the overall goal and the four objectives, clearly indicates that while the programs were physically located in districts, the programmatic emphasis was on health facilities and their catchment communities. As such, the focus of the DBTAs as implemented was on increasing both the supply and demand sides for HIV/AIDS and TB services, with little emphasis on the systems strengthening. It was not the mandate of the STAR programs to strengthen the systems, and this was evident in their contracts, the approved Activity Monitoring Evaluation and Learning Plans (AMELPS), and quarterly and annual reports. The lack of emphasis on systems strengthening was further compounded by the very ambitious service-delivery output targets, especially in the voluntary medical male circumcision (VMMC) and elimination of mother-to-child transmission of HIV (eMTCT) program areas, both of which were expected to be delivered within short time frames. This design and implementation weakness inevitably forced the DBTAs to take shortcuts to achieve the required results while building some capacity along the way. In STAR-E for example, the project personnel reported that targets for VMMC and eMTCT services were overly ambitious and, as a result, targets for VMMC were mainly achieved through outreach activities with allowances for the staff instead at the health facilities. This meant that health workers were removed from their stations to conduct outreach operations and that there was a lack of clarity about where to refer clients who experienced complications. Health workers

who were involved in the outreach circumcision activities did not continue to perform circumcision activities at their stations because there were no financial gains.

Limited Focus on Behavioral HIV Prevention Activities

The Uganda National HIV Prevention Strategy (2011–2015) emphasizes the need for combination prevention, focusing on both behavioral and biomedical components. The main focus of HIV prevention activities in the STAR programs has largely been on biomedical approaches, including safe male circumcision (SMC), eMTCT, and the reduction of community viral load through ART. However, little attention was paid to sexual risk behavior–focused prevention approaches, such as education about the benefits of monogamy and abstinence/delay of sexual debut among youth. It was evident that condom distribution largely focused on key populations at risk as opposed to other groups, such as married couples. This did not reflect the findings of the 2012 Uganda AIDS Indicator Survey reports, in which married couples were found to be at high risk of infection due to extramarital sexual relationships.

According to findings from the KIIs conducted with service providers and the FGDs conducted with PLHIVs across the DBTA regions, behavior change communication about the role of sexual risk behaviors in the prevention of HIV transmission was limited. Additionally, respondents noted, especially youths interviewed, that power relations at the family level negatively impacted their ability to practice HIV prevention behaviors, including condom use, delay of sexual debut, monogamy, and abstinence.. Mitigating HIV/AIDS exposure risk to others received limited program attention under the DBTAs. It was reported by health workers and PLHIVs that women who were enrolled in Option B+ had difficulty informing their husbands and other relatives about their situation.

Provision of Incentives for Clients and Service Providers

The provision of maize flour and sugar to clients utilizing ART sites undeniably increased demand for and utilization of those sites while also contributing to clients' improved nutritional status. However, as STAR programs came to a close, the availability of costly incentives similarly came to an end. At the time of the evaluation, there was a question of whether the program's cessation would result in decreased supply and demand for ART services. In one of the STAR-E–supported facilities, health workers and their in-charges categorically stated that they were no longer inclined to work long hours in the ART clinic or provide outreach services since there were no more allowances for the additional work. Another example that cut across the DBTA programs was the delivery of VMMC services at the health facilities. The health workers stated they would no longer take time off from their mandated duties to provide circumcisions without the special allowances that they were previously provided with for participating in the program. The evaluation teams also noted during client exit interviews that the clients included the availability of welfare benefits obtained from the health centers as one of the measurements by which they judged a health center's quality of services. Failure to maintain welfare benefits as part of the service delivery package is likely to negatively impact demand for HIV/AIDS and TB services.

Logistics and Supply Management (LSM) of TB Drugs

Although not specifically included as a DBTA deliverable, during implementation of the STAR programs, there was a country-wide gap in LSM of TB drugs. Initially, LSM for TB drugs was operated by the National TB and Leprosy Program, under a separate arrangement from that of other essential medicines and health supplies (EMHS). This arrangement had challenges that

necessitated its integration into the national supply system starting in 2012. The quantity of TB drugs delivered to health facilities was determined by the National Medical Stores (NMS) until 2013. During this period, there was less emphasis on placing orders and there were no order forms. As a result, TB drugs were sent to all facilities in excess and there was no room for redistribution across the districts. This led to the expiration of TB drugs in health facilities, yet the STAR programs had limited scope for intervention.

What are the facilitators and barriers of these approaches to achieving results?

Facilitating Factors

The following narrative describes the common factors that facilitated the application of the DBTA model across all STAR programs.

Conducive HIV/AIDS Policy Framework

The national HIV/AIDS policy and clinical guidelines in Uganda are well defined. The STAR project across the three regions and the district staff were well guided in terms of what was required of them. With support from MoH, the project technical teams, together with the DHTs, were well placed to respond to any changes in the relevant policies and implementation guidelines.

“We do not have enough local revenue and so we need STAR-E to help us with putting up essential services, and the health sector that STAR-E supports is our priority.”

(Local council chairman, STAR-E district)

Technical Competencies of the STAR Teams

As noted above in the report’s discussion of successful approaches to the provision of technical assistance, the DBTA/STAR programs achieved significant progress toward the STAR projects’ defined deliverables. Despite the rather high personnel turnover across the three programs, the evaluation team attributes the programs’ success to staff competency in the required technical areas. During KIIs with DHT members, they acknowledged the high specialization and practical competency of the clinical advisors and mentors. The health workers who benefited from mentoring also acknowledged the staff’s level of competence. At the same time, a number of DHTs in selected districts indicated that they “...liked the project but not necessarily the team.” Comments of this sort were assessed as reflecting more on the quality of professional and personal interactions between program and district leadership rather than on technical competence.

Conducive Community Environment

Based on KIIs with service providers, FGDs with community beneficiaries, and exit interviews across the DBTA project regions, over the life of the DBTA interventions there was a positive community-based environment for service delivery. The clients who participated in the exit interviews reported that this conducive environment was not experienced at the health facilities prior to the support provided by the STAR projects. In addition, the DBTA projects facilitated the collaboration of health center staff and expert clients to develop a positive community-based working environment. The expert clients helped in the delivery of HIV/AIDS and TB services, both at the facilities and in the communities across the DBTA project regions. At each health facility, the network of expert clients supported the provision of HIV counseling, organized files, participated in mobilizing people to access HIV/AIDS and TB services, and conducted client

follow-ups in the communities. This led to an increased demand for HIV/AIDS and TB services, improved adherence to treatment regimens, and reduced the number of clients who were lost to follow-up. FGDs noted the important role of CSOs in community mobilization and other family support services. The positive community receptivity and the involvement of expert clients were principal factors that led to the improved community environment and the attainment of the set service delivery targets required by the STAR projects.

Receptivity for Technical Assistance

The technical assistance introduced by the DBTA/STAR programs was well received at the district and health facilities. The district and health facility managers provided the needed support to ensure that the interventions were easily rolled out. The technical assistance that was provided was judged to be adequate and relevant to health workers. There was good will from the district leadership across the three STAR projects (both administrative and technical). MOUs were signed, and the relevant district officials provided the necessary support. As a result, the district health teams saw the valuable additions of the projects and were willing to support the operationalization of the technical assistance, helping to make it a success. The evaluation team also noted that the new districts were more committed to supporting the DBTA projects.

Resources for Priority Technical Assistance Interventions

Availability of sufficient funds to implement the mandated activities was a cross-cutting facilitating factor. The three DBTA projects were well funded, and this enabled service delivery to take place. Funds were available to facilitate transport refunds, allowances for health workers in HIV clinics, support for supervision, and male circumcision camps. Funds were also available to enable the IPs to flexibly spend on ad hoc requests from USAID, MOH, and local government. This kind of arrangement enabled continuity of the critical services. In addition, once the SDS initiative was launched and the first grants were awarded in March 2011, the environment was established for significant district-level support in concert with support provided by the STAR projects. Finally, working in partnership with other USAID IPs, including ASSIST, TRAC TBSRING, and SURE, enabled the STAR projects to secure additional health systems strengthening support, such as human resource capacity strengthening, quality assurance, and monitoring and evaluation support.

Barriers and Challenges

The following section describes common barriers or challenges associated with program planning, management, and implementation that impacted the application of the DBTA model across all STAR programs.

Inadequate Human Resources

The problem of human resources affected both the performance of district leadership and health facilities. In the districts, especially new ones, recruitment and retention of medical officers, midwives, clinical officers, and laboratory technicians was a general problem. The CAOs cited the limitations in the district wage bill as another challenge. The problem of inadequate capacity was, however, partly ameliorated through the Human Resources for Health (HRH) and SDS grants, which enabled districts to recruit critical staff for the district health system, with the understanding that they would later be absorbed into the districts' payrolls at the end of the program.

Continued High Levels of HIV-related Stigma and Discrimination

Based on discussions with clients in both FGDs and in client exit interviews, the spectrum of stigma and discrimination continues to impact the willingness of PLHIVs to access health centers for health issues. Women reported unwillingness to disclose their test results to their spouses, especially if they were HIV positive.

Health System Weaknesses

The health system in Uganda is characterized by a number of inherent weaknesses.

- Inadequate financing (low pay, low morale, poor work climate)
- Low staffing for DHMTs (about sixty-four districts had staffing below 60% at the DHO's office)
- Poor infrastructure, including lack of accommodations for health workers and geographical barriers such as rough terrain and bad roads
- Shifts in policies to match global trends, regardless of the readiness of available systems

Due to low salaries for health workers, the STAR projects resorted to “double-edged” financial incentive schemes to encourage staff to continue to provide HIV/AIDS services. Laboratory infrastructure was also limited in many facilities, with staff expressing concern for their safety when conducting TB microscopy. The issue of equipment was, to a large extent, addressed by the program, which ensured that the basic equipment for delivering minimum healthcare packages was provided to all the supported facilities.

A number of districts in the STAR regions had health-sector leadership challenges that affected district capacity to absorb and utilize the available technical assistance. In the evaluation team's discussions, both district and facility staff noted the existence of incomplete district, health sub-district, and health-facility management structures, with many officers in “acting” capacities. It was also observed that, even where DBTAs built capacity at the facility level, institutional capacity for effective management was significantly diminished in a number of instances where senior in-charge personnel were demonstrably under-qualified for their levels of responsibility.

The impact on DBTA programming and implementation associated with irregularly scheduled and single-issue vertical training programs

During the lifespan of the three STAR programs, HIV/AIDS care continued to evolve with concomitant changes in policy, most notably with reference to the eMTCT policy of Option B+ and safe male circumcision. As a result, the time and resources consumed to engage facility staff in what key informants described as constant and single-issue training cycles significantly impacted DBTAs' ability to effectively and efficiently program facility and community-level capacity building initiatives.

Central-level Stock Outs of Vital Commodities

Earlier sections of this report cited facility-level improvements in LSM as one of the DBTAs' most successful approaches. However, inadequacies associated with centrally controlled deliveries of vital commodities resulted in stock outs of antiretroviral medications, test kits, and reagents across all program regions. In response, DBTA staff adopted the practice of canvassing facilities in the area to determine whether these facilities had reserves that could be distributed

to those facilities lacking critical drugs and medical supplies. While the willingness of facilities to share resources is to be commended, inadequate central-level management of vital commodities was identified as a source of frequent frustration among LSM facility-based managers who, with assistance from DBTA technical staff, approached their drug and medical supply responsibilities in a professional and efficient manner.

Were the approaches used and results achieved for old/established and relatively new/naive districts significantly different?

The evaluation team noted district-specific approaches, without reference to a standard pattern across a program area or across the DBTAs' regions. Generally, however, there were not significant differences across the three regions in terms of approaches applied or results achieved between old and new districts. Differences in implementation of the approaches noted between old and new districts related more to elements of the regions' health systems, including availability of transport, human resources, and infrastructure. These elements were beyond the programmatic or technical scope of the three DBTAs.

What was the effect of transition of direct implementation of district led health care management activities from the STARs projects to district grants through SDS?

USAID/Uganda introduced the SDS project as a supplementary mechanism that would focus on strengthening district-led coordination of health services and local government systems and would provide performance-based grants to districts to complement service-delivery resources. While the SDS project was not directly part of the evaluation of the STAR projects, it was important to assess the effects of transitioning to the SDS grants on the DBTA. The evaluation aimed to understand the extent to which transitioning direct implementation of district-led health care management activities from the STARs projects to district grants through SDS impacted the STARs projects' provision of technical services under the DBTA model. The findings indicate that the recipient districts felt positively about the arrangement.

Inaugurated in April 2010, with its first grant issued in March 2011, the SDS project and its implementation of activities was preceded by the inauguration of the STAR-E and STAR-EC projects in late 2009. Prior to the start-up of SDS activities, both STAR-E and STAR-EC assumed many of the district capacity-building activities that were eventually taken over by SDS.

“Before SDS came on board, we were doing the technical assistance and funding of those activities. When SDS came, we would do the work planning with the district, but SDS would fund those work plans, which then meant that our role was to work with the district and give technical assistance to the district while they do the funding.”

(KII, STAR-EC)

The entry of SDS in STAR-EC was poorly initiated by the districts. The local governments had high expectations that were beyond the SDS mandate. The districts anticipated receiving funds for infrastructure development and hardware purchases. On realizing that this was outside the SDS mandate, the motivation for local governments to perform stagnated. As a result, it took STAR-EC and SDS time to define roles, responsibilities, and programmatic parameters with the local governments. It was only in the case of STAR-SW (launched in 2011) that transitioning issues from a STAR project to the SDS project did not occur. In the South-West region, SDS

grants and the DBTA program began around the same time, and therefore the transition was collaborative.

Strengthening district capacity to lead and manage service development: SDS grants facilitated effective planning at the district level. Working in close collaboration, SDS and the DBTA ensured proper coordination of the planning process in each district, including the sharing of approved work plans, budgeting with other USAID-funded health projects, and HIV/AIDS initiatives with district political and technical teams. The districts were also supported to develop multiyear and annual implementation plans, determining key activities for achieving targets for HIV/AIDS programming.

Provision of performance-based grants: SDS provided performance-based grants to the districts, and this supported service-delivery coordination within districts and regions, as well as USAID support to district health sector programs. SDS strengthened the district capacity to manage vital SI. Support was provided for: the recruitment of additional staff at the facility level and for technical positions in the district planning office; HMIS training that benefited all STAR-SW districts; printing and reproduction of HMIS reporting registers/forms; coordination meetings for SI committees; and the implementation of LQAS-related activities.

Strengthening of district capacity for managing partnerships: SDS coordinated USAID-funded activities and contributed to improving district capacity to engage multiple funding sources effectively. The role of SDS in the districts promoted alignment of USAID support to districts, which facilitated alignment of priorities and linkages between partners. However, weak partnerships among districts, CSOs, training institutions, private health partners (PHPs), and non-PEPFER partners still exists.

Institutionalizing the culture of transparent accountability for both results and finances: The ability of districts to manage grants and accounting transparently, while linking financing to performance, was a major breakthrough for sustained district leadership and led to greater outcomes in service delivery.

To what extent has the STAR program developed, established, and/or strengthened management and technical structures at the local-government and health-facility levels to sustainably improve quality, availability, and accessibility of HIV/AIDS and TB services?

Sustainability is one of the seven essential design elements described in the USAID request for application (RFA) for the DBTA programs. The RFA defined two elements of sustainability—the program activities and the program impact—and indicated that sustainability is dependent on the development of local capacity to design, manage, and maintain services. The RFA further stated that sustainability would be achieved through the direct technical and institutional capacity building of: (a) government counterpart agencies; (b) local partner service providers (civil society, faith, and PHA groups); and (c) community organizations and other groups. Two results of such support as described in the RFA were: (a) greater involvement in planning, implementation, and monitoring of HIV/AIDS and TB services; and (b) effective partnerships with other service providers to link PHAs to a continuum of care through the network model approach. The final requirement in the RFA related to sustainability was an exit strategy for the program.

The evaluation sought to establish the extent to which the STAR project developed management and technical structures that would sustainably improve quality, accessibility, and availability of HIV/AIDS and TB services in targeted districts. The evaluation team found that the STARS programs had developed, established, and/or strengthened the following management and technical structures:

Management Structures

- **Strengthening of management structures:** Supervisory and planning structures were strengthened, including the DHTs and district AIDS committees (DACs), particularly in STAR-EC and STAR-SW. The STAR programs facilitated the operationalizing of specific management functions, which were enhanced through training, mentorship, and joint implementation opportunities. Specific STAR program staff were assigned clusters of districts to support on a monthly basis. With the aid of the STAR programs, the DHTs convened monthly and quarterly meetings, mainly to review performance and develop implementation plans. As part of the mentorship activities, the STAR programs supported the restructuring of quarterly meetings and supervisory plans to incorporate essential elements of QI management. To ensure sustainability, operations of the DHTs as coordination mechanisms were integrated into SDS grants to enhance a sense of ownership of HIV/AIDS and TB efforts by the respective districts.
- **Strengthened regional and district teams:** Regional and district teams were strengthened for the management of SI through centralized training, practical on-site training, and in-field practical skills transfer opportunities. The areas of focus included streamlining and overseeing management of data collection for entry in the HMIS and the DHIS2 and utilizing the web-based supply ordering system.
- **Strengthened capacity for CSOs participating in the DBTA/STAR projects:** CSOs were strengthened in several areas, including resource mobilization, financial management, supervision, training and mentorship, and specialized aspects of proposal writing. This was a significant step in developing institutional capacity of partner organizations to develop strategic plans that can be funded by alternative partners.

Technical Structures

- **Strengthening of districts-based trainers, mentors, and supervisors:** The DBTA/STAR projects established district-based teams of trainers, mentors, and supervisors to serve as hubs of technical expertise for expanding and sustaining the technical competencies of the healthcare workforce in the respective districts. Each district had a team of about five trainers and eight to twelve clinical mentors, comprising members from the district and health-facility levels. To increase sustainability, these teams were mainstreamed in their respective district health systems and at the facility level. As a result, most of the health facilities will be able to sustain on-site training and mentorship.
- **Capacity building for service providers:** Under the DBTA/STAR program, service providers from over 680 health facilities were trained in various technical areas including clinical skills, client management, management of QI, and service data management of integrated HIV/AIDS and TB and HIV/AIDS and family planning (FP) services. On average, the structure supported the development and maintenance of teams of seven to eight multi-skilled service providers at 680 HCIV and III.

- **Strengthened district, health facility, and CSO quality improvement (QI) teams:** In partnership with the MOH and other USAID partners, the STAR programs established and/or strengthened a total of twenty-eight district QI teams, eighty-four facility QI teams, and nine CSO QI teams. To pave the way for sustainability and also to create a sense of ownership of QI activities, the project ensured that members of these teams included district and facility mentors.
- **Capacity building for LQAS teams:** A team of fifteen members, comprising representatives from the DHT and district planning unit, were trained in LQAS methodology and supported to apply it in their respective target DBTA/STAR project districts on an annual basis. Training in LQAS included technical concepts, data collection and analysis, and dissemination. Using the LQAS methodology, the districts were able to identify performance gaps. The LQAS methodology was widely accepted by the Ministry of Local Government (MoLG), DHTs, district planning units, district political leadership, and DBTA managers.

What technical capacity in strategic information have the STARs developed, built, and/or strengthened? Where has this capacity been developed, built, and/or strengthened? How is it manifested/demonstrated? How sustainable will this capacity be after the STARs' exit?

To strengthen the technical capacity in SI management, the DBTA focused on three elements: human capacity development, systems development, and material support. The evaluation team measured technical capacity in SI in terms of focus, benefit, and potential for sustainability. Technical capacity was strengthened in the following aspects:

- **Capacity to generate and process routine service data:** Working in close collaboration with MOH and SDS, the STAR programs supported the streamlining of data collection at the facility level by providing essential materials for documenting and reporting on service delivery. Also, the STAR programs provided technical assistance in improving data quality by introducing the concept and practice of data auditing and cleaning. This support went to all districts and their respective health facilities. With improved capacity to generate data, the STARs went further to train and mentor health facility teams in reviewing and using data at the facility level to plan QI. Interviews with service providers showed that various teams now recognize the use of service data as a strategic tool in identifying gaps and making improvements.

“The in-charge at a facility can make simple analysis of data collected in a month or a quarter to identify any striking issues that might need the attention of the facility. For example, check number of clients per service and compare it to a previous month or quarter. Find out lost-to-follow-up clients who were on ART, PMTCT, or TB treatment. This data has informed the facility to generate action points for the coming month or quarter.”

(KII, Busembatya HCIII)

- **Electronic medical record systems:** KIIs reported that in some regions, STAR programs supported the rolling out of patient-level electronic medical record systems (MOH OpenMRS), particularly in

“We have the skills to collect data, do data tabulations manually, and reporting.”

(KII, Kamuli DHT)

high-volume facilities. As a result, there was quicker retrieval and access of patient medical records.

- **Capacity for application of LQAS in community surveys:**

The STAR project strengthened the capacity of all participating districts to apply LQAS methodology in annual community surveys. LQAS application in the STAR project aimed at generating population-based data on key outcome indicators for HIV/AIDS and TB prevention, care and treatment, and related components of maternal and child health. LQAS allowed generation of district-specific data for strategic planning and improvement of programs. In each district, a team of eight to ten people was trained in concepts and principles of LQAS, data collection, tabulation of results, and use of information.

“LQAs has been very useful and we have often referred to the information in our planning and budgeting”.

“... data collected helped the district team to analyse and plan, for example HIV will be streamlined in district work plan, we have to recruit more workers to extend services”

“Results collected by LQAS help us in planning because it is evidence based as compared to HMIS development plans. This helps in resource allocation”

(KII DHT)

- **District and facility-level platforms for performance review and data dissemination:**

The STAR project revitalized and strengthened district and health-facility processes for performance reviews and dissemination of strategic data. The effort institutionalized HMIS data review and feedback processes, quarterly review meetings for key stakeholders, dissemination of SI from LQSA, and learning sessions for peer review and sharing. A culture of evaluating performance and generating and sharing lessons was inculcated in the management operations of the respective district teams.

- **Capacity to generate information and data from communities and service users:**

The STAR project supported the creation of a community-based data system to solicit and document information from and about targeted communities using the existing system of VHTs. The project facilitated introduction of record books to document eligible clients, referrals, and follow-up mechanisms for VHTs and Mother Mentor. The practice resulted in greater service utilization.

“We have the referral books, and with follow-up we get to know the clients in the area. There are VHTs based at health facilities and community-based VHTs. Every month we have parish meetings organized by the parish VHT coordinator, and we synchronize the data and write in the parish register from which we make the report.”

(FGD, VHT, Busesa)

Manifestation and Utilization of Strategic Information

The STAR project’s strengthening of technical capacity in SI management is evident in three distinct elements of capacity building: human capacity development, systems development, and material support. Human capacity development entailed organizing and conducting training and mentorship opportunities that targeted district-based biostatisticians, HMIS focal persons, records assistants, CSO technical persons, and service providers.

Systems development entailed installation and facilitation of computerized data collection systems like HMIS, DHIS2, patient records systems, web-based ordering systems, surveillance

systems, and data quality assessment processes. Systems development also involved initiation of regular performance review forums, annual application of the LQAS methodology, and a community information system managed by VHTs and Mother Mentors. Strengthening systems that generate SI notably improved reporting rates for the HIMS systems in all districts. On average, timeliness and completeness increased from 40% to 97% for all STAR-

supported districts between 2013 and 2014. In addition, improvements in capacity to use the web-based supply ordering system translated into timely ordering of supplies, stock redistribution within a district, and reductions in stock out rates. Furthermore, the capacity to generate and utilize LQAS data is evident in all STAR districts. District-specific data for HIV prevention and maternal child health (MCH) outcome indicators were available on an annual basis in 2010, 2011, 2013, and 2014. KIIs with DHTs, service providers, and district leadership confirmed the use of LQAS and HMIS data in planning, and all districts disseminated strategic data widely through the public display of dashboards and other wall charts. Most districts expressed appreciation for the utility of SI, as well as confidence in being able to conduct LQAS without external technical support.

SI management capacity was also manifested in the existence and use of systematic district and facility-level platforms for performance reviews, data dissemination, and learning. Although the STAR project provided technical assistance in restructuring monthly and quarterly performance review meetings, those meetings have been district led over the years. The meetings improve intra- and inter-sectoral coordination by providing platforms for district health departments and CSOs to share their immediate plans and routine information and present experiences from their activities and processes. The platforms enhanced collaborative learning and adaptation of change.

Strategic data was also used at the district level for annual performance assessments, development of district implementation plans, and other health service delivery programs beyond HIV/AIDS and TB care. One example is the use of LQAS data in Mitooma District, where LQAS data showed weak performance in sanitation. In response, the district council formulated a by-law to improve community response to water, sanitation, and hygiene (WASH) interventions. DHTs and service providers appreciated and were proud of the developments and the strengthening of systems for SI management.

Material support entailed reproduction and provision of record-keeping books and reporting tools, computers, power generators, and solar power systems. Acknowledging the importance of collecting service data after the initial support from SDS grants, districts continued to solicit support for reproduction and distribution of data collection and reporting tools. In general, all STAR-supported health facilities have adequate data collection and reporting tools. The rest of the equipment, such as computers, power generators, and solar power systems, are located in the fields of operation.

“...the monthly data review district meetings ensure that all facilities complete their summaries, including internal data quality assessments, on time.”

(KII, STAR-SW)

“I have used LQAS information for accountability during district council meetings.”

(DHO)

Sustainability of Strategic Information Management Capacity

The evaluation team observed that investments in strengthening technical capacity for SI management were made in the development of district-based human resources, and therefore, they were found to be sustainable. However, sustainability of SI management capacity in district-based human resources relies on the ability of districts to motivate and retain staff and refrain from staff transfers that do not consider the existing capacity at individual health facilities. Nonetheless, it will be necessary for districts to sustain SI capacity through sustained demand for and utilization of SI. Current use of strategic data generated with support from the DBTA is limited to health departments, DHTs, and health-facility teams, with minimal involvement of other sectors, local government, and political leadership.

The financial implications for sustaining systems that generate SI are far beyond the financial capacity of the districts. Although the first application of LQAS seems high, at 15–20 million Ugandan shillings (UGX), there is evidence that subsequent applications are cheaper, at a reduced cost of about 8 million UGX. Most districts showed willingness to include LQAS in their annual budgets. Another potential limitation to sustaining the capacity for SI management is minimal engagement of the private sector in the institutionalization of LQAS as a management tool. The private sector has potential to be the future custodian of and a technical resource for maintaining its use. The evaluation noted that the STAR project needed to do more in soliciting SI on client satisfaction.

CONTRIBUTION TO IMPROVED HEALTH SERVICE DELIVERY

How has the support contributed to improved health service delivery in the targeted districts?

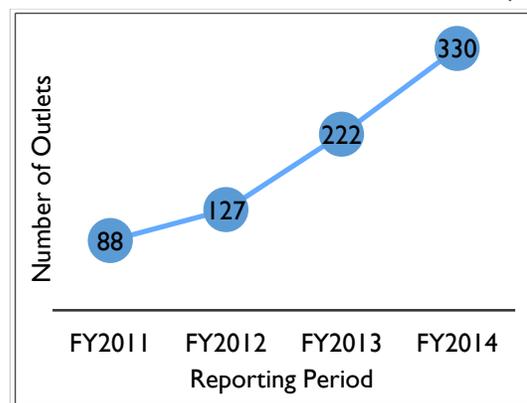
While the evaluation does not fully attribute progress and achievements in the target districts to the DBTAs, the DBTA/STAR programs are major contributors in terms of both inputs and outputs, with consequent outcomes in health service delivery. The DBTAs' contributions to service delivery included expansion of ART services to lower-level health facilities, support for the roll-out of new policy guidelines, strengthened logistics and supplies management, and strengthened SI management.

Expansion of ART Services Delivery to Lower-level Facilities:

By expanding ART services to lower-level health facilities, the DBTAs increased access to services. The STAR programs supported the accreditation of a number of health facilities in the districts to enable increased access to and utilization of comprehensive HIV/AIDS and TB services. By 2014, the number of facilities accredited to provide HIV/AIDS and TB services increased by more than three times. As illustrated in Figure 1, the number of outlets providing ART services increased almost four fold over the life of the three DBTAs, increasing from 88 in 2011 to 330 outlets in 2014. This was mainly achieved through the efforts of accreditation support by the DBTAs.

Figure 1: Change in Number of Sites Providing both Adult and Pediatric ART

STAR Annual Reports



Increase in access to services was demonstrated by findings from client exit interviews; 84% of clients reported that they found it easy to access and utilize HIV/AIDS and TB services.

“The STAR projects have revolutionized care for HIV/AIDS in the country.”
(MoH central-level official)

Expansion of infrastructure for HIV/AIDS and TB services at selected health facilities: The key infrastructure improvements at health centers included: expansion and redesign of the service delivery space to accommodate large numbers of clients; refurbishments of clinical care and laboratory areas; improvements in clinic furniture; and improvements in facilities for the systematic storage of the large amounts of client records inherent in the high-volume chronic care clinics and for the storage of HIV/AIDS and TB supplies, such as medicines and surgical kits for male circumcision, through provision of shelves, store pallets, file folders, etc.

Support to districts to enable them to quickly adapt revised national clinical guidelines: To achieve rapid adaptation of revisions in national clinical guidelines, the DBTA established regional and district training teams that supported dissemination of national policies and clinical guidelines for SMC, Option B+, ART, and TB care.

Strengthened HIV/AIDS and TB laboratory services: The DBTA supported construction and renovation of laboratories, provided equipment, including microscopes and CD4 machines, trained laboratory staff, and improved sample transportation through the national laboratory hubs strategy. This increased access to appropriate TB and HIV/AIDS diagnostic tests and reduced rejected samples to less than 2% of the total samples, as reported by STAR-SW. The DBTAs also supported revitalization of TB diagnostic services at health facilities and outreach based at the sub-county level.

Strengthened logistics and supplies management: Although strengthening supply chain management was listed as an element to be addressed under the DBTA model for the three STAR programs, this was not specified in the program results framework. The interventions were, therefore, ad hoc in nature, and it was understood that another mechanism, the Securing Uganda’s Right to Essential Medicines (SURE) project, would work on supplies. DBTAs worked closely with the SURE program to fix some of the ad hoc challenges in medicine supplies. Relevant SURE activities included mentoring staff and direct support to the districts and health facilities to ensure that orders were submitted to NMSs in a timely manner and followed up on to ensure that supplies were received, properly stored, and accounted for. As a result, there were reductions in stock outs of essential commodities at health facilities, as well as reductions in stock accumulation, wastage, and expiration of health commodities within the districts.

The DBTA/STAR program used various approaches to strengthen logistics and the supply system. STAR-E was particularly successful with facility-based training in each district, tagging medicine management supervisors (MMSs), and establishing innovative distribution of condoms through its behavior change communication (BCC) function. STAR-EC successfully provided operational support to the districts, including facilitating the ordering process by providing facilitation fees to the district officials. Overall, STAR-EC experienced general improvement in the management of medicines by providing MMSs with facilitation fees to implement in sparsely populated areas. STAR-SW was particularly successful in capacity building through mentorship, on-site training in logistics management, coaching with a focus on newly accredited sites, and use

of VHTs and peer support groups to improve distribution of underutilized commodities like female condoms.

Strengthened the quality improvement processes in health facilities: The DBTAs expanded and mentored QI teams at the district and health-facility level to continuously improve the administrative and technical competence of the district health system. They built the district and health-facility staff capacity to generate and utilize data for performance. Currently the data is used in continuous monthly introspection for quality defects, monitoring improvement in projects, and learning at the facility level. In addition, the districts and the facilities are utilizing the data during performance reviews to make improvements in implementation.

Strengthened linkages and referral systems with the community: The efforts of the DBTAs involved mobilizing and supporting community structures such as VHTs, FSGs, mentor mothers, and peer educators to increase HIV/AIDS and TB service demand, initiate active referrals, and perform client follow-up in the community. Additionally, the program supported outreach, including SMC camps, moonlight clinics, and the “4-6 tent model” to reach pockets of key at-risk populations as well as adolescents and men who could not easily access facility-based services for diagnostic and care services. Importantly, all community mobilization interventions were achieved through direct support to CSOs to carry out such activities.

What are the service delivery outcomes attributed to the DBTA/STAR programs?

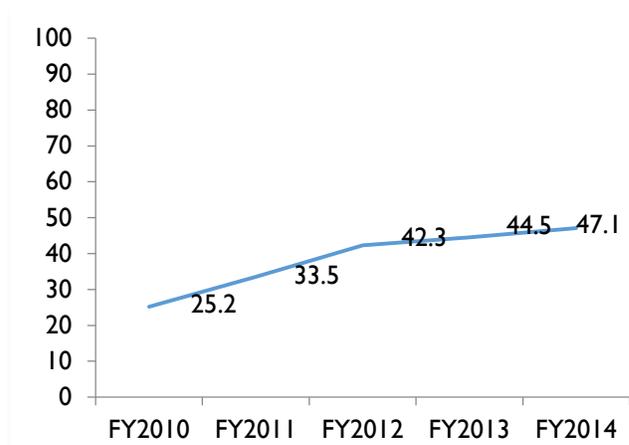
It is difficult to determine the cause-effect relationship between the DBTA interventions, which were largely facility based and to, a small extent, demanded creation at the community level, and service delivery outcomes. As a proxy, it can be argued that the integration of HIV/AIDS services with other services at the health facilities was one way of improving HIV/AIDS service outcomes.

Significant Improvement in HTC Uptake:

As a result of the DBTA project interventions, there was increased uptake of HTC services. The MEEPP APR showed that there was an increase in the number of people counseled, tested, and given their results; this number increased from 937,882 in 2011 to 1,486,633 in 2013. Similarly, findings from the LQAS showed that there was an increase in the percentage of people counseled and tested who received their HIV test results in the last twelve months; this figure rose from **25% in 2010 to 47% in 2014 (Figure 2).**

The increased uptake of HTC services is as a result of the improved quality of service delivery as reported in the client exit surveys, wherein 83% of the clients felt they

Figure 2: Percentage of Patients Who Were Counseled and Received an HIV Test in Last 12 Months and Know Their Results



were appropriately counseled, while three-quarters of the respondents mentioned that the health workers discussed with them specific actions to be taken in light of their HIV test results.

Furthermore, couple testing has improved, as shown in the DBTA LQAS results. There was an increase in the proportion of mothers of children eleven months old and younger who were tested for HIV and received their results with their partners, rising from 76% in 2011 to 94% in 2014 across all supported districts.

Increased enrollment in ART services: As a result of the DBTA interventions in the districts, there was improvement in the numbers of clients enrolled for pre-ART and ART services. As noted in MEEPP APR data, the number of new patients enrolled in HIV/AIDS care annually doubled from 23,600 in 2011 to 40,100 in 2014. As illustrated in Figure 1, the number of outlets providing ART services increased almost four fold over the life of the three DBTAs, increasing from 88 in 2011 to 330 outlets in 2014. This was mainly achieved through the efforts of accreditation support by the DBTAs. The number of new patients started on ART almost tripled from 10,821 in 2009 to 30,920 in 2014. A number of factors contributed to this result, including the roll-out of national policies such as the Option B+ in eMTCT, test-and-treat for special groups, as well as the revision of ART eligibility threshold during the STAR program's implementation period.

No improvement in ART retention: MEEP APR (2011–2014) showed that the percentage of adults and children with HIV known to still be on treatment twelve months after initiation of ART in the DBTA districts remained stagnant; the median figure of 90.8% in 2011 only decreased to 87.8% in 2014 across the STAR-supported districts. However, the majority of client exit survey respondents reported that services improved over time. On average, 50% of the respondents said there was some improvement, while 25% said there was significant improvement.

Increased utilization and uptake of PMTCT services: There was an increase in uptake of couple counseling and testing for HIV during pregnancy. MEEP APR data showed an increase in the number of male partners who were tested and received HIV test results in the PMTCT clinic; the numbers more than doubled over the four years from 19,850 in 2011 to over 52,877 (6% to 15%) in 2014. Despite the increased number of male spouses who were tested, male attendance for couple testing still remains low.

The number of HIV-exposed babies born to HIV-positive mothers who were given ARVs doubled from 3,128 in 2010 to 6,082 in 2014, and 91% of these HIV-positive mothers were given ARVs for PMTCT. Furthermore, all HIV-exposed infants were given co-trimoxazole prophylaxis within two months, pointing to increased utilization and uptake of PMTCT services.

Reduced drop-out of clients on ART: Retention in care and adherence to ART are critical elements of HIV/AIDS care interventions and are closely associated with optimal individual and public health outcomes and cost effectiveness. The percentage of adults and children with HIV/AIDS known to still be on treatment twelve months after initiation of ART decreased from 95% in 2011 to 87% in 2014 across the STAR-supported districts (MEEPP APR 2011–2014).

Increased access to ART for TB patients: There was an increase in ART initiation during TB treatment and improved HIV case detection among TB patients. Data showed an increase in the percentage of registered HIV-positive TB cases who initiated ART across the STARs, with

the district median rising from 12% in 2011 to 77% in 2014. However, this still falls short of the national target of 100%. In most districts, the increase was seen between 2012 and 2013.

Finding and diagnosing patients with TB and HIV/AIDS is a prerequisite for timely TB treatment and ART initiation, and it improves health outcomes among HIV-infected TB patients. Data shows that the median percentage of registered new and relapsed TB cases with documented HIV status in STAR-supported districts rose from 7.5% to 90% between 2011 and 2014. Despite these improvements in clinical care, the DBTAs have had minimal impact on level of community awareness regarding TB. Awareness across the districts that TB is a curable disease only rose from 60% to 77%, and knowledge of at least two signs and symptoms of TB only increased from 61% to 63% over the four years.

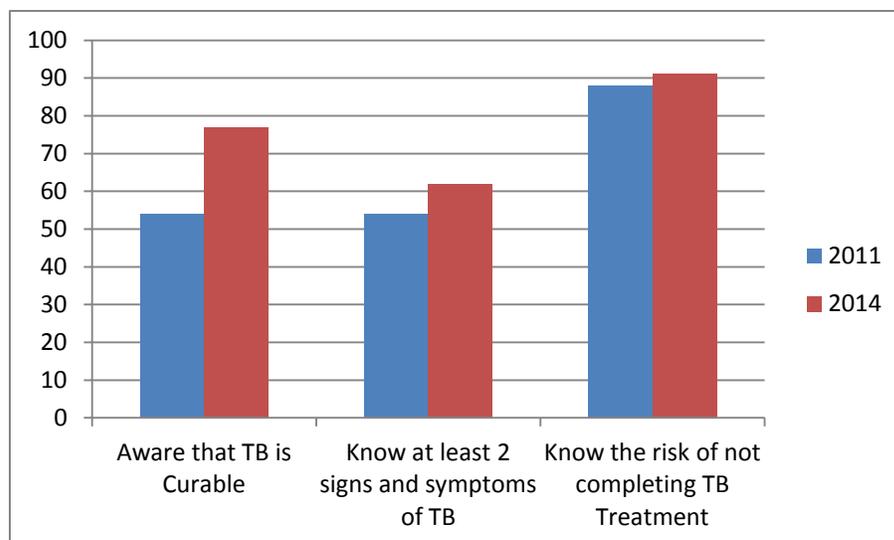
Change in risky sexual behavior and sexual debut before the age of fifteen remained at 9%. LQAS findings showed no major change in the percentage of individuals who had sex with more than one sexual partner in the last twelve months; the figures increased slightly from 14% in 2011 to 15% in 2014. The proportion of individuals who had sex with a non-marital or non-cohabiting sexual partner in the last twelve months remained at 18% over the same period. Condom use during sex with a non-marital or non-cohabiting sexual partner in the last twelve months declined from 67% to 56%, and only 3% of youth knew at least three correct steps for proper condom use.

Increased client confidence in the services: As a result of the DBTA project interventions, there was an improvement in the quality of HIV/AIDS and TB services and increased client satisfaction.

The client exit survey revealed that 75% of respondents reported an improvement in the quality of HIV/AIDS and TB services provided at the health facilities, citing a conducive environment as one of the causes. Almost all clients were satisfied with the way the services were provided to them: 98% felt that they were attended to in a friendly and respectful way; 95% said that they had sufficient privacy; and 96% reported that the services they received were safe. Highlighted improvements included better time management by the health workers, friendlier staff, and the availability of shelters and chairs for clients waiting to receive services. Clients also cited the formation and establishment of family support groups for eMTCT as a pillar that supports eMTCT.

Increased TB community awareness also improved, with 77% of people aware that TB is a curable disease in 2014 compared with 54% in 2011 LQAS year. As illustrated in Figure 3 below, over the same period (2011–2014), the percentage of individuals who knew at least two signs and symptoms of TB increased from 54% to 62%, and those who knew the risk of not completing TB treatment increased from 88% to 91% (LQAS, 2011–2014).

Figure 3: Increased Knowledge about TB



Increased knowledge about sexually transmitted infections (STIs): LQAS (2011–2014) data showed that the percentage of individuals who correctly identified at least two common signs or symptoms of STIs remained low, at 45% among men, and changed from 54% to 61% among women over the four years. The percentage of individuals who knew three or more actions to take when infected with an STI slightly changed from 36% to 42%.

Findings show anecdotal improvements in uptake of HIV testing and identification of HIV-positive individuals through integrating HTC in outpatient, maternity, and outreach services. Integration appears to have improved linkage to HIV/AIDS care, but serious weaknesses in retention on ART remain. There were no data to assess retention in pre-ART care or adherence to ART.

What was the effect of integration of HIV/TB, HIV/Family Planning, HIV/AIDS and health on overall health outcomes?

The effect of integration was assessed based on outcomes related to non-HIV/AIDS-related services within the general population and, where data were available, among PLHIVs. HIV services were integrated with other health services within the primary healthcare context, such as maternal health, child health, family planning, and TB care. In some cases, like TB care and maternal health, clear improvements were observed in service outcomes related to non-HIV/AIDS-related services. There were also notable gaps, such as weak service integration with adolescent health. The evaluation team looked at the changes that occurred shortly after integration in 2010 and after three years of implementation in 2014 but did not compare before and after service integration.

Effect of integration on HIV/AIDS and TB service outcomes: The integration of HIV/AIDS and TB care increased HIV testing and ART initiation among TB patients. This was confirmed by the MEEPP APR 2009–2014 service data, which showed that the number of registered new and relapsed TB cases with documented HIV status increased, with the district median of 8% to 90%. The number of TB patients started on treatment also increased from 14% to 79% over the four-year period.

Increased uptake of ART for TB patients: Patients in TB treatment were also tested for HIV. Findings of the MEEP APR 2011–2014 data showed an increase in the percentage of registered TB cases who were HIV-positive and accessed ART services across the DBTA/STAR project areas, with the district median rising from 12% in 2011 to 77% in 2014. However, this still falls short of the national target of 100%. In most districts, the increase was between 2012 and 2013.

Detecting and diagnosing patients with TB and HIV/AIDS is a prerequisite for timely TB treatment and ART initiation, as this improves health outcomes among HIV-infected TB patients. MEEP APR 2011–2014 data showed that the median percentage of registered new and relapsed TB cases with documented HIV status rose from 7.5% to 90%.

Effect on maternal health outcomes: Implementing PMTCT in antenatal care (ANC) may have influenced the uptake of ANC services and births in health facilities from 2011 to 2014 across the DBTAs. The proportion of mothers receiving ANC at least four times rose from 43% to 53% over this period. This did not vary much (54% in 2014) when compared with the total LQAS USAID districts. There were also improvements in the number of births registered in the health facilities, with the proportion of mothers who delivered in health facilities increasing from 60% to 74% over the four years. This did not vary much (75% in 2014) when compared with the total LQAS USAID districts.

Effect of integration on HIV/family planning outcomes: Family planning uptake, though still low, showed improvement. The percentage of sexually active women age fifteen to forty-nine years who used a modern method of family planning increased from 31% to 37%. This shows better performance when compared with the total USAID LQAS districts, which reduced from 37% to 35% over the same period.

Effect on child health outcomes: Integrated outreach services covered: ANC, immunization, EID, HTC, and eMTCT. LQAS 2011–2014 data showed general improvements in child health outcomes. The percentage of children aged twelve to twenty-three months who were fully vaccinated increased from 58% to 74%; this was a greater improvement compared with the total LQAS USAID districts at 56% to 67%, respectively.

Effect on other health services outcomes: In addition to delivering HIV/AIDS services at health centers, the DBTAs also conducted integrated outreach services using a “4-6 tent model,” whereby HIV/AIDS services were provided alongside other medical services. This approach registered many patients coming in for non-HIV/AIDS-related services, but data were not readily available for this assessment. However, there seemed to be little impact on practices like household sanitation, hygiene, and household nutrition. The percentage of individuals who wash their hands with soap after visiting the toilet remained at 60% over the four-year period.

COST EFFICIENCY

To what extent can the DBTA design be considered cost efficient in strengthening capacity of districts and CSOs to improve health service delivery?

Within the context of this evaluation, *cost-efficiency* refers to a rough assessment of value-for-money (VFM) that considers an analysis of both the level of investment and what the project has achieved given the level of spending. This assessment is not a comprehensive economic

evaluation (cost-effectiveness) or thorough assessment of efficiency of the project. It was agreed that the amount time and resources available for the cost-efficiency assessment were not adequate to permit a detailed efficiency assessment.

VFM is a term used to assess whether or not an organization has obtained the maximum benefit from the goods and services it both acquires and provides, with the resources available to it. Some elements may be subjective, difficult to measure, intangible, and misunderstood. Judgment is therefore required when considering whether VFM has been satisfactorily achieved or not. It not only measures the cost of goods and services, but also takes account of the mix of quality, cost, resource use, fitness for purpose, timeliness, and convenience to judge whether or not, together, they constitute good value. Achieving VFM is often described in terms of the “three Es”: *economy*, *efficiency*, and *effectiveness*. The definitions of the three are as follows:

- **Economy:** Careful use of resources to save expense, time, or effort
- **Efficiency:** Delivering the same level of service for less cost, time, or effort
- **Effectiveness:** Delivering a better service or getting a better return for the same amount of expense, time, or effort

This section provides a rough assessment of VFM for each of the STARs projects. Within the resource constraints for doing this evaluation, this assessment was able to assess *economy*, and to some extent *efficiency*, but was not able to measure the *effectiveness* of the projects given the level of effort required do this and the resources available (time and money) to undertake the assessment.

Overall Project Spending

Table 4 provides details of annual spending by each project. Since inception of the projects up until end of FY14, the three projects have spent a total of about \$103 million.

Table 4. Annual Expenditure by Project

| US \$ | FY09 | FY10 | FY11 | FY12 | FY13 | FY14 | TOTAL |
|---------|-----------|-----------|-----------|-----------|-----------|-----------|--------------------|
| STAR-E | | 7,268,918 | 6,578,800 | 7,291,409 | 6,737,277 | 8,211,381 | 36,087,785 |
| STAR-SW | | | 6,052,665 | 6,695,637 | 8,838,639 | 8,047,211 | 29,634,152 |
| STAR-EC | 1,289,882 | 4,960,701 | 8,135,570 | 6,424,473 | 8,310,362 | 8,647,004 | 37,767,992 |
| | | | | | | Total | 103,489,929 |

Spending by Program Area, FY13 and FY14

This assessment transitioned into on a detailed review and analysis of the PEPFAR expenditure reports for FY13 and FY14. However, the assessment made an attempt at reviewing the programs’ expenditures for the whole period of 2010–2014. Unfortunately, expenditure information for FY10, FY11, and FY12 are not detailed enough to permit a proper trends and overall analysis of project spending. Based on the PEPFAR expenditure analysis data for FY13 and FY14, a review of the spending allocations by program area was considered (see Tables 5 and 6).

Table 5. Spending for FY13, Broken Down by Program Area

| | STAR-SW | STAR-E | STAR-EC | TOTAL | % of total |
|--|------------------|------------------|------------------|-------------------|------------|
| Facility-Based Care, Treatment, and Support | 1,405,049 | 801,785 | 1,410,921 | 3,617,756 | 15.1% |
| Community-Based Care, Treatment, and Support | 1,229,417 | 451,661 | - | 1,681,078 | 7.0% |
| PMTCT | 1,781,684 | 1,323,133 | 1,316,958 | 4,421,775 | 18.5% |
| Voluntary Medical Male Circumcision | 1,317,233 | 1,540,659 | 3,311,005 | 6,168,897 | 25.8% |
| HIV Testing and Counselling | 263,447 | 511,485 | 973,464 | 1,748,396 | 7.3% |
| Post-exposure Prophylaxis | - | - | 50,370 | 50,370 | 0.2% |
| Blood Safety | - | - | - | - | |
| Laboratory | 1,524,577 | 263,253 | 433,100 | 2,220,930 | 9.3% |
| Infection Control | 263,447 | 267,587 | - | 531,033 | 2.2% |
| Orphans and Vulnerable Children | - | - | - | - | |
| SORP-General Population | 263,447 | - | 489,572 | 753,019 | 3.2% |
| Key Populations-PWID | - | - | - | - | |
| Key Populations-FSW | 174,646 | 40,122 | 39,510 | 254,278 | 1.1% |
| Key Populations-MSMTG | - | - | - | - | |
| Other Vulnerable Populations-Prevention | 615,693 | 135,522 | 152,782 | 903,996 | 3.8% |
| Medically-Assisted Therapy | | | | | |
| SI | | | 8,994 | 8,994 | 0.04% |
| Surveillance | | | | | |
| HSS | | 1,402,071 | 123,684 | 1,525,754 | 6.4% |
| TOTAL | 8,838,639 | 6,737,277 | 8,310,362 | 23,886,278 | |

Table 6. Spending for FY14 and 2 Years Combined, Broken Down by Program Area

| FY 14 | STAR-SW | STAR-E | STAR-EC | TOTAL | | 2 Years Combined | |
|--|------------------|------------------|------------------|-------------------|-------|-------------------------|---------------|
| Facility-Based Care, Treatment, and Support | 2,066,045 | 1,357,224 | 1,030,543 | 4,453,812 | 17.9% | 8,071,568 | 16.5% |
| Community-Based Care, Treatment, and Support | 531,622 | 1,046,559 | 711,362 | 2,289,542 | 9.2% | 3,970,621 | 8.1% |
| PMTCT | 2,390,329 | 699,714 | 908,799 | 3,998,842 | 16.1% | 8,420,617 | 17.3% |
| Voluntary Medical Male Circumcision | 786,266 | 1,046,921 | 3,129,702 | 4,962,889 | 19.9% | 11,131,786 | 22.8% |
| HIV Testing and Counselling | 461,982 | 261,811 | 1,123,597 | 1,847,389 | 7.4% | 3,595,786 | 7.4% |
| Post-exposure Prophylaxis | 9,451 | - | - | 9,451 | 0.0% | 59,821 | 0.1% |
| Blood Safety | - | - | - | - | | - | |
| Laboratory | 650,148 | 378,456 | 441,547 | 1,470,150 | 5.9% | 3,691,080 | 7.6% |
| Infection Control | 80,665 | 104,906 | - | 185,571 | 0.7% | 716,605 | 1.5% |
| Orphans and Vulnerable Children | - | 158,134 | 390,617 | 548,751 | 2.2% | 548,751 | 1.1% |
| General Population –Prevention | 232,569 | 105,691 | 400,938 | 739,198 | 3.0% | 1,492,217 | 3.1% |
| Key Populations-PWID | - | - | - | - | | - | |
| Key Populations-FSW | 299,045 | 89,048 | 44,372 | 432,465 | 1.7% | 686,744 | 1.4% |
| Key Populations-MSMTG | 160,934 | - | - | 160,934 | 0.6% | 160,934 | 0.3% |
| Other Vulnerable Populations-Prevention | 378,155 | 845 | 232,443 | 611,444 | 2.5% | 1,515,440 | 3.1% |
| Medically-Assisted Therapy | - | - | - | - | | - | 0.00% |
| SI | | 1,303,023 | 119,104 | 1,422,127 | 5.7% | 1,431,121 | 2.9% |
| Surveillance | | 216,614 | 113,979 | 330,594 | 1.3% | 330,594 | 0.7% |
| HSS | | 1,442,434 | | 1,442,434 | 5.8% | 2,968,189 | 6.1% |
| TOTAL | 8,047,211 | 8,211,381 | 8,647,004 | 24,905,596 | | 48,791,874 | 100.0% |

Results in Tables 5 and 6 provide insight into how each of the projects allocated its resources across the different program areas. Key findings from these results are:

- I. Each of the three projects allocated its resources differently, and as such there were differences in priorities for each project. The only priorities consistent across all three projects were PMTCT and VMMC. However, for PMTCT, there was a change in priorities in FY14, and PMTCT received a relatively lower proportion of the funds allocated by STAR-E and STAR-EC.

2. Care and treatment took up nearly 25% of total funds for the two-year period. This is in line with the government of Uganda’s priorities, as noted in the Ugandan National HIV Prevention Strategy.
3. The key priorities for all three projects were: care and treatment, VMMC, PMTCT, HTC, and laboratory. These priorities took up about 80% of total resources for the two years. The remaining program areas (infection control, blood safety, prevention for general population and key populations, and orphans and vulnerable children (OVCs)) took up the remaining 20%. These priorities are aligned to what the USAID Mission Uganda provided as guidance for how money should be spent over the project life.

Spending by Level

Table 7 provides details on the levels where funds were spent. Results show that spending at the district level (to support direct provision of HIV/AIDS services) took less than half (57.8%) of the total resources for all three projects over the two-year period. It can be argued that spending on SI and health systems strengthening (HSS) was at the program level. A more detailed assessment is required to provide further information on whether spending on SI and HSS were directed at improving systems at the district and health-facility levels.

Table 7. Breakdown of Expenditure for FY13 and FY14 (Combined) by Level of Spending

| Level of Spending | STAR-SW | STAR-E | STAR-EC | TOTAL | |
|------------------------------|-----------|-----------|-----------|------------|-------|
| Investment (Site Level) | 1,808,814 | 2,069,053 | 1,551,930 | 5,429,797 | 11.1% |
| Recurrent (Site Level) | 7,882,074 | 1,949,836 | 8,082,929 | 17,914,839 | 36.7% |
| Program Management | 3,051,380 | 6,828,682 | 5,617,492 | 15,497,554 | 31.8% |
| Strategic Information | 1,669,332 | 2,658,282 | 1,273,913 | 5,601,527 | 11.5% |
| Health Systems Strengthening | 2,474,250 | 1,442,804 | 431,102 | 4,348,156 | 8.9% |
| | | | | 48,791,874 | |

Results in 7 show that nearly 32% of total project funds (for all three projects combined and over the two-year period) was spent on program management. While the critical role of program management cannot be understated in ensuring the achievement of project objectives and proper use of funds, the current structure of project management is inefficient and is the main cause of high management costs. For instance, there are up to three tiers of management for these projects (international, national, and lower-level implementers and partners). At each of these levels, both personnel and other management-related overheads are incurred. This approach to management is inefficient and results in further inefficiencies. For example, for STAR-SW, in FY13, a total of \$1.41 million (17.6% of total annual spending) was spent on program management. Of this \$1.41 million, about \$1.22 million (86.4%) was spent on “above national” level program management, implying that this is not spent in-country.

These findings point toward some degree of allocative inefficiency; a more efficient allocations of project resources would spend funds in-country on actual project targets. Ultimately, a large percentage of funds were spent on program management outside the country, with a relatively high level of spending on the enabling environment, and high levels of spending outside the country to administratively support the project. This approach to supporting improvements in service delivery is both expensive and not sustainable in the long run.

Cost drivers

A further look into expenditures on specific line items reveals the main cost drivers. This assessment provides better insight about the efficiency of resource allocation and use. Table 8 shows that expenditure on personnel took up 38% of total resources for all three projects over the two-year period (FY13 and F14). This is personnel expenditure at site, national, and above-national levels. A more detailed assessment of the breakdown of personnel expenditure at the different levels is recommended in order to provide further insights about allocative efficiency. From an *economy* point of view, it is highly probable that this level of spending on personnel is inefficient.

As noted earlier, program management took up near 32% of total resources for the three projects over the two-year period. Program management is the second highest cost driver for these projects. This level of spending on program management is inefficient and cannot be sustained if to the programs must achieve more outcomes with fewer resources.

Table 8. Cost Drivers of Expenditures FY13 and FY14 (Combined) in All Three Projects

| US \$ | FY13 | FY14 | TOTAL | % of total for 2 years |
|------------------------------|-----------|-----------|------------|------------------------|
| Personnel (at all levels) | 9,546,174 | 9,111,340 | 18,657,514 | 38.2% |
| Program Management | 6,606,900 | 8,890,654 | 15,497,554 | 31.8% |
| Other General/Administrative | 4,571,265 | 6,752,808 | 11,324,073 | 23.2% |
| National Level | 3,940,874 | 4,545,220 | 8,486,094 | 17.4% |
| Travel and Transport | 3,511,234 | 3,719,979 | 7,231,214 | 14.8% |
| Above National | 2,056,802 | 3,619,391 | 5,676,194 | 11.6% |
| Training (Site Level) | 3,021,047 | 1,868,978 | 4,890,025 | 10.0% |
| Other Supplies (Site Level) | 2,243,895 | 2,499,509 | 4,743,404 | 9.7% |
| Consultants | 158,229 | 329,434 | 487,663 | 1.0% |

These expenditure categories are standard as required and reported in the PEPFAR expenditure analysis. See also <http://www.pepfar.gov/documents/organization/195700.pdf>. An effort has been made to explain some of the categories below.

In the paragraph below the previous Table 7, the explanation does not suggest that 32% includes personnel. The explanation attempts to explain the inefficiencies of having a three-tier system of program management and how each tier would require its own resources.

The third cost driver is “other general expenses,” which mainly support the administrative functions of the projects at site and national levels. These expenses include, but are not limited to: office utilities and rent; staff meetings; telephone systems; staff recruiting; bank charges; office equipment; computer equipment for staff and facilities; vehicle purchases; printing and stationery; contractual services, including legal, accounting, and consultation; trainers; costs associated with GHC fellows; data entrants and clerks; translation of program information, education, and communication (IEC) materials into local languages; temporary staff; and materials related to the casual labor loading program. Table 8 shows that these expenses took up 23% of total project funds, which is considered relatively high. Potentially, cutting back spending on these items could lead to efficiency gains.

The three projects spent 11.6% of their total resources on “above national” expenses. These include personnel and other overhead costs supported by the projects. Expenditure of \$5.6 million at this level is considered inefficient, despite the critical and important role the international support plays in the projects.

Comments on Value-for-money

The following issues should be noted in relation to the findings on VFM for the three projects:

Economy

- As noted earlier, program management costs (and above-national costs) took up a significantly large proportion of the total project budget. This is partly due to the three-tiered management structure, with negotiated salaries and overheads for each level (above-national, national level, and sub-grantee level). This management structure is inefficient.
- Through KIs, it was noted that USAID supports local governments through a grant that is managed by the SDS project. This support was implemented in parallel with the STARs project, but it targeted the same districts. While the SDS support is directed toward improving the capacity of local governments to implement their mandates, the SDS support and STARs support were not well synchronized, and this resulted in inefficiencies. Most specifically, implementation of some of the activities by STARs project was delayed due to poor coordination and synchronization of activities with SDS.

Efficiency

- **Allocative efficiency:** Results in Table 8 show a relatively high allocation of funds to program management, SI, and HSS, compared with the proportion of funds allocated to supporting actual provision of HIV/AIDS services (prevention, care, and treatment). While the importance of an enabling environment is clear, an allocation of close to 52.2% does not reflect allocative efficiency, considering the needs and gaps in service provision.
- **Technical efficiency:** Although an attempt was made to calculate unit expenditure and benchmark it against the unit costs of implementing similar services for each of the projects, we note that we are not “comparing apples with apples” and that the findings on this should not form the basis for judgments about the technical efficiency of the DBTA model.
- The approach being used for mentoring, training, and supervision attracts costs, particularly related to (a) personnel, (b) training, and (c) travel and transport. A further inquiry into the approaches used by the projects for these is recommended as there are potential efficiency gains in changing the way mentoring, training, and supervision are done.

V. CONCLUSIONS

The evaluation team examined and reported its findings with reference to the SOW's seven evaluative questions. On the basis of our examination, with input from multiple informants and available documentation, we conclude the following:

IMPROVED CAPACITY AND SUSTAINABILITY

- 1. Approaches implemented under the DBTA/STAR programs:** The three DBTA/STAR programs have achieved the program objectives and intermediate results to a large extent, especially with respect to increasing availability and accessibility of HIV/AIDS and TB services. There were no major differences across the regions in terms of implementation approaches and results. The evaluation team found that the majority of DBTA approaches used were successful and appropriate for improving accessibility, quality, and availability of integrated health service delivery, as well as health financing and management. The most successful approaches were mentorship and training, HIV/AIDS and TB care integration, and the establishment of community linkages. The success of these approaches was attributed to a conducive HIV/AIDS care environment and the technical competence of the STAR teams. However, resources for priority technical assistance interventions were constrained by specific barriers within the context of operation, which included health systems constraints outside the scope of the project, inadequate human resources, and poor infrastructure.
- 2. Effect of transition from the STAR programs to district grants through SDS:** The discordance between the STAR programs' emphasis on defined facility-based service-delivery results, together with the SDS program's emphasis on the provision of grants focused on strengthening decentralized systems, resulted in limited synergy between the two elements of the DBTA program. Furthermore, there was poor coordination between SDS and STAR in the East and East-Central regions, as well as unclear expectations for beneficiaries and local government regarding the role of SDS versus STAR.
- 3. Sustainability:** While technical initiatives introduced under the STAR programs were sustainable, the STAR programs' limited emphasis on health systems strengthening, on the development of programmatic linkages between districts and health facilities, and on ways to address financial resources required to maintain the program's monetary investments undermined prospects for long-term sustainability.

CONTRIBUTION TO IMPROVED HEALTH SERVICE DELIVERY

- 1. Use of strategic information:** Under the DBTA/STAR programs, capacity to collect and use information for health systems management purposes specific to HIV/AIDS and TB services was significantly enhanced. The STAR project strengthened the capacity of all participating districts to apply the LQAS methodology in annual community surveys. LQAS allowed generation of district-specific data for strategic planning and improvement of programs. KIs with DHTs, service providers, and district leadership confirmed the use of LQAS and HMIS data in planning and data dissemination.
- 2. DBTA contribution to improved health service delivery and related health outcomes:** The DBTA/STAR programs were major contributors to the improvement of health service delivery, especially in HIV/AIDS and TB services. The program contributed to the expansion of quality HIV/AIDS and TB service delivery to lower-level health facilities. As a result of improvements in service delivery, the evaluation found significant improvements

in HIV/AIDS and TB service-delivery outcomes, including increases in HTC uptake for individuals and couples, PMTCT uptake, and pre-ART enrollment and ART initiation. However, while ART initiation improved, ART retention remained stagnant despite efforts.

3. **The effects of integration on health outcomes:** Integration, as supported by the DBTAs, had a clear impact on health outcomes specifically related to HIV/AIDS service integration with TB and maternal health. The integration of HIV/AIDS and TB dramatically increased HIV testing and ART initiation among TB patients. However, outcomes related to HIV/AIDS integration with other health service areas did not show much improvement, and there were integration gaps, such as with adolescent health and chronic care.

COST EFFICIENCY

1. **Cost efficiency:** While each of the STAR programs has been able to achieve substantial progress over the life of the projects, inefficiencies in program management suggest that more could have been achieved with the level of investment.

The evaluation team has assessed that the three STAR programs were successful in terms of meeting the requirements of their technical assistance contracts. However, an increased focus on health systems strengthening, sustainability, integration of services, and cost efficiency could have facilitated the programs' reaching the full potential of a comprehensive District Based Technical Assistance (DBTA) program.

VI. RECOMMENDATIONS

The evaluation team recommends the following changes to improve the design of future DBTA projects:

- 1. To strengthen DBTA capacity-building approaches, the design of future DBTA projects should address the strengthening of multiple components of the health system, since many factors affect technical assistance uptake.** The evaluation team especially recommends continued support for DBTA's strengthening of facility-level laboratories. The DBTA/STAR programs' advancements in the quality of facility-based laboratories, laboratory equipment, and laboratory technicians, as well as support for the innovative development of laboratory hubs, merits continued inclusion under future DBTAs. Such recognition under future DBTAs should be accompanied by an explicit program of district and national-level advocacy that will lead to budgetary line-item support for laboratory systems within the period of time covered by the next DBTA projects.
- 2. Clearly delineate roles, responsibilities, and programmatic parameters among multiple programs working in the same district to improve coordination and collaboration:** The evaluation notes that there was a much stronger collaborative relationship between SDS and STAR-SW compared with the other STAR programs. Working in close collaboration, SDS and the DBTA ensured proper coordination of the planning process, including sharing of approved work plans, budgeting with other USAID-funded health projects, and HIV/AIDS initiatives with district political and technical teams. Clearly delineating roles, responsibilities, and programmatic parameters will also improve understanding among beneficiaries and local governments of what can be expected from the various programs being implemented in their communities.
- 3. Invest in developing the leadership capacity of existing health management committees (HMCs) at the health-facility level:** Such investment should center on strengthening the role of the HMCs as a focal point for a proactive quality assurance linkage between the health services and the communities they serve and would constitute a holistic approach to managing community engagement and improving health outcomes.
- 4. In collaboration with the DBTA's participating districts, establish and maintain a database to determine the extent of cost sharing among districts, with reference to DBTA interventions to improve long-term sustainability:** By establishing such a database, DBTAs and USAID will foster an environment of understanding between districts and their partner DBTAs that will strengthen the potential for a knowledge-based program under which DBTAs, USAID, and local governments will be able to identify ways in which districts can progressively and realistically assume fiduciary responsibility for selected DBTA initiatives.
- 5. Continue to support maintenance and utilization of the LQAS methodology for data collection, strategic planning, and improvement of programs:** The current DBTAs have established the value of LQAS for district management and evaluation purposes. Continued short-term investment should focus on refresher training of district data collectors and on continued development of user-friendly mechanisms and processes designed to enhance the effective use of LQAS for district-level monitoring and response to performance indicators. At the same time, it is recommended that USAID work with the MoLG to build upon the expressed interest of the government to progressively institutionalize support for the LQAS.

6. **Continue to support community quality improvement initiatives to strengthen linkages between health facilities and the communities they serve and to improve quality of care in service delivery:** Current DBTA initiatives have made significant progress in development of QI linkages between the health facilities and the communities they serve. Continued development of these linkages should focus on progressive institutionalization of the capacity of health services to effectively identify ways to enhance client satisfaction and sustained utilization of HIV/AIDS and TB services. Improvements in quality of care at the community and facility level have the potential to positively impact ART retention and other benefits of HIV/AIDS and TB service decentralization. Lastly, there is a need to strengthen measurements of the parameters of quality and the utilization of results in QI interventions.
7. **Integration should be expanded to include other key health areas:** There is need to review whether strengthened facilities can take on other key health areas, including chronic care, integration of out- and inpatient services, and facility management. This would require integrated access to records, ability to provide daily ART regimens, and multiskilled health workers. Furthermore, the design of the intended integration should be developed in parallel with clear indicators to measure the effectiveness of integrating services.
8. **Design DBTA programs that rigorously focus on the reduction to minimal necessary levels of the percentage of administrative support costs required to sustain DBTA technical assistance and DBTA operations to promote cost efficiency and value for money:** Such reductions should be applied at all three levels (international, national, and sub-grantee) of DBTA program management. The focus of such reductions should be on promoting cost efficiency and VFM with an explicitly forward-looking and transparent orientation toward the districts' capacity to progressively absorb programmatic costs during the execution and at the completion of the DBTAs' contracts.

ANNEX A. STATEMENT OF WORK

STATEMENT OF WORK FOR EVALUATION OF USAID/UGANDA'S DISTRICT-BASED TECHNICAL ASSISTANCE (DBTA) PROJECTS, STRENGTHENING TUBERCULOSIS AND HIV/AIDS RESPONSES (STAR) PROJECTS IN EAST, EAST-CENTRAL, AND SOUTH-WEST UGANDA

INTRODUCTION

The STAR projects in East, East-Central, and South-West Uganda were the first in USAID/Uganda's District Based Technical Assistance (DBTA) model featuring regional focus on improving accessibility, quality, and availability of integrated health service delivery as well as health financing and management. The STAR program is implemented by Management Sciences for Health (MSH) in East Uganda, by John Snow International (JSI) in East-Central Uganda, and by Elizabeth Glaser Pediatric AIDS Foundation (EGPAF) in South-West Uganda, covering thirty-four districts in total.

Working closely with the Ministry of Health and through district health management teams (DHMTs), district councils, health facilities, and communities, the projects' goal is to increase access to, coverage of, and utilization of quality comprehensive HIV/AIDS and TB prevention, care, and treatment services within district health facilities and their respective communities. This will be achieved through the following objectives: (a) strengthening decentralized HIV/AIDS and TB service delivery systems; (b) improving the quality and efficiency of HIV/AIDS and TB service delivery within health facilities; (c) strengthening networks and referrals systems to improve access to, coverage of, and use of HIV/AIDS and TB services; and (d) increasing demand for comprehensive HIV/AIDS and TB prevention, care, and treatment services.

All three STAR projects are designed to strengthen systems at the decentralized level to facilitate improved delivery and uptake of HIV/AIDS and TB services, including district-led performance reviews to help identify coverage and service gaps. Systems include, but are not limited to, leadership, management, health management information systems (HMIS), and human resources for health, supply chain management, SI, infrastructure, and laboratories. An efficient and transparent grant mechanism for funding and providing technical support to civil society organizations (CSOs) to facilitate behavior change and increase uptake of comprehensive services is also a critical component of these projects.

This approach is closely linked to or complemented by USAID's Strengthening Decentralization for Sustainability (SDS) project, which was designed to improve systems and coordination at the decentralized level. SDS enhances primary health care (PHC) support through quarterly coordination meetings, district-integrated supervision to health centers, transportation of lab samples, HIV/AIDS care and treatment, and monthly follow up of community-based (CB) directly observed therapy short courses (DOTSs). Some of these activities were initially covered under the STAR portfolio (i.e., the healthcare management support led by districts) until a decision was made to transition the activities to SDS as part of Grant A activities. While the SDS project itself will not be part of this evaluation, it will be valuable to understand how it was implemented and how it collaborated with the STARS to affect the anticipated project outcomes.

STAR-E and STAR-EC began in 2010 and STAR-SW started in 2011, all were scheduled to end together in March 2015. This document outlines a statement of work for a program evaluation of the three STAR projects as one comprehensive program across three geographical regions.

EVALUATION

Purpose of the Evaluation

The purpose of the evaluation is to establish the extent of efficiency and effectiveness of the USAID/Uganda's District Based Technical Assistance (DBTA) project model that features comprehensive and integrated service delivery towards improving access, quality and availability of integrated health service delivery as well as health financing and management tailored for specific regions. Integrated regional based health service delivery approaches are a key feature of the current USAID Uganda's Development Objective 3 targeted at improving health and nutrition in targeted populations. This evaluation will therefore provide key lessons on the implementation process and value of the approach.

Note that the focus is not so much on what targets have been achieved as this is already largely known from the ongoing performance monitoring processes, but more on understanding how this model and approach applied across the different regions affected the project outcomes.

Audience

The primary user of the evaluation findings is USAID /Uganda Mission staff, other United States government agencies; USAID funded implementing partners (IPs), Ministry of Health, and other national and international stakeholders with interest in decentralized HIV/AIDS programing and SI systems.

Evaluation Questions

Specific questions to be addressed by the evaluation will be divided into: (1) improved capacity and sustainability, (2) service delivery, and (3) cost efficiency.

Improved Capacity and Sustainability

The DBTAs were designed to strengthen decentralized service delivery systems for improved uptake of quality HIV/AIDS and TB services, including the institutionalization of evidence-based program management. Improved district capacity is defined/manifested as the district's ability to:

- Deliver quality health services that meet national and/or international standards
- Provide leadership, management, functional health management information systems (HMIS), human resources for health, supply chain management, financial management systems, SI, physical infrastructure including laboratories for the delivery of quality health services
- CSOs' increased advocacy for efficient and effective service delivery within the health sector

Sustainability is important for the results achieved through these investments to continue making a difference into the future. The deliberate focus on working with the district local governments as the key provider of health services was to ensure that structures, processes and resources are strengthened, functional and in place to continue providing services even after the end of USAID's support. This evaluation will attempt to inform the USAID Uganda Mission on the likelihood that results of the DBTA program can be sustained after USAID support. The evaluation will answer the following questions in this regard:

1. Approaches utilized by the STARS to strengthen districts and local governments to deliver health services, have differed and evolved over time. What are: a) the most successful and b) least successful approaches applied by STAR-E, STAR-EC and STAR-SW respectively towards strengthening the institutional, management, and human capacity of CSOs and local governments to deliver health services? What are the facilitators and barriers of these approaches to achieving results? Are the approaches used and results achieved for old/established and relatively new/naive districts significantly different?
2. What was the effect of transition of direct implementation of district led health care management activities from the STARS projects to district grants through SDS?
3. To what extent has the STARS program developed, established and/or strengthened management and technical structures at the local government and health facility levels that will sustainably improve quality, availability and accessibility of HIV/AIDS and TB services?
4. What technical capacity in strategic information have the STARS developed, built and/or strengthened? Where has this capacity been developed, built and or strengthened? How is it manifested/demonstrated? How sustainable is this capacity after the STARS' exit?

Service delivery

5. How has the support by the STARS contributed to improved health service delivery? What are the Service delivery outcomes attributed to the DBTAs (USAID is not asking for a rigorous impact evaluation here; the team may use comparisons it deems appropriate)?
6. What was the effect of integration of HIV/TB, HIV/Family Planning, HIV/AIDS and health on overall health outcomes?

Cost Efficiency

Efficiency refers to the transformation of inputs into results. It is the extent to which the STARS program has converted its resources economically into results in order to achieve the maximum possible outputs, outcomes, and impacts with the minimum possible inputs. This analysis will include desk analysis of data and documents on each of the three projects. The primary question to be answered by the evaluation is:

7. To what extent can the DBTA design be considered cost efficient in strengthening capacity of districts and CSOs to improve health service delivery? Evaluation team is encouraged to make use of the recent PEPFAR expenditure analysis.

METHODOLOGY

The evaluation will apply cross-sectional design using mixed method approach i.e. using both quantitative and qualitative methods. The evaluation team will in build before and after methods to understand changes that could be linked to the program. The evaluation team is expected to propose and use sound sampling techniques to determine districts, CSOs and facilities to be visited and from which data will be collected.

Suggested data collection methods include:

1. *Review of Program Documents and Related Literature:* There are several program related documents that have been produced by the three projects. The evaluation team will be provided access to these documents for review. These documents may include solicitation documents, annual work-plans, Performance Management Plans (PMPs), progress reports (e.g. quarterly, semi-annual and annual reports), district and health sector planning, strategy policy and performance documents etc. In addition to these documents, evaluation team may access service delivery data through DHIS-2. The evaluation team will decide on the type of analysis that can be conducted using these secondary data sources in order to answer the evaluation questions.
2. *Key Informant Interviews (KII):* Using a structured questionnaire comprising primarily of open ended questions, the evaluation team will conduct in-depth interviews with respondents from Ministry of Health, USAID, local government, non-government stakeholders and health facility managers and service providers in implementation areas of the three projects. Other respondents will be drawn from the SDS, Capacity, SURE projects, and, sampled CSOs in the respective zones of influence.
3. *Focus Group Discussions:* Focus group discussions (FGD) will be another method that could be used to collect data from STARS' stakeholders. These may include staff from local governments, partner organizations, CSOs, and, clients who have utilized services offered through these projects, etc.
4. *Survey of Key Stakeholders:* It is also suggested that the evaluation team consider conducting a survey of a sample of clients/beneficiaries in selected districts where these projects were implemented. This survey could be used to assess the extent to which the STARS' approach was effective in delivering the services. This data collection may be complemented with data from the LQAS data.

The evaluation team will develop tools and detailed guidance for data collection and work closely with implementing partners, District staff and USAID/Uganda to identify appropriate respondents. All data collection instruments and guides will be approved by USAID/Uganda prior to the beginning of fieldwork.

The evaluation team will propose data analysis strategies and tools for both the qualitative and quantitative data. The team will be expected to conduct trend analysis; comparisons of performance and changes in relatively new districts against the older ones as appropriate and any other comparisons that could highlight achievement or lack of achievement of positive effects of these projects. Data disaggregation and analysis by gender and age to establish the differential effects of the project on men, women and different age groups will also be expected. The team will propose other analysis approaches. The evaluation team shall describe the type of software for quantitative and qualitative data analysis they propose to use.

DELIVERABLES

- A. **Inception report** showing the evaluation design, a detailed evaluation plan with timelines and data collection tools. A filled evaluation design matrix following the template in attached as Annex I should be included in the Inception report. The report should also provide an overview of the methodology that will be used to select areas to be visited and respondents/participants.
- B. **Oral Presentation:** Power Point presentation (including hand-outs) to:

- a. USAID alone
- b. USAID and each of the three DBTA projects being evaluated
- c. USAID, the DBTAs, and other selected stakeholders.

The main presentation will normally be for 60 minutes covering the major findings, conclusions, and lessons learned, and allowing for about 30 minutes of discussion and feedback.

- C. **First Draft Evaluation Report:** The content should cover all the main elements of the report including major findings, conclusions, lessons learned, and relevant annexes. The input from the oral presentation sessions should also be incorporated in the report. The first draft should be 15-20 pages discussing the overall DBTA approach, about 10-15 pages standalone (pullouts) for each of the DBTA projects being evaluated and any other annexes
- D. **Final Draft Evaluation Report:** A complete report presented in the agreed-upon format and incorporating comments from USAID and other stakeholders.
- E. **Cleaned labeled and ready to use electronic copies of datasets** collected through fieldwork and cleaned ready to use electronic copies of FGD analyses if any. In addition, copies of all instruments used in data collection must be separately delivered to USAID.
- F. **Final Report:** The team leader will submit a final report within one week of receiving final comments from USAID including those from other stakeholders. The core report should be less than 60 pages, **including** project specific pullouts but **excluding** annexes.

TEAM COMPOSITION

The evaluation will be conducted by an external evaluator, and team that may include international and Ugandan team members. The evaluation team must include one team leader and three or more senior experts and may include research assistants/middle level evaluators as need be. Between them, the team must have:

- 1) A senior evaluator/M&E Expert
- 2) A senior public health professional with vast experience in PEPFAR programming
- 3) Expertise in a combination of the major HIV/AIDS program areas
 - a. Behavior Change Communication (BCC)
 - b. Condom promotion and distribution
 - c. elimination of Mother to Child Transmission of HIV (eMTCT)
 - d. Voluntary Medical Male Circumcision (VMMC)
 - e. HIV/AIDS Care
 - f. Anti-Retroviral Therapy (ART)
 - g. Health Systems Strengthening (HSS)
- 4) Skills to interpret Logistics and Commodity Management reports
- 5) Excellent understanding of Medical Records (specifically clinic registers and HMIS) and population based surveys e.g. Lots Quality Sampling Assurance (LQAS)
- 6) A thorough knowledge of Human Resources for Health (HRH)
- 7) A thorough knowledge and understanding of the roles and responsibilities of CSOs in Uganda

- 8) A program specialist with experience in decentralized health service delivery
- 9) Excellent knowledge of Uganda's health care system

The key personnel of this activity will be a Team Leader, a senior HIV/AIDS technical expert and a Decentralized Health Service Delivery Expert. Following award, no changes to key personnel shall be made without approval from USAID/Uganda.

The Team Leader will be responsible for coordinating the activities, assign tasks to team members and supervise performance. S/he will be the main point of contact between the evaluation Activity Manager at USAID/Uganda, QED and the evaluation team. The Team Leader will review all plans and outputs and be responsible for submitting quality products to USAID through QED on a timely basis.

The team leader shall have:

1. A minimum of a Master's degree in development studies, health management, public health, applied research or related fields. PhD is preferred
2. Significant expertise in conducting evaluations with a minimum of ten years' experience in health evaluation management
3. Played significant role designing, managing or executing a minimum of ten evaluations, at least five for a public sector health activities and at least two in Africa or similar region.
4. Been team leader in a minimum of five evaluations, with at least one evaluating activities of similar scale
5. Skills in quantitative and qualitative evaluation design and methods.

Other team members will perform tasks in a professional manner and assist the Team Leader to develop and review deliverables.

Senior HIV/AIDS technical expert shall have:

6. A minimum of an advanced degree in an area related to public health. PhD is preferred.
7. A minimum of seven years' experience in designing and management of health interventions in HIV/AIDS and TB.
8. Demonstrated excellent knowledge of all PEPFAR programming
9. Thorough knowledge of all PEPFAR program areas
10. Participated in a minimum of five evaluations.

Decentralized Health Service Delivery Expert shall have:

1. A minimum of an advanced degree in an area related to public administration, health management, development studies, governance or business management
2. Over ten years of experience in Decentralized Health Service Delivery
3. Knowledge of local governance structures in Uganda
4. A thorough knowledge and understanding of the roles and responsibilities of CSOs in Uganda
5. Experience evaluating and analyzing local government systems, and Government to Government (G2G) activities in Uganda.

DURATION

The task is estimated to begin on or about the beginning of August 2014 and be completed no later than middle of November 2014. Contract may provide for protracted timeline outside the performance time to provide for billing and closure.

LOCATION OF ASSIGNMENT

Kampala and regional field offices, and site visits conducted in the different beneficiary health facilities and communities found in the STARs' zones of influence in Uganda.

MANAGEMENT ROLES AND RESPONSIBILITIES

The USAID Organizational Learning Adviser, will have primary administrative and technical responsibility for the evaluation process. This also includes making the necessary arrangements for USAID inputs and briefings. The Evaluation Team will liaise closely with the Agreement Officer's Representatives (AORs) for STAR-E, STAR-EC and STAR-SW, the USAID Senior Strategic Information Advisor (SSIA) for the Health, HIV and Education Team, M&E Specialist for the Health, HIV and Education Team, The Program Office M&E Specialist on coordination and clarification of USAID requirements and standards for maintaining effective communication on what is to be learned.

The STARs will participate in the design and planning of the evaluation, support with logistics for implementation (avail copies of relevant documents, arrange for meetings and interviews, etc.), participate in the oral presentation and review the draft and final reports.

GOU/MoH will participate in the oral presentation and review of the draft and final reports. Other USAID implementing partners may be invited to presentations.

The evaluation contractor will provide own laptop computer(s) and other equipment necessary for performance of this activity; transport hire (within Kampala and upcountry), office supplies, communication costs, field work expenses (including survey, focus groups and dissemination. The evaluation contractor should also anticipate meeting field costs for government staff who may participate in the evaluation upon approval by USAID.

Implementing Partners, USAID and other stakeholders will not interfere with the evaluation team's capability to collect objective information and to conduct independent investigation relevant for this evaluation, analyze data and make inferences, conclusions and recommendations.

EVALUATION CRITERIA

1. Technical Approach
 - Sub criteria in order of importance
 1. Extent to which the proposed technical approach is clear, logical, well-conceived, technically sound and accurately interprets the evaluation questions provided in this Statement of Work
 2. Extent to which the proposed technical approach demonstrates an understanding of the implementation context
2. Key Personnel
 1. Extent to which the proposed key personnel meet the required qualifications demonstrating the Offeror's ability to conduct the evaluation

ANNEX I: SAMPLE EVALUATION DESIGN MATRIX

| Evaluation Question | Sub- questions (will help you answer the key evaluation question) | Indicator/ Performance Measure (information needed to answer the question) | Data Source (primary and or secondary) | Data Collection Instrument | Data Analysis Plan | Comments |
|---------------------|---|--|--|----------------------------|--------------------|----------|
| Q1. | | | | | | |
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| Q2. | | | | | | |
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| Q3. | | | | | | |
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| Q4. | | | | | | |
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| Q5. | | | | | | |
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| Q6. | | | | | | |
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ANNEX 2: ILLUSTRATIVE EVALUATION REPORT OUTLINE

Cover page (Title and date of the study, names of recipients and the evaluation team).

Table of Contents

List of Acronyms

Executive Summary [Stand-Alone, 1-3 pages, summary of report. This section shall not contain any material not found in the main body of the report]

Main Part of the Report

USAID/Uganda prefers smaller documents approx. 20-25 pages. Additional details can go to annexes

Introduction/Background and Purpose: [Overview of the evaluation. Covers the purpose and intended audiences for the study and the key questions as identified in the SOW)

Evaluation Approach and Methods: [Brief summary. Additional information, including instruments should be presented in an Annex].

Findings: [This section, organized in whatever way the team wishes, must present the basic answers to the key evaluation questions, i.e., the empirical facts and other types of evidence the study team collected, including the assumptions].

Conclusions: [This section should present the team's interpretations or judgments about its findings].

Recommendations: [This section should make clear what actions should be taken as a result of the evaluation].

Lessons Learned: [In this section the team should present any information that would be useful to people who are designing/manning similar or related new or on-going programs in Uganda or elsewhere. Other lessons the team derives from the study should also be presented here].

Annexes: [These may include supplementary information on the evaluation itself; further description of the data collection/analysis methods used; data collection instruments; summaries of interviews; statistical tables, and other relevant documents].

ANNEX 3: CRITERIA TO CHECK THE QUALITY OF THE EVALUATION REPORT

1. The evaluation report should represent a thoughtful, well-researched and well organized effort to objectively evaluate what worked in the project, what did not and why.
2. Evaluation reports shall address all evaluation questions included in the scope of work.
3. The evaluation report should include the scope of work as an annex. All modifications to the scope of work, whether in technical requirements, evaluation questions, evaluation team composition, methodology or timeline need to be agreed upon in writing by the Contracting Officer Representative in this evaluation, who is the USAID staff member responsible for administrative role.
4. Evaluation methodology shall be explained in detail and all tools used in conducting the evaluation such as questionnaires, checklists and discussion guides will be included as Annexes in the final report.
5. Evaluation findings will be gender sensitive. i.e. assess outcomes and impact on males and females.
6. Limitations to the evaluation shall be disclosed in the report, with particular attention to the limitations associated with the evaluation methodology (selection bias, recall bias, unobservable differences between comparison groups, etc.).
7. Evaluation findings should be presented as analyzed facts, evidence and data and not based on anecdotes, hearsay or the compilation of people's opinions. Findings should be specific, concise and supported by strong quantitative or qualitative evidence.
8. Sources of information need to be properly identified and listed in an annex.
9. Recommendations need to be supported by a specific set of findings.
10. Recommendations should be action-oriented, practical and specific, with defined responsibility for the action.

ANNEX B. METHODOLOGY

EVALUATION DESIGN AND METHODOLOGY

Guiding Principles: The evaluation’s focus will be on using the questions provided above as the framework around which the evaluation team will develop qualitative and, to some extent, quantitative evidence to support conclusions both on lessons learned in implementing the DBTA model and as well as on the value of the DBTA approach.

TECHNICAL APPROACH

In responding to the scope of work’s seven principal questions, the evaluation’s technical approach is comprised of seven distinct but inter-related elements:

1. Review of Documentation
2. Field Team Management
3. Respondent Selection and District Sampling
4. Key Informant Interviews, Focus Group Discussions and Data Collection
5. Data Analysis
6. Information Dissemination

The following narrative describes the evaluation team’s technical approach and methodology on each of the above of technical elements of the STAR evaluation:

Review of Documentation

The team will carry out a comprehensive review of relevant documents. The documents will include, but will not be limited to:

1. Work plans
2. PMPs
3. National strategic documents
4. Project design documents
5. Performance reviews
6. LQAS reports
7. Health assessment reports
8. Quarterly and Annual reports
9. PEPFAR annual and semi-annual reports

Team Management

With reference to Figure 2, the evaluation team of fifteen persons will be divided into five technical teams, one for the national level, one for each of the three project areas (i.e. “sub-teams”) and a fifth team (a “roving team”) that will address issues associated with project-related information management and procurement and supplies management (PSM) issues. At the national level, the evaluation’s team leader, assisted by Dr. Augustine Wandera, QED’s Senior M&E adviser, will be responsible for conducting KIs with national level officials including, *inter alia*, representatives of the MoH and other allied ministries and government agencies, of USAID, of allied implementing partners, and of Area Development Programs (ADP). The team leader will also be responsible for visiting each of the project areas and for providing support to the evaluation’s sub-teams. The evaluation’s three sub-teams (ST), comprised of an ST leader, a deputy ST leader and two research assistants will spend approximately three weeks in their assigned project during which they will have 12 working days in which to collect data. Each of the sub-teams will be responsible for conducting key informant interviews and focus group

discussions through the use of identical semi-structured instruments that will be used across all three project areas. The roving team will be comprised of a statistician and a consultant on PSM. The statistician will focus on the collection and analysis of project-related statistics including, *inter alia*, reports on the Lot Quality Assurance Sampling (LQAS), health facility assessment data, and the three project’s operational statistics contained in annual reports and other documents. The PSM consultant will focus on the collection and analysis of data related to PSM-related issues in each of the DBTA-STAR project areas. The roving team will spend approximately four days in each of the three project areas. In addition to collecting and analyzing data available in project offices and in health districts, the roving team and their two research assistants will be responsive to the resident team’s identified need for statistical data and for data related to procurement and supplies management.

Respondent Selection and District Sampling

Selection of Central Level Respondents

Stakeholders representing the MoH, other allied ministries, USAID, all STAR implementing partners and other representatives of allied projects and, finally, stakeholders representing donor agencies and other area development partners (ADP) will be interviewed by the team leader using a separate KII instrument (Please see Annex 4 for an example of this instrument). As of the date of this inception report, the final list of national-level stakeholders who will be interviewed is being defined in consultation with USAID’s AORs, other members of USAID’s health team, and representatives of STAR IPs. As individuals are identified, QED/Learning staff are assisting the team leader in making the necessary appointments. In total, we expect to have at least 15 such interviews (Please see Table 1).

Table 1: STAR Evaluation: Tentative List of KIIs to be conducted at Central-Level and in the 12 Sampled STAR Districts

| Method | Category of Respondent | Number at Central/Per District | Total |
|--------|---|--------------------------------|-------|
| KIIs | Central Government Officials (MoH-relevant project Managers and Commissioners, Pharmacy division, UAC, MoLG & ULGA) | At least 15 | 15 |
| | Central level USAID | 5 | 5 |
| | ADPs (DFID, Global Fund & World Bank) | 2 | 2 |
| | IPs (SURE, ASSIST, SDS, Sunrise, Spring, FANTA, STARS) | 7 | 7 |
| | CAO | 1 | 12 |
| | District Officers (DHT) | 1 | 12 |
| | Health In-charge (HCIV & HCIII, HCII) | 3 | 36 |

Sample Selection at Project Level

Given the large number of districts across all three projects, the evaluation will apply a sampling process to select the districts and health centers that will be surveyed by the evaluation team. This process is described below.

District Selection

In this assignment, each of the DBTA programs will have a separate sampling frame (Please see Table 2), with the district as the sampling unit. The districts have been stratified into old and New given the fact that, as new districts face markedly greater health system challenges than old

ones, the challenges may have had an impact on DBTA programs as well. For purposes of this undertaking, new districts are those established from July 2005 onwards.

Table 2: Sampling Frame for STAR Districts

| STAR SOUTH – WEST | | STAR EAST CENTRAL | | STAR EASTERN | |
|-----------------------------|-----------------------------|-----------------------------|----------------------------|-----------------------------|-----------------------------|
| Old Districts | New Districts | Old Districts | New Districts | Old Districts | New Districts |
| Bushenyi | Buhweju | Iganga | Luuka | Kapchorwa | Bukwo |
| Kabale | Ibanda | Bugiri | Namayingo | Mbale | Kween |
| Kanungu | Isingiro | Kamuli | Buyende | Pallisa | Bulambuli |
| Kisoro | Kiruhura | Kaliro | Namutumba | Busia | Kibuku |
| Ntungamo | Mitooma | Mayuge | | Sironko | Budaka |
| Rukungiri | Sheema | | | | Bududa |
| | Rubirizi | | | | Butaleja |
| 33% Sample (2 districts) | 33% Sample (2 districts) | 33% Sample (2 districts) | 50% Sample (2 district) | 33% Sample (2 districts) | 33% Sample (2 districts) |

A survey of two districts per cluster (Old and New in each of the project area) will be undertaken. The evaluation team expects that there is likely to be limited value to collecting additional information when a random selection of more than two districts in each cluster (Old and New in each project area) is taken. This represents a selection of almost one in every three in each cluster (33%). In preparation for providing detailed information required for this inception report, the selection of the two districts in each of the cluster was done by using simple random sampling approach (lottery method), in each of the DBTA programs. The names of each of the districts were written on a separate piece of paper and then put in a bowl. A random selection of a piece of paper at a time was done to select the two districts. This process was repeated for all the other clusters in the different program areas. This process is statistically referred to as simple random sampling. As a result, twelve districts were included in the sample.

The randomly selected districts are shown in Table 3 (Please note that The STAR – EC program, with a significantly smaller number of districts, has been slightly oversampled). In working to ensure that the evaluation addresses the need to reach out to both relatively accessible and “hard-to-reach” districts, the three IPs provided the evaluation team with names of all hard to reach districts. The evaluation team then did the sampling with replacement to take into account for the “hard-to-reach” districts particularly for the STAR-EC cluster. The other clusters already had the “hard-to-reach” addressed in the sampling plan. The “hard-to-reach” districts that were included in the sample are: Buhweju and Namayingo. Some parts of the districts of Bulambuli have areas that are mountainous and could also be described as “hard-to-reach”. Buhweju district in the STAR-SW project area is associated with bad terrain with sharp “rolling hills” and is difficult to reach in a heavy rainy season. As Namayingo is essentially an island accessed by watercraft, the district can be classified as a relatively “hard-to-reach” area. The evaluation team will utilize other data sources (LQAS and Annual reports) that show disaggregated data by district in order to evaluate service uptake in other hard to reach areas like Bukwo which were not included in the sample to avoid an oversampled “hard-to-reach” areas.

Table 3: List of Sample Districts for the STAR Evaluation

| STAR SOUTH – WEST | | STAR EAST CENTRAL | | STAR EASTERN | |
|-------------------|---------------|-------------------|---------------|---------------|---------------|
| Old Districts | New Districts | Old Districts | New Districts | Old Districts | New Districts |
| Bushenyi | Buhweju | Iganga | Luuka | Mbale | Kibuku |

| | | | | | |
|----------|---------|--------|-----------|-----------|-----------|
| Ntungamo | Mitooma | Kamuli | Namayingo | Kapchorwa | Bulambuli |
|----------|---------|--------|-----------|-----------|-----------|

Selection of facilities

The evaluation team will use a list of government health facilities to be obtained from the District Health Office (DHO). The list of facilities will be clustered into HCIV, HCIII and HCII. Since there are a few facilities at HCIV level (there are usually 1 or 2) in a district, with information from the DHO, only one with a higher client load will be visited. The evaluation team with assistance from the District Health Office will categorize the HCIII and HCII health facilities in two categories (high and low) client load. Within the two categories, the evaluation team will then randomly select one health facility in each of the category (High/Low). This implies a selection of two HCIII level health facilities that will be selected having a category of High/Low client load. The evaluation team will similarly do the same for HCII. However, from prior field experience, client load at this level is usually very low due to limited services at that level. The evaluation team will not assume that this is the case throughout the entire district but will obtain information from the District Health Office about client load at that level. STARS project also collaborated with Private not for Profit (PNP) health facilities. The evaluation team will as much as possible include at least a PNP health facility in each district. In total each district that the evaluation team visits will include visits to at least 5 health facilities.

Selection of STAR Program Representatives

In visiting project officers in each of the three project areas, the sub-teams will schedule a one-on-one key informant interviews with each Chief of Party, with his designated deputy and with the project’s monitoring and evaluation (M&E) adviser. In addition to separate interviews with these three key project members, the sub-teams will work with the Chiefs of Party to review the project’s organizational chart and to select, for a group interview, other principal staff officers. As the evaluation intends, as a management principle, to disrupt project activities as minimally as possible, these group sessions and indeed all interviews with all key informant interview (KIIs) and focus group discussion (FGD) respondents will be scheduled to last one hour unless respondents indicate that they would like to extend a specific session.

Selection of Health Providers

At the health facility, the Health person in-charge and health providers associated with supervising the provision of HIV/AIDS, TB and Family Planning services will be interviewed relating to general questions on service provision that are included in the DHT and IP instrument under the category of service delivery. Persons in charge of medicines management at the health facilities and one in charge of Laboratory supplies (ordering and use) will be interviewed while, at the same time, the Health person-in-charge and persons responsibility for information system management will be interviewed by the evaluation team’s statistician with respect to capacity development in the use and application of strategic information with specific reference to the Lot Quality Assurance Sampling (LQAS) and to information related to integration of HIV/AIDS, TB and Family Planning (FP).

Selection of respondents at the Community level

The evaluation team, with assistance from IPs, will mobilize People Living with HIV/AIDS (PLHA) for an FGD. Similarly, if feasible within the time available we will mobilize village health worker teams (VHT) for separate FGDs. Failing that, Sub-team leaders will explore the possibility of including VHT in the PLHA FGD.

KEY INFORMANT INTERVIEWS, FOCUS GROUP DISCUSSIONS AND DATA COLLECTION

Key Informant Interviews with Stakeholders

The team will hold key informant interviews (KIIs) with key stakeholders at national and district levels. At the central level, a standardized open-ended instrument will be applied for KIIs with all central-level respondents. (Please see Annex 4 for an example of the evaluation's KII for central level.) At the project level, each of the sub-teams will be employing identical semi-structured KII instruments throughout their interviews. (Please see Annex 5 for an example of the evaluation's KII.) The purpose of the interviews at both levels will be to document their views, experiences and opinions on the effectiveness of the District Based Technical Assistance project model as implemented by STAR – E in Eastern Uganda; STAR – EC in the East Central Region; and STAR – SW in the South Western part of Uganda. As indicated in Table 2, consultations at both levels will reach out to at least 90 respondents.

Focus Group Discussions (FGD)

The purpose of Focus Group Discussions will be to collect qualitative data on insights into STAR project stakeholders' perception, experiences and needs. They will serve as a cost-effective technique for eliciting views and opinions of civil society organizations and clients/beneficiaries, regarding improving the quality and efficiency of HIV/AIDS and TB service delivery at health facility level. This technique will give the evaluation a better understanding of data from a quantitative stakeholder's satisfaction appraisal of the different service delivery approaches the STAR project supported for HIV/AIDS prevention, care and treatment, and TB services.

All FGDs will open with general "engagement" questions to establish participants' general concerns with HIV and AIDS and TB within their communities. The discussion will then graduate to specific "exploration" questions designed to draw out participants' attitude toward and, if applicable, experience with issues such as integrated services, HCT, PMTCT and male circumcision as a means of preventing HIV. Finally, the questions will graduate to an "exit" question or opportunity for the respondents to offer suggestions on ways in which to prevent HIV/AIDS and TB in their communities. Two categories of discussants will be engaged:

- 1) Civil Society Organizations that have received both technical and financial support from STAR project and are currently implementing interventions under STAR projects in districts sampled by this evaluation.
- 2) Members of PLHA networks and family support groups, representing the clients for the different service delivery systems supported by STAR project. This group will be composed of individuals who are HIV positive and have participated in HIV/AIDS prevention, care and treatment services at health facilities supported by STAR projects. If feasible, members of VHT that are working in communities associated with health facilities supported by STAR Projects will be included in the FGDs.

Each discussion group will include 7-9 people with each group being disaggregated by age and sex. The discussion will be led by a team of two people, a moderator and a note-taker using a structured discussion guides. The discussion guides for the above two groups (Please see Annex 6 and Annex 7) will keep the session on track while allowing respondents to talk freely and spontaneously. The note taker will capture the discussions in writing and also take note of participant' nonverbal expressions and the entire session will be tape-recorded. The content of the group discussion will be analyzed by reviewing the notes and listening to tape recordings.

The content will be transcribed according to key topics and themes that are answering the evaluation questions. The moderator will synthesize the group discussions by reviewing the notes from the note taker, identifying recurrent ideas and interpreting these ideas. The team will prepare a report following each discussion session. As indicated in Table 4, it is estimated that there will be 12 total focus group discussions throughout the DBTA STAR sampled districts. Based on the average of 7-9 participants in each focus group, the evaluation team estimates that over 100 individuals will participate in the FGDs.

Table 4: STAR Evaluation: Tentative List of FGDs to be conducted in the 12 Sampled Districts in STAR Project Areas

| Method | Category of Respondent | Number Per District | Total |
|--------|------------------------|---------------------|-------|
| FGDs | CSOs | 1 | 12 |
| | Clients and VHT teams. | 1 | 12 |

Collection of field-based documentation

In the process of interviewing persons in charge of drug management at health facilities and laboratory supplies (ordering and use), the team PSM consultant on the health facility, the Health person-in-charge and persons responsible for information system management will be interviewed by the evaluation team’s statistician with respect to capacity development in the use and application of strategic information with specific reference to the Lot Quality Assurance Sampling (LQAS) and to information related to integration of HIV/AIDS, TB and Family Planning (FP).

DATA ANALYSIS PLAN

At the end of the working day, each project area’s four-person team will meet to complete a standardized summary sheet (Please see Annex 8) consisting of the scope of work’s six questions on (a) improved capacity and sustainability and (b) service delivery. (Question 7 referencing cost efficiency will be addressed in January with the assistance of the economist we have scheduled to join us during the month.) Facilitated by the sub-team leader, this summary discussion will focus on the following question: **What did we learn from today’s KII and/or FGD with reference to the six scope of work’s questions?** While there is no absolute guarantee that this summary will result in similar interpretations across all teams and even within all teams, the goal of the end of the day summary discussions will be to reach a consensus among the four members of the team on information gleaned from the day’s activities.

While observations arrived at from the visits to the district offices and those of the IPs will be included in the summaries, we expect that, especially when conducting KIIs at the service level, teams will be invited to tour and observe operations in the facilities and will then ask questions during the tour. Responses to those questions and the team’s observations (again centered on the team’s keeping in mind the scope of work’s six questions) will then contribute to the end-of-the day summaries. Although the evaluation team has discussed the possibility of exit interviews, it was concluded that there would be neither time nor personnel to conduct and debrief on exit interviews. As an alternative to exit interviews, our FGDs will provide for client feedback.

If the team finds that some of the questions are not adequately addressed during a given day's activities, the sub-team leader will have the responsibility for ensuring that, in subsequent days' activities, identified information gaps will be addressed. Finally, with reference to the FGDs, the research assistants will be responsible for transcribing the FGDs from the taped recordings of each FGD. Once these transcriptions are available, the entire sub-team will cross-check the transcriptions with the end of the day discussion summaries to ensure that the summaries are accurate reflections of the FGDs.

As the FGDs will generally be disaggregated by age and sex, the research assistants will maintain separate summary sheets by age and by sex with reference to the issues addressed in the FGDs. At the end of the work week, these summary sheets will be reviewed by the entire technical team to determine the extent to which there is a common thread within the disaggregated groups in response to issues raised during the FGDs.

As a final point, every Saturday (note that the teams are all paid to work six days a week), the teams will meet to review and finalize the week's summary documents (there will be two such end-of-the-week meetings) and to consolidate the summaries into a master summary. The master summary will then be posted on the evaluation's electronic drop box so that other teams will be able to gain a sense of what has transpired in the other project areas. These master summaries will then be used by the team leader as email documentation to be sent to the AORs and other member of USAID's health team. It should be noted that the STAR drop box is the central repository for all information is available and utilized by all team members as a means of posting information, of reviewing results from other project areas included in the evaluation, for exchanging documentation with all team members and for generally maintaining an environment in which information is shared across all 15 team members and with the QED/Learning staff.

The evaluation team will use both qualitative and quantitative approaches in the collection of data. The qualitative data will be collected through document review, FGDs and KIIs. The FGDs will be tape recorded and then transcribed by the Research Assistants (RAs) while responses from FGDs will be recorded by the note taker. The RAs will also type the transcribed text using MS Word Software. Evaluation themes will be developed and content analysis technique will be utilized to filter out emerging issues necessary to answer the evaluation question. During report writing, the qualitative findings will be integrated with the quantitative data.

Quantitative data will be collected through two approaches: secondary data and clients' survey. The secondary data will mainly include data from: LQAS, PMPs, project annual reports and DHIS2. The analyses of these data will focus on identifying trends in service utilization over the STARs intervention period that could be used as a proxy measure of project attribution. The summary process described above is key to our being able to synthesize what the team has learned from the field. Following the teams' return to Kampala on 28 November, each of the teams will meet individually on Saturday, the 29th of November to consolidate its findings associated with the project area in which the team has been working. The consolidation of findings will also incorporate data resulting from each team's review of available project documentation. In addition, each team will work with our statistics and procurement and supplies management consultants to incorporate data collected during these consultants' review of field records and observations during their joint five-day visits to each project area. Then, on Monday, December 1st, each of the teams will present its findings to the other teams followed by a full team discussion focused on clarifying issues addressed by each team. In essence, we will have created "expert teams" for the three project areas. Then, on Tuesday, December 2nd and on Wednesday, December 3rd, the team will work together to triangulate the findings into a consolidated DBTA projects' presentation that will be prepared for USAID and others.

DISSEMINATION PLAN

Oral Presentations on Preliminary Findings

In addition to providing a summary overview of our consolidated findings, the presentation will provide a brief summary of our findings specific to each project area. Both parts of the presentation (i.e. consolidated and project- specific) will be keyed to the six scope of work questions. At the conclusion of each of four presentations (currently scheduled for December 4-5 to allow for separate presentations to USAID and to the three IPs) a minimum of one hour's discussion will focus both on the summaries. All sessions will be working sessions in which preliminary findings will be presented and during which all participants will have an opportunity to clarify, validate and identify remaining information gaps that the team will address following its resumption of the evaluation in mid-January.

First Draft Evaluation Report

Responding to information gaps identified in early December's discussions and preparation of the 1st Draft Evaluation Report will constitute the principal foci of the evaluation when the team resumes its evaluation for three weeks in mid-January 2015. The content of the report will also address issues raised during USAID and other stakeholders' review of the December 2014 oral presentation. Completion of the final draft report may necessitate a limited number of additional interviews and additional focused data collection. The report will include major findings, conclusions, lessons learned, and relevant annexes. The first draft will be 15-20 pages discussing the overall DBTA approach, about 10-15 pages standalone (pullouts) for each of the DBTA projects being evaluated and any other annexes. This deliverable will be supported by a second oral PowerPoint presentation presented to USAID and stakeholders at the completion of the January/February 2015 three-week extension of the evaluation.

Cleaned labeled and ready to use electronic copies of datasets

The datasets will consist of data collected through fieldwork and cleaned ready to use on electronic copies of FGD analyses if any. In addition, copies of all instruments used in data collection will be separately delivered to USAID. The datasets will be delivered to USAID as part of the level of effort completed prior to the evaluation team's completion of the January/February 2015 three-week extension.

Final Draft Evaluation Report

On or about February 26, 2015 or within five days following USAID and other stakeholders' review of the 1st Draft evaluation report (whichever should come later), the evaluation team, led by the team leader, will submit to QED a complete report in the agreed-up format incorporating comments from USAID and other stakeholders. The core report will be less than 60 pages, including project specific pullouts but excluding annexes. Final formatting, printing and delivery of the report to USAID will be the responsibility of QED Uganda's Chief of the Party of USAID/Uganda's Learning Project.

Concept Note for the Client Exit Survey for the STARs Evaluation

Introduction

The STAR projects in East, East-Central and South-West Uganda were the first in USAID/Uganda's District Based Technical Assistance (DBTA) model featuring regional focus in improving access, quality and availability of integrated health service delivery as well as health financing and management. The projects work in five program areas, these include: (1) Increasing

access to, coverage of, and use of comprehensive HIV & AIDS and TB services; (2) Strengthening decentralized HIV & AIDS and TB service delivery systems; (3) Improving the quality and efficiency of HIV & AIDS and TB service delivery within health facilities; (4) Strengthening networks and referrals systems to improve access to, coverage of, and use of HIV & TB services; and (5) Increasing demand for comprehensive HIV & AIDS and TB prevention, care, and treatment services.

All the three STAR projects build the capacity of civil society organizations (CSOs) and local governments in each region to identify and respond to community needs using quality data while continuously improving services and facilities through best practices in management. Working closely with the Ministry of Health and through District Health Management Teams, District Councils, health facilities, and communities, the projects' general objective is to increase access to, coverage of, and utilization of quality comprehensive HIV/TB prevention, care, and treatment services within district health facilities and their respective communities. They train CSOs and local governments in strategic information collection and dissemination, including training in lot quality assurance sampling (LQAS) methodology and facilitate district-led performance reviews to help identify coverage and service gaps.

This approach is closely linked to USAID's Strengthening Decentralization for Sustainability (SDS) Program which was designed to improve systems and coordination at the decentralized level. SDS enhances PHC support through quarterly coordination meetings, district-integrated supervision to health centers, transportation of lab samples, HIV/AIDS care and treatment, and monthly follow up of Community Based-Directly Observed Treatment (CB-DOTS). Implementation of the STAR-E and STAR-EC started in 2010, while STAR-SW started in 2011, they will all end in March 2015.

The STARs evaluation team contracted by QED presented its preliminary findings to USAID in December 2014. The evaluation focused on establishing the extent of efficiency and effectiveness of the USAID/Uganda's District Based Technical Assistance (DBTA) project model. The evaluation was tailored on evaluating the following key aspects namely: Comprehensive and integrated service delivery; improved service access, quality and availability; rationalized health financing and the strengthened district health management.

Rationale of undertaking a client exit survey

During the ongoing evaluation exercise for the DBTAs, qualitative data was collected using Focus Group Discussions (FGDs) and Key Informant Interviews (KIIs) and supplemented with secondary data (LQAS, PMP and MEEPP)². After the preliminary presentation, the USAID mission staff noted a need for collaborating client (beneficiary) voices with KII regarding quality improvement in the health facilities. This was seen as a critical in addition to the information obtained through FGDs, KIIs and the secondary data. The initial design of the SOW had provision for a population based client survey to provide information on client satisfaction to measure improvement in the quality of services. The evaluation team objected that there was no value addition in undertaking a population based client survey. After all it would be difficult to obtain or identify clients from the population due to stigma associated with HIV/AIDS. USAID and the Evaluation Team later agreed that a health facility exit interview survey should be undertaken to assess quality improvement HIV/AIDS services from the clients' perspective.

² Lot Quality Assurance Surveys (LQAS), Performance Monitoring Plan (PMP); Monitoring and Evaluation of Emergency Plan Progress (MEEPP)

Methodology

The survey approach builds on the existing information collected during the initial stage. Already, twelve (12) districts were selected using simple random sampling approach (lottery method) from a total of 34 districts. The selection was based on the project areas, the “old” and “new” districts and took into consideration the “hard-to-reach” districts. The old districts were defined to constitute those that started after July 2005. The list of districts reached during the first phase of data collection are provided in Table I below.

Table 1: List of Sample Districts for the STAR Evaluation

| STAR SOUTH – WEST | | STAR EAST CENTRAL | | STAR EASTERN | |
|-------------------|---------------|-------------------|---------------|---------------|---------------|
| Old Districts | New Districts | Old Districts | New Districts | Old Districts | New Districts |
| Bushenyi | Buhweju | Iganga | Luuka | Mbale | Kibuku |
| Ntungamo | Mitooma | Kamuli | Namayingo | Kapchorwa | Bulambuli |

In this concept note we propose the same districts that were included in the initial evaluation data collection, but this time selecting 2 facilities from each district i.e. HC IV and HC III, since quality improvement is expected to be largely implemented and noticeable at these levels of service provision.

Sample size and sample design for the client exit survey

The client exit survey will be undertaken in the sub-sampled health facilities that were reached during the prior field visit but will not take into consideration Low/High client load³. Two (2) health facilities will be selected from each district (1 HC IV and 1 HC III) making it eight (8) health facilities from each of the STARs region implying that a total of 24 health facilities will be reached during the client exit survey. The selection of the health facilities will be done carefully to ensure substantial number of clients based on clients’ days. At the health facility, the interviewer will purposively select at least 5 clients from each of the available HIV/AIDS services (PMTCT, HCT, ART, TB and nutritional services where applicable) as they exit from the facility. Due to the likely low number of TB patients on a given clients’ day, the interviewers will aim to interview all those TB clients (not exceeding 10) who will have reported at the health facility on that particular day. This means that between 30-40 or an average of 18 respondents per facility are expected to be interviewed from either one HCIII or one HCIV in each district. This also implies that overall at least a total of 648 clients will be interviewed as shown in Table 2 below.

Table 2: Sample selection for the clients to be interviewed through a client exit approach

| Health facility level/Type | Total Number of facilities selected per district | Total number of districts selected | Average number of clients to be interviewed per facility | Total expected number of clients to be interviewed in each of the HIV/AIDS services |
|----------------------------|--|------------------------------------|--|---|
| HCIV | 1 | 12 | 18 | 216 |
| HCIII | 1 | 12 | 18 | 216 |
| PNFP ⁴ | 1 | 12 | 18 | 216 |
| Total | | | | 648 |

³ From the prior field visit, it was observed that HCIV and HCIII are more likely to have quality issues that would be of interest to the evaluation

⁴ Could be substitute by a HCIII facility where it is not available

Questionnaire Design, Field Implementation, Data Management and Analysis

The Evaluation team will draft the data collection tool (see draft attached). The semi-structured questionnaire has been developed aiming at measuring existing standards for quality services. The clients' survey will be managed by a qualified and experienced firm. The contracted firm will recruit experienced Research Assistants to administer the tool to health facility clients. The Research Assistants (RAs) must be familiar with the local languages. The RAs will be trained by the firm and a pre-test of the data collection will be undertaken. For each of the STAR regions, the selected firm should recruit an appropriate but manageable number of RAs to ensure that the field work activities do not take more than 5 days. The RAs should be well supervised by a highly experienced person in related field activities to ensure completeness, accuracy and consistency of the data being collected. The Evaluation Team will offer supportive supervision during training of the RAs, pre-testing of the tool, the actual field work and during data processing to ensure that quality data is collected and processed. Data collection will run concurrently with phase II field work creating an opportunity for the Evaluation Team to offer supportive supervision.

The firm to be hired should have experience in similar surveys, HIV/AIDS and quality improvement measurement. The hired firm will present a competent Team leader for the clients' exit survey exercise with a minimum of a Master's Degree in Social Sciences or Statistics or Public Health or other related disciplines.

The Evaluation Team Statistician will design the data entry template and generate relevant dummy tables for the evaluation report. The firm will carry out data entry, cleaning and analysis, and provide QED a well labeled data in either SPSS or Stata format. The firm is also expected to submit completed dummy tables to QED as one of the major key deliverables.

ANNEX C. LIST OF KEY INFORMANTS

| NAMES | POSITION/ Titles. | |
|--|-------------------------------------|--|
| STAR-E MANAGEMENT TEAM | | |
| 1. Edward Ssemafumu | COP STAR-E (Out-going) | |
| 2. Bud Crandall | COP STAR-E (In-coming) | |
| 3. Peter Dungu. | D/COP STAR-E | |
| 4. Daniel Waswa | Contracts Manager | |
| 5. Paul Lusoke | Director Finance and Administration | |
| 6. Francis Wagasami | Director Monitoring and Evaluation | |
| MBALE DISTRICT HEALTH TEAM (11/11/2014) | | |
| 1. Dr. John Bosco Wanyai | DHO | |
| 2. Madoi Ayub | DHI | |
| 3. Luwano Rogers. | Biostatistician | |
| 4. Jennifer Wandawa. | DNO | |
| 5. Waniale Paul. | District Drugs Inspector | |
| 6. Madaya Patrick. | HMIS/Focal Person | |
| 7. Ochieng Galex. | District Vector Control Officer | |
| 8. Nirema Fatuma. | Stores Assist | |
| Namwanga health center IV (13/11/2014) | | |
| 1. WabuleWarble Lydia | ECN | |
| 2. Nambozo Saphira | EIN | |
| 3. Masawi Harriet | HIA | |
| 4. Stephen Orena | Lab. Technician | |
| 5. Akello Edith | ELM | |
| 6. Sakwa Jane | SCO | |
| BUFUMBO HEALTH CENTRE IV STAFF (12/11/2014) | | |
| 1. Kabuya Miriam | Clinical officer in charge | |
| 2. Rosemary Achieng | Nursing officer PMCTCT focal person | |
| 3. Kusasira loyce | Senior nursing officer | |
| NAKALOKE HC 3 TEAM (12/11/2014) | | |
| 1. Wangiro Rehema | I/Charge and HIV Focal Person | |
| 2. Logose Perusi | PMTCT Focal Person | |
| 3. Samuel Wafenya | Lab Assistant / HCT Focal Person | |
| 4. Arikod Mary | QI Focal Person | |
| BUSHIKORI CHRISTIAN CENTRE (13/11/2014) | | |
| 1. Levert Wafula | MO | |
| 2. Namwano Recheal | R/A | |
| 3. Nambuya Oliver | Lab / Microscopist | |
| BULAMBULI DISTRICT HEALTH TEAM (17/11/2014) | | |
| 1. Nebuza Isaac | SCO/DQITR | |
| 2. Waniaza Stephen | ADHO/ MCH | |
| 3. Dr. Mulongo Muhamed | DHO | |
| 4. Alele Alfred | N/O / YCC | |
| 5. Kabala Enoch | MO | |

| | | | |
|--|-----------------------|------------------------------|--|
| 6. | Woniala Richard | CO / DTLS | |
| 7. | Okiror Thomas | L/T | |
| 8. | Khankha Stephen | SAA | |
| 9. | Mr. Aloka Aloisius | Chief Administrative Officer | |
| MUYEMBE HEALTH CENTRE 4 TEAM (17/11/2014) | | | |
| 1. | Mary Abuke | Nursing Officer | |
| 2. | Jacob kiplangat | Public Health Dental Officer | |
| 3. | Muzaki Jenifer | E/N | |
| 4. | Mugide Jackline | E/N | |
| 5. | Khandehe Apofia | Clinical Officer | |
| 6. | Nandudu Rachael | E/M | |
| 7. | Aruto Judith Martha | E/M | |
| 8. | Wakhasa Boaz | Askari | |
| 9. | Negesa Betty | Porter | |
| 10. | Nanzira Proscovia | Porter | |
| 11. | Nadunga Filis | Porter | |
| BUGINYANYA HEALTH CENTRE III (18/11/2014) | | | |
| 1. | Mabonga Caroline | EPN | |
| 2. | Alisa Agnes | E/M | |
| 3. | Masete Elise | MCO | |
| 4. | Wamulira Anna | PORTER | |
| 5. | Wamboza Andrew | MLT | |
| 6. | Muzaki Jastine | H/A | |
| 7. | Nabukonde Saphiri | N/ASS | |
| 8. | Nakabugo Jackline | HIA | |
| 9. | Wazemba Francis | Askari | |
| BUYAGA HEALTH CENTRE III (18/11/2014) | | | |
| 1. | SABILA GEORGE | Linkage Facilitator | |
| 2. | AKISA Esther | EIN | |
| 3. | Nambozo Ronnah | NA | |
| 4. | Walebu Hakim | PORTER | |
| 5. | Nambafu Rose | VOLUNTIER VACCINATOR | |
| 6. | Matsanga William | ASKARI | |
| 7. | Khamiri Benaya | T.B focal person | |
| BUNAMBUTYE HEALTH CENTRE (19/11/2014) | | | |
| 1. | SEELA Carloline | EN | |
| 2. | Namisi John | N/A | |
| 3. | Buyi Alex | Askari | |
| 4. | Wabuyi James | LF | |
| 5. | Gidoi Sulaina | PORTER | |
| 6. | Musani Isaac | L/A | |
| 7. | Aiki Hellen | S.C.O | |
| 8. | Nengone Codes | N/A | |
| 9. | Muduwa Salimah | N/O | |
| 10. | Toko Manisur Ijagason | HIA | |
| 11. | Robert Wangaire | TB/Leprosy Assistant | |
| KIBUKU DISTRICT HEALTH TEAM (20/11/2014) | | | |
| 1. | Watuwa Jenipher | NO | |
| 2. | Mondo Erick | Coordinator | |
| 3. | Ssentongo Gerlad | MSH / STAR E clinical mentor | |

| | | | |
|--|--------------------|--------------------------------------|--|
| 4. | John Emamu | Capacity building specialist Star E | |
| 5. | Byekwaso Julius | Orthopedic officer / EPIFP | |
| 6. | Kolyanga John | DTLS | |
| 7. | Lamu Robbert | DSA | |
| 8. | Muneko Joseph Paul | DCCA | |
| 9. | Opade John Francis | H/ Inspector | |
| KIBUKU HEALTH CENTRE 4 TEAM (20/11/2014) | | | |
| 1. | Sango William | Clinical Officer | |
| 2. | Yazit | Clinical Officer | |
| 3. | David | E/N and Public Health Dental Officer | |
| 4. | Taiba Christine | R/Midwife | |
| 5. | Sadam | HMIS Focal Person | |
| 6. | Byekwaso | Orthopaedic Officer / MMC F/Person | |
| BUSETA HC 3 TEAM (24/11/2014) | | | |
| 1. | Jackline Mugala | C/Officer I/Charge | |
| 2. | Lydia Naula | Lab. Assistant | |
| 3. | Monica Kadondi | E/Nurse | |
| 4. | Akumuroit Anne | E/Midwife | |
| 5. | Enock Padere | Lab. Assistant (Volunteer) | |
| 6. | Musibika Beatrice | N/Assistant | |
| 7. | Amagoro Veronika | N/Assistant | |
| 8. | Kanuku Annette | N/Assistant | |
| 9. | Mpuhimba Elias | Porter | |
| BULANGIRA HC 3 TEAM (21/11/2014) | | | |
| 1. | Mutegule Gideon | Senior Clinical Officer | |
| 2. | Beatrice Adangan | Registered Midwife | |
| 3. | Muloni George | Nursing Officer | |
| 4. | Naguti Amina | Nursing Assistant | |
| 5. | Masese Rosette | Nursing Assistant | |
| BUCHANAGANDI HC 3 TEAM (21/11/2014) | | | |
| 1. | Hellen Adengo | In-Charge | |
| 2. | Zenei Stella | Enrolled Comprehensive Nurse | |
| 3. | Moses Kapisa | Nursing Assistant | |
| 4. | Mulira Amiri | Enrolled Comprehensive Nurse | |
| 5. | Emmanuel Kawikizi | Senior Clinical Officer | |
| 6. | Agnes Chaba | Student Nurse | |
| 7. | Sam Wazige | Clinical Officer | |
| KAPCHORWA DISTRICT HEALTH TEAM (25/11/2014) | | | |
| NAMES | | POSITION/ Titles. | |
| 1. | Abas Margret | Stores Assistant | |
| 2. | Bossy Aggrey | Leprosy T.B focal person | |
| 3. | Wilson Kiprotich | Biostatician | |
| 4. | Obonyo Ofumbi | District Surveillance focal person | |
| 5. | Joweti John | DHE | |
| 6. | Ekoroi John Robert | Acting DHO | |
| 7. | Damba Henry | Deputy CAO | |
| KAPCHORWA HOSPITAL TEAM (25/11/2014) | | | |
| 1. | Anna Achen | E/Midwife | |
| 2. | Martin Chemtai | HMIS Focal Person | |

| | | | |
|---------------------------------------|------------------|-----------------------------|--|
| 3. | Chebandege Anne | E/Nurse / Counsellor | |
| 4. | Amadi James | I/C Chronic Care | |
| SIPI HC 3 TEAM (26/11/2014) | | | |
| 1. | Wamasebu Timothy | Senior Clinical Officer | |
| 2. | Chepop Juliet | R/Midwife and I/C MCH | |
| 3. | Kusuro Jackline | E/N | |
| 4. | Mwanga Patrick | Nursing Officer | |
| 5. | Khayiyi Sarah | Health Inspector | |
| TEGERES HC 3 TEAM (26/11/2014) | | | |
| 1. | Masau David | Senior Clinical Officer I/C | |
| 2. | Katusi Caroline | R/Midwife | |
| 3. | Hussein Shifa | E/N | |
| 4. | Achebet Veronika | Lab. Assistant | |
| 5. | Chelimo Diana | E/N | |
| 6. | Akalo Rose | R/Midwife | |
| KASEREM HC 3 TEAM (27/11/2014) | | | |
| 1. | Chelimo Willy | N/Officer In-Charge | |
| 2. | Arapsiwa Huzairi | Records Assistant | |
| 3. | Chepkru | Lab. Technician | |
| 4. | Cherop Zam | Vaccinator | |
| 5. | Kamarir Sadiq | Laboratory Microscopist | |
| 6. | Salim Okeba | Chairman HUMC | |

ANNEX D. INTERVIEW GUIDES

INTERVIEW GUIDE FOR CENTRAL LEVEL RESPONDENTS

Name of respondent

Name of the ministry:.....

Date of Interview.....

Name (s) of Key Informant (s)

| Name | Responsibility Position and department |
|------|--|
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| | |

1. How would you describe you experience working with the STARS programs?

Based on the respondent’s experience, knowledge and working experience with the STAR Program and in working with one the three implementing partners:

A. Improved capacity and sustainability (*For USAID and Non-governmental Central-level respondents familiar with district level issues*)

- What is your assessment of the STAR Program’s? [Please consider one or more of the following factors: Human Resources, Geography, Time, Funding, Community/Facility Interface, USAID/STAR/ MOH/Local Government interaction, Government Policy, Facility Policy, Leadership.]
 - Strengths
 - Weaknesses

- Opportunities
- Threats
- What are the most successful approaches applied by the Stars program (towards strengthening the institutional, management, and human capacity of districts to deliver HIV/AIDS and TB services?) If something worked well, why did it work well?
- From your perspective, what, if anything, is innovative about the STAR Program's approach to program management? What's innovative about the approach and what has been its impact on service delivery? (Nutrition, TB, integration of services & OVC, strategic information, LQAS, HRH)
- In the context of the STARS Programs, how would you rate their sustainability? (Sustainability is important for the results achieved through these investments to continue making a difference into the future. The deliberate focus on working with the district local governments as the key provider of health services was to ensure that structures, processes and resources are strengthened, functional and in place to continue providing services even after the end of USAID's support. This evaluation will attempt to inform the USAID Uganda Mission on the likelihood that results of the DBTA program can be sustained after USAID support.)
 - What STARS interventions are sustainable and what actions or interventions would you recommend to build upon and improve the sustainability of management systems in the STAR Program areas?
 - What STARS interventions are not sustainable and why not?
 - Five years from now, do you anticipate that this strengthened capacity will continue to exist or be further enhanced?
 - Five years from now, to what extent do you anticipate that STAR-promoted management and technical structures at the local government, health facility, and community levels will still be in place and/or enhanced?
- How has the STARS program enhanced district capacity to effectively use strategic information for district management purposes? How is this capacity contributing to national planning and decision making? In what ways has this capacity been developed, built and or strengthened? What has been the documented or manifested impact of this strengthened capacity?
 - LQAS
 - HMIS
 - DHIS2

B. Service delivery (*Central level informants who have knowledge of service delivery issues*)

- To what extent has the support delivered by the STAR program improved quality, availability and accessibility of HIV/AIDS and TB services?
- How has the STARS program been effective in promoting integrated service delivery? What has been the impact of this program integration?
 - HIV/TB
 - HIV/FP
 - OVC and other services
 - Nutrition and other services
 - BMCC and other services
- What lessons do we **learn from** the STAR Programs' efforts to improve capacity and health service delivery in the three project areas?

INTERVIEW GUIDE FOR PARTNERS / DISTRICT HEALTH TEAM MEMBERS

Name of DBTA

Programme.....

District :

.....

Date of

Interview.....

Name (s) of Key Informant (s)

| Name | Responsibility Position |
|------|-------------------------|
| | |
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| | |

IMPROVE CAPACITY AND SUSTAINABILITY

1. How would you describe your experience working with the STARS programs?

- What are the most successful approaches applied by the program towards strengthening the institutional, management, and human capacity of your district to deliver HIV/AIDS and TB services? If something worked well, why did it work well?
- What are the least successful approaches applied by the program towards strengthening the institutional, management, and human capacity of districts and local governments to HIV/AIDS and TB services? If something did not work well, why not?

- Are the approaches used and results achieved for old/established and relatively new districts significantly different?
- USAID's Strengthening Decentralization for Sustainability (SDS) Program, a technical support program that is closely linked to the STAR Programs, was designed to improve systems and coordination at the decentralized level. What differences did you notice when the STAR program switched from direct implementation of activities to activities supported through the issuance of SDS-supported district grants?
- In the context of the STARS Programs, how would you rate their sustainability? (Sustainability is important for the results achieved through these investments to continue making a difference into the future. The deliberate focus on working with the district local governments as the key provider of health services was to ensure that structures, processes and resources are strengthened, functional and in place to continue providing services even after the end of USAID's support. This evaluation will attempt to inform the USAID Uganda Mission on the likelihood that results of the DBTA program can be sustained after USAID support.)
 - What STARS interventions are sustainable and what actions or interventions would you recommend to build upon and improve the sustainability of management systems in the STAR Program areas?
 - What STARS interventions are not sustainable and why not?
 - Five years from now, do you anticipate that this strengthened capacity will continue to exist or be further enhanced?
 - Five years from now, to what extent do you anticipate that STAR-promoted management and technical structures at the local government, health facility, and community levels will still be in place and/or enhanced?
- To what extent has the STARS program developed and established management and technical structures at the local government and health facility levels that will sustainably improve quality, availability and accessibility of HIV/AIDS and TB services?
- How has the STARS program enhanced district capacity to effectively use strategic information for district management purposes?
- How has the STARS program enhanced district capacity to effectively use strategic information for district management purposes? How is this capacity contributing to national planning and decision making? In what ways has this capacity been developed, built and or strengthened? What has been the documented or manifested impact of this strengthened capacity?
 - LQAS

- HMIS
- DHIS2

SERVICE DELIVERY

- To what extent has the support delivered by the STAR program improved quality, availability and accessibility of HIV/AIDS and TB services?
- How has the STARS program been effective in promoting integrated service delivery? What has been the impact of this program integration?
 - HIV/TB
 - HIV/FP
 - OVC and other services
 - Nutrition and other services
 - BMCC and other services

INTERVIEW GUIDE FOR DISTRICT HEALTH FACILITY MANAGERS

DBTA

Programme.....

District.....HSD.....

Name and Level of Health Facility.....

Name of respondent..... Designation.....

Name of Interviewer..... Date.....

A: COMPOSITION OF THE HEALTH FACILITY TEAM.

| STAFF CADRE | Number in Place | Establishment | Deficit |
|------------------------------------|-----------------|---------------|---------|
| 1. Medical Officers | | | |
| 2. Clinical Officers | | | |
| 3. Registered Nurses | | | |
| 4. Registered Midwives | | | |
| 5. Registered Comprehensive Nurses | | | |
| 6. Enrolled Comprehensive Nurses | | | |
| 7. Enrolled Nurses | | | |
| 8. Enrolled Midwives | | | |
| 9. Counsellors | | | |
| 10. Dispensers | | | |
| 11. Public Health Dental Officers | | | |
| 12. Laboratory Technologists | | | |
| 13. Laboratory Technicians | | | |
| 14. Health Inspectors | | | |
| 15. Health Assistants | | | |
| 16. Health Educators | | | |
| 17. Health Information Assistants | | | |
| 18. Anesthetic Officers | | | |
| 19. Nursing Assistants | | | |
| 20. Drivers | | | |
| 21. Cleaners | | | |
| 22. Watchmen | | | |

B: HEALTH UNIT CATCHMENT AREA

B 1. Does your Health Unit have a clearly defined catchment area? YES / NO

B 2. Is there a map of the catchment area at this facility? YES / NO

B 3. What is the approximate total population served by this health unit?

| Total Population | Children Less than 1 Year | Children Less than 5 Years | Women of Child bearing age (15-49 yrs) |
|------------------|---------------------------|----------------------------|---|
| | | | |

C: HEALTH SERVICES DELIVERY.

C 1: Which of the following services do you provide and how often?

| SERVICE | PROVIDED YES / NO | Frequency |
|--|-------------------|-----------|
| Outpatient Services | | |
| General Inpatient Services | | |
| Deliveries | | |
| Caesarian sections | | |
| Minor Surgery | | |
| Major Surgery | | |
| Immunization | | |
| IMCI | | |
| Nutrition Assessment (< 5s) | | |
| Antenatal Services | | |
| Post Natal Including Family Planning | | |
| Counseling and Testing for HIV / AIDS | | |
| PMTCT | | |
| HIV Chronic Care | | |
| ARV Services | | |
| Malaria case management | | |
| TB case management | | |
| Dental health care | | |
| Mental health care | | |
| Laboratory Services | | |
| Health Education | | |
| Mobile Outreach Services | | |
| Home Visiting | | |
| C 1.1. Are some of these services integrated? YES / NO | | |
| C 1.2. If YES, give examples : | | |
| | | |
| | | |

C 2. Do you have sufficient room to conduct all the available services? YES / NO

C 2.1. If NO, what service delivery areas are most affected?

.....

C 3. Do you have a laboratory? YES / NO

If yes, which of the following tests are you able to carry out?

C 3.1. Sputum examination for Tuberculosis YES / NO

C 3.2. HIV rapid Tests YES / NO

C 3.3. Syphilis serology YES / NO

C 3.4. Hemoglobin Estimation YES / NO

C 3.5. Complete Urinalysis YES / NO

C 3.6. Rapid Malaria Diagnostic tests YES / NO

C 3.7. Blood Slides for Malaria Parasites YES / NO

C 4. Is this laboratory enrolled into the SLIPTA (Strengthening Laboratory Improvement Processes towards Accreditation) Programme YES / NO?

D: DRUGS AND SUPPLIES

D 1. Do you normally have sufficient drugs throughout the year? YES / NO

D 2. Does the health unit determine the type and quantity of drugs delivered YES / NO?

D 3. Do you sometimes have drugs in your stores that you don't actually need?
YES / NO

D 4. In the last one year, have some drugs expired in the stores? YES / NO

D 5. Is there sufficient storage space for the drugs and sundries YES / NO

E: EQUIPMENT.

E 1. What is the functional state of the following equipment?

| EQUIPMENT ITEM | Number that is <i>Functional /Non-functional</i> |
|-------------------------|--|
| Vaccine Refrigerator | |
| Sterilizer | |
| Autoclave | |
| Vaccine Carriers | |
| Adult weighing Scales | |
| Infant weighing Scales | |
| Blood Pressure Machines | |
| | |
| | |

E 2. According to the facility service delivery level, what extra equipment items do you need to provide the expected services?

.....

.....

F: QUALITY IMPROVEMENT

F 1. Is there a Quality Improvement (QI) Committee at this Facility? If so, how functional is it?

| | | | |
|----------------|-------------------|-----------------|----|
| YES | | | NO |
| Not Functional | Poorly Functional | Very Functional | |

G: SUPPORT SUPERVISION.

G 1. Who normally comes to conduct supervision at this health facility?

| Supervisor (s) | Frequency |
|----------------|-----------|
| | |
| | |
| | |

G 2. When was the last supervision visit?

G 3. At the last visit, for how many hours did the Supervisor(s) stay at the unit?

G 4. In what ways do these support supervision visits help you?

.....

G 5: What is the level of availability of the following Data Collection Tools in this Facility?

| Data Collection Tool | Available as needed YES / NO | Comments |
|-----------------------------|---------------------------------|----------|
| 1. Integrated ANC Registers | | |
| 2. PNC Registers | | |
| 3. Maternity Registers | | |
| 4. Pre-ART Registers | | |
| 5. ART Registers | | |

| | | |
|--------------------------------------|--|--|
| 6. EID Registers | | |
| 7. EID Cards | | |
| 8. Family Planning Register | | |
| 9. Pre-ART /ART Client Cards | | |
| 10. Integrated ART/PMTCT Order Forms | | |
| 11. Family Support Group Registers | | |
| 12. Dispensing Log | | |
| 13. Appointments Books | | |
| 14. Referral Forms | | |
| 15. Job Aides / SOPs | | |

H: CLINICAL WASTE MANAGEMENT

H 1. What method(s) is used for the disposal of clinical waste?

.....

H 2. Are any problems experienced in the disposal of clinical waste? YES / NO

H 3. If yes, what problems?

.....

I: HEALTH INFORMATION

I 1. Who is responsible for filling and compiling the various Health Information Forms?

I 2. Are any problems experienced in the filling of these Forms?YES / NO

I 3. If yes, what kind of problems?

.....

.....

I 4. How is your facility data entered into DHIS 2?

.....

I 5. Does the health unit receive any health information from the community? YES / NO

I 6. If yes, what type of information is received?

.....

I 7. In what ways is the health unit data utilized by the health unit itself?

.....

.....

J: COMMUNITY INVOLVEMENT IN HEALTH SERVICES

J 1. What are the structures that help to link the health unit and the community?

.....

.....

J 2. What role does each of these structures play?

.....

.....

J 3. How many Village Health Committees are there in the catchment area?

J 4. How many of them are seen to be active?.....

J 5. Is the health unit represented at the Village Health Committee meetings?
YES / NO

J 6. If yes, who commonly represents the health unit at these meetings?

.....

J 7. Is there a system of getting community feedback about satisfaction /
Dissatisfaction with the services provided at this health unit?YES / NO

J 8. If yes, how does the system work?

K: SUSTAINABILITY

K 1. Over the last 5 years, what have been the performance trends in health services delivery in this Health Facility?

| 1 | 2 | 3 | 4 |
|----------------------------|-----------|------------------|-------------------------|
| Services have deteriorated | No change | Some improvement | Significant Improvement |

| | | | |
|------------------------|--|------------|------------|
| | | Registered | Registered |
| <u>Please Explain:</u> | | | |

K 2. In which service delivery areas has the facility registered significant improvements?

.....

.....

.....

.....

.....

.....

K 3. Looking at the next 5 years, how promising is it to register further improvements in health services delivery in this Health facility?

| | | | |
|------------------------|--------------------|------------------|----------------|
| 1 | 2 | 3 | 4 |
| Not Promising at all | Somewhat Promising | Fairly Promising | Very Promising |
| <u>Please Explain:</u> | | | |

Evaluation of USAID Uganda’s District-Based Technical Assistance (DBTA) Projects

Focus Group Discussion Guide

Civil Society Organizations

The first step in conducting focus group discussions for Civil Society Organizations being supported by the STAR project will include confirming their participation in the discussion and explaining the purpose of the meeting. The moderator will inform participants of the purpose of the STAR project evaluation exercise and furthermore, the moderator will confirm to participants that they are participating in the FGD as because of their status as GRANTEEs and recipients of technical assistance, finances and material support from the STAR project.

The moderator will confirm to participants that this discussion is seeking their experience, views and recommendations. The moderator will further explain to participants that it is important for them as CSOs to share their experiences, challenges and recommendations. In addition participants will be assured that their privacy will be protected by not including their names in any report that is published.

In concluding the introductory part of the meeting the moderator will ask participants to introduce themselves and invite them to record their names on an official sign up form.

Guiding Questions

- What service delivery approaches does the STAR project support for delivering HIV/AIDS prevention, care and treatment in your district?
 - Which ones would you consider as approaches for community mobilization/engagement
 - Which ones would you say are consider as approaches for service delivery?
- How has each specific approach/arrangement influenced or impacted on community participation and engagement?
 - How has the community participated?
 - What is the impact by each approach?
- How has each specific approach/arrangement impacted on service delivery under STAR?
 - What is the impact on HIV/AIDS prevention?
 - What is the impact on HIV/AIDS care and support?
 - What is the impact on HIV/AIDS treatment program?
 - What is the impact on intended education, and the promotion and advocacy?

- How has each specific approach/arrangement impacted on the overall attainment of intended outcomes?
 - Outcomes in HIV/AIDS prevention?
 - Outcomes in care and support?
 - Outcomes in treatment program?
 - Outcomes in advocacy?

- How is integration applied in the interventions you implement under STAR project?
 - What is the impact on HIV/AIDS prevention?
 - What is the impact on HIV/AIDS care and support?
 - What is the impact on HIV/AIDS treatment program?
 - What is the impact on service promotion and advocacy?

- How has integration affected or impacted on service delivery of HIV/AIDS prevention, care and treatment services?
 - What are the benefits?
 - What are the challenges?

- What issues would you say are currently affecting service delivery and need improvement?

- What additional approaches would you recommend for improving service delivery of HIV/AIDS prevention, care and treatment services?
 - Why this recommendation?

- What arrangements are currently in place to promote sustainability of the quality, availability and accessibility of HIV/AIDS services beyond the life the STAR project?

Evaluation of USAID Uganda’s District-Based Technical Assistance (DBTA) Projects

Focus Group Discussion Guide

Clients/Beneficiaries

The first step in conducting focus group discussions for this evaluation will include seeking participants consent, assuring voluntary participation, confidentiality and explaining the process before commencement of the discussion. PLHA Participation in a focus Group will require seeking their consent from participants and this will be processed by the moderator. The moderator will inform participants of the purpose of the STAR project evaluation exercise. Furthermore, the moderator will confirm to them that they have been asked to participate in the FGD because of their status as clients of service delivery systems the STAR project has supported over the years.

The moderator will confirm to participants that this is voluntary participation and therefore each individual can decide not to take part if they don’t want to and this will have no effect on their access services after the evaluation. The moderator will further explain to participants that there are no benefits except their offer of an understanding of client priority needs and how they could be addressed in future. In addition participants will be assured that their privacy will be protected by not including their names in any report that is published. The moderator will also seek permission from participants to tape record proceedings of the discussion.

In concluding the introductory part of the meeting the moderator will ask participants to introduce themselves and consent to starting the discussion. Names for those participants who have consented to participating will be recorded on an official sign-up list.

Guiding Questions

- What are your views about current service delivery arrangements/approaches for provision of the different HIV prevention, care and treatment services in your community? [**Introductory**]
- Compared to the past [before STAR project], what changes have you observed or experienced in current arrangements/approaches for providing these services in your communities?
- How have PLHAs benefited from current arrangements/approaches?
- Which specific service arrangements/approaches would you consider to be beneficial?

- Which specific service arrangements/approaches would you consider to have been problematic to clients? How come?
- On a single visit to the health facility, do clients get an opportunity to get additional services to what they came in for? Can you please share some examples of this experience?
- How beneficial or challenging is this arrangement of getting more than one service on a single visit?
- What issues would you say are currently affecting service delivery and need improvement?
- What additional improvements would PLHAs recommend for the health facility in your area?

Client Exit Interview Guide: Facility Based HTC, PMTCT & ART Services

DBTA Programme

.....District.....

Name/Level of Health Facility.....

Name of Health Sub-district.....Date.....

Name of
Interviewer.....

Instructions

Only one section of this Tool (HTC Services; PMTCT - Option B+ Services or ART Services) is to be filled for the exiting client, having received one of the HIV services (HTC; PMTCT or ART). At the point of exit, approach the client and ask whether he or she is willing to answer a couple of questions anonymously. Find a space that offers some privacy, and explain that you are interested in improving the quality of care that is provided at the health care facility and that their responses/comments will be used only for that purpose.

A: Client Socio-demographic Characteristics

Sex: M/F Age..... Years Marital Status.....

What service/clinic did you attend today? (Tick appropriately)

HTC Services – Answer questions in section 1 only

PMTCT - Option B+ Services – Answer questions in section 2 only

ART Services – Answer questions in section 3 only

SECTION 1: HTC SERVICES

1B: Client Interaction with the Health Services

Was it easy for you to get to this place/clinic? YES / NO

If NO, what were the causes of the difficulty?

.....

How long did you have to wait at the health facility before you were attended to?

< 30 Minutes /30 Minutes – 1 Hour /1 -2 Hours/> 2 Hours

What was the cause of the delay?

.....

.....
Who attended to you? Doctor / Nurse / Midwife/Expert Client/Don't know Title

Were you attended to in a friendly and respectful way? YES / NO

Did you have sufficient privacy? YES / NO

Did you find the clinic area clean? YES / NO

Do you feel you were appropriately counseled before you took the HIV test? YES /NO

Do you feel you were appropriately counseled as part of the process of receiving your HIV test results? YES / NO

Do you feel you have been adequately prepared to disclose your HIV results to other people? YES / NO

Where you accorded enough time to deal with your problems/issues? YES / NO

If NO, what HTC Service delivery areas would you want to see improved?

.....
.....
SKIP TO THE END

SECTION 2: PMTCT – OPTION B + SERVICES

2B: Client Interaction with the Health Services

Was it easy for you to get to this place/clinic? YES / NO

If NO, what were the causes of the difficulty?.....

.....
How long did you have to wait at the health facility before you were attended to?

< 30 Minutes /30 Minutes – 1 Hour /1 -2 Hours/> 2 Hours

What was the cause of the delay?
.....
.....

Who attended to you? Doctor / Nurse / Midwife/Expert Client/Don't know Title

What services did you receive today? (Tick all mentioned)

- Family planning education and services
- Screening for TB
- Breast feeding education and counselling
- Invitation for male involvement
- Early infant diagnosis
- Medicines and commodities supplies
- Linkages for support and follow-up
- Referral for non-medical support

Were you attended to in a friendly and respectful way? YES / NO

Did you have sufficient privacy? YES / NO

Did you find the clinic area clean? YES / NO

Did the clinician order Laboratory tests? YES / NO

If YES, did you have all the tests done? YES / NO

Were you satisfied with the way your HIV test results were given to you? YES / NO

Have you already been started on ARVs? YES / NO

Do you feel you were appropriately counseled before being started on ARVs? YES / NO

What do you see as challenges to remaining on ARVs for the rest of your life?

.....

.....

.....

15. Were you counselled on Family Planning? YES / NO

Are you a member of a Family Support Group? YES / NO

Were you given an appointment for the next visit? YES / NO

Do you foresee any issues that might prevent you from fulfilling this appointment? YES / NO

If YES, what are the issues?

.....

Where you accorded enough time to deal with your problems/issues? YES / NO

If NO, what areas would you want to see improved?

.....
.....

Over the period that you have been receiving HIV care at this facility, what have been the performance trends in health services delivery?

| 1 | 2 | 3 | 4 |
|----------------------------|-----------|-----------------------------|------------------------------------|
| Services have deteriorated | No change | Some improvement Registered | Significant Improvement Registered |
| PLEASE EXPLAIN : | | | |

SKIP TO THE END

SECTION 3: ART SERVICES

3B: Client Interaction with the Health Services

Was it easy for you to get to this place/clinic? YES / NO

If NO, what were the causes of the difficulty?.....

.....

How long did you have to wait at the health facility before you were attended to?

< 30 Minutes /30 Minutes – 1 Hour /1 -2 Hours/> 2 Hours

What was the cause of the delay?

.....
.....

Who attended to you? Doctor / Nurse / Midwife/Expert Client/Don't know Title

What services did you receive today? Tick all mentioned

Adherence monitoring/discussion

CD4 Follow-up

Family planning education and services

Screening for TB

Education on TB symptoms

Nutrition education and counselling

Medicines and commodities supplies

Linkages for support and follow-up
Referral for non-medical support

Were you attended to in a friendly and respectful way? YES / NO

Did you have sufficient privacy? YES / NO

Did you find the clinic area clean? YES / NO

Did the clinician order Laboratory tests? YES / NO

If YES, did you have all the tests done?

Do you feel that over the period that you have been receiving HIV care at this facility, the health workers have been explaining the purpose and benefits of the various laboratory tests you have undergone? YES / NO

Do you feel you were appropriately counseled before being started on ARVs? YES / NO

What do you see as challenges to remaining on ARVs for the rest of your life?

.....
.....
.....

Were you screened or tested for TB today or during previous Clinic visits? YES / NO

Were you given an appointment for the next visit? YES / NO

Do you foresee any issues that might prevent you from fulfilling this appointment? YES / NO

Where you accorded enough time to deal with your problems/issues? YES / NO

If NO, what areas would you want to see improved?

.....
.....

Over the period that you have been receiving HIV care at this facility, what have been the performance trends in health services delivery?

| 1 | 2 | 3 | 4 |
|----------------------------|-----------|-----------------------------|------------------------------------|
| Services have deteriorated | No change | Some improvement Registered | Significant Improvement Registered |
| PLEASE EXPLAIN : | | | |

END

ANNEX E. CONSENT FORM

Evaluation of Strengthening TB and HIV&AIDS Responses (STAR) Projects in: *(Moderator checks all that are applicable)*

Eastern Uganda (Management Sciences for Health – 2010)

East-Central Uganda (John Snow International - 2010)

South-West Uganda (Elizabeth Glaser Pediatric AIDS Foundation – 2011)

Respondent Name:

Respondent Position:

Date:

Moderator(s):

INFORMED CONSENT STATEMENT

Read the following to the respondents.

Introductory and Consent Note

Good day. My name is _____, and we are conducting an evaluation of USAID's three Strengthening TB and HIV&AIDS Responses (STAR) projects in Eastern Uganda/East-Central Uganda/South Western Uganda in collaboration with the Government of Uganda, USAID, Ministry of Health and District Health Management Teams, District Councils and other stakeholders. The purpose of the evaluation is to comprehensively analyze results associated with the process of implementing USAID/Uganda's District Based Technical Assistance (DBTA) model. The model's core direction, which serves as the technical framework for all three projects, centers on promoting comprehensive and integrated service delivery with a regional focus for improving access, quality and availability of integrated health service delivery as well as health financing and management..

You have been selected as a Key Informant to provide information associated with activities implemented by: the institution(s) indicated above. The information collected will only be used for the above purposes. All the information is strictly confidential. I also have a recorder that will help me to capture the discussion to ensure that I do not miss anything. May I use it? *[Moderator seeks consent]*.

I would also like to clarify that this interview is entirely voluntary and that you have the right to withdraw from interview at any point without consequence.

Thank you very much.

At this time, do you have any questions?

Are you willing to participate in this study?

Yes 1) Proceed

No 2) Thank the KI and STOP HERE

May I begin the discussion now?

Yes1) Continue with the Key Informant Interview

No2) STOP HERE

Date:

Start Time: ____:____ Time of conclusion: ____:____

Thank you

ANNEX F. AREA-SPECIFIC CLIENT EXIT REPORTS

THE CLIENT EXIT AGGREGATE SURVEY REPORT FOR THE STAR EVALUATION



Prepared and submitted by
Provide and Equip Limited
www.provide-equip.com
January 2015

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Cover picture: A STAR East PMTCT Client during the interview at Buginyanya HC III, Bulambuli District

LIST OF ABBREVIATIONS AND ACRONYMS

| | |
|---------|--|
| AIDS | Acquired Immune Deficiency Syndrome |
| ART | Anti-retroviral Therapy |
| ARVs | Anti-Retroviral Drugs |
| CAO | Chief Administrative Officer |
| CB-DOTS | Community Based-Directly Observed Treatment |
| CSOs | Civil Society Organizations |
| DBTA | District Based Technical Assistance |
| FP | Family Planning |
| HW | Health Worker |
| HC | Health Center |
| HF | Health Facilities |
| OPD | Out-Patient Department |
| P&E | Provide and Equip Ltd |
| PMCT | Prevention of Mother to Child Transmission |
| PMP | Performance Monitoring Plan |
| MELC | Monitoring Evaluation and Learning Contract |
| SMC | Safe Male Circumcision |
| STAR | Strengthening decentralized HIV and AIDS and TB |
| STAR-E | STAR East |
| STAR-EC | STAR East Central |
| STAR-SW | STAR South West |
| TB | Tuberculosis |
| TA | Technical Assistance |
| U.S | United States |
| USAID | United States Agency for International Development |
| USG | United States Government |

EXECUTIVE SUMMARY

Background

The Strengthening Decentralized HIV and AIDS and TB (STAR) projects end of project evaluation was conducted in 2014 using Focus Group Discussions (FGDs) and Key Informant Interviews (KIIs) and review of secondary data. After the presentation of preliminary results the USAID mission, the evaluation team was advised to include a stronger voice from beneficiaries regarding the quality improvement of services in the health facilities, hence necessitating an Exit Client Survey. The Exit Client Survey was hence conducted among 25 Health Facilities (HFs) in 12 sampled districts. The data collection for the survey was conducted from 19th - 23rd January 2015.

Methodology

The survey employed a largely quantitative methodology using a semi-structured tool with both closed and open-ended questionnaires. Twelve districts were purposively selected, 4 from each of the 3 STAR regions. A total of 33 health facilities were covered, the interviewers selected targetting at least 9 clients from each of the HIV/AIDS services (PMTCT, HCT and ART,) as they exited the facility. Overall, a total of 661 clients were interviewed.

Findings

Socio-Demographic Characteristics of Respondents: Thirty two percent (32%) of the respondents were from STAR East, 36% from East Central while 32% were from STAR South West. Most of the respondents were from HC IIIs (48%), followed by HC IVs (47%) and one hospital (5%). Thirty six percent (36%) of clients had accessed HTC services, 34% ART while 30% PMTCT. The majority of the respondents (66%) were aged 25-49 years; (63%) were married while 42% had incomplete primary school education as their highest level of education.

Client Interaction with the Health Services: Over three quarters (74%) of the respondents reported that it was easy for them to get to the Health Centres (HCs), majority of which from STAR South West (STAR SW). The long distances to the HCs and the associated transport costs were the main problems faced affecting getting to HCs. Slightly over half (54%) of the respondents said that they had waited for less than 30 minutes at health facility (HF) before being attended to; longer waiting hours were noted at STAR SW. Almost all clients were satisfied by the way the services were provided to them; 98% felt that they were attended to in a friendly and respectful way, 95% said that they had sufficient privacy, while 96% reported that the services they received were safe.

Over three quarters (75%) of the respondents reported that received all prescribed medicine; the OPD had stock outs of several essential drugs such as malaria drugs and painkillers. Almost all respondents (100%) who accessed services at the hospitals rated it as clean, significantly more than HC IV clients (94%).

Significantly more respondents that had accessed services at the hospital said that their concerns had been adequately addressed than HC IVs clients (94% versus 82% from HC IVs).

HTC Services: The majority of the respondents (83%) felt that they were appropriately counseled; and this was significantly higher among the respondents from STAR E region (90%) than those of STAR SW (72%). Although three quarters of the respondents mentioned that the HWs had discussed with clients specific actions to be taken in view of their HIV test results, the variation was significantly higher among the respondents from STAR E (90%) than those of STAR SW (72%).

Significantly more respondents from STAR E (reported that HWs had discussed with them specific actions to be taken in view of their HIV results (86% STAR E, 75% STAR EC and 69% STAR SW).

One third of the respondents (33%) said that they would like to see HTC service delivery processes improved. Significantly more clients in STAR SW (46%) as compared to STAR EC (30%) and STAR E (23%) wanted services improved. Suggestions for HTC service improvement by clients included: stocking drugs to treat other illnesses in addition to HIV/AIDS, improved counseling services, improved time keeping, stocking more lab supplies, increasing on the number of health workers, (HWs), HWs wearing safety measures such as gloves and extending HTC services to remote villages.

PMTCT Option B Plus Services: The most commonly accessed PMTCT services were: medicines and commodities supplies (84%); followed by counselling/psycho-social support (35%) and family planning (FP) education and services (29%). Three quarters (74%) of PMTCT clients that were interviewed reported that they were given information on FP and almost all respondents that were provided FP information (92%) said that they would consider using the information provided. The screening of TB among PMTCT clients was very limited; it was significantly lower in STAR E region (7%) and slightly higher in STAR SW (32%).

The majority of the respondents reported that services had improved over time; 47% of the respondents said there had been some improvement, while 33% said there was significant improvement. Significant improvement was mentioned more among STAR EC respondents (49%) while most of the respondents from STAR E (72%) said that there had been some improvement. Thirty-seven percent (37%) of STAR SW respondents said that there had been some improvement, while (36%) mentioned significant improvement.

The highlighted improvements in the quality of PMTCT services included: improved time management by the HWs, HWs are friendlier more to the clients than before, provided shelters and chairs were for waiting clients, the family support groups were established and the eMTCT was believed to have almost eliminated MTCT.

ART Services: The majority of ART respondents had been provided with ART drug refills (92%), followed by adherence monitoring/discussion (30%) and general counseling/psycho-social support (29%). Provision of adherence monitoring, family planning education, education on TB symptoms and general counseling/psycho-social support was significantly higher among STAR E supported HCs than in other regions. Significantly fewer clients (20%) in STAR E than in other regions (50% STAR EC, 50% STAR SW reported that all recommended tests had been done at the HCs, largely due to HIV the stock out test kits.

The majority of the respondents reported that services had improved over time; 50% of the respondents said there had been some improvement, while 25% said there was significant improvement. The perceived improvements in quality were: improved longevity and quality of life of clients, regular availability of ARVs, improved care/attention that doctors give to the

patients, increased number of HWs, integrated services which has eased access and establishment of family support groups.

A few clients however said that the services had deteriorated due to: clients not receiving food rations and transport facilitation any more, absence of other essential drugs, minimum provision of information due to routine counseling and testing, negative HW attitude in non HIV and AIDS departments, lack of adolescent friendly services and limited access to doctors for consultation.

Conclusions

The STAR projects have substantially contributed to improved quality of HIV and AIDS services delivery. Although the service delivery practices had similar trends of improved service delivery across STAR projects, there were some variations. Some notable variations included significantly lower TB screening in STAR E region and significantly lower adherence monitoring, family planning education, education on TB symptoms and general counseling/psycho-social support among STAR EC and SW supported HCs than in other regions. Overall, TB screening was very low in all regions. Whereas HIV and AIDS service delivery improved, other supplementary services seemed to be in limbo. Routine counseling and testing seems to have compromised the quality of HTC. The HCS were found to be implementing 3 different clinic models: having a weekly clinic day, a monthly clinic day as well as no specific clinic day.

Lessons Learned

What worked well: The DBTA model integrated a range of services, which has eased access to services. Clients are able to find a range of services in the same place such as ARVs, PMCT, FP and lab testing. The regular availability of drugs and ARVs greatly enhanced the demand and uptake of HIV and AIDS services.

What did not well: In order to comprehensively improve HC service delivery, there is need to support all complementary departments to ensure that clients get comprehensive quality services. Although the services of expert clients were very much appreciated in terms of being part of the HC service delivery team, hence beefed up manpower, expert clients from STAR SW did not seem to be very motivated to do their work, complaining of heavy workload without pay.

Recommendations: Comprehensively support strengthening of quality of health services beyond HIV and AIDS and ensure availability of drugs as well as other medical supplies in all departments; assess the quality of HIV counseling under RCT to minimize the compromise on the quality of services, address in a sustainable manner issues that affect the client's ability to return to the HCs such as long distances and associated transport costs; consider taking services closer to communities; perform regular monitoring of quality aspects of service delivery; commission an assessment for the 3 clinic models: 'weekly clinic day', 'monthly clinic day' as well as 'no specific clinic day' to establish the most effective and efficient model of service delivery.

INTRODUCTION

This section presents the background to the STAR Projects and Evaluation as well as the background for the client Exit Survey.

Background to the STAR Projects and Evaluation

The Strengthening Decentralized HIV and AIDS and TB (STAR) projects in East, East-Central and South-West Uganda were the first in USAID/Uganda's District Based Technical Assistance (DBTA) model featuring regional focus in improving access, quality and availability of integrated health service delivery as well as health financing and management. The projects work in five program areas, these include: (1) Increasing access to, coverage of, and use of comprehensive HIV and AIDS and TB services; (2) Strengthening decentralized HIV and AIDS and TB service delivery systems; (3) Improving the quality and efficiency of HIV and AIDS and TB service delivery within health facilities; (4) Strengthening networks and referrals systems to improve access to, coverage of, and use of HIV and TB services; and (5) Increasing demand for comprehensive HIV and AIDS and TB prevention, care, and treatment services.

All the three STAR projects build the capacity of civil society organizations (CSOs) and local governments in each region to identify and respond to community needs using quality data while continuously improving services and facilities through best practices in management. Working closely with the Ministry of Health and through District Health Management Teams, District Councils, health facilities, and communities, the projects' general objective is to increase access to, coverage of, and utilization of quality comprehensive HIV/TB prevention, care, and treatment services within district health facilities and their respective communities. They train CSOs and local governments in strategic information collection and dissemination, including training in lot quality assurance sampling (LQAS) methodology and facilitate district-led performance reviews to help identify coverage and service gaps.

This approach is closely linked to USAID's Strengthening Decentralization for Sustainability (SDS) Program, which was designed to improve systems and coordination at the decentralized level. SDS enhances PHC support through quarterly coordination meetings, district-integrated supervision to health centers, transportation of lab samples, HIV/AIDS care and treatment, and monthly follow up of Community Based-Directly Observed Treatment (CB-DOTS). Implementation of the STAR-E and STAR-EC started in 2010, while STAR-SW started in 2011, they will all end in March 2015.

The STARs evaluation team contracted by QED presented its preliminary findings to USAID in December 2014. The evaluation focused on establishing the extent of efficiency and effectiveness of the USAID/Uganda's District Based Technical Assistance (DBTA) project model. The evaluation was tailored on evaluating the following key aspects namely: Comprehensive and integrated service delivery; improved service access, quality and availability; rationalized health financing and the strengthened district health management.

Background to the Client Exit Survey

During the STAR evaluation exercise for the DBTAs, qualitative data was collected using Focus Group Discussions (FGDs) and Key Informant Interviews (KIIs) and supplemented with

secondary data from the LQAS, Performance Management Plan (PMP) and Monitoring and Evaluation of Emergency Plan Progress (MEEPP). After the presentation of preliminary results the USAID mission, the evaluation team was advised to include a stronger voice from beneficiaries regarding the quality improvement in the health facilities. This was seen as a critical in addition to the information obtained through FGDs, KIs and the secondary data.

QED through Monitoring Evaluation and Learning Contract (MELC) the hence contracted Provide and Equip (P&E) consultancy firm to conduct the Exit Client Survey among Health Facilities (HFs) in sampled districts. The data collection for the survey was conducted from 19th - 23rd January 2015.

TECHNICAL APPROACH AND METHODOLOGY FOR SURVEY

This section presents the survey methodology, sampling, field implementation, data collection data analysis, ethical considerations as well as the limitations of the survey.

Methodology

The survey employed a largely quantitative methodology using a semi-structured tool with both closed and open-ended questionnaires. Twelve (12) districts were selected using simple random a sampling approach (lottery method) from a total of 34 districts. The selection was based on the project areas, the “old” and “new” districts and took into consideration the “hard-to-reach” districts. The old districts were defined to constitute those that started after July 2005. The list of districts reached during the survey is provided in Table I below.

Table 9: List of Surveyed Districts for the STAR E Client Exit Survey

| STAR SOUTH – WEST | | STAR EAST CENTRAL | | STAR EASTERN | |
|-------------------|---------------|-------------------|---------------|---------------|---------------|
| Old Districts | New Districts | Old Districts | New Districts | Old Districts | New Districts |
| Bushenyi | Buhweju | Iganga | Luuka | Mbale | Kibuku |
| Ntungamo | Mitooma | Kamuli | Namayingo | Kapchorwa | Bulambuli |

Sample Size and Sample Design

The client exit survey was undertaken in the sub-sampled health facilities that were reached during the prior field visit but took into consideration Low/High client load⁵. Two (2) health facilities were selected from each district (1 HC IV and 1 HC III) making it eight (8) health facilities. The selection of the HFs was purposively done to ensure substantial number of clients based on clients’ days.

At the health facility, the interviewers selected at least 9 clients from each of the HIV/AIDS services (PMTCT, HCT and ART,) as they exit from the facility. An average of 27 respondents per facility was interviewed from either one HCIII or one HCIV in each district. Overall, a total of 661 clients were interviewed as shown in Table 2 below.

Table 10: Sample Composition

| Health facility level/Type | Total number of facilities selected per district | Total number of clients interviewed per service area (HTC, PMTCT, ART) per facility | Total number of clients interviewed per facility |
|----------------------------|--|---|--|
| HCIV | 1 | 9 | 27 |
| HCIII | 1 | 9 | 27 |
| Total per district | 2 | 18 | 54 |

Fieldwork Preparations

Fieldwork preparations entailed pre-field consultations; designing and pre-testing of data collection tools; field staff recruitment and training, as explained in the preceding subsections.

Field Staff Training and Pre-Testing of Data Collection Tools

Two consultative meetings were held with QED MELC management as well as evaluation team to gain consensus on the scope of work, technical approach as well as timelines for key deliverables. During one of the meetings, the Client Exit Survey Tool that had been drafted by the survey team was reviewed and improved. P&E then organized and facilitated a two-days training program for the research team that role plays by the research team as well as pretesting of the tools in two Health Centers (Baitambogwe HC III) and in Mayuge HC IV) in Mayuge District. Feedback was obtained from the pretest and was used to further improve and finalize the tool. The pretest enabled the team to gauge the length of the interview, make a few questions clearer and to add and or rectify some skips. The supervisors check all the pretested tools and feedback was provided to interviewers for improvement. The pretests were also entered into the data entry screens in Epidata as a pretest for the database. Pre-testing facilitated in fine-tuning the tools to ensure relevance, consistency, completeness and coherency of all questions in the tool.

Data Collection, Processing and Management

Data was collected using a semi-structured questionnaire that was developed aiming at measuring existing standards for quality services. Data was collected by experienced Research Assistants who administered the tool to health facility clients in the local languages. Data entry was done using Epidata software, which is rich in data validation for controlling data entry errors. The data was then exported to SPSS for analysis. Graphs, charts and tables were generated using MS Excel.

Quality Assurance

Quality control was given due attention in order to obtain a quality outcome of the survey exercise. Quality assurance was done through:

- Rigorous training of the research team and role-plays.
- Pretesting and reviewing the data collection tools based on the results of the pretest.
- Having the enumerators and supervisors cross check each filled-in data collection tool at the end of the day so that corrections are done while still in the field.
- Daily de-briefing among the research team every evening to share experiences and map out strategies for the way forward.
- Conducting random spot checks by supervisors in the field to validate the authenticity of compiled data.

Checking was done for:

- i. Appropriateness of approach
- ii. Correct target group
- iii. Correct interpretation of key concepts and terminologies
- iv. Accurate recording of correct information

The payment for the data entry team had quality assurance element embedded, data entrants were paid per entered clean record. The data entry screen also had an inbuilt program for detecting errors such as outliers, double entry and wrong entries. The database was further cleaned by running logical checks to determine and eliminate outliers and errors.

Ethical Considerations

Participation in this survey was purely voluntary and maximum confidentiality was maintained for all the information collected. Although, respondents/participants were encouraged to participate, they were free to turn down the invitation if they so wished. Consent was sought by obtaining permission to conduct the interviews through the respondents' signing the consent forms or putting their thumbprint for those without literacy skills. The interviewers had strict instructions not to inquire about respondent names or HIV status for the HTC clients.

Survey Limitations

The following limitations were faced but were managed well so as not to compromise the quality of data:

Some HCs in STAR SW region had clinic days only once a month, and that day fell outside the data collection period. That meant interviewing fewer clients that targeted and over sampling among those that had clinic days within the survey period.

Some HCs in STAR-E region had no defined clinic days, each client is given their own day, hence it was not possible for the interviewers to get the targeted sample size in those HCs such as Biginyanya HC III in Bulambuli District.

PMTCT days were often different from ART days, hence it would have necessitated 2 days at the clinic, yet the timeframe did not allow. We managed this by interviewing ART mothers who has delivered in the past 2 years.

The national polio immunization campaign negatively affected the first two days of data collection. Most health workers were engaged in the exercise hence limited service delivery at HCs.

Some HCs in all STAR regions had no test kits, hence HCT was not fully done. The survey teams at times had to get HTC clients from the newly enrolled on ART, those that had tested within 3 months.

FINDINGS

This sections presents findings of the exit client survey are presented under the following subheadings: socio-demographic characteristics of respondents, client interaction with the health services, HTC services, PMTCT – Option B Plus services and ART Services.



Figure 1 STAR East Sign post at Buginyanya HC III, Bulambuli District

Socio-Demographic Characteristics of Respondents

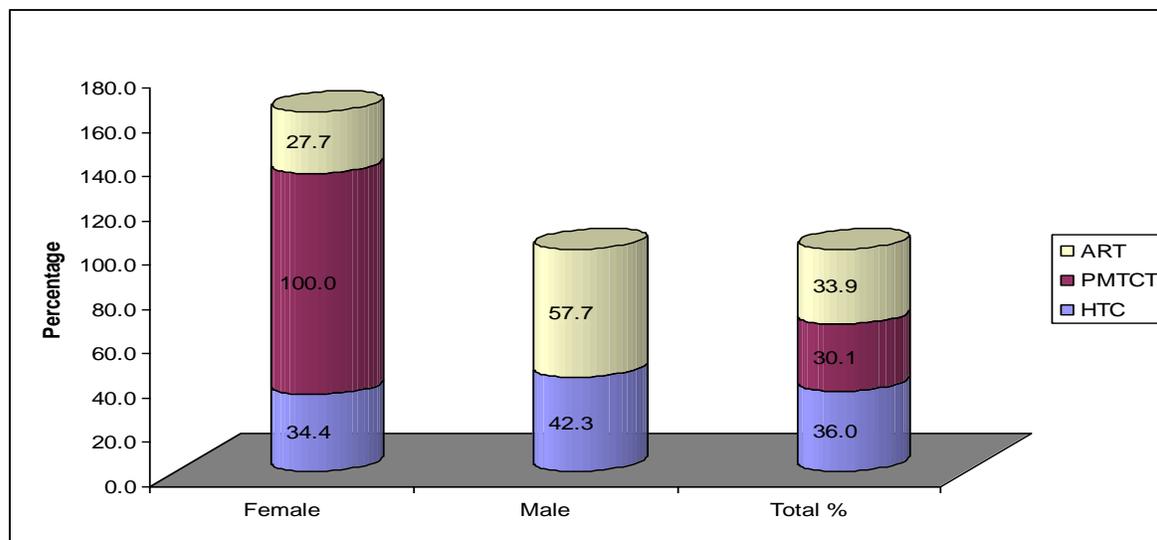
A total of 661 respondents were interviewed (higher than the targeted 450 clients), of which 32% from STAR East, 36% from East Central and 32 % from STAR South West as shown in table 3 below. Most of the respondents were from HC IIIs (48%), followed by HC IVs (47%) and one hospital (5%). Although hospitals were initially not meant to be included in the sample, Kapchorwa hospital was selected in due to lack of HC IVs in Kapchorwa District.

Table 3: Respondents Background Characteristics

| CHARACTERISTIC | NUMBER OF RESPONDENTS | PERCENTAGE |
|---|------------------------------|-------------------|
| Programme location | | |
| STAR East | 211 | 31.9 |
| East Central | 236 | 35.7 |
| STAR South West | 214 | 32.4 |
| TOTAL | 661 | 100 |
| Level of Health Facility | | |
| HC III | 320 | 48.4 |
| HC IV | 309 | 46.7 |
| HOSPITAL | 32 | 4.8 |
| TOTAL | 661 | 100 |
| Services category of respondents | | |
| HTC | 238 | 36.0 |
| PMTCT | 199 | 30.0 |
| ART | 224 | 33.9 |
| TOTAL | 661 | 100 |
| Age category in years | | |
| 15-24 | 148 | 22.4 |
| 25-49 | 433 | 65.5 |
| 50+ | 80 | 12.1 |
| TOTAL | 661 | 100 |
| Education level | | |
| Never Attended | 103 | 15.7 |
| Functional Adult Literacy | 05 | 0.8 |
| Incomplete Primary | 279 | 42.2 |
| Complete Primary | 94 | 14.2 |
| O-Level | 149 | 22.5 |
| A-Level | 14 | 2.1 |
| Post-Secondary/Tertiary | 14 | 2.1 |
| Vocational Training | 3 | 0.5 |
| TOTAL | 661 | 100 |
| Marital status | | |
| Single | 92 | 13.9 |
| Married/living together | 413 | 62.5 |
| Widowed | 86 | 13 |
| Divorced | 10 | 1.5 |
| Separated | 60 | 9.1 |
| TOTAL | 661 | 100 |

The distribution of clients across service areas was as follows: HTC (36%), ART (34%) and PMTCT (30%) as presented in figure 2 below.

Figure 2 Respondent Sex by Service Received



The majority of the respondents (66%) were aged 25-49 years, followed by 15-24 years (22%), while 12% were aged 50 and above. The largest proportion of respondents (42%) had incomplete primary school education as their highest level of education. Over two thirds of the respondents (63%) were married.

Client Interaction with the Health Services

Over three quarters (74%) of the respondents reported that it was easy for them to get to the Health Centres (HCs). Significantly more clients from STAR South West (STAR SW) mentioned that it easy to get to the HCs as compared to those in STAR East Central (STAR EC), as shown in table 4 below.

Almost all respondents (97%) who mentioned that it was not easy to get to the HCs pointed out the long distances to the HCs and the associated transport costs as the main problems faced. Mothers, who came carrying along babies under the PMTCT program, as well as the weak and elderly, commonly raised the distance and transport cost issues.

Slightly over half (54%) of the respondents said that they had waited for less than 30 minutes at health facility (HF) before being attended to; clients at STAR SW were more likely to wait for longer hours, 21% waited for more than 2 hours, as compared to 10% of STAR East clients (STAR E) clients.

The common reasons given for the delay in receiving services were:

- Very many clients as HCs as compared to the service providers
- The late starting time for service delivery; clients were waiting for the facility to open

Almost all clients were satisfied by the way the services were provided to them; 98% felt that they were attended to in a friendly and respectful way, 95% said that they had sufficient privacy, while 96% reported that the services they received were safe.

However, clients at Kiyunga HC reported lack of privacy:

“Everybody can see you”, remarked PMTCT client. “The rooms in which we receive services are too small. The women who have come for antenatal hear what we the PMTCT mothers are receiving and spread rumours. Please we need privacy”, said one PMTCT client in Kiyunga H/C

All STAR E clients rated their HCs as clean (100%) which was significantly higher than those from other regions (95%). It should be noted that from the research team’s perspective, most HC were not clean to the desired level, they were not swept or mopped for a long time, but the clients saw them a very clean.

It should be noted that from the research team’s perspective, most HC were not clean to the desired level, they appeared not have been swept or mopped for a long time, but the clients saw them a very clean.

The STAR EC clients rated specific safety issues relatively lower than the rest though the rating was still high; (74%) of STAR EC clients rated mentioned that they had seen HWs using gloves as compared to 83% and 85% at STAR E and STAR SW respectively; 75% of STAR EC clients mentioned that the HWs seen using new needles as compared to 85% and 84% at STAR E and STAR SW respectively. It should however be noted that some clients may have not been keen to observe whether for instance a new needle was used or not.

Over three quarters (75%) of the respondents said that received all prescribed medicine; the highest percentage of those who got all prescribed drugs was from the ART clinic; the OPD had stockouts of several essential drugs such as malaria drugs and painkillers.

Table 4: Percentage Client Interaction with the Health Services by Programme Location

| CLIENT INTERACTION WITH THE HEALTH SERVICES | STAR EAST (n=211) | EAST CENTRAL (n=236) | STAR SOUTH WEST (n=214) | TOTAL (n=661) | P-VALUE |
|--|--------------------------|-----------------------------|--------------------------------|----------------------|----------------|
| Easy to get to the health facility/ clinic | 73 | 70.3 | 79.4 | 74.1 | 0.080* |
| Length of time waited at health facility before being attended to | | | | | |
| Less than 30 minutes | 59.2 | 57.2 | 47.2 | 54.6 | |
| 30 minutes – 1 hour | 14.2 | 14 | 18.2 | 15.4 | |
| 1 -2 hours | 16.1 | 11.0 | 13.6 | 13.5 | |
| More than 2 hours | 10.4 | 17.8 | 21.0 | 16.5 | |
| TOTAL | 100 | 100 | 100 | 100 | 0.023* |
| Facility was clean | 99.5 | 94.9 | 94.9 | 96.4 | 0.012* |
| Attended to in a friendly and respectful way | 98.1 | 98.7 | 96.7 | 97.9 | 0.326 |
| Client or respondent had sufficient privacy | 97.6 | 93.2 | 93.5 | 94.7 | 0.071 |
| Felt that the services received were safe | 95.7 | 96.2 | 95.3 | 95.8 | 0.872 |
| Health worker used gloves | 82.5 | 74.2 | 84.6 | 80.2 | 0.00* |

| CLIENT INTERACTION WITH THE HEALTH SERVICES | STAR EAST (n=211) | EAST CENTRAL (n=236) | STAR SOUTH WEST (n=214) | TOTAL (n=661) | P-VALUE |
|---|--------------------------|-----------------------------|--------------------------------|----------------------|----------------|
| Health worker used a new needle | 84.8 | 75.0 | 84.1 | 81.1 | 0.015* |
| Were any medicines prescribed for you | 77.3 | 84.3 | 84.1 | 82.0 | 0.094 |
| Client was given instructions on how to take medicines | 96.3 | 99.5 | 96.7 | 97.6 | 0.087 |
| Client or respondent received all prescribed medicine | 70.6 | 78.0 | 78.5 | 75.8 | 0.103 |

*p-value less than 0.05 is significant

Comparison was made among people accessing services at varying HC levels to determine those with more accessibility challenges regarding getting to HCs. There was a significant variation among people who accessed services at HCs IIIs (78%) versus those who accessed services at the hospital (63%) in terms of mentioning that it was easy to get to the HF, shown in table 5 below.

Almost all respondents (100%) who accessed services at the hospitals rated it as clean, this was significantly higher than the rating of those who had accessed services at HC IVs (94%).

Almost all respondents (99%) felt that they were attended to in a friendly and respectful way at HC IIIs as compared to 91% for those that received services from the hospital.

The respondents were further asked whether they felt that all the concerns that had brought

The most common reasons why the respondents reported that their concerns were not addressed by the HC staff were:

- Drug stock outs; other drugs were not dispensed, especially malaria drugs
- Limited counseling was given to clients
- Absenteeism of health workers
- No HIV testing done due to lack of test kits
- Clients having to buy gloves for HWs to use

them to the HC were adequately addressed; significantly more respondents that had accessed services at the hospital said that their concerns had been adequately addressed than those who got services from HC IVs (94% versus 82% from HC IVs).

Table 5: Percentage Client Interaction with the Health Services by Level of Health Facility

| CLIENT INTERACTION WITH THE HEALTH SERVICES | HOSP (n=32) | HC III (n=320) | HC IV (n=309) | TOTAL (n=661) | P-VALUE |
|--|--------------------|-----------------------|----------------------|----------------------|----------------|
| Easy to get to the health facility/ clinic | 62.5 | 78.1 | 71.2 | 74.1 | 0.043* |
| Length of time waited at health facility before being attended to | | | | | |
| Less than 30 minutes | 87.5 | 63.4 | 42.1 | 54.6 | |
| 30 minutes – 1 hour | 6.2 | 17.2 | 14.6 | 15.4 | |
| 1 -2 hours | 3.1 | 10.9 | 17.2 | 13.5 | 0.000* |

| CLIENT INTERACTION WITH THE HEALTH SERVICES | HOSP (n=32) | HC III (n=320) | HC IV (n=309) | TOTAL (n=661) | P-VALUE |
|--|------------------------|---------------------------|--------------------------|--------------------------|----------------|
| More than 2 hours TOTAL | 3.1 100 | 8.4 100 | 26.2 100 | 16.5 100 | |
| Facility was clean | 100.0 | 98.1 | 94.2 | 96.4 | 0.015* |
| Attended to in a friendly and respectful way | 90.6 | 99.4 | 97.1 | 97.9 | 0.002* |
| Client or respondent had sufficient privacy | 93.8 | 95.9 | 91.5 | 94.7 | 0.390 |
| Felt that the services received were safe | 93.8 | 97.2 | 94.5 | 95.8 | 0.385 |
| Health worker used gloves | 87.5 | 88.4 | 70.9 | 80.2 | 0.000* |
| Health worker used a new needle | 90.6 | 89.4 | 71.5 | 81.1 | 0.000* |
| Clients or respondents who felt that all their concerns were adequately addressed | 93.8 | 88.4 | 81.9 | 85.6 | 0.026* |

There was no significant variation regarding the length of time waited at HCs before being attended to across HTC, PMTCT and ART services; 55% of the respondents had waited for less than 30 minutes before being attended to, while 17% waited for more than 2 hours, as presented in table 6 below.

The respondents were asked whether they had observed the HWs using gloves or a new injection needle while receiving injections or while under going the bleeding procedures. More HCT clients (88%) than PMCT (85) and ART clients (67) observed the use of gloves and new needles (92% HTC, 85% PMTCT and 66% ART) respectively. The variation was significant, possibly because there are more bleeding procedures taking place in HTC units.

Table 6: Percentage Client Interaction with the Health Services by Service Category

| CLIENT INTERACTION WITH THE HEALTH SERVICES | HTC (n=238) | PMTCT (n=199) | ART (n=224) | TOTAL (n=661) | P-VALUE |
|--|------------------------|--------------------------|------------------------|--------------------------|----------------|
| Easy to get to the health facility/ clinic | 77.7 | 74.4 | 70.1 | 74.1 | 0.172 |
| Length of time waited at health facility before being attended to | | | | | |
| Less than 30 minutes | 55.9 | 52.8 | 54.9 | 54.6 | |
| 30 minutes – 1 hour | 13.0 | 19.1 | 14.7 | 15.4 | |
| 1 -2 hours | 12.6 | 13.6 | 14.3 | 13.5 | |
| More than 2 hours | 18.5 | 14.6 | 16.1 | 16.5 | |
| TOTAL | 100 | 100 | 100 | 100 | 0.652 |
| Facility was clean | 96.6 | 95.9 | 96.9 | 96.4 | 0.717 |
| Attended to in a friendly and respectful way | 97.5 | 98.5 | 97.8 | 97.9 | 0.756 |
| Client or respondent had sufficient privacy | 93.1 | 93.5 | 96.9 | 94.7 | 0.203 |
| Felt that the services received were safe | 94.5 | 96.0 | 96.9 | 95.8 | 0.131 |
| Health worker used gloves | 87.8 | 84.9 | 67.9 | 80.2 | 0.000* |
| Health worker used a new needle | 91.6 | 85.4 | 66.1 | 81.1 | 0.000* |
| Clients or respondents who felt that all their concerns were adequately addressed | 84.0 | 85.9 | 87.1 | 85.6 | 0.645 |

HTC Services

The clients that accessed HTC services on the day of the interviews were asked a number of questions regarding the content and quality of the service that they had received. The majority of the respondents (83%) felt that they were appropriately counselled; and this was significantly higher among the respondents from STAR E region (90%) than those of STAR SW (72%), as shown in table 7 below. Although three quarters of the respondents mentioned that the HWs had discussed with clients specific actions to be taken in view of their HIV test results, the variation was significantly higher among the respondents from STAR E (90%) than those of STAR SW (72%).

Significantly more respondents from STAR E (reported that HWs had discussed with them specific actions to be taken in view of their HIV results (86% STAR E, 75% STAR EC and 69% STAR SW).

One third of the respondents (33%) said that they would want to see HTC service delivery processes improved. Significantly more clients in STAR SW (46%) as compared to STAR EC (30%) and STAR E (23%) wanted services improved.

Table 7: Percentage Clients Interaction with the Health Services by Programme Location

| CLIENT INTERACTION WITH THE HEALTH SERVICES | STAR EAST (n=81) | EAST CENTRAL (n=79) | STAR SOUTH WEST (n=78) | TOTAL (n=238) | P-VALUE |
|--|-----------------------------|--------------------------------|-----------------------------------|--------------------------|----------------|
|--|-----------------------------|--------------------------------|-----------------------------------|--------------------------|----------------|

| CLIENT INTERACTION WITH THE HEALTH SERVICES | STAR EAST (n=81) | EAST CENTRAL (n=79) | STAR SOUTH WEST (n=78) | TOTAL (n=238) | P-VALUE |
|---|-----------------------------|--------------------------------|-----------------------------------|--------------------------|----------------|
| Clients/respondents who felt that they were appropriately counseled | 90.1 | 87.3 | 71.8 | 83.2 | 0.004* |
| Health worker discuss with clients specific actions to be taken in view of their HIV results | 86.4 | 74.7 | 69.2 | 76.9 | 0.000* |
| Would want to see HTC service delivery processes clients improved | 23.5 | 30.4 | 46.2 | 33.2 | 0.009* |

Suggestions for HTC service improvement by clients:

- Treat other illnesses in addition to HIV/AIDS. Stock more essential drugs
- Improved counseling services by employing qualified counselors and ensuring privacy
- Improved time keeping by health workers
- Stock more lab supplies
- Increase on the number of health workers
- The nurses should wear safety measures such as gloves
- Extend HTC services to remote villages

PMTCT Option B Plus Services

Client exit interviews were further conducted among women who had accessed PMTCT services on the day of the interview. The most commonly accessed PMTCT services were: medicines and commodities supplies (84%); followed by counselling/psycho-social support (35%) and family planning (FP) education and services (29%).

Three quarters (74%) of PMTCT clients that were interviewed reported that they were given information on FP and almost all respondents that were provided FP information (92%) said that they would consider using the information provided.

The screening of TB among PMTCT clients was very limited; it was significantly lower in STAR E region (7%) and slightly higher in STAR SW (32%).

Table 8: Percentage PMTCT Client Interaction with the Health Services by Programme Location

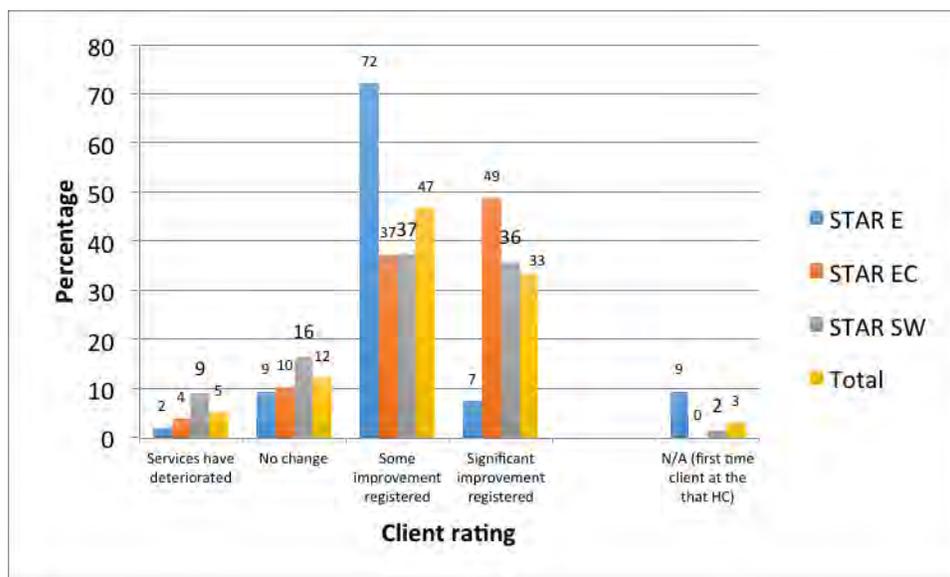
| CLIENT INTERACTION WITH THE HEALTH SERVICES | STAR EAST (n=54) | EAST CENTRAL (n=78) | STAR SOUTH WEST (n=66) | TOTAL (n=199) |
|--|-----------------------------|--------------------------------|-----------------------------------|--------------------------|
| Services received on interview day | | | | |

| CLIENT INTERACTION WITH THE HEALTH SERVICES | STAR EAST (n=54) | EAST CENTRAL (n=78) | STAR SOUTH WEST (n=66) | TOTAL (n=199) |
|--|-------------------------|----------------------------|-------------------------------|----------------------|
| Family planning education and services | 40.7 | 32.1 | 14.9 | 28.6 |
| Screening for TB | 3.7 | 3.8 | 0 | 2.5 |
| Breast feeding education and counselling | 37.0 | 19.2 | 14.9 | 22.6 |
| Invitation for male involvement | 11.1 | 5.1 | 0.0 | 5.0 |
| Early infant diagnosis | 14.8 | 3.8 | 16.4 | 11.1 |
| Medicines and commodities supplies | 79.6 | 93.6 | 80.6 | 85.4 |
| Counselling/psycho-social support | 46.3 | 52.6 | 6.0 | 35.2 |
| Referral for health services at another health facility | 0 | 1.3 | 1.5 | 1.0 |
| Referral for non-health care support | 0 | 0 | 0 | 0 |
| Laboratory testing | 24.1 | 11.5 | 23.9 | 19.1 |
| Discussion of laboratory tests and results | 5.6 | 1.3 | 00 | 02 |
| Did the health worker refer you or any other member of your family to receive other health services | 11.1 | 15.4 | 16.4 | 14.6 |
| Referral note written and given to the client | 33.3 | 75.0 | 81.8 | 69.0 |
| HIV-exposed infant receive any laboratory test during this visit | 48.1 | 48.7 | 76.1 | 57.8 |
| Was the testing done in the same unit or place where all other services given today were received? | 55.6 | 52.6 | 70.1 | 59.3 |
| Satisfied with the way the information was discussed? | 66.7 | 69.2 | 82.1 | 72.9 |
| Was provided with information on family planning? | 61.1 | 78.2 | 80.6 | 74.4 |
| Was checked for symptoms of TB | 5.6 | 30.8 | 32.8 | 24.6 |

Assessment of PMTCT Service Quality

The participants were asked to rate the quality of PMTCT service delivery over the period that they had been receiving PMTCT services at the facility. Overall all, the majority of the respondents reported that services had improved over time. On average, 47% of the respondents said there had been some improvement, while 33% said there was significant improvement. Significant improvement was mentioned more among respondents from STAR EC (49%) while most of the respondents from STAR E (72%) said that there had been some improvement. Thirty-seven percent (37%) of STAR SWW respondents said that there had been some improvement, while (36%) mentioned significant improvement. The variation in the perception of quality improvement was significant across STAR regions as presented figure 3 below.

Figure 3 PMTCT Client Perception of Service Quality Trends



Some of the reasons why clients reported that there was improvement in the quality of services included:

- There is improved time management by the Health Workers (HWs). The client schedule of treatment is adhered to and there is reduced waiting time even with very heavy client load.
- Counseling is given to clients and the HWs are friendlier more to the clients than before.
- Better waiting areas for clients for clients were constructed, so clients can wait for services patiently because they are under the shelter and have somewhere to sit (with the exception PMTCT clients at Kiyunga H/C IV, Luuka District). STAR provided shelters and chairs for waiting clients at the Health Centers (HCs).
- Doctors have improved on the care/attention that they give to the patients.
- The model has integrated services which has eased access
- The family support groups were establishment and have gone a long way in strengthening client social support.
- The eMTCT was believed to have almost eliminated MTCT.

ART Services

The majority of ART client respondents had been provided with ART drug refills (92%), followed by adherence monitoring/discussion (30%) and general counselling/psycho-social support (29%), as shown in table 7 below. The provision of the following services: adherence monitoring, family planning education, education on TB symptoms and general counselling/psycho-social support was significantly higher among STAR E supported HCs than in other regions. However, significantly fewer clients (20%) in STAR E than in other regions (50% STAR EC, 50% STAR SW) reported that all recommended tests had been done at the HCs. This was largely contributed to HIV test kit stock out at Buginyanya HC.

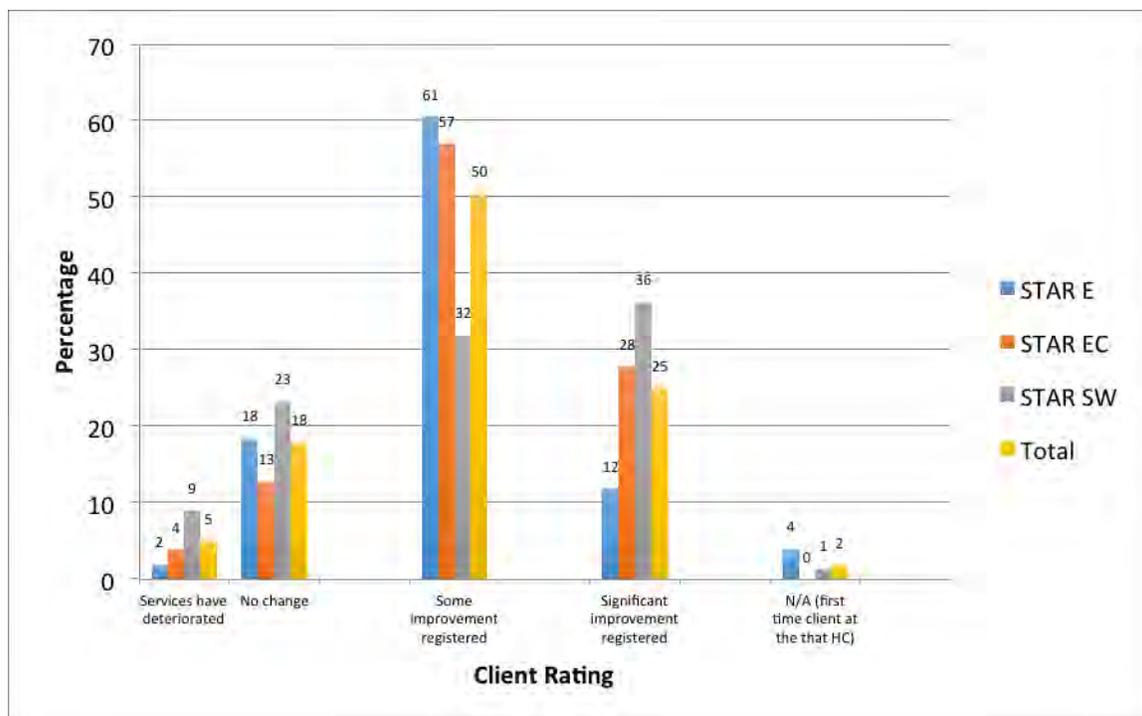
Table 9: Percentage ART Clients Interaction with the Health Services by Programme Location

| CLIENT INTERACTION WITH THE HEALTH SERVICES | STAR EAST (n=76) | EAST CENTRAL (n=79) | STAR SOUTH WEST (n=69) | TOTAL (n=224) | P-VALUE |
|--|-------------------------|----------------------------|-------------------------------|----------------------|----------------|
| Services clients received as per interview | | | | | |
| Adherence monitoring/discussion | 27.6 | 45.6 | 14.5 | 29.9 | 0.000* |
| Laboratory service | 25.0 | 12.7 | 8.7 | 15.6 | 0.17 |
| Family planning education and services | 11.8 | 36.7 | 5.8 | 18.8 | 0.000* |
| Screening for TB | 6.6 | 6.3 | 4.3 | 5.8 | 0.82 |
| Education on TB symptoms | 7.9 | 34.2 | 4.3 | 16.1 | 0.000* |
| Nutrition education and counselling | 25.0 | 34.2 | 11.6 | 24.1 | 0.005* |
| Medicines and commodities supplies | 96.1 | 87.3 | 92.8 | 92.0 | 0.131 |
| General counselling/psycho-social support | 36.8 | 34.2 | 13.0 | 28.6 | 0.003* |
| Referral for health services at another health facility | 0.0 | 1.3 | 0.0 | 0.4 | 0.398 |
| Referral for non-health care | 0 | 0 | 0 | 0 | N/A |
| Health Worker order Laboratory tests | 39.5 | 41.8 | 40.6 | 40.6 | 0.958 |
| Testing done in the same unit/place where all other services given were received | 96.7 | 97.0 | 82.1 | 92.3 | 0.53 |
| Required to go to another health facility or site in order to have the tests done | 13.3 | 3.0 | 10.7 | 8.9 | 0.322 |
| Did you have all the tests done | 50.0 | 21.2 | 50.0 | 39.6 | 0.002* |
| Laboratory tests results discussed in the visit | 90.0 | 69.7 | 82.1 | 80.2 | 0.124 |
| Clients satisfied with the way the information was discussed | 93.3 | 75.8 | 85.7 | 84.6 | 0.152 |
| Clients feel were appropriately counselled before being started on ARVs | 88.2 | 94.9 | 88.4 | 90.6 | 0.263 |
| Checked for symptoms of TB? | 23.7 | 29.1 | 26.1 | 26.3 | 0.744 |
| Provided with information on family planning? | 35.5 | 62.0 | 73.9 | 56.7 | 0.000* |
| Has the quality of services improved over time | 5.3 | 2.5 | 7.2 | 4.9 | 0.003* |
| Services have deteriorated | | | | | |
| No change | 18.4 | 12.7 | 23.2 | 17.9 | |
| Some improvement registered | 60.5 | 57.0 | 31.9 | 50.4 | |
| Significant improvement registered | 11.8 | 27.8 | 36.2 | 25.0 | |
| N/A (first time client at the that HC) | 3.9 | 00 | 1.4 | 1.8 | |

Assessment of ART Service Quality

The ART exit clients were further asked to rate the quality of ART services over the period that they had been receiving HIV care at the facility. Overall all, the majority of the respondents reported that services had improved over time. On average, 50% of the respondents said there had been some improvement, while 25% said there was significant improvement as presented in figure 4 below. In all regions, most of the respondents said that there had been some improvement (61% STAR E, 57% STAR EC and 50% STAR SW). Significant improvements in ART were mentioned more among respondents from STAR SW (36%). The variation in the perception of quality improvement was significant across STAR regions.

Figure 4 ART Clients' Perception of Service Quality Trends



The perception of quality improvement was viewed by clients from the perspectives:

- Improved longevity and quality of life of the clients as per statement below:
“For me I am over 95 years old. I have been taking these drugs for such a long time, such that I have lost taste in my mouth. There is nothing I can do. If I do not take them, then I will definitely die, so nothing to do but to painfully continue to come here on my given appointment, though mobility is difficult”, said Busesa H/C IV ART client.
- Regular availability of ARVs
- Improved care/attention that doctors give to the patients. Clients felt that they are heard and given appropriate advice.
- Increased number of HWs, which has reduced the waiting time for clients.
- The model has integrated services which has eased access
- Establishment of family support groups which has gone a long way in strengthening client support.

A few clients however said that the services had deteriorated due to the following reasons:

- The clients seemed to tag the quality of services to the welfare aspects that they were getting as individuals such as the food rations, transport facilitation (for those coming from far off homes and those carrying babies) and other handouts.
“We used to get posho (maize meal), beans and soybeans. Now we no longer get anything other than ARVs, things have deteriorated”, remarked one elderly ART client at Buyinja HV IV.

- Although all HCs had ARVs in place, the absence of other drugs such as malaria drugs, Cotrimoxazole and painkillers made the clients say that their issues were not fully addressed because they were referred to drug shops to buy drugs and eat well, yet they had no money.

“The model is not holistic, it provides only ARVs, tells you to eat well, but there is no money to buy the food. Food and money should be provided especially for the physically weak”, said another HIV positive client.
- Clients felt that there was hoarding of drugs at Buyanja HC IV; they said that some clients are given drugs whereas others are told to go and buy for the same issue.
- The expert clients in STAR SW region did not seem to be very motivated to perform their work at those in other regions, they respondents said that they are not polite to them claiming that they are they are doing donkey work yet not paid.
- Routine counseling and testing seems to have compromised the quality of HTC, the respondents in some HCs said that HW simply send clients to the lab without explaining what tests are to be performed and even after testing, interviewed clients under OPD that they simply send them to the dispensing window for Cotrimoxazole if HIV positive without proper counseling and guidance. Some HIV positive clients felt that they are no prepared well for disclosure, some of them approached the research team for advise:

“I have just found out that I am HIV positive! How will I tell my husband?” lamented one client at Busembatya H/C III.
- Whereas the HIV services seem to be doing well in terms of HW attitude towards clients and medical supplies, other departments may not have benefited that much.

“Here (in the ART clinic) they treat us well and give us drugs, but when they ask us to send our wives to maternity for delivery, they are not treated well and the drugs are not there”, lamented one HIV positive client.
- Lack of adolescent friendly services.

*“For me I was born with HIV. I kept falling sick until my auntie told me what was wrong. I am so scared for my friends to find out. I can’t even take this **medicine at school**; I only take it when I go back home after school. I wish they could have only weekend clinic days so that I do not miss school”, said a student ART client in Busembatya H/C III.*
- Limited access to doctors for consultation;

“In this place, talking to a doctor is impossible. In case you have concerns to discuss you put them on hold until you are able to access a doctor in the private clinic which is expensive”, said on ART client at Busembatya H/C III.

CONCLUSIONS

Based on the analysis of findings, the following conclusions were made:

The STAR projects have substantially contributed to improved quality of HIV and AIDS services delivery, particularly in the area of ensuring regular supplies of ARVs, formation of family support groups, ensuring that HCs have staffs providing services to clients, eMTCT, better client waiting areas and improved time management by HWs. The perception of quality improvement was also viewed by clients from the perspective of improved longevity and quality of life of the clients. Clients also judged the quality of services from the welfare benefits that they obtained from the HC.

Although the service delivery practices had similar trends of improved service delivery across STAR projects, there were some variations. Some notable ones included significantly lower TB screening in STAR E region and significantly lower adherence monitoring, family planning education, education on TB symptoms and general counseling/psycho-social support among STAR EC and SW supported HCs than in other regions. Overall, TB screening was very low in all regions.

Whereas HIV and AIDS service delivery improved, other supplementary services seemed to be in limbo. Most OPD clients left the HC grudging because the non-ART drugs that they had come for were not available. The DBTA approach was not very comprehensive.

Routine counseling and testing seems to have compromised the quality of HTC, most HWs were reported to have been simply sending clients to the lab without explaining what tests will be performed; those who tested HIV positive also felt that they were not adequately prepared for disclosure and the next course of action.

The HCS were found to be implementing 3 clinic models: having a weekly clinic day, a monthly clinic day as well as no specific clinic day. These three models need to be critically assessed to establish the most effective and efficient model.

LESSONS LEARNED

The following lessons were drawn from the assessment of the DBTA approach towards contributing to the quality of health services:

What worked well

The DBTA model integrated a range of services, which has eased access to services. Clients are able to find a range of services in the same place such as ARVs, PMCT, FP and lab testing.

The regular availability of drugs and ARVs greatly enhanced the demand and uptake of HIV and AIDS services.

What did not well

In order to comprehensively improve HC service delivery, there is need to support all complementary departments to ensure that clients get comprehensive quality services. The DBTA focus on HIV and AIDS services left other services in limbo, yet clients would love to get all services in one place.

Although the services of expert clients were very much appreciated in terms of being part of the HC service delivery team, hence beefed up manpower, expert clients from STAR SW did not seem to be very motivated to do their work, complaining of heavy workload without pay.

RECOMMENDATIONS

The following recommendations are made for increasing improving the quality of health service delivery through the DBTA model:

- Comprehensively support strengthening of quality of health services beyond HIV and AIDS and ensure availability of drugs as well as other medical supplies in all departments.
- Assess the quality of HIV counseling under RCT to minimize the compromise on the quality of services.
- Address in a sustainable manner issues that affect the client's ability to return to the HCs such as long distances and associated transport costs. Consider taking services closer to communities through outreaches or Village Health Teams.
- Perform regular monitoring of quality aspects of service delivery to ensure adherence to agreed standards. Track the provision of comprehensive services that include adherence monitoring, family planning education, TB education and screening and general counseling/psycho-social support, in all regions, with a special focus on STAR EC and STAR SW.
- Commission an assessment for the 3 clinic models: 'weekly clinic day', 'monthly clinic day' as well as 'no specific clinic day' to establish the most effective and efficient model of service delivery.

ANNEX I THE SURVEY TOOL

The Exit Client Survey Questionnaire for Facility Based HTC, PMTCT and ART Services

District Based Technical Assistance (DBTA) Programme

(Circle one)

STAR East1
STAR East Central.....2
STAR south West.....3

District.....Health Sub-
district.....

Name of Health Facility.....Level of Health
Facility.....

Name of Interviewer.....Date of the
interview.....

At the point of exit, approach the client and ask whether he or she is willing to answer a couple of questions anonymously. Find a space that offers some privacy for the interview.

Consent

Hello. My name is _____. I am carrying out an assignment for USAID/QED Monitoring, Evaluation and Learning Contract. The purpose of the survey is to collect additional information for the evaluation of the work performed by the (Strengthening TB and AIDS Response (STAR) projects in East, East-Central and South-West Uganda in areas of TB and HIV/AIDS. The information we collect will help to plan and improve the quality of the services. You have been randomly selected for this survey. The questions take about 15 minutes. All of the answers you give will be confidential and will not be shared with anyone. You don't have to be in the survey, but we hope you will agree to answer the questions since your views are important for programme improvement.

At this time, do you want to ask me anything about the survey? Do you agree to participate in this survey?

YES..... NO.....

Respondent Signature/Thumbprint: _____
Date: _____

Instructions

Sections A-B apply to all sampled clients. Only one program area in sections C-E (HTC Services; PMTCT - Option B+ Services or ART Services) is to be filled for an exiting client even if they received more than one service.

Screening Question

| QUESTIONS AND FILTERS | CODING CATEGORIES | GO TO |
|---|-------------------|-------|
| What services did you receive today? <i>(Circle services as mentioned by the client. Thank the respondent and end the interview if none of the first 4 services were received)</i> | HTC.....1 | |
| | PMTCT.....2 | |
| | ART.....3 | |
| | TB.....4 | |
| Service area selected for the interview <i>(Write only one services among HTC, PMTCT, ART and TB)</i> | | |

SECTION A: Client Socio-demographic Characteristics

| NO. | QUESTIONS AND FILTERS | CODING CATEGORIES | GO TO |
|-----|--|---|-------|
| 101 | How old are you? <i>(Indicate age in completed years)</i> | ----- <i>(If below 15 years, interview the guardian)</i> | |
| 102 | Sex of respondent <i>(Do not ask, observe and circle the correct one)</i> | Female.....1 Male.....2 | |
| 103 | What is your highest level of education? <i>(Do not read out, probe for highest attained education. Single response only)</i> | Never Attended .....1 Functional Adult Literacy .....2 Incomplete Primary .....3 Complete Primary .....4 O-Level .....5 A-Level .....6 Post-Secondary/Tertiary .....7 Vocational Training .....8 | |
| 104 | What is your current marital status? <i>(Do not read out; single response only. Probe for specific status)</i> | PROBE FOR SPECIFIC STATUS Single.....1 Married/ living together .....2 Widowed.....3 Divorced.....4 Separated .....5 | |

SECTION B: Client Interaction with the Health Services

| NO. | QUESTIONS AND FILTERS | CODING CATEGORIES | GO TO |
|------|---|-----------------------|-----------------------------|
| 201a | Was it easy for you to get to this place / clinic? <i>(Single response)</i> | Yes.....1 No.....2 | If yes, skip to 202a |

| NO. | QUESTIONS AND FILTERS | CODING CATEGORIES | GO TO |
|------|---|---|-----------------------------|
| | <i>only</i> | | |
| 201b | If NO, what difficulties did you have (<i>Probe for the difficulties</i>) | ..... ..... ..... |  |
| 202a | How long did you have to wait at the health facility before you were attended to? (<i>Single response only</i>) | Less than 30 minutes..... 1 30 minutes – 1 hour .....2 1 -2 hours .....3 More than 2 hours.....4 | If 1, skip to 203 |
| 202b | If more than 30 minutes, what was the cause of the delay? (<i>Probe for the causes</i>) | ..... ..... ..... |  |
| 203 | Were you attended to in a friendly and respectful way (<i>Single response only</i>) | Yes.....1 No.....2 | |
| 204 | Did you have sufficient privacy (<i>probe if they were served without being heard or seen by any other person other than the service provider</i>)? (<i>Single response only</i>) | Yes.....1 No.....2 | |
| 205 | Did you find the clinic area clean? (<i>Single response only</i>) | Yes.....1 No.....2 | |
| 206 | In case a lab test was performed, an injection was administered or under went through any bleeding procedure, did the provider use: | | |
| | a. Gloves (<i>Single response only</i>) | Yes.....1 No.....2 N/A.....3 Don't know.....4 | |
| | b. A new needle (<i>Single response only</i>) | Yes.....1 No.....2 N/A.....3 Don't know.....4 | |
| 207a | Did you feel that the services you received were safe? (<i>Probe for general medical procedures done such as bleeding, medical examination and administerig injections</i>) | Yes.....1 No.....2 | If yes, skip to 208a |
| 207b | If no, why do you think so? | ..... ..... ..... |  |
| 208a | Were any medicines prescribed for you? (<i>Single response only</i>) | Yes.....1 No.....2 | If no, skip to 209 |
| 208b | Were you given instructions on | Yes.....1 | |

| NO. | QUESTIONS AND FILTERS | CODING CATEGORIES | GO TO |
|------|---|-------------------------|--|
| | how to take the medicines you have received? (<i>Single response only</i>) | No.....2 | |
| 208c | Were all the medicines prescribed received? (<i>Single response only</i>) | Yes.....1 No.....2 | |
| 208d | If no, what is your plan for dealing with the issue of the medicines not received? | ..... ..... ..... |  |
| 209a | During this visit, do you feel that all your concerns were adequately addressed? (Single response only) | Yes.....1 No.....2 | If yes, skip to the relevant service section |
| 209b | If no, what were the concerns that were not addressed? | ..... ..... ..... |  |
| 209c | What actions do you intend to take concerning the concerns not addressed? | ..... ..... ..... |  |

SECTION C: HTC SERVICES

Respondents: Any person exiting Outpatient, services of the health facility on the day of interview, who has received HTC on that day.

| NO. | QUESTIONS AND FILTERS | CODING CATEGORIES | GO TO |
|-----|--|-----------------------|-------|
| 301 | Do you feel that you were appropriately counselled (<i>fully informed or taught</i>) before you took the HIV test? (<i>Single response only</i>) | Yes.....1 No.....2 | |
| 302 | Do you feel you were appropriately counselled (<i>fully informed or taught</i>) as part of the | Yes.....1 No.....2 | |

| | | | |
|------|---|-------------------------|-----------------------------|
| | process of receiving your HIV test results? <i>(Single response only)</i> | | |
| 303 | Do you feel you have been adequately prepared to disclose your HIV results to other people? <i>(Single response only)</i> | Yes.....1 No.....2 | |
| 304 | Did the health worker discuss with you any specific actions that you need to take, in view of your HIV results from this visit? <i>(Single response only)</i> | Yes.....1 No.....2 | |
| 305a | Were you screened for TB? were you tested/checked for Symptoms suggestive of TB - cough lasting longer than 2 weeks, coughing out sputum that includes blood, weight loss, fever or night sweats. <i>(Single response only)</i> | Yes.....1 No.....2 | If no, skip to 306 |
| 305b | If yes and you were suspected to have TB, what action was taken? | ..... ..... ..... |  |
| 306a | Are there any HTC service delivery processes you would want to see improved? <i>(Single response only)</i> | Yes.....1 No.....2 | If no, end interview |
| 306b | If yes, what are these processes? <i>(probe for the processes)</i> | ..... ..... ..... |  |

Skip to end of the questionnaire

SECTION D: PMTCT – OPTION B + SERVICES

Respondents: HIV positive mothers that have given birth in the previous two years, who are attending the PMTCT follow up services at the health facility (e.g., mother-baby-care point services; family support group members, ART, etc.).

| NO. | QUESTIONS AND FILTERS | CODING CATEGORIES | GO TO |
|------|--|--|---------------------------------|
| 401 | <p>What services did you receive today? <i>(Multiple response possible, do not read out the responses. Circle all that are mentioned and ask any other?)</i></p> | <p>Family planning education and services.....1</p> <p>Screening for TB.....2</p> <p>Breast feeding education and counselling.....3</p> <p>Invitation for male involvement.....4</p> <p>Early infant diagnosis.....5</p> <p>Lab testing.....6</p> <p>Medicines and commodities supplies.....7</p> <p>Counselling/psycho-social support.....8</p> <p>Referral for health services at another health facility.....9</p> <p>Referral for non-health care support.....10</p> <p>Discussion of laboratory tests and results.....11</p> <p>Other (specify).....</p> <p>.....</p> <p>.....</p> <p>.....</p> | |
| 402a | <p>Did the health worker refer you or any other member of your family to receive other health services?</p> | <p>Yes.....1</p> <p>No.....2</p> | <p>If no Skip to 403</p> |

| NO. | QUESTIONS AND FILTERS | CODING CATEGORIES | GO TO |
|------|--|---|---------------------------|
| | <i>(Single response only. Probe for family support, mother baby pair)</i> | | |
| 402b | If yes; was a referral note written and given to you? <i>(Single response only)</i> | Yes; referral note written; given to the client .....1 Yes referral note written; not given to the client .....2 No referral note written.....3 | |
| 402c | If a referral note was given to the client; ask to take a look <i>(do not read)</i> at the referral note and confirm if it is a referral | Referral note seen, verified to be a referral .....1 Document given as a referral note verified NOT to be a referral note .....2 No document given for verification 3 | |
| 403 | Did you or your HIV-exposed infant receive any laboratory test during this visit? | Yes.....1 No.....2 | If no skip to 406 |
| 404a | Was the testing done in the same unit or place where all other services given today were received? <i>(Single response only)</i> | Yes.....1 No.....2 | If yes skip to 405 |
| 404b | If no, were you escorted to the point where the testing was done? <i>(Single response only)</i> | Yes.....1 No.....2 | If no, skip to 405 |
| 405a | Were any laboratory tests results discussed in the visit? <i>(Single response only)</i> | Yes.....1 No.....2 | |
| 405b | Were you satisfied with the way the information was discussed? <i>(Single response only)</i> | Yes.....1 No.....2 | |
| 406a | Have you already been started on ARVs? <i>(Single response only)</i> | Yes.....1 No.....2 | If no, skip to 407 |
| 406b | If yes, do you feel you were appropriately counselled <i>(fully informed, explained to or taught)</i> before being started on ARVs? <i>(Single response only)</i> | Yes.....1 No.....2 | |

| NO. | QUESTIONS AND FILTERS | CODING CATEGORIES | GO TO |
|------|---|--|---------------------------|
| | <i>only</i> | | |
| 407 | What do you see as challenges to remaining on ARVs for the rest of your life? | ..... ..... |  |
| 408a | Were you provided with information on Family Planning during this visit? <i>(Single response only)</i> | Yes.....1 No.....2 | If no, skip to 409 |
| 408b | If yes do you consider using the information provided? <i>(Single response only)</i> | Yes.....1 No.....2 | |
| 409 | Are you a member of a Family Support Group? <i>(Single response only)</i> | Yes.....1 No.....2 | |
| 410 | Were you given an appointment for the next visit? <i>(Single response only)</i> | Yes.....1 No.....2 | |
| 411a | Do you foresee any issues that might prevent you from fulfilling this appointment? <i>(Single response only)</i> | Yes.....1 No.....2 | If no, skip to 412 |
| 411b | If yes, what are the issues? | ..... ..... ..... |  |
| 412a | Over the period that you have been receiving HIV care at this facility, what has been the quality of service delivery? <i>(Single response only)</i> | Services have deteriorated.....1 No change.....2 Some improvement registered.....3 Significant improvement registered.....4 N/A (first time client at the that HC).....5 Other (specify) | |

| NO. | QUESTIONS AND FILTERS | CODING CATEGORIES | GO TO |
|------|---|--|-----------------------------|
| | | <p>.....</p> <p>.....</p> <p>.....</p> <p>.....</p> | |
| 412b | Please give reasons for your response above | <p>.....</p> <p>..</p> <p>.....</p> <p>...</p> <p>.....</p> <p>...</p> | |
| 413a | Were you tested/checked for Symptoms suggestive of TB - cough lasting longer than 2 weeks, coughing out sputum that includes blood, weight loss, fever or night sweats. <i>(Single response only)</i> | Yes..... 1 No..... 2 | |
| 413b | If yes and you were suspected to have TB, what action was taken? | <p>.....</p> <p>.....</p> <p>.....</p> | |
| 414a | Are there any PMTCT service delivery areas you would want to see improved? <i>(Single response only)</i> | Yes.....1 No.....2 | If no, end interview |
| 414b | If yes, what are these areas? <i>(probe for the areas)</i> | <p>.....</p> <p>.....</p> <p>.....</p> | |

Skip to end of the questionnaire

SECTION E: ART SERVICES

Respondents: Any client on ART who has received ART-related services at the health facility on the day of interview.

3B: Client Interaction with the Health Services

| NO. | QUESTIONS AND FILTERS | CODING CATEGORIES | GO TO |
|------|---|---|---------------------------|
| 501 | | What service (s) did you receive today? (<i>Multiple response possible, circle all responses</i>) | |
| | | Adherence monitoring/discussion.....1 | |
| | | Laboratory service (taking samples/ receiving results).....2 | |
| | | Family planning education and services.....3 | |
| | | Screening for TB.....4 | |
| | | Education on TB symptoms.....5 | |
| | | Nutrition education and counselling.....6 | |
| | | Medicines and commodities supplies.....7 | |
| | | General counselling/psycho-social support.....8 | |
| | | Referral for health services at another health facility.....9 | |
| | | Referral for non-health care.....10 | |
| | | None-drugs were out of stock .....11 | |
| | | Medical consultation/review.....12 | |
| | Other (specify)..... | | |
| 502a | Did the Health Worker order Laboratory tests in the past 3 months? | Yes.....1 | If no, skip to 504 |
| | | No.....2 | |
| 502b | Was the testing done in the same unit/place where all other services given today were received? (<i>single response only</i>) | Yes.....1 | |
| | | No.....2 | |
| 502c | Were you required to go to another health facility or site in order to have the tests done? | Yes.....1 | |
| | | No.....2 | |
| 502d | If yes did you have all the tests done? (<i>single response only</i>) | Yes.....1 | |
| | | No.....2 | |
| 503a | Were any laboratory | Yes.....1 | |

| NO. | QUESTIONS AND FILTERS | CODING CATEGORIES | GO TO |
|------|---|-------------------------|---------------------------|
| | tests results discussed in the visit? (<i>single response only</i>) | No.....2 | |
| 503b | Were you satisfied with the way the information was discussed? (single response only) | Yes.....1 No.....2 | |
| 504 | Do you feel you were appropriately counselled (<i>fully informed, explained to or taught</i>) before being started on ARVs? | Yes.....1 No.....2 | |
| 505 | What do you see as challenges to remaining on ARVs for the rest of your life? | ..... ..... ..... |  |
| 506a | Were you tested/checked for Symptoms suggestive of TB - cough lasting longer than 2 weeks, coughing out sputum that includes blood, weight loss, fever or night sweats? (<i>Single response only</i>) | Yes.....1 No.....2 | If no, skip to 507 |
| 506b | If yes and you were suspected to have TB, what action was taken? | ..... ..... ..... |  |
| 507 | Were you given an appointment for the next visit? (<i>Single response only</i>) | Yes.....1 No.....2 | If no skip to 509 |
| 508 | Do you foresee any issues that might prevent you from fulfilling this appointment? (<i>Single</i> | Yes.....1 No.....2 | |

| NO. | QUESTIONS AND FILTERS | CODING CATEGORIES | GO TO |
|------|---|--|-----------------------------|
| | <i>response only</i>) | | |
| 509a | Were you provided with information on Family Planning during this visit? <i>(Single response only)</i> | Yes.....1 No.....2 | If no, skip to 510 |
| 509b | If Yes, Do you consider using the information that was provided? <i>(Single response only)</i> | Yes.....1 No.....2 | |
| 510a | Over the period that you have been receiving HIV care at this facility, what have been the performance trends in health services delivery? <i>(Single response only)</i> | Services have deteriorated.....1 No change.....2 Some improvement registered.....3 Significant improvement registered.....4 N/A (first time client at the that HC).....5 Other (specify) | |
| 510b | Please give reasons for your response above | ..... ..... ..... |  |
| 511a | Are there any ART service delivery areas you would want to see improved? <i>(Single response only)</i> | Yes.....1 No.....2 | If no, end interview |
| 511b | If yes, what are these areas? <i>(probe for the areas)</i> | ..... ..... ..... |  |

End of Interview

Thank you very much for your time.

ANNEX 2 LIST OF HEALTH FACILITIES INCLUDED IN THE CLIENT EXIT SURVEY

| Survey Region | District | Name/Level of Health Facility |
|------------------------------|-----------------------------|-------------------------------|
| Star South West | Bushenyi | Bushenyi Health Centre IV |
| | | Kyeizooba Health Centre III |
| | Ntungamo | Kitwe Health Centre IV |
| | | Rwekiniro Health Centre III |
| | Mitooma | Mitoma Health Centre IV |
| | | Kyesensero Health Centre III |
| Buhweju | Nsiika Health Centre IV | |
| | Burere Health Centre III | |
| STAR East Central | Namayingo | Buyinja Health Centre IV |
| | | Banda Health Centre III |
| | | Busiro Church Of God HCIII |
| | Kamuli | Namwendwa Health Centre IV |
| | | Lulyambuzi Health Centre III |
| | Luuka | Kiyunga Health Centre IV |
| | | Irongo Health Centre III |
| | Iganga | Busesa Health Centre IV |
| Busembatia Health Center III | | |
| STAR Eastern | Bulambuli | Muyembe Health Centre IV |
| | | Buginyanya Health Centre III |
| | Kibuku | Buseta Health Centre III |
| | | Kibuku Health Centre IV |
| | Kapchorwa | Sipi Health Centre III |
| | | Kapchorwa Hospital |
| Mbale | Bufumbo Health Centre IV | |
| | Namawanga Health Centre III | |

ANNEX G. ECONOMIC ANALYSIS

EVALUATION OF DBTA/ STARS PROJECTS IN UGANDA

VALUE-FOR-MONEY/ COST-EFFICIENCY ASSESSMENT OF STAR-SW, STAR-EC, AND STAR-E

Charlotte Muheki Zikusooka

2/5/2015

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OVERVIEW AND METHODS

Introduction

PEPFAR, through USAID, supported three STARs projects in Uganda which have been running since 2009/10. The STARs projects were designed to provide district-based technical assistance (DBTA), in relation to improving capacity for service provision for HIV/AIDS and TB in Uganda. The projects' general objective was to increase access to, coverage of, and use of high-quality, comprehensive HIV & AIDS and TB prevention, care, and treatment services within district health facilities and their respective communities. As these projects come to an end, USAID has planned an evaluation of the projects. Among others, one of the evaluation questions is: *to what extent can the DBTA design be considered cost efficient in strengthening capacity of districts and CSOs to improve health service delivery?*

In this report, we present a summary of the assessment of the projects' cost-efficiency. Within the context of this evaluation, *cost-efficiency* refers to a rough assessment of value-for-money that considers an analysis of both the level of investment and what the project has achieved given the level of spending. This assessment is not a comprehensive economic evaluation (cost-effectiveness) or thorough assessment of efficiency of the project. The purpose of this assessment is to provide some indication of the value-for-money of the DBTA approach used for the STARs projects.

This report provides a rough assessment of value-for-money for each of the STARs projects. Within the resource constraints for doing this evaluation, this assessment is able to assess "economy", and to some extent "efficiency", but is not able to measure the "effectiveness" of the projects. The report presents findings for STAR-SW in Section 2, for STAR-E in Section 3, for STAR-EC in Section 4. A comparison of the three projects, key conclusions and recommendations are presented in Section 5. More detailed tables are presented in the annexes.

Methods

Value-for-money' (VFM) is a term used to assess whether or not an organisation has obtained the maximum benefit from the goods and services it both acquires and provides, within the resources available to it. Some elements may be subjective, difficult to measure, intangible and misunderstood. Judgment is therefore required when considering whether VFM has been satisfactorily achieved or not. It not only measures the cost of goods and services, but also takes account of the mix of quality, cost, resource use, fitness for purpose, timeliness, and convenience to judge whether or not, together, they constitute good value. Achieving VFM is often described in terms of the 'three Es' - *economy, efficiency and effectiveness*. The definition of the three E's is as follows:

- **Economy** - careful use of resources to save expense, time or effort.
- **Efficiency** - delivering the same level of service for less cost, time or effort.
- **Effectiveness** - delivering a better service or getting a better return for the same amount of expense, time or effort.

This assessment largely relied on a detailed review and analysis of the PEPFAR Expenditure analysis reports for FY13 and FY14 for each of STAR projects. However, the assessment made an attempt at reviewing of the projects' expenditure for the whole period of 2009/10 – 2014.

Unfortunately, expenditure information for FY10, FY11 and FY12 are not detailed enough to permit a proper trends and overall analysis of project spending. In addition, the assessment attempted to review project performance, by reviewing project Annual Reports, with the aim to estimate the *unit expenditure* of the interventions (where feasible). Unit expenditures are compared with appropriate unit costs of similar interventions, as benchmarks to assess technical efficiency.

Key informant interviews with the staff of STAR-SW, STAR-E and STAR-EC were undertaken to provide additional understanding of the project and its achievements, as well as to validate preliminary findings. Information obtained through the review of expenditure and performance reports, review of other relevant documents, and key informant interviews was synthesized to come up with conclusions about the projects' economy and efficiency. Lastly, judgments were made about the mode of service delivery and the extent to which the mode used was efficient or inefficient.

The findings from this assessment need to be interpreted with caution, given the fact that this is not a rigorous and comprehensive value-for-money or cost-effectiveness analysis of the projects.

The findings of the assessment for each project are presented separately (in Sections 2-4), and the findings of the comparison of the three projects and key conclusions are presented in Section 5.

EVALUATION OF STAR-SW: VALUE FOR MONEY ASSESSMENT

Economic Analysis

Elizabeth Glaser Pediatric AIDS Foundation (EGPAF) led implementation of the Strengthening TB and HIV/AIDS Responses (START-SW) in the South Western Region of Uganda project. The project operated through the existing district health system and focused on building local capacity, with the health sub-district as a center of various capacity building interventions. The project supported 13 districts: Buhweju, Bushenyi, Ibanda, Isingiro, Kabale, Kanungu, Kiruhura, Kisoro, Mitooma, Ntungamo, Rubirizi, Rukungiri, and Sheema. STAR-SW worked in close partnership with CSOs; sub-granting to seven CSOs to implement a number of community-related activities.

Findings

STAR-SW project started in 2010 and is intended to run over a period of five years (2010/11 – 2014/15). Over a period of four years, the project has spent approximately \$29.6 million (Table 2.1.1). Of this total spending, over 28% of total spending (\$29.6 million) was spent on personnel and related allowances (at district, national and above-national levels).

Table 2.1.1 Total Project Spending (FY 11 - FY 14)

| US \$ | FY11 | FY12 | FY13 | FY14 | TOTAL |
|---------------------------|-----------|-----------|-----------|-----------|-------------------|
| Actual Expenditure | 6,052,665 | 6,695,637 | 8,838,639 | 8,047,211 | 29,634,152 |
| Total Budget | | | | | 32,954,116 |
| Remaining for FY15 | | | | | 3,319,964 |

Source: Project documents

The PEPFAR Expenditure Analysis tool was introduced in FY13, so a detailed analysis of the project's expenditure is only feasible for two years (FY13 and FY14). The findings from the detailed expenditure analyses for these two years are presented in turn.

Table 2.1.2 Detailed Expenditure by Program Areas (FY 13 and FY 14)

| Program Area | FY 13 Expenditure (US \$) | % of total | Program Area | FY 14 Expenditure (US \$) | % of total |
|---|---------------------------|------------|---|---------------------------|------------|
| Facility-based Care, Treatment and Support | 1,405,049 | 15.9% | Facility-based Care, Treatment and Support | 2,066,045 | 25.7% |
| Community-based Care, Treatment and Support | 1,229,417 | 13.9% | Community-based Care, Treatment and Support | 531,622 | 6.6% |
| PMTCT | 1,781,684 | 20.2% | PMTCT | 2,390,329 | 29.7% |
| Voluntary Medical Male Circumcision | 1,317,233 | 14.9% | Voluntary Medical Male Circumcision | 786,266 | 9.8% |
| HIV Testing and | 263,447 | 3.0% | HIV Testing and | 461,982 | 5.7% |

| Program Area | FY 13 Expenditure (US \$) | % of total | Program Area | FY 14 Expenditure (US \$) | % of total |
|---------------------------------|---------------------------|-------------|---|---------------------------|-------------|
| Counselling | | | Counselling | | |
| Post-Exposure Prophylaxis | 0 | | Post-Exposure Prophylaxis | 9,451 | 0.1% |
| Blood Safety | 0 | | Blood Safety | 0 | |
| Laboratory | 1,524,577 | 17.2% | Laboratory | 650,148 | 8.1% |
| Infection Control | 263,447 | 3.0% | Infection Control | 80,665 | 1.0% |
| Orphans and Vulnerable Children | 0 | | Orphans and Vulnerable Children | 0 | |
| SORP-General Population | 263,447 | 3.0% | General Population - Prevention | 232,569 | 2.9% |
| SORP-Injectable Drug Users | 0 | | Key Populations-PWID | 0 | |
| SORP-Commercial Sex Workers | 174,646 | 2.0% | Key Populations-FSW | 299,045 | 3.7% |
| SORP-Men who have Sex with Men | 0 | | Key Populations-MSMTG | 160,934 | 2.0% |
| SORP-Key Population Other | 615,693 | 7.0% | Other Vulnerable Populations-Prevention | 378,155 | 4.7% |
| TOTAL | 8,838,639 | 100% | Medically-Assisted Therapy | 0 | |
| | | | TOTAL | 8,047,211 | 100% |

Table 2.1.2 provides a summary of expenditure broken down by program areas, as well as indicating the level at which it spent.

For FY 13, findings of the expenditure analysis show that:

- **\$8.84 million** was spent by the STAR-SW project, of which \$4.42 million (29.8%) was spent on Care, Treatment and Support (facility-based, community-based); about \$1.78million (20.2%) on PMTCT; about \$1.42 million (17.2%) on laboratory support; and \$1.32 million (14.9%) on male circumcision. Other program areas (such as counselling and testing, prevention activities, and vulnerable populations took up relatively smaller amounts, each one averaging at about 3% of total expenditure.

For FY 14, findings of the expenditure analysis show that:

- **\$8.05 million** was spent by the STAR-SW project, of which \$4.99 million (32.3%) was spent on Care, Treatment and Support (facility-based, community-based); about \$2.39 million (29.7%) was spent on PMTCT; about \$0.79 million (9.8%) on male circumcision; \$0.65 million (8.1%) on laboratory support; and \$0.46 million (5.7%) on HIV Counselling and Testing. Other program areas (such as prevention activities and key populations) together took up the remaining 14% of total expenditure.

We note a consistency in allocation of resource to support Care, Treatment and Support between the two years, and an increase in the resources allocated to PMTCT over the two

years. Interestingly, we note a reduction in resources allocated to male circumcision and laboratory support.

Table 2.1.3 Summary of Expenditure by Level of spending (FY 13 and FY 14)

| Level of Spending | FY 13 (US \$) | | FY 14 (US \$) | |
|------------------------------|-------------------------|-----------|------------------|---------|
| | Investment (Site level) | 1,117,270 | 12.6% | 691,544 | 8.6% |
| Recurrent (Site Level) | 3,863,716 | 43.7% | 4,018,358 | 49.9% |
| Program Management | 1,638,156 | 18.5% | 1,413,224 | 17.6% |
| Strategic Information | 832,519 | 9.4% | 836,813 | 10.4% |
| Health Systems Strengthening | 1,386,978 | 15.7% | 1,087,272 | 13.5% |
| | 8,838,639 | | 8,047,211 | |

Information presented in Table 2.1.3 shows the level at which money was spent.

For FY 13:

- A total of \$4.98 million (56.4% of total annual spending) was spent at **site level** (i.e. at district level).
- \$1.64 million (18.5% of total annual spending) was spent on **Program Management** (at site, national and above-national levels).
 - Of this \$1.64 million, about \$1.27million (77%) was spent on “*above national*” level Program Management activities (implying that this not spent in-country). Above national level spending refers to expenses made on behalf of the project for technical and administrative support abroad.
- Furthermore, \$1.39 million (15.7% of total annual spending) was spent on **Health Systems Strengthening**, while \$0.83 million (9.4%) was spent on supporting and improving **Strategic Information**.
- These findings show that only slightly over half of total spending for FY13 was spent on direct technical support to support HIV/AIDS service provision, while the remaining was spent on technical support for an enabling environment and administrative services.

For FY 14:

- A total of \$4.71 million (58.5% of total annual spending) was spent at **site level** (i.e. at district level). This implies that less than 60% of total funds in F14 were spent on direct technical support to support HIV/AIDS service provision.
- Slightly over 40% of the funds were spent on supporting an enabling environment which includes: program management, strategic information and health systems strengthening.
- Specifically, a total of \$1.41million (17.6% of total annual spending) was spent on **Program Management** (at site, national and above-national levels).
 - Of this \$1.41 million, about \$1.22million (**86.4%**) was spent on “**above national**” level Program Management activities (implying that this not spent in-country).
- Furthermore, \$1.09 million (13.5% of total annual spending) was spent on Health Systems Strengthening activities, while \$0.84 million (10.4%) was spent on supporting and improving Strategic Information.
- These findings point towards some degree of allocative inefficiency, with a relatively high level of spending on the enabling environment, and high levels of spending outside

the country to administratively support the project. This approach to supporting improvements in service delivery is both expensive and not sustainable in the long run.

Table 2.1.4 Summary of Cost Drivers (FY 13 and FY 14)

| | Exp FY13 | % of total Exp FY 13 | | Exp FY14 | % of total Exp FY 14 |
|------------------------------|------------------|----------------------------------|------------------------------|------------------|----------------------------------|
| Personnel (at all levels) | 2,612,536 | 29.6% | Personnel (at all levels) | 2,253,197 | 28.0% |
| Other General/Administrative | 2,123,381 | 24.0% | Other supplies (Site Level) | 2,198,781 | 27.3% |
| Other supplies (Site Level) | 1,879,142 | 21.3% | Other General/Administrative | 2,072,052 | 25.7% |
| Program management | 1,638,156 | 18.5% | Program management | 1,413,224 | 17.6% |
| Above National | 1,357,400 | 15.4% | Above National | 1,315,148 | 16.3% |
| Training (Site level) | 1,085,556 | 12.3% | Training (Site level) | 691,544 | 8.6% |
| Travel and Transport | 751,903 | 8.5% | Travel and Transport | 690,552 | 8.6% |
| TOTAL FY13 | 8,838,639 | | TOTAL FY14 | 8,047,211 | |

A further look into the expenditure on specific line items reveals the main cost drivers of project expenditure. This assessment provides better insight around the efficiency of resource allocation and use.

Table 2.1.4 shows that the first cost driver is spending on personnel (in both FY13 and FY14).

- About 30% and 28% of project funds were spent on Personnel in FY13 and FY14 respectively.
 - For FY 13: of the \$2.61 million, about \$2.27million (86.7%) is spent **on personnel at district level** and the remaining is spent at national or above-national personnel.

This finding implies that supporting human resources for health (for provision of HIV/AIDS services) took up a reasonably high proportion of the project funds. Although the project relied on existing structures to deliver services, this level of spending on personnel points to two important issues:

- a) That existing human resources were very inadequate and without additional support directed to personnel, there would be very little achievement in terms of the outputs reported in the districts supported.
- b) That while this approach to supporting the health systems indeed results in achieving excellent health outputs, it may also at the same time cause distortions in the human resource market. We think this may be the case because without additional HR financial support (in the form of allowances), the health system may actually completely shut down. This issue indicates that the DBTA approach is not sustainable without donor support because Government of Uganda may not be position, in the short to medium term, to increase HR emoluments to the level at which the project has been supporting HR at health facilities.

In interpreting these findings, it is important to note that health care service provision is a labor-intensive process which requires skilled and motivated human resources. Therefore, the issues raised above notwithstanding, it is difficult to achieve reasonable health outcomes without investing in human resources.

- The second cost-driver is “Other General/Administrative” expenses which accounted for 24% and 25.7% of total expenditure in FY13 and FY 14, respectively. These general/administrative expenses are incurred under Program Management, Strategic information and health systems strengthening.
 - Of the \$2.12 million spent on general/administrative in FY13, **about \$1.18 million (55.5%) is spent “above national”**, \$0.82 million (38.6%) is spent at district level, and the remaining \$0.13 million (5.9%) is spent at national level.

Spending up to \$1.2 million outside the country to support the project activities is a very expensive way of supporting improved service provision in Uganda. Obviously, such amounts of money could be spent more efficiently on other activities that are more directly related to service provision at district level.

- The third cost driver is “other supplies” which used as part of service delivery at district level. It is important to note that all expenditures at site level **exclude** key commodities used in Care and Treatment, such as: test kits, ARVs and non-ARV drugs, and condoms. In FY13, a total of \$1.88 million (21.3% of total expenditure) was spent on “other supplies”.

Spending on “other supplies” is critical for actual service provision, so this level of sending is well justified. To assess efficiency in a more detailed manner, an in-depth analysis of what is included on “other supplies” and the prices at which they are procured would be recommended.

- *Program management* took up about 18.5% and 17.6% of total project expenses in FY13 and FY 14, respectively, while **“above-national” program management expenses took up 15.4% and 16.3% of total project expenditure** in those years, respectively.
 - As noted earlier, this level of spending on program management is not efficient. To make the DBTA approach more efficient, it is imperative to find ways of minimizing “above national” expenditure, but also program management costs at all levels.
- Lastly, the DBTA approach had a heavy investment in training which took up 12.3% and 8.6% of total expenditure in FY 13 and FY 14, respectively. All training expenses were incurred at district level. In the third and fourth years of the project, we note significantly high levels of spending on training due to the nature of the project. Consistently high levels of spending on training is attributed to the many changes in treatment guidelines for ART and PMTCT, as well as changes in the HMIS systems that have changed several times over the course of the project. This notwithstanding, a more detailed assessment of investment in training is recommended, with the view to ascertain whether the approaches used for the trainings are efficient.
- Lastly, *travel and transport* took up about 8.5% of total spending in each year. Of the amount spent on this line item, 95.5% was spent at district level and the remaining 4.5% was spent at national level. The fact that most funds for travel are spent at district level is not surprising given the nature of the project (with a heavy focus on mentoring, monitoring and supervision). In spite of this, there is potential for efficiency gains on this line item, so a more in-depth analysis on travel expenses would be recommended.

Table 2.1.5 Summary of Unit Expenditure (FY 13 and FY 14)

| Unit |
|------|
|------|

| | Expenditure | | Comparison (US \$) | Unit Cost | Source | Adjustments |
|---------------|---------------|---------------|--------------------|---|---|---|
| | FY 13 (US \$) | FY 14 (US \$) | | | | |
| FBTC S | | | | \$441 as Cost per person on Treatment | PEPFAR | Reduce unit cost by 55% to remove cost of ARVs, drugs for OIs and TB |
| CBCT S | 140.36 | 70.93 | 198.45 | \$497 as cost per person on treatment | Uganda HIV Investment Case | |
| LAB | | | | \$124 cost per per person pre-ART | Uganda HIV Investment Case | |
| PMTCT | 189.12 | 279.44 | \$75 - \$122 | \$291.50 Cost per woman receiving HAART | Tanzania (2010): Robberstad et al. | Subtract \$168.64 for Drugs; and possibly \$47 for personnel |
| VMMC | 16.30 | 7.01 | \$19.5 - \$30.55 | \$8.46 - \$18.20 (Kit) \$ 30.55 (PrePex) \$22.65 (Surgical) \$19.50 - \$22.23 (Surgical) | Uganda (2012): Kuznik et al. Uganda (2013): Duffy et al. Uganda (2013): Duffy et al. Uganda (2010): Wabiwire-Mangen et al. | |
| HTC | 0.56 | 0.78 | \$1.15 | \$5 Cost per person tested (home based); \$6.4 cost per person at health facility | Uganda (2013): Mulogo et al | Subtract \$1.17 personnel, \$2.53 supplies, \$0.85 training, \$0.7 infrastructure |
| FSW / MSM | 8.98 | 17.07 | \$9.48 - \$17.40 | \$9.48 cost per sex worker; | Uganda HIV Investment Case (2014) | |
| SORP-KP Other | 5.29 | 2.39 | \$15 - \$17.4 | \$15 Cost per trucker reached, \$17.4 Cost per fisher folk reached | Uganda HIV Investment Case (2014) | |

Results presented in Table 2.1.5 point to some degree of technical efficiency for most of the interventions, with the exception of PMTCT where the unit expenditure is relatively higher than the unit costs used for benchmarking. **A quick disclaimer follows however, relating to the fact we should be cautious in interpreting these results.** Firstly, unit expenditures are not reflectively of the full cost of providing a services. As such, they should ordinarily not be compared with unit costs, not matter how much adjustments are made to try and get a

comparison of “apples with apples”. But in the absence of any other benchmark, we are making these comparisons in this assessment.

Key lessons learned: STAR-SW

- We see a consistency in allocation of funds between FY13 and 14, with Care and Treatment consistently taking the largest proportion of total project funds, and PMTCT taking up the second largest share. There seems to be a reallocation of funds from laboratory support and VMMC to PMTCT between FY 13 and FY14, and from community-based care and treatment to facility-based care and treatment. The shift of priorities between these two years is most likely a shift in policies and priorities of the Ministry of Health, as opposed to a shift with the view to improve efficiency and effectiveness of the project (although this could have been achieved as a results of aligning project priorities to the policies stipulated by MOH).
- Comparing the STAR-SW’s allocation of resource between program areas with the priorities listed in the HIV/AIDS National Strategic Plan (NSP) for Uganda (2011/12 – 2014/15), we note that the interventions supported STAR-SW are aligned to those identified in the NSP. However, we note that the project order of priorities were not necessarily the same as those in the NSP. For example, spending 20% of total spending on PMTCT (excluding ARV drugs) is a significantly higher allocation compared to the 8% allocation estimated in the NSP. Similarly a 14.9% allocation to supporting VMMC is significantly higher than the 6.4% estimated for the NSP for FY12/13. Spending on support for care and treatment seems to be within reasonable range (29.8%) compared to 35% estimated for FY13 in the NSP.
- Overall, we note that in both FY13 and F14, the STAR-SW project allocated a relatively high proportion of resources to *systems strengthening, strategic information, and program management*, compared to the proportion allocated to support direct provision of HIV/AIDS services. Most noteworthy is the significant amounts of money spent on program management, and especially the amount spent outside Uganda to administratively support the project.
- Attaining a healthy resource allocation split between supporting the provision of HIV/AIDS services and supporting or improving an enabling environment is always a challenge. The NSP underscores the importance of an enabling environment and details the support needed to support service delivery. From the outset, the STAR projects, as seen from their project objectives, seem to have a heavier leaning towards strengthening different aspects of the enabling environment in order to improve service delivery for TB and HIV. It is therefore, not surprising that about 25% of the project funds in FY13 and 23.9% in FY 14 were spent on supporting Strategic Information and Health Systems Strengthening.

EVALUATION OF STAR-E: VALUE FOR MONEY ASSESSMENT

Economic Analysis

The Strengthening TB and HIV & AIDS Response in Eastern Uganda (STAR-E) is a six-year project funded by the US Agency for International Development (USAID) that was awarded on March 9, 2009, to Management Sciences for Health (MSH). MSH's partners include the Joint Clinical Research Centre (JCRC), the Inter-Religious Council of Uganda (IRCU), Resources for Policy Exchange (RPX), and Liverpool Associates in Tropical Health (LATH). STAR-E's mandate is to support comprehensive HIV & AIDS & TB services in the 12 districts of Eastern Uganda (Budaka, Bududa, Bukwo, Bulambuli, Busia, Butaleja, Kapchorwa, Kibuku, Kween, Mbale, Pallisa, and Sironko). STAR-E's overall goal is to empower communities in Eastern Uganda to respond effectively to the challenges posed by the HIV & AIDS and TB epidemics. The project's general objective aims to increase access to, coverage of, and use of high-quality, comprehensive HIV & AIDS and TB prevention, care, and treatment services within district health facilities and their respective communities.

Findings

STAR-E project started in 2009 and over a period of five years, the project has spent approximately \$36.1 million (Table 3.1.1). Of this total spending, over 43.7% of total spending (\$36.1 million) was spent on personnel and related allowances.

Table 3.1.1 Total Project Spending (FY 11 - FY 14)

| US \$ | FY10 | FY11 | FY12 | FY13 | FY14 | TOTAL |
|---------------------|-----------|-----------|-----------|-----------|-----------|-------------------|
| Actual Expenditure | 7,268,918 | 6,578,800 | 7,291,409 | 6,737,277 | 8,211,381 | 36,087,785 |
| Total Budget | | | | | | 37,507,585 |
| Remaining for FY15 | | | | | | 1,419,800 |

Source: Project documents

The PEPFAR Expenditure Analysis tool was introduced in FY13, so a detailed analysis of the project's expenditure is only feasible for two years (FY13 and FY14). The findings from the detailed expenditure analyses for these two years are presented in turn.

Table 3.1.2 Detailed Expenditure by Program Areas (FY 13 and FY 14)

| Program Area | FY 13 Expenditure (US \$) | % of total | Program Area | FY 14 Expenditure (US \$) | % of total |
|--------------|---------------------------|------------|--------------|---------------------------|------------|
| FBTCS | 801,785 | 11.9% | FBTCS | 1,357,224 | 16.5% |
| CBCTS | 451,661 | 6.7% | CBCTS | 1,046,559 | 12.7% |
| PMTCT | 1,323,133 | 19.6% | PMTCT | 699,714 | 8.5% |
| VMMC | 1,540,659 | 22.9% | VMMC | 1,046,921 | 12.7% |
| HCT | 511,485 | 7.6% | HTC | 261,811 | 3.2% |
| PEP | 0 | | PEP | 0 | |
| BS | 0 | | BS | 0 | |
| LAB | 263,253 | 3.9% | LAB | 378,456 | 4.6% |
| IC | 267,587 | 4.0% | IC | 104,906 | 1.3% |

| Program Area | FY 13 Expenditure (US \$) | % of total |
|---------------|---------------------------|------------|
| OVC | 0 | |
| SORP-GP | 0 | |
| SORP-IDU | 0 | |
| SORP-CSW | 40,122 | 0.6% |
| SORP-MSM | 0 | |
| SORP-KP Other | 135,522 | 2.0% |
| SI/HSS | 1,402,071 | 20.8% |
| TOTAL | 6,737,277 | |

| Program Area | FY 14 Expenditure (US \$) | % of total |
|--------------|---------------------------|------------|
| OVC | 158,134 | 1.9% |
| GP-PREV | 105,691 | 1.3% |
| KP-PWID | 0 | |
| KP-FSW | 89,048 | 1.1% |
| KP-MSMTG | 0 | |
| OVP-PREV | 845 | 0.0% |
| MAT | 0 | |
| SI | 1,303,023 | 15.9% |
| Surveillance | 216,614 | 2.6% |
| HSS | 1,442,434 | 17.6% |
| TOTAL | 8,211,381 | |

Table 3.1.2 provides a summary of expenditure broken down by program areas, as well as indicating the level at which it spent.

For FY 13, findings of the expenditure analysis show that:

- **\$6.74 million** was spent by the STAR-E project, of which \$1.25 million (18.6%) was spent on Care, Treatment and Support (facility-based, community-based); about \$1.32 million (19.6%) on PMTCT; about \$1.54 million (22.9%) on male circumcision; and \$1.4 million on strategic information and surveillance and health systems strengthening.

For FY 14, findings of the expenditure analysis show that:

- **\$8.21 million** was spent by the STAR-E project, of which \$2.4 million (29.2%) was spent on Care, Treatment and Support (facility-based, community-based); about \$0.7 million (8.5%) was spent on PMTCT; about \$1.05 million (12.7%) on male circumcision; \$1.3 million (15.9%) on Strategic Information; and \$1.44 million (17.6%) on health systems strengthening. Other program areas (such as prevention activities for the general population and key populations) together took up a relatively small proportion of total expenditure.

Table 3.1.3 Summary of Expenditure by Level of spending (FY 13 and FY 14)

| Level of Spending | FY 13 (US \$) | | FY 14 (US \$) | |
|------------------------------|------------------|---------------|------------------|---------------|
| | US \$ | % | US \$ | % |
| Investment (Site level) | 1,455,766 | 21.6% | 613,287 | 7.5% |
| Recurrent (Site Level) | 782,157 | 11.6% | 1,167,679 | 14.2% |
| Program Management | 2,496,396 | 37.1% | 4,332,286 | 52.8% |
| Strategic Information | 1,651,568 | 24.5% | 1,006,714 | 12.3% |
| Health Systems Strengthening | 351,390 | 5.2% | 1,091,414 | 13.3% |
| | 6,737,277 | 100.0% | 8,211,381 | 100.0% |

Information presented in Table 3.1.3 shows the level at which money was spent.

For FY 13:

- A total of \$2.24 million (33% of total annual spending) was spent at site level (i.e. at district level).
- \$2.5 million (37% of total annual spending) was spent on Program Management (at site, national and above-national levels).
 - Of this \$2.5 million, about \$2.24million was spent on national level Program Management activities.
- Furthermore, \$0.35 million (5% of total annual spending) was spent on Health Systems Strengthening activities, while \$1.65 million (24.5% of total annual spending) was spent on supporting and improving Strategic Information.
- These findings show that only one third of total spending for FY13 was spent on direct technical support to support HIV/AIDS service provision, while the remaining two-thirds was spent on technical support for an enabling environment and administrative services.

For FY 14:

- A total of \$1.78 million (21.7% of total annual spending) was spent at site level (i.e. at district level) for direct technical support to HIV/AIDS service provision.
- This implies that over 78% of total funds were spent on supporting an enabling environment which includes: program management, strategic information and health systems strengthening.
- Specifically, a total of **\$4.33million** (53% of total annual spending) **was spent on Program Management** (at site, national and above-national levels).
 - Of this \$4.33 million, about \$2.65million (**61%**) **was spent on national level Program Management** and the remaining **\$1.69 million was spent above national** program management (implying that this not spent in-country).
- Furthermore, \$1.09 million (13% of total annual spending) was spent on Health Systems Strengthening activities, while \$1 million (12.3%) was spent on supporting and improving Strategic Information.
- These findings point towards some degree of allocative inefficiency, with a relatively high level of spending on program management, and particularly high levels of spending outside the country and at national level to administratively support the project. This approach to supporting improvements in service delivery is both expensive and not sustainable in the long run.

Table 3.1.4 Summary of Cost Drivers (FY 13 and FY 14)

| US \$ | Exp FY13 | % of total Exp FY 13 | US \$ | Exp FY14 | % of total Exp FY 14 |
|------------------------------|-----------------|-----------------------------|------------------------------|-----------------|-----------------------------|
| Personnel (at all levels) | 3,036,108 | 45.1% | Program management | 4,332,286 | 52.8% |
| Program management | 2,496,396 | 37.1% | Other General/Administrative | 3,667,881 | 44.7% |
| National level spending | 2,239,998 | 33.2% | National level spending | 3,034,757 | 37.0% |
| Other General/Administrative | 1,576,165 | 23.4% | Personnel (at all levels) | 2,706,406 | 33.0% |
| Training (Site level) | 1,384,811 | 20.6% | Above National | 2,304,243 | 28.1% |

| US \$ | Exp FY13 | % of total Exp FY 13 | US \$ | Exp FY14 | % of total Exp FY 14 |
|-------------------------------|------------------|----------------------|-------------------------------|------------------|----------------------|
| Travel and Transport | 440,887 | 6.5% | Travel and Transport | 653,922 | 8.0% |
| Above National | 256,398 | 3.8% | Training (Site level) | 612,471 | 7.5% |
| Other supplies (Site Level) | 98,979 | 1.5% | Other supplies (Site Level) | 83,583 | 1.0% |
| Total Expenditure FY13 | 6,737,277 | | Total Expenditure FY14 | 8,211,381 | |

A further look into the expenditure on specific line items reveals the main cost drivers of project expenditure. This assessment provides better insight around the efficiency of resource allocation and use.

Table 3.1.4 shows that the first cost driver is spending on personnel in both FY13 and program management in FY14.

- About 45% and 33% of project funds were spent on Personnel in FY13 and FY 14 respectively.
 - For FY 13: of the \$3.04 million, about \$1.71million (56%) is spent on personnel at district level and the remaining is spent at national or above-national personnel.

This finding implies that supporting human resources for health (for provision of HIV/AIDS services) took up a reasonably high proportion of the project funds. Although the project relied on existing structures to deliver services, this level of spending on personnel points to two important issues:

- c) That existing human resources were very inadequate and without additional support directed to personnel, there would be very little achievement in terms of the outputs reported in the districts supported.
- d) That while this approach to supporting the health systems indeed results in achieving excellent health outputs, it may also at the same time cause distortions in the human resource market. We think this may be the case because without additional HR financial support (in the form of allowances), the health system may actually completely shut down. This issue indicates that the DBTA approach is not sustainable without donor support because Government of Uganda may not be position, in the short to medium term, to increase HR emoluments to the level at which the project has been supporting HR at health facilities.

In interpreting these findings, it is important to note that health care service provision is a labor-intensive process which requires skilled and motivated human resources. Therefore, the issues raised above notwithstanding, it is difficult to achieve reasonable health outcomes without investing in human resources.

- The second cost-driver is “*Other General/Administrative*” expenses which accounted for 23.4% and 44.7% of total expenditure in FY13 and FY 14, respectively. These general/administrative expenses are incurred under Program Management, Strategic information and health systems strengthening.

- Program management took up about 37% and 52.8% of total project expenses in FY13 and FY 14, respectively. There is a significant increase in spending on program management from \$2.5 million in FY13 to \$4.3million in FY14.
 - As noted earlier, this level of spending on program management is not efficient. To make the DBTA approach more efficient, it is imperative to find ways of minimizing “above national” expenditure, but also program management costs at all levels. A more in-depth analysis of what program management entails is recommended.

- Lastly, the DBTA approach had a heavy investment in training which took up 20.6% and 7.5% of total expenditure in FY 13 and FY 14, respectively. All training expenses were incurred at district level. In the third and fourth years of the project, we note significantly high levels of spending on training due to the nature of the project. Consistently high levels of spending on training is attributed to the many changes in treatment guidelines for ART and PMTCT, as well as changes in the HMIS systems that have changed several times over the course of the project. This notwithstanding, a more detailed assessment of investment in training is recommended, with the view to ascertain whether the approaches used for the trainings are efficient.

Table 3.1.5 Summary of Unit Expenditure (FY 13 and FY 14)

| | FY 13 | FY 14 | Comparison (US \$) | Unit Cost | Source | Manipulation |
|--------------------------|-------|-------|--------------------|---|---|---|
| FBTCS | 146.0 | 183.0 | 198.45 | \$441 as Cost per person on Treatment | PEPFAR | Reduce unit cost by 55% to remove cost of ARVs, drugs for OIs and TB |
| CBCTS | | | | \$497 as cost per person on treatment | Uganda HIV Investment Case | |
| LAB | | | | \$124 cost per person pre-ART | Uganda HIV Investment Case | |
| PMTCT | 304.4 | 217.9 | \$75 - \$122 | \$291.50 Cost per woman receiving HAART | Tanzania (2010): Robberstad et al. | Subtract \$168.64 for Drugs; and possibly \$47 for personnel |
| VMMC | 20.8 | 22.8 | \$19.5 - \$30.55 | \$8.46 - \$18.20 (Kit) \$ 30.55 (PrePex) \$22.65 (Surgical) \$19.50 - \$22.23 (Surgical) | Uganda (2012): Kuznik et al. Uganda (2013): Duffy et al. Uganda (2013): Duffy et al. Uganda (2010): Wabiwire-Mangen et al. | |
| HTC | 1.4 | 0.6 | \$1.15 | \$5 Cost per person tested (home based); \$6.4 cost per person at health facility | Uganda (2013): Mulogo et al | Subtract \$1.17 personnel, \$2.53 supplies, \$0.85 training, \$0.7 infrastructure |
| SORP-CSW / FSW | 4.1 | 11.2 | \$9.48 - \$17.40 | \$9.48 cost per sex worker; | Uganda HIV Investment Case (2014) | |
| SORP-KP Other / OVP-PREV | | | \$15 - \$17.4 | \$15 Cost per trucker reached, \$17.4 Cost per fisher folk reached | Uganda HIV Investment Case (2014) | |

Results presented in Table 3.1.5 point to some degree of technical efficiency for most of the interventions, with the exception of PMTCT where the unit expenditure is relatively higher than the unit costs used for benchmarking. **A quick disclaimer follows however, relating to the fact we should be cautious in interpreting these results.** Firstly, *unit expenditures* are not reflectively of the full cost of providing a services. As such, they should not be compared with unit costs, not matter how much adjustments are made to try and get a comparison of “apples with apples”. But in the absence of any other benchmark, we are making these comparisons.

Key lessons learned: STAR-E

- We note a lack of consistency in allocation of funds between FY13 and 14, with Care and Treatment consistently taking the largest proportion of total project funds, and VMMC taking up the second largest share. The allocation of funds between program areas may be

reflective of the project priorities in the different years, which are not necessarily prioritized in the order of the NSP.

- STAR-E has the highest level of spending on Program management. Spending close to 53% of total funds on program management in FY14 requires further inquiry and may be indicative of poor management practices.
- Overall, we note that in both FY13 and FY14, the STAR-E project allocated a relatively high proportion of resources (67% and 78%, respectively) to *systems strengthening*, *strategic information*, and *program management*, compared to the proportion allocated to support direct provision of HIV/AIDS services. This points to allocative inefficiency and requires more in-depth inquiry.

EVALUATION OF STAR-EC: VALUE FOR MONEY ASSESSMENT

Evaluation of STAR-EC: Economic Analysis

The Strengthening TB and HIV & AIDS Response in East-Central Uganda (STAR-EC) project, funded by the US Agency for International Development (USAID), is in final phase of implementation in nine districts of East Central Uganda, namely: Bugiri, Buyende, Iganga, Luuka, Kaliro, Kamuli, Mayuge, Namayingo, and Namutumba. Currently, the region is inhabited by an estimated 3.1 million people; approximately 9% of Uganda's current population. STAR-EC's overall goal is to empower communities in Eastern Uganda to respond effectively to the challenges posed by the HIV & AIDS and TB epidemics. The project's general objective aims to increase access to, coverage of, and use of high-quality, comprehensive HIV & AIDS and TB prevention, care, and treatment services within district health facilities and their respective communities. This project was implemented by JSI Research & Training Institute Inc., in collaboration with World Education's Bantwana Initiative, Communication for Development Foundation Uganda, mothers2mothers, and Uganda Cares.

Findings

STAR-EC project started in 2009 and over a period of six years, the project has spent approximately \$37.8 million (Table 4.1.1). Of this total spending, over 30.7% of total spending (\$37.8 million) was spent on personnel and related allowances.

Table 4.1.1 Total Project Spending (FY 09 - FY 14)

| US \$ | FY09 | FY10 | FY11 | FY12 | FY13 | FY14 | TOTAL |
|---------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------------|
| Actual Expenditure | 1,289,882 | 4,960,701 | 8,135,570 | 6,424,473 | 8,310,362 | 8,647,004 | 37,767,992 |
| Total Budget | | | | | | | 37,767,992 |
| Remaining for FY15 | | | | | | | - |

Source: Project documents

The PEPFAR Expenditure Analysis tool was introduced in FY13, so a detailed analysis of the project's expenditure is only feasible for two years (FY13 and FY14). The findings from the detailed expenditure analyses for these two years are presented in turn.

Table 4.1.2 Detailed Expenditure by Program Areas (FY 13 and FY 14)

| | FY 13 Expenditure (US \$) | % of total | Program Area | FY 14 Expenditure (US \$) | % of total |
|------------------|---------------------------------|---------------|-----------------|---------------------------------|---------------|
| FBTCS | 1,410,921 | 17.0% | FBTCS | 1,030,543 | 11.9% |
| CBCTS | 0 | | CBCTS | 711,362 | 8.2% |
| PMTCT | 1,316,958 | 15.8% | PMTCT | 908,799 | 10.5% |
| VMMC | 3,311,005 | 39.8% | VMMC | 3,129,702 | 36.2% |
| HCT | 973,464 | 11.7% | HTC | 1,123,597 | 13.0% |
| PEP | 50,370 | 0.6% | PEP | 0 | |
| BS | 0 | | BS | 0 | |
| LAB | 433,100 | 5.2% | LAB | 441,547 | 5.1% |
| IC | 0 | | IC | 0 | |
| OVC | 0 | | OVC | 390,617 | 4.5% |
| SORP-GP | 489,572 | 5.9% | GP-PREV | 400,938 | 4.6% |
| SORP-IDU | 0 | | KP-PWID | 0 | |
| SORP-CSW | 39,510 | 0.5% | KP-FSW | 44,372 | 0.5% |
| SORP-MSM | 0 | | KP-MSMTG | 0 | |
| SORP-KP Other | 152,782 | 1.8% | OVP-PREV | 232,443 | 2.7% |
| SI | 8,994 | 0.1% | MAT | 0 | |
| HSS | 123,684 | 1.5% | SI | 119,104 | 1.4% |
| TOTAL | 8,310,362 | 100.0% | HSS | 113,979 | 1.3% |
| | | | TOTAL | 8,647,004 | 100.0% |

Table 4.1.2 provides a summary of expenditure broken down by program areas, as well as indicating the level at which it spent.

For FY 13, findings of the expenditure analysis show that:

- **\$8.31 million** was spent by the STAR-EC project, of which \$1.41 million (17%) was spent on Care, Treatment and Support (facility-based, community-based); about \$1.32 million (15.8%) on PMTCT; about \$3.3 million (39.8%) on male circumcision; and \$0.97 million (11.7%) on HTC.

For FY 14, findings of the expenditure analysis show that:

- **\$8.65 million** was spent by the STAR-E project, of which \$1.74 million (20%) was spent on Care, Treatment and Support (facility-based, community-based); about \$0.91 million (10.5%) was spent on PMTCT; about \$3.13 million (36%) on male circumcision; \$1.12 million (13%) on HTC; and \$0.44 million (5.1%) on laboratory support.

Table 4.1.3 Summary of Expenditure by Level of spending (FY 13 and FY 14)

| Level of Spending | FY 13 (US \$) | | FY 14 (US \$) | |
|------------------------------|------------------|--------|------------------|--------|
| Investment (Site level) | 804,848 | 9.7% | 747,082 | 8.6% |
| Recurrent (Site Level) | 4,188,569 | 50.4% | 3,894,360 | 45.0% |
| Program Management | 2,472,348 | 29.8% | 3,145,144 | 36.4% |
| Strategic Information | 619,745 | 7.5% | 654,168 | 7.6% |
| Health Systems Strengthening | 224,852 | 2.7% | 206,250 | 2.4% |
| | 8,310,362 | 100.0% | 8,647,004 | 100.0% |

Information presented in Table 4.1.3 shows the level at which money was spent.

For FY 13:

- A total of \$4.99 million (60% of total annual spending) was spent at **site level** (i.e. at district level).
- **\$2.5 million** (29.8% of total annual spending) was spent on **Program Management** (at site, national and above-national levels).
 - Of this \$2.5 million spent on program management about **\$1.2million was spent on national level** Program Management activities.
- Furthermore, \$0.22 million (2.7% of total annual spending) was spent on Health Systems Strengthening activities, while \$0.62 million (7.5% of total annual spending) was spent on supporting and improving Strategic Information.

For FY 14:

- A total of \$4.6 million (53.7% of total annual spending) was spent at **site level** (i.e. at district level) for direct technical support to HIV/AIDS service provision.
- This implies that 46% of total funds were spent on supporting an enabling environment which includes: program management, strategic information and health systems strengthening.
- Specifically, a total of \$3.15 million (36% of total annual spending) was spent on Program Management (at site, national and above-national levels). This represents an increase in spending on program management from \$2.5 million in FY13.
 - Of this \$3.15 million, about 30% was spent on national level Program Management and the remaining **70% was for program management at district level.**
- These findings point towards some degree of allocative inefficiency, with a relatively high level of spending on program management, and particularly high levels of spending program management at district level. This approach to supporting improvements in service delivery is both expensive and not sustainable in the long run. This finding also calls for more in-depth analysis of what program management at district level actually constitutes.

Table 4.1.4 Summary of Cost Drivers (FY 13 and FY 14)

| | Exp FY13 | % of total Exp FY 13 | Exp FY14 | % of total Exp FY 14 |
|------------------------------|-----------|----------------------|-----------|----------------------|
| Personnel (at all levels) | 3,897,530 | 46.9% | 4,151,737 | 48.0% |
| Program management | 2,472,348 | 29.8% | 3,145,144 | 36.4% |
| Travel and Transport | 2,318,444 | 27.9% | 2,375,505 | 27.5% |
| National level spending | 1,367,748 | 16.5% | 1,201,668 | 13.9% |
| Other General/Administrative | 871,719 | 10.5% | 1,012,875 | 11.7% |
| Training (Site level) | 550,680 | 6.6% | 564,963 | 6.5% |
| Other supplies (Site Level) | 265,774 | 3.2% | 217,145 | 2.5% |
| Above National | 443,004 | 5.3% | - | |

A further look into the expenditure on specific line items reveals the main cost drivers of project expenditure. This assessment provides better insight around the efficiency of resource allocation and use.

Table 4.1.4 shows that the first cost driver is spending on *personnel* in both FY13 and program management in FY14.

- About 47% and 48% of project funds were spent on Personnel in FY13 and FY 14 respectively.
 - For FY 13: of the \$3.9 million, about 73% was spent on personnel at district level and the remaining is spent at national or above-national personnel.

This finding implies that supporting human resources for health (for provision of HIV/AIDS services) took up a reasonably high proportion of the project funds. This finding is consistent with the findings for STAR-SW and STAR-E. Regarding this level of spending on personnel at district level, we have already noted two possible issues:

- That existing human resources were very inadequate or not motivated enough, and that without additional support directed to personnel, there would be very little achieved in terms of the outputs reported in the districts supported.
- That while this approach to supporting the health systems indeed results in achieving reasonable health outputs, it may inadvertently cause distortions in the human resources situation at the health facilities. For example, health workers may be drawn to concentrate on delivering services (HIV/AIDS/TB) for which they receive additional incentives and may ignore or may not have adequate time for other services (e.g. immunization, maternal health, etc.). We argue that the DBTA approach is not sustainable without donor support because Government of Uganda may not be position, in the short to medium term, to increase HR emoluments to the level at which the project has been supporting HR at health facilities.
- The second cost driver, *Program management*, took up about 30% and 36% of total project expenses in FY13 and FY 14, respectively. There is a significant increase in spending on program management from \$2.47 million in FY13 to \$3.14 million in FY14.
 - As noted earlier, this level of spending on program management is not efficient. To make the DBTA approach more efficient, it is imperative to find ways of minimizing “above national” expenditure, but also program management costs at all levels. A more in-depth analysis of what program management entails is recommended.

- The third cost-driver is “Travel and transport” expenses which accounted for nearly 28% of total expenditure in each of the years (in FY13 and in FY 14). These expenses are largely due to heavy mentoring, monitoring and supervision being undertaken by project staff for more than 80% of their working time.
- Not surprising, given the structure of the project, “national level spending” took up to 17% and 14% of total expenditure in FY13 and FY14, respectively. This expenditure comprises mainly salaries of project staff, other general administrative expenses, as well as travel and transport for project staff.

Table 4.1.5 Summary of Unit Expenditure (FY 13 and FY 14)

| | FY 13 | FY 14 | Comparison (US \$) | Unit Cost | Source | Manipulation |
|------------------------------------|--------|--------|--------------------|---|---|--|
| FBTCS | 89.62 | 84.14 | 198.45 | \$441 as Cost per person on Treatment | PEPFAR | Reduce unit cost by 55% to remove cost of ARVs, drugs for OIs and TB |
| CBCTS | | | | \$497 as cost per person on treatment | Uganda HIV Investment Case | |
| LAB | | | | \$124 cost per person pre-ART | Uganda HIV Investment Case | |
| PMTCT | 303.38 | 447.46 | \$75 - \$122 | \$291.50 Cost per woman receiving HAART | Tanzania (2010): Robberstad et al. | Subtract \$168.64 for Drugs; and possibly \$47 for personnel |
| VMMC | 24.87 | 36.15 | \$19.5 - \$30.55 | \$8.46 - \$18.20 (Kit) \$ 30.55 (PrePex) \$22.65 (Surgical) \$19.50 - \$22.23 (Surgical) | Uganda (2012): Kuznik et al. Uganda (2013): Duffy et al. Uganda (2013): Duffy et al. Uganda (2010): Wabiwire-Mangen et al. | |
| HTC | 1.19 | 1.70 | \$1.15 | \$5 Cost per person tested (home based); \$6.4 cost per person at health facility | Uganda (2013): Mulogo et al | Subtract \$1.17 personnel, \$2.53 supplies, \$0.85 training, \$0.7 infrastructure |
| Prevention - General Population | 1.55 | 1.46 | \$9.48 - \$17.40 | \$9.48 cost per sex worker; | Uganda HIV Investment Case (2014) | |
| FSW / Other Vulnerable populations | 2.73 | 2.75 | \$15 - \$17.4 | \$15 Cost per trucker reached, \$17.4 | Uganda HIV Investment Case (2014) | |

| | FY 13 | FY 14 | Comparison (US \$) | Unit Cost | Source | Manipulation |
|--|-------|-------|--------------------|------------------------------|--------|--------------|
| | | | | Cost per fisher folk reached | | |

Results presented in Table 4.1.5 point to some degree of technical efficiency for most of the interventions, with the exception of PMTCT and VMMC where the unit expenditure is relatively higher than the unit costs used for benchmarking. **A quick disclaimer follows, however, relating to the fact we should be cautious in interpreting these results.** Firstly, unit expenditures are not reflective of the full cost of providing a service. As such, they should not be compared with unit costs, not matter how effort goes into making adjustments to the unit costs to try and them comparable to unit expenditure. The findings presented in Table 4.1.5 are inconclusive and should not be used to make any decision about technical efficiency.

Key lessons learned: STAR-EC

- STAR-EC spent a relatively high proportion of their total resources on personnel (at district, national and above national levels). A more in-depth analysis on this level of spending would provide more insights on efficiency.
- STAR-EC spent the highest proportion of funds at site level (compared to the other two projects). This is a good indication of allocative efficiency, in line with achieving the project objectives.
- STAR-EC's heavy focus on VMMC may be in line with the project priorities, but is not necessarily in line with NSP ordering of priorities. Like the other STAR projects, STAR-EC gave little emphasis to prevention of the general population and MARPs.

FOR ALL THREE STAR PROJECTS: COMPARISONS, KEY CONCLUSIONS AND RECOMMENDATIONS

Comparisons, Conclusions and Recommendations

Comparisons of the three projects

Table 5.1.1 Comparing Spending by level (FY 13 and FY 14) – all three projects

| FY 13 (US \$) | STAR-SW | | STAR-E | | STAR-EC | |
|------------------------------|------------------|-------|------------------|-------|------------------|-------|
| Investment (Site level) | 1,117,270 | 12.6% | 1,455,766 | 21.6% | 804,848 | 9.7% |
| Recurrent (Site Level) | 3,863,716 | 43.7% | 782,157 | 11.6% | 4,188,569 | 50.4% |
| Program Management | 1,638,156 | 18.5% | 2,496,396 | 37.1% | 2,472,348 | 29.8% |
| Strategic Information | 832,519 | 9.4% | 1,651,568 | 24.5% | 619,745 | 7.5% |
| Health Systems Strengthening | 1,386,978 | 15.7% | 351,390 | 5.2% | 224,852 | 2.7% |
| TOTAL | 8,838,639 | | 6,737,277 | | 8,310,362 | |

| FY 14 (US \$) | STAR-SW | | STAR-E | | STAR-EC | |
|------------------------------|------------------|-------|------------------|-------|------------------|-------|
| Investment (Site level) | 691,544 | 8.6% | 613,287 | 7.5% | 747,082 | 8.6% |
| Recurrent (Site Level) | 4,018,358 | 49.9% | 1,167,679 | 14.2% | 3,894,360 | 45.0% |
| Program Management | 1,413,224 | 17.6% | 4,332,286 | 52.8% | 3,145,144 | 36.4% |
| Strategic Information | 836,813 | 10.4% | 1,006,714 | 12.3% | 654,168 | 7.6% |
| Health Systems Strengthening | 1,087,272 | 13.5% | 1,091,414 | 13.3% | 206,250 | 2.4% |
| TOTAL | 8,047,211 | | 8,211,381 | | 8,647,004 | |

Table 5.1.1 provides a summary of where each project spent its funds. The key findings include:

- STAR-E allocated the highest level of spending on Program management in both FY13 and FY14, followed by STAR-EC. As far as the inefficiencies of program management spending are concerned, STAR-SW was most efficient (with about 18% spent on program management). STAR-E's significant allocation of funds to program management from \$2.5 million in FY 13 to \$4.3 million in FY14 requires more in-depth analysis and inquiry.
- STAR-EC allocated the least amount of money to health system strengthening, followed by STAR-E. Relative to the other projects, STAR-SW allocated more funds to health systems strengthening.
- STAR-E allocated the highest amount of funds to Strategic Information, followed by STAR-SW.
- STAR-EC allocated the highest level of funds to site level, and STAR-E allocated the least. However, we note earlier that STAR-EC had very high spending on travel and transport (at both district and national levels) and this may explain their high allocation to "site level". Therefore, their high level recurrent spending in both years may not necessarily imply allocative or technical efficiency.

- Both STAR EC and STAR-SW show consistency in resource allocation between the two years, and STAR-E seems to demonstrate some erratic allocation of resource between levels. This finding points to possible management challenges, but the finding is not conclusive in itself.

Table 5.1.2 Comparing Spending by program area (FY 14) – all three projects

| FY 14 | STAR-SW | STAR-E | STAR-EC | TOTAL |
|---|------------------|------------------|------------------|-------------------|
| Facility-based Care, Treatment and Support | 2,066,045 | 1,357,224 | 1,030,543 | 4,453,812 |
| Community-based Care, Treatment and Support | 531,622 | 1,046,559 | 711,362 | 2,289,542 |
| PMTCT | 2,390,329 | 699,714 | 908,799 | 3,998,842 |
| Voluntary Medical Male Circumcision | 786,266 | 1,046,921 | 3,129,702 | 4,962,889 |
| HIV Testing and Counselling | 461,982 | 261,811 | 1,123,597 | 1,847,389 |
| Post-Exposure Prophylaxis | 9,451 | - | - | 9,451 |
| Blood Safety | - | - | - | - |
| Laboratory | 650,148 | 378,456 | 441,547 | 1,470,150 |
| Infection Control | 80,665 | 104,906 | - | 185,571 |
| Orphans and Vulnerable Children | - | 158,134 | 390,617 | 548,751 |
| General Population - Prevention | 232,569 | 105,691 | 400,938 | 739,198 |
| Key Populations-PWID | - | - | - | - |
| Key Populations-FSW | 299,045 | 89,048 | 44,372 | 432,465 |
| Key Populations-MSMTG | 160,934 | - | - | 160,934 |
| Other Vulnerable Populations-Prevention | 378,155 | 845 | 232,443 | 611,444 |
| Medically-Assisted Therapy | - | - | - | - |
| SI | | 1,303,023 | 119,104 | 1,422,127 |
| Surveillance | | 216,614 | 113,979 | 330,594 |
| HSS | | 1,442,434 | | 1,442,434 |
| TOTAL | 8,047,211 | 8,211,381 | 8,647,004 | 24,905,596 |

Table 5.1.2 summarizes the way each project prioritized the different program areas. Overall, each of the project spent roughly \$8 million. The analysis of the information presented in Table 5.1.2 is based on what each project reported as having allocated to the different program area. As such, their estimation of allocations may have been subjective and not very accurate. Results show the following:

- Each project seemed to have different priorities. While STAR-SW prioritized Care and Treatment, and PMTCT as the most important program areas; STAR-E prioritized health systems strengthening, Care and Treatment, and VMMC; and, STAR-EC prioritize, VMMC, HTC, Care and Treatment.
- All the three projects gave little attention to prevention for the general population, key populations, OVC, infection control and PEP and blood safety.

Table 5.1.3 Comparing Cost Drivers (FY 14) – all three projects

| FY 14 | STAR-SW | STAR-E | STAR-EC |
|--------------------------------|----------------|---------------|----------------|
| Personnel | 2,253,197 | 2,706,406 | 4,151,737 |
| Program management | 1,413,224 | 4,332,286 | 3,145,144 |
| Travel and Transport | 690,552 | 653,922 | 2,375,505 |
| Above national spending | 1,315,148 | 2,304,243 | 443,000 |
| Other General / Administrative | 2,072,052 | 3,667,881 | 1,012,875 |

Table 5.1.3 provides insights into the cost drivers for each of the project. The results show that:

- Personnel is a cost driver in all three projects. However, it is significantly so for STAR-EC. The level of spending on personnel for STAR-EC requires further analysis.
- The levels of spending on program management by STAR-E and STAR-EC are very high. This makes these two projects less efficient, compared to STAR-SW.
- STAR-EC’s spending on Travel and Transport is very high. As already explained earlier, this is due their design for mentoring, monitoring and supervision. This makes STAR-EC’s approach very inefficient, compared to the other two projects.
- While spending “above national” cannot be completely eliminated, spending levels like those for STAR-E indicate huge inefficiencies. STAR-EC has the least above-national spending.
- Lastly, all projects have significant spending on “other administrative” expenses. Partly, the problem is that this category is inclusive of so many items, including those that directly support program interventions (so by definition it is problematic).

Table 5.1.4 Comparing Outputs (cumulative for the period 2010 - 2014) – all three projects

| | STAR-SW | STAR-E | STAR-EC |
|---------------------------------|----------------|---------------|----------------|
| PMTCT | 32,565 | 14,776 | 15,209 |
| VMMC | 228,123 | 155,649 | 314,643 |
| Prevention - General Population | 325,292 | 416,992 | - |
| Prevention - MARPs | 65,943 | 68,029 | 239,996 |
| HCT | 1,419,901 | 1,341,907 | 2,575,523 |
| ART | 88,406 | 28,929 | 58,792 |

Results in Table 5.1.4 show that overall, STAR-EC achieved the highest number of outputs on selected key indicators, followed by STAR-SW. STAR-E was the least performing of all the three projects. These summaries are based on the information presented in the annual reports of each of the projects. This assessment is not able to comment on the differences in quality of the outputs of each project, because this component was outside the scope of work.

Table 5.1.5 Comparing unit expenditure (FY 13 and FY 14) – all three projects

| | STAR-SW | | STAR-E | | STAR-EC | |
|------------------|----------------|--------------|---------------|--------------|----------------|--------------|
| | FY 13 | FY 14 | FY 13 | FY 14 | FY 13 | FY 14 |
| Care & Treatment | 140.36 | 70.93 | 146.0 | 183.0 | 89.6 | 84.1 |

| | STAR-SW | | STAR-E | | STAR-EC | |
|--------------------|---------|--------|--------|-------|---------|-------|
| | FY 13 | FY 14 | FY 13 | FY 14 | FY 13 | FY 14 |
| PMTCT | 189.12 | 279.44 | 304.4 | 217.9 | 303.4 | 447.5 |
| VMMC | 16.30 | 7.01 | 20.8 | 22.8 | 24.9 | 36.1 |
| HTC | 0.56 | 0.78 | 1.4 | 0.6 | 1.2 | 1.7 |
| FSW / MSM | 8.98 | 17.07 | 4.1 | 11.2 | 1.55 | 1.46 |
| SORP - KP Other | 5.29 | 2.39 | | | 2.73 | 2.75 |

As noted in Sections 2-4, the results on unit expenditure need to be interpreted with caution because they do not reflect the possible differences in the quality of outputs for these three projects.

Table 5.1.5 shows the following results:

- STAR-EC had the lowest unit expenditure for “care and treatment”, except in FY14 when STAR-SW had a lower unit expenditure.
- STAR-SW had the lowest unit expenditure for PMTCT, except in FY14 when STAR-E had the lowest.
- STAR-SW had the lowest unit expenditure for VMMC
- STAR-SW had the lowest unit expenditure for HTC
- The unit expenditure for MARPs and other key populations seems to vary significantly between the different projects and the years, possibly due to the difference in the quality and nature of the outputs for these interventions.

Value for Money conclusions

Economy (careful use of resources to save expense, time or effort)

Economy relates to efficient procurement, efficiency to efficient delivery of outputs, and effectiveness to achieving the intended outcomes. This definition entails both a quantitative and qualitative aspect. The most essential information needed for any measurement of VfM is the cost of an intervention, broken down into operational and administrative costs to estimate overheads and funds spent directly on implementation.

In general, the projects had some areas of being uneconomical, as discussed in sections 2-4. Specifically:

- Program management costs (and above national costs) take up a significantly large proportion of total project budget (32% based on the analysis of FY13 and FY14 data). If this proportion of spending is applied to the total spending for all 3 projects over their entire project life, then approximately \$32.8 million was spent on program management. This high level of spending on program management is partly due to the project design that has a 3-

tier level of management, with negotiated salaries and overheads for each level (above-national, national level, and at sub-grantee level). This management structure is inefficient.

- The levels of spending on (a) travel and transport, and (b) other administrative expenses by each of the projects is significantly high. Potentially efficiency gains could be made on these expenses. However, a more in-depth analysis for travel and transport costs, as well as training and administrative expenses is required to be able to reach a better conclusion on project efficiency on these items.
- Through key informant interviews, it was noted that USAID supports local governments through a grant that is managed under the SDS project. This support is being implemented parallel to the support provided by the STAR projects, but targets the same districts. While the SDS support is directed towards improving the capacity of local governments to implement their mandates, the SDS and STARs projects are not well synchronized, and this results in inefficiencies. Most specifically, implementation of some of the activities by STARs project is delayed due to poor coordination and synchronization of activities implemented by the SDS project.

Once information about costs is available, the next step is to identify the number of beneficiaries reached and estimate the unit costs of an intervention, and thus the efficiency of an intervention. Therefore, having standardized unit costs is often seen as a first important step to be able to compare interventions and embark on measuring value-for-money.

Efficiency (delivering the same level of service for less cost, time or effort)

- *Allocative efficiency*: Overall, only 48% of total spending by all three projects (in FY13 and FY14) was spent at “site level” – directly supporting the provision of services for HIV/AIDS/TB. The remaining 52% was spending on strategic information, health systems strengthening and program management. This finding points to some degree of allocative inefficiency. However, this needs to be interpreted in the overall objective of the projects and their effectiveness (which has not been measure in this assessment).

The idea of standardizing unit costs also has the purpose of achieving greater comparability of costs of similar outputs and outcomes. Using unit costs to locate inefficiencies and strive for greater effectiveness depends on information about relative value.

- *Technical efficiency*:
 - Although an attempt has been made to calculate *unit expenditure* and to benchmark it against unit costs of implementing similar services, we note that fact that we are not “comparing apples with apples” and that the results presented on this should not form the basis for making judgments about the technical efficiency of the projects.
 - The model being used for mentoring, training and supervision seems to attract a lot of costs, particularly relating to (a) personnel, (b) training, and (c) travel and transport. The approaches used by the projects to undertake these activities may be inefficient, but further analysis of these expenses is required to reach a more robust conclusion.

Effectiveness (delivering a better service or getting a better return for the same amount of expense, time or effort)

With a total spending by all three projects of \$103 million over the 4-5 year period, and the quantity of results shared in Table 5.1.4, this level of funding could have achieved reasonably more outputs. This conclusion should be interpreted cautiously because the outputs being considered exclude other “softer” outputs that relate to strategic information and health systems strengthening, which we note earlier consumed a significant proportion (estimated at 20%) of total spending for all three projects. It is important to recognize that some outcomes are easier to quantify than others. Indeed, only a portion of development work and outcomes may be captured in quantitative terms.

Given the measurement of the effectiveness of these projects was beyond the scope of this evaluation, no further conclusions can be made.

Recommendations

- A cost-effectiveness analysis for each of the projects is recommended, if USAID is interested in getting more robust information on value for money.
- Further in-depth analysis of expenditure on training, travel and transport costs, as well as other general administrative expenses is recommended. The results will provide further insights on areas of inefficiency by the projects.
- Future project support should consider ways that ensure lower administrative costs, particularly the overheads incurred at 3 levels of program management (above national, national and the sub-grantees who implement). Ideally, program costs should not exceed 15% of total expenditure.
- Having separate functions of supporting the DBTA model (with the STAR project supporting implementation while SDS supports the decentralization and governance aspects is both complex and inefficient. Future project design should consider an integrated approach to supporting districts with one entity handling all aspects.
- Consideration should be made of supporting human resource in a manner that is more efficient manner that is more beneficial to the overall health system. The current model of supporting human resources (through allowances) most probably creates more distortions than it strengthens the system, particularly with regard to shifting the focus of human resource away from other services to focusing largely only HIV/AIDS.

ANNEXES

Annexes: Detailed Tables – STAR SW

Annex 2.1: Expenditure by Program Areas (FY 13)

| FY 2012/13 Expenditure (USD) | Investment (Site level) | Recurrent (Site Level) | Program Management | Strategic Information | Health Systems Strengthening | TOTAL | % of total |
|---|-------------------------|------------------------|--------------------|-----------------------|------------------------------|------------------|------------|
| Facility-based Care, Treatment and Support | 173,689 | 614,136 | 262,105 | 133,203 | 221,916 | 1,405,049 | 15.9% |
| Community-based Care, Treatment and Support | 151,978 | 537,368 | 229,342 | 116,553 | 194,177 | 1,229,417 | 13.9% |
| PMTCT | 217,111 | 793,042 | 327,631 | 166,504 | 277,396 | 1,781,684 | 20.2% |
| Voluntary Medical Male Circumcision | 162,833 | 575,752 | 245,723 | 124,878 | 208,047 | 1,317,233 | 14.9% |
| HIV Testing and Counselling | 32,567 | 115,150 | 49,145 | 24,976 | 41,609 | 263,447 | 3.0% |
| Post-Exposure Prophylaxis | 0 | 0 | 0 | 0 | 0 | 0 | |
| Blood Safety | 0 | 0 | 0 | 0 | 0 | 0 | |
| Laboratory | 216,258 | 652,518 | 278,486 | 141,528 | 235,786 | 1,524,577 | 17.2% |
| Infection Control | 32,567 | 115,150 | 49,145 | 24,976 | 41,609 | 263,447 | 3.0% |
| Orphans and Vulnerable Children | 0 | 0 | 0 | 0 | 0 | 0 | |
| SORP-General Population | 32,567 | 115,150 | 49,145 | 24,976 | 41,609 | 263,447 | 3.0% |
| SORP-Injectable Drug Users | 0 | 0 | 0 | 0 | 0 | 0 | |
| SORP-Commercial Sex Workers | 21,494 | 75,999 | 32,763 | 16,650 | 27,740 | 174,646 | 2.0% |
| SORP-Men who have Sex with Men | 0 | 0 | 0 | 0 | 0 | 0 | |
| SORP-Key Population Other | 76,206 | 269,451 | 114,671 | 58,276 | 97,088 | 615,693 | 7.0% |
| TOTAL | 1,117,270 | 3,863,716 | 1,638,156 | 832,519 | 1,386,978 | 8,838,639 | 100.0% |
| | 12.6% | 43.7% | 18.5% | 9.4% | 15.7% | | |

Annex 2.2: Expenditure by Program Areas (FY 14)

| FY 2013/14 Expenditure (USD) | Investment (Site level) | Recurrent (Site Level) | Program Management | Strategic Information | Health Systems Strengthening | TOTAL | % of total |
|---|-------------------------|------------------------|--------------------|-----------------------|------------------------------|------------------|------------|
| Facility-based Care, Treatment and Support | 175,950 | 1,022,395 | 367,438 | 217,571 | 282,691 | 2,066,045 | 25.7% |
| Community-based Care, Treatment and Support | 43,757 | 254,253 | 98,926 | 58,577 | 76,109 | 531,622 | 6.6% |
| PMTCT | 203,962 | 1,185,174 | 423,967 | 251,044 | 326,182 | 2,390,329 | 29.7% |
| Voluntary Medical Male Circumcision | 66,442 | 386,093 | 141,322 | 83,681 | 108,727 | 786,266 | 9.8% |

| FY 2013/14 Expenditure (USD) | Investment (Site level) | Recurrent (Site Level) | Program Management | Strategic Information | Health Systems Strengthening | TOTAL | % of total |
|---|-------------------------|---------------------------|---------------------------|-------------------------|------------------------------|------------------|------------|
| HIV Testing and Counselling | 38,430 | 223,313 | 84,793 | 50,209 | 65,236 | 461,982 | 5.7% |
| Post-Exposure Prophylaxis | 1,388 | 8,063 | 0 | 0 | 0 | 9,451 | 0.1% |
| Blood Safety | 0 | 0 | 0 | 0 | 0 | 0 | |
| Laboratory | 56,262 | 326,901 | 113,058 | 66,945 | 86,982 | 650,148 | 8.1% |
| Infection Control | 6,942 | 40,350 | 14,132 | 8,368 | 10,873 | 80,665 | 1.0% |
| Orphans and Vulnerable Children | 0 | 0 | 0 | 0 | 0 | 0 | |
| General Population - Prevention | 19,450 | 113,000 | 42,397 | 25,104 | 32,618 | 232,569 | 2.9% |
| Key Populations-PWID | 0 | 0 | 0 | 0 | 0 | 0 | |
| Key Populations-FSW | 24,307 | 141,246 | 56,529 | 33,473 | 43,491 | 299,045 | 3.7% |
| Key Populations-MSMTG | 23,629 | 137,305 | 0 | 0 | 0 | 160,934 | 2.0% |
| Other Vulnerable Populations-Prevention | 31,025 | 180,265 | 70,661 | 41,841 | 54,364 | 378,155 | 4.7% |
| Medically-Assisted Therapy | 0 | 0 | 0 | 0 | 0 | 0 | |
| TOTAL | 691,544 8.6% | 4,018,358 49.9% | 1,413,224 17.6% | 836,813 10.4% | 1,087,272 13.5% | 8,047,211 | 100.0% |

Annex 2.3: Summary of Unit Expenditure (FY 13)

| Program Area | Expenditure for Output | FY 13 Outputs | Output category | Unit Expenditure (US \$) | Comparison (US \$) | Unit Cost | Source | Adjustments |
|-----------------------|------------------------|---------------|--|--------------------------|--------------------|---|---|---|
| FBTCS CBCTS LAB | 4,159,044 | 29,631 | Number of adults and children with advanced HIV infection receiving ART [CURRENT] | 140.36 | 198.45 | \$441 as Cost per person on Treatment \$497 as cost per person on treatment \$124 cost per person pre-ART | PEPFAR Uganda HIV Investment Case Uganda HIV Investment Case | Reduce unit cost by 55% to remove cost of ARVs, drugs for OIs and TB |
| PMTCT | 1,781,684 | 9,421 | Number of pregnant women who received ARVs to reduce risk of mother-to-child-transmission | 189.12 | \$75 - \$122 | \$291.50 Cost per woman receiving HAART | Tanzania (2010): Robberstad et al. | Subtract \$168.64 for Drugs; and possibly \$47 for personnel |
| VMMC | 1,317,233 | 80,827 | Number of males circumcised as part of the minimum package of MC for HIV prevention services | 16.30 | \$19.5 - \$30.55 | \$8.46 - \$18.20 (Kit) \$ 30.55 (PrePex) \$22.65 (Surgical) \$19.50 - \$22.23 (Surgical) | Uganda (2012): Kuznik et al. Uganda (2013): Duffy et al. Uganda (2013): Duffy et al. Uganda (2010): Wabiwire-Mangen et al. | |
| HTC | 263,447 | 469,082 | Number of individuals tested | 0.56 | \$1.15 | \$5 Cost per person tested (home based); \$6.4 cost per person at health facility | Uganda (2013): Mulogo et al | Subtract \$1.17 personnel, \$2.53 supplies, \$0.85 training, \$0.7 infrastructure |
| SORP-CSW | 174,646 | 19,450 | Number of MARPS reached with individual and or small group level HIV preventive interventions | 8.98 | \$9.48 - \$17.40 | \$9.48 cost per sex worker; | Uganda HIV Investment Case (2014) | |
| SORP-KP Other | 615,693 | 116,328 | Number of the targeted population reached with individual and/or small group level HIV prevention intervention | 5.29 | \$15 - \$17.4 | \$15 Cost per trucker reached, \$17.4 Cost per fisher folk reached | Uganda HIV Investment Case (2014) | |

Annex 2.4: Summary of Unit Expenditure (FY 14)

| Program Area | Expenditure for Output | FY 14 Outputs | Output category | Unit Expenditure (US \$) | Comparison (US \$) | Unit Cost | Source | Adjustments |
|-----------------------|------------------------|---------------|---|--------------------------|--------------------|---|---|---|
| FBTCS CBCTS LAB | 3,247,815 | 45,791 | Number of adults and children with advanced HIV infection receiving ART [CURRENT] | 70.93 | 198.45 | \$441 as Cost per person on Treatment \$497 as cost per person on treatment \$124 cost per person pre-ART | PEPFAR Uganda HIV Investment Case Uganda HIV Investment Case | Reduce unit cost by 55% to remove cost of ARVs, drugs for OIs and TB |
| PMTCT | 2,390,329 | 8,554 | Number of pregnant women who received ARVs to reduce risk of mother-to-child-transmission | 279.44 | \$75 - \$122 | \$291.50 Cost per woman receiving HAART | Tanzania (2010): Robberstad et al. | Subtract \$168.64 for Drugs; and possibly \$47 for personnel |
| VMMC | 786,266 | 112,130 | Number of males circumcised as part of the minimum package of MC for HIV prevention services | 7.01 | \$19.5 - \$30.55 | \$8.46 - \$18.20 (Kit) \$ 30.55 (PrePex) \$22.65 (Surgical) \$19.50 - \$22.23 (Surgical) | Uganda (2012): Kuznik et al. Uganda (2013): Duffy et al. Uganda (2013): Duffy et al. Uganda (2010): Wabiwire-Mangen et al. | |
| HTC | 461,982 | 594,498 | Number of individuals tested | 0.78 | \$1.15 | \$5 Cost per person tested (home based); \$6.4 cost per person at health facility | Uganda (2013): Mulogo et al | Subtract \$1.17 personnel, \$2.53 supplies, \$0.85 training, \$0.7 infrastructure |
| KP-FSW KP-MSMTG | 459,979 | 26,948 | Number of MARPS reached with individual and or small group level HIV preventive | 17.07 | \$9.48 - \$17.40 | \$9.48 cost per sex worker; | Uganda HIV Investment Case (2014) | |
| OVP-PREV | 378,155 | 158,397 | Number of the targeted population reached with individual and/or small group level HIV prevention | 2.39 | \$15 - \$17.4 | \$15 Cost per trucker reached, \$17.4 Cost per fisher folk reached | Uganda HIV Investment Case (2014) | |

Annexes: Detailed Tables – STAR E

Annex 3.1: Expenditure by Program Areas (FY 13)

| FY 2012/13 Expenditure (USD) | Investment (Site level) | Recurrent (Site Level) | Program Management | Strategic Information | Health Systems Strengthening | TOTAL | % of total |
|---|-------------------------|------------------------|--------------------|-----------------------|------------------------------|------------------|------------|
| Facility-based Care, Treatment and Support | 173,689 | 614,136 | 262,105 | 133,203 | 221,916 | 1,405,049 | 15.9% |
| Community-based Care, Treatment and Support | 151,978 | 537,368 | 229,342 | 116,553 | 194,177 | 1,229,417 | 13.9% |
| PMTCT | 217,111 | 793,042 | 327,631 | 166,504 | 277,396 | 1,781,684 | 20.2% |
| Voluntary Medical Male Circumcision | 162,833 | 575,752 | 245,723 | 124,878 | 208,047 | 1,317,233 | 14.9% |
| HIV Testing and Counselling | 32,567 | 115,150 | 49,145 | 24,976 | 41,609 | 263,447 | 3.0% |
| Post-Exposure Prophylaxis | 0 | 0 | 0 | 0 | 0 | 0 | |
| Blood Safety | 0 | 0 | 0 | 0 | 0 | 0 | |
| Laboratory | 216,258 | 652,518 | 278,486 | 141,528 | 235,786 | 1,524,577 | 17.2% |
| Infection Control | 32,567 | 115,150 | 49,145 | 24,976 | 41,609 | 263,447 | 3.0% |
| Orphans and Vulnerable Children | 0 | 0 | 0 | 0 | 0 | 0 | |
| SORP-General Population | 32,567 | 115,150 | 49,145 | 24,976 | 41,609 | 263,447 | 3.0% |
| SORP-Injectable Drug Users | 0 | 0 | 0 | 0 | 0 | 0 | |
| SORP-Commercial Sex Workers | 21,494 | 75,999 | 32,763 | 16,650 | 27,740 | 174,646 | 2.0% |
| SORP-Men who have Sex with Men | 0 | 0 | 0 | 0 | 0 | 0 | |
| SORP-Key Population Other | 76,206 | 269,451 | 114,671 | 58,276 | 97,088 | 615,693 | 7.0% |
| TOTAL | 1,117,270 | 3,863,716 | 1,638,156 | 832,519 | 1,386,978 | 8,838,639 | 100.0% |
| | 12.6% | 43.7% | 18.5% | 9.4% | 15.7% | | |

Annex 3.2: Expenditure by Program Areas (FY 14)

| FY 2013/14 Expenditure (USD) | Investment (Site level) | Recurrent (Site Level) | Program Management | Strategic Information | Health Systems Strengthening | TOTAL | % of total |
|---|-------------------------|------------------------|--------------------|-----------------------|------------------------------|------------------|------------|
| Facility-based Care, Treatment and Support | 175,950 | 1,022,395 | 367,438 | 217,571 | 282,691 | 2,066,045 | 25.7% |
| Community-based Care, Treatment and Support | 43,757 | 254,253 | 98,926 | 58,577 | 76,109 | 531,622 | 6.6% |
| PMTCT | 203,962 | 1,185,174 | 423,967 | 251,044 | 326,182 | 2,390,329 | 29.7% |
| Voluntary Medical Male Circumcision | 66,442 | 386,093 | 141,322 | 83,681 | 108,727 | 786,266 | 9.8% |
| HIV Testing and Counselling | 38,430 | 223,313 | 84,793 | 50,209 | 65,236 | 461,982 | 5.7% |
| Post-Exposure Prophylaxis | 1,388 | 8,063 | 0 | 0 | 0 | 9,451 | 0.1% |
| Blood Safety | 0 | 0 | 0 | 0 | 0 | 0 | |

| FY 2013/14 Expenditure (USD) | Investment (Site level) | Recurrent (Site Level) | Program Management | Strategic Information | Health Systems Strengthening | TOTAL | % of total |
|---|-------------------------|---------------------------|---------------------------|-------------------------|------------------------------|------------------|------------|
| Laboratory | 56,262 | 326,901 | 113,058 | 66,945 | 86,982 | 650,148 | 8.1% |
| Infection Control | 6,942 | 40,350 | 14,132 | 8,368 | 10,873 | 80,665 | 1.0% |
| Orphans and Vulnerable Children | 0 | 0 | 0 | 0 | 0 | 0 | |
| General Population - Prevention | 19,450 | 113,000 | 42,397 | 25,104 | 32,618 | 232,569 | 2.9% |
| Key Populations-PWID | 0 | 0 | 0 | 0 | 0 | 0 | |
| Key Populations-FSW | 24,307 | 141,246 | 56,529 | 33,473 | 43,491 | 299,045 | 3.7% |
| Key Populations-MSMTG | 23,629 | 137,305 | 0 | 0 | 0 | 160,934 | 2.0% |
| Other Vulnerable Populations-Prevention | 31,025 | 180,265 | 70,661 | 41,841 | 54,364 | 378,155 | 4.7% |
| Medically-Assisted Therapy | 0 | 0 | 0 | 0 | 0 | 0 | |
| TOTAL | 691,544 8.6% | 4,018,358 49.9% | 1,413,224 17.6% | 836,813 10.4% | 1,087,272 13.5% | 8,047,211 | 100.0% |

Annex 3.3: Summary of Unit Expenditure (FY 13)

| Program Area | Expenditure for Output | FY 13 Outputs | Output category | Unit Expenditure (US \$) | Comparison (US \$) | Unit Cost | Source | Adjustments |
|-----------------------|------------------------|---------------|--|--------------------------|--------------------|---|---|---|
| FBTCS CBCTS LAB | 4,159,044 | 29,631 | Number of adults and children with advanced HIV infection receiving ART [CURRENT] | 140.36 | 198.45 | \$441 as Cost per person on Treatment \$497 as cost per person on treatment \$124 cost per person pre-ART | PEPFAR Uganda HIV Investment Case Uganda HIV Investment Case | Reduce unit cost by 55% to remove cost of ARVs, drugs for OIs and TB |
| PMTCT | 1,781,684 | 9,421 | Number of pregnant women who received ARVs to reduce risk of mother-to-child-transmission | 189.12 | \$75 - \$122 | \$291.50 Cost per woman receiving HAART | Tanzania (2010): Robberstad et al. | Subtract \$168.64 for Drugs; and possibly \$47 for personnel |
| VMMC | 1,317,233 | 80,827 | Number of males circumcised as part of the minimum package of MC for HIV prevention services | 16.30 | \$19.5 - \$30.55 | \$8.46 - \$18.20 (Kit) \$ 30.55 (PrePex) \$22.65 (Surgical) \$19.50 - \$22.23 (Surgical) | Uganda (2012): Kuznik et al. Uganda (2013): Duffy et al. Uganda (2013): Duffy et al. Uganda (2010): Wabiwire-Mangen et al. | |
| HTC | 263,447 | 469,082 | Number of individuals tested | 0.56 | \$1.15 | \$5 Cost per person tested (home based); \$6.4 cost per person at health facility | Uganda (2013): Mulogo et al | Subtract \$1.17 personnel, \$2.53 supplies, \$0.85 training, \$0.7 infrastructure |
| SORP-CSW | 174,646 | 19,450 | Number of MARPS reached with individual and or small group level HIV preventive interventions | 8.98 | \$9.48 - \$17.40 | \$9.48 cost per sex worker; | Uganda HIV Investment Case (2014) | |
| SORP-KP Other | 615,693 | 116,328 | Number of the targeted population reached with individual and/or small group level HIV prevention intervention | 5.29 | \$15 - \$17.4 | \$15 Cost per trucker reached, \$17.4 Cost per fisher folk reached | Uganda HIV Investment Case (2014) | |

Annex 3.4: Summary of Unit Expenditure (FY 14)

| Program Area | Expenditure for Output | FY 14 Outputs | Output category | Unit Expenditure (US \$) | Comparison (US \$) | Unit Cost | Source | Adjustments |
|-----------------------|------------------------|---------------|---|--------------------------|--------------------|---|---|---|
| FBTCS CBCTS LAB | 3,247,815 | 45,791 | Number of adults and children with advanced HIV infection receiving ART [CURRENT] | 70.93 | 198.45 | \$441 as Cost per person on Treatment \$497 as cost per person on treatment \$124 cost per person pre-ART | PEPFAR Uganda HIV Investment Case Uganda HIV Investment Case | Reduce unit cost by 55% to remove cost of ARVs, drugs for OIs and TB |
| PMTCT | 2,390,329 | 8,554 | Number of pregnant women who received ARVs to reduce risk of mother-to-child-transmission | 279.44 | \$75 - \$122 | \$291.50 Cost per woman receiving HAART | Tanzania (2010): Robberstad et al. | Subtract \$168.64 for Drugs; and possibly \$47 for personnel |
| VMMC | 786,266 | 112,130 | Number of males circumcised as part of the minimum package of MC for HIV prevention services | 7.01 | \$19.5 - \$30.55 | \$8.46 - \$18.20 (Kit) \$ 30.55 (PrePex) \$22.65 (Surgical) \$19.50 - \$22.23 (Surgical) | Uganda (2012): Kuznik et al. Uganda (2013): Duffy et al. Uganda (2013): Duffy et al. Uganda (2010): Wabiwire-Mangen et al. | |
| HTC | 461,982 | 594,498 | Number of individuals tested | 0.78 | \$1.15 | \$5 Cost per person tested (home based); \$6.4 cost per person at health facility | Uganda (2013): Mulogo et al | Subtract \$1.17 personnel, \$2.53 supplies, \$0.85 training, \$0.7 infrastructure |
| KP-FSW KP-MSMTG | 459,979 | 26,948 | Number of MARPS reached with individual and or small group level HIV preventive | 17.07 | \$9.48 - \$17.40 | \$9.48 cost per sex worker; | Uganda HIV Investment Case (2014) | |
| OVP-PREV | 378,155 | 158,397 | Number of the targeted population reached with individual and/or small group level HIV prevention | 2.39 | \$15 - \$17.4 | \$15 Cost per trucker reached, \$17.4 Cost per fisher folk reached | Uganda HIV Investment Case (2014) | |

Annexes: Detailed Tables – STAR EC

Annex 4.1: Expenditure by Program Areas (FY 13)

| | Investment (Site level) | Recurrent (Site Level) | Program Management | Strategic Information | Health Systems Strengthening | TOTAL | % of total |
|------------------|-------------------------|------------------------|--------------------|-----------------------|------------------------------|------------------|------------|
| FBTCS | 253,461 | 626,749 | 395,576 | 99,159 | 35,976 | 1,410,921 | 17.0% |
| CBCTS | 0 | 0 | - | - | - | 0 | 0.0% |
| PMTCT | 321,223 | 531,363 | 346,129 | 86,764 | 31,479 | 1,316,958 | 15.8% |
| VMMC | 40,472 | 1,943,755 | 988,939 | 247,898 | 89,941 | 3,311,005 | 39.8% |
| HTC | 46,008 | 529,423 | 296,682 | 74,369 | 26,982 | 973,464 | 11.7% |
| PEP | 4,472 | 12,729 | 24,723 | 6,197 | 2,249 | 50,370 | 0.6% |
| BS | 0 | 0 | - | - | - | 0 | 0.0% |
| LAB | 139,212 | 128,041 | 123,617 | 30,987 | 11,243 | 433,100 | 5.2% |
| IC | 0 | 0 | - | - | - | 0 | 0.0% |
| OVC | 0 | 0 | - | - | - | 0 | 0.0% |
| SORP-GP | 0 | 323,725 | 123,617 | 30,987 | 11,243 | 489,572 | 5.9% |
| SORP-IDU | 0 | 0 | - | - | - | 0 | 0.0% |
| SORP-CSW | 0 | 6,341 | 24,723 | 6,197 | 2,249 | 39,510 | 0.5% |
| SORP-MSM | 0 | 0 | - | - | - | 0 | 0.0% |
| SORP-KP Other | 0 | 86,443 | 49,447 | 12,395 | 4,497 | 152,782 | 1.8% |
| SI | | | - | - | 8,994 | 8,994 | 0.1% |
| HSS | | | 98,894 | 24,790 | - | 123,684 | 1.5% |
| | 804,848 | 4,188,569 | 2,472,348 | 619,745 | 224,852 | 8,310,362 | 100.0% |
| | 9.7% | 50.4% | 29.8% | 7.5% | 2.7% | | |

Annex 4.2: Expenditure by Program Areas (FY 14)

| | Investment (Site level) | Recurrent (Site Level) | Program Management | Strategic Information | Health Systems Strengthening | TOTAL | % of total |
|----------|-------------------------|------------------------|--------------------|-----------------------|------------------------------|------------------|------------|
| FBTCS | 139,786 | 404,416 | 345,966 | 78,500 | 61,875 | 1,030,543 | 11.9% |
| CBCTS | 101,855 | 305,562 | 251,612 | 52,333 | - | 711,362 | 8.2% |
| PMTCT | 200,984 | 245,384 | 314,514 | 65,417 | 82,500 | 908,799 | 10.5% |
| VMMC | 71,976 | 1,727,967 | 1,100,800 | 228,959 | - | 3,129,702 | 36.2% |
| HTC | 52,368 | 602,228 | 377,417 | 91,584 | - | 1,123,597 | 13.0% |
| PEP | 0 | 0 | - | - | - | 0 | |
| BS | 0 | 0 | - | - | - | 0 | |
| LAB | 129,733 | 121,848 | 157,257 | 32,708 | - | 441,547 | 5.1% |
| IC | 0 | 0 | - | - | - | 0 | |
| OVC | 50,380 | 151,140 | 125,806 | 26,167 | 37,125 | 390,617 | 4.5% |
| GP-PREV | 0 | 210,972 | 157,257 | 32,708 | - | 400,938 | 4.6% |
| KP-PWID | 0 | 0 | - | - | - | 0 | |
| KP-FSW | 0 | 6,379 | 31,451 | 6,542 | - | 44,372 | 0.5% |
| KP-MSMTG | 0 | 0 | - | - | - | 0 | |
| OVP-PREV | 0 | 118,464 | 94,354 | 19,625 | - | 232,443 | 2.7% |
| MAT | 0 | 0 | - | - | - | 0 | |
| SI | | | 94,354 | - | 24,750 | 119,104 | 1.4% |
| HSS | | | 94,354 | 19,625 | - | 113,979 | 1.3% |
| | 747,082 | 3,894,360 | 3,145,144 | 654,168 | 206,250 | 8,647,004 | 100.0% |
| | 8.6% | 45.0% | 36.4% | 7.6% | 2.4% | | |

Annex 4.3: Summary of Unit Expenditure (FY 13)

| | Expenditure (US \$) | Expenditure for Output | FY 13 Outputs | Output category | Unit Expenditure (US \$) |
|---------------------------|---------------------|------------------------|---------------|---|--------------------------|
| FBTCS CBCTS LAB | 1,410,921 | 1,844,021 | 20,577 | Adults and children with HIV infection receiving ART (Current) | 89.62 |
| PMTCT | 1,316,958 | 1,316,958 | 4,341 | Pregnant women who received ARVs to reduce risk of MTCT (new clients) | 303.38 |
| VMMC | 3,311,005 | 3,311,005 | 133,122 | Males circumcised as part of VMMC | 24.87 |
| HTC | 973,464 | 973,464 | 817,011 | Individuals who received HTC & their results (including pregnant women and PNC, PMTCT partner testing and VMMC) | 1.19 |
| SORP-GP | 489,572 | 489,572 | 316,003 | Targeted population reached with sexual prevention messages (general popn + MARPs) | 1.55 |
| SORP-CSW SORP-KP Other | 39,510 152,782 | 192,292 | 70,473 | MARPs reached with individual or small group HIV prevention based on evidence | 2.73 |

Annex 4.4: Summary of Unit Expenditure (FY 14)

| | Expenditure (US \$) | Expenditure for Output | FY 14 Outputs | Output category | Unit Expenditure (US \$) |
|-----------------------|---------------------|------------------------|---------------|---|--------------------------|
| FBTCS CBCTS LAB | 1,030,543 | 2,183,452 | 25,937 | Adults and children with HIV infection receiving ART (Current) | 84.18 |
| PMTCT | 908,799 | 908,799 | 2,031 | Pregnant women who received ARVs to reduce risk of MTCT (new clients) | 447.46 |
| VMMC | 3,129,702 | 3,129,702 | 86,578 | Males circumcised as part of VMMC | 36.15 |
| HCT | 1,123,597 | 1,123,597 | 660,757 | Individuals who received HTC & their results (including pregnant women and PNC, PMTCT partner testing and VMMC) | 1.70 |
| OVC | 390,617 | 390,617 | | | |
| GP-PREV | 400,938 | 400,938 | 274,200 | Targeted population reached with sexual prevention messages (general popn + MARPs) | 1.46 |
| KP-FSW OVP-PREV | 44,372 232,443 | 276,815 | 100,821 | MARPs reached with individual or small group HIV prevention based on evidence | 2.75 |

Annex 5: Summary of Literature accessed on Unit Costs of Interventions

Table: ART in Uganda

| Authors | Year | Unit of Measurement | Unit Cost- 2011 USD | Items included | Cost break down |
|-------------------|------|---|---------------------|--|--|
| Jaffar et al. | 2009 | Cost per person treated with first line HAART | \$912.41 | Personnel, Drugs; Laboratory and clinical expenses, transport, sensitization, training, teambuilding, and workshops, utilities overheads, Capital costs (buildings, furniture, vehicles, equipment, and inventory) | Personnel Cost(\$265.8) Drugs/Supplies Cost(\$456.86) Lab cost (\$44.91) |
| Jaffar et al. | 2009 | Cost per person reached with facility HBC | \$863.41 | Personnel, Drugs; Laboratory and clinical expenses, transport, sensitization, training, teambuilding, and workshops, utilities overheads, Capital costs (buildings, furniture, vehicles, equipment, and inventory) | Personnel Cost(\$199.65) Drugs/Supplies Cost(\$457.25) Lab cost(\$44.95) |
| Kipp et al. | 2011 | Cost per person treated with ART | \$100 | Drugs. | Not available |
| Menzies et al. | 2011 | Cost per person treated with first or second line HAART | \$990.40 | Personnel, antiretroviral drugs, other drugs, laboratory supplies, other supplies, building, utilities, travel, and contracted services ; investments, including renovation/ construction, equipment, training, and antiretroviral buffer stock., laboratory services, training and supervision, supply chain management, M&E and HMIS (and general administration/operations. | Not available |
| Marseille et al. | 2009 | Cost per person treated with first or second line HAART | \$860.09 | Personnel, ARV drugs, "other recurrent goods", "recurrent services", equipment, buildings, overhead and administration. See further unit cost detail for more information. | Not available |
| Babigumira et al. | 2009 | Cost of follow up per patient | \$10.5-\$59.8 | Personnel, cost of patients' time spent, transport and health worker costs, opportunity cost of patient time. Cost variation depends on study perspective and type of personnel used to do the follow up. | Only break down presented is personnel cost Personnel (\$0.22-\$2.51) |

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Kipp W, Konde-Lule J, Ruballe T, Okech-Ojony J, Alibhai A, Saunders DL. Comparing antiretroviral treatment outcomes between a prospective community-based and hospital-based cohort of HIV patients in rural Uganda. *BMC International Health and Human Rights*. 2011; 11(Suppl 2): S12.

Menzies NA, Berruti AA, Berzon R, Filler S, Ferris R, Ellerbrock TV, Blandford JM The cost of providing comprehensive HIV treatment in PEPFAR-supported programs *AIDS*. 2011; 25: 1753-1760.

Marseille E, Kahn JG, et al. The cost-effectiveness of home-based provision of antiretroviral therapy in rural Uganda. *Applied Health Economic Policy*. 2009; 7(4): 229-243.

Table: PMTCT costs from comparable countries

| Authors | Year | Country | Unit of Measurement | Unit Cost-2011 USD | Items included | Cost breakdown |
|-------------------|------|----------|--|--------------------|---|---|
| John et al. | 2008 | Kenya | Cost per pregnant woman receiving HCT services | 6.89 | Pretest counselling, laboratory technician time, laboratory supplies and post-test counselling. Personnel: nurse counsellors, lab technician. Lab: test kits, vials, needles. Other recurrent costs such as rentals, utilities and whole group education are excluded | Not available |
| John et al. | 2008 | Kenya | Cost per couple receiving HCT services | 7.03 | Pretest counselling, laboratory technician time, laboratory supplies and post-test counselling. Personnel: nurse counsellors, lab technician. Lab: test kits, vials, needles. Other recurrent costs such as rentals, utilities and whole group education are excluded | Not available |
| Robberstad et al. | 2010 | Tanzania | Cost per mother who received HAART | \$291.50 | Personnel; recurrent (drugs and laboratory, supplies); other recurrent (vehicle operation and maintenance, building operation and maintenance, consultancies); capital (buildings, equipment, vehicles, consultancies- non recurrent). Administrative costs are not included. | Personnel- \$95.66 Drugs and supplies-168.64 Laboratory- \$12.9 |

References

John FN, Farquhar C, Kiarie JN, Kabura MN, John-Stewart GC. Cost-effectiveness of couple-counselling to enhance infant HIV-1 prevention. *International Journal of STD and AIDS*. 2008; 19(6); 406-409

Robberstad B, Evjen-Olsen B Preparing mother-child transmission of HIV with highly active antiretroviral treatment in Tanzania- a prospective cost-effectiveness study. *J Acquir Immune Def Syndr*. 2010; 55(3): 397-403

Table X: VMMC Costs in Uganda

| Authors | Year | Unit of Measurement | Unit Cost-USD | Items included | Cost break down |
|------------------------|------|--------------------------------------|--------------------------|---|---|
| Gray et al. | 2007 | Cost per male circumcision | \$71.94 | | Not available |
| Kuznik et al. | 2012 | Cost per re-usable circumcision kit | \$18.20 | Personnel and rent are included, but only for what is needed to sterilize re-usable circumcision instruments. | Not available |
| Kuznik et al. | 2012 | Cost per disposable circumcision kit | \$8.46 | Personnel and rent are included, but only for what is needed. | Not available |
| Wabiwire-Mangen et al. | 2010 | Cost per male circumcision | 19.52-\$22.23 | Drugs/supplies, training costs, maintenance and utility costs, support personnel costs, and management and supervision costs. | Personnel\$5.05\$6.62 Supplies\$9.16\$9.45 Laboratory\$0\$0 Other recurrent\$4.96 \$5.73 Capital goods\$0.34 \$0.42 |
| Duffy et al. | 2013 | Cost per person using prepax | \$30.55 | Personnel, equipment, consumables and overheads/Shared costs | Personnel-\$5.79 Supplies-\$24.76 |
| Duffy et al. | 2013 | Cost per person using surgical | \$22.65 | Personnel, equipment, consumables and overheads/Shared costs | Personnel-\$9.8 Supplies-\$12.86 |
| Njeuhmeli et al. | 2011 | Cost per male circumcision | \$65.85 (\$52.68 -79.02) | Consumables/supplies, waste management, supply chain, staff costs, training costs. Indirect costs capital costs, maintenance and utility costs, | Supplies-\$28.67 |

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Njeuhmeli E, Forsythe S, Reed J, Opuni M, Bollinger L, Heard N, Castor D, Stover J, Farley T, Menon V, Hankins C. Voluntary medical male circumcision: modeling the impact and cost of expanding male circumcision for HIV prevention in eastern and southern Africa.

Kuznik A, Lamorde M, Sekavuga DB, Picho B, Coutinho A Medical male circumcision for HIV/AIDS prevention in Uganda- the cost of disposable vs. reusable circumcision kits. *Tropical Doctor*. 2012; 42: 5-7.

Wabiwire-Mangen, Mbona Tumwesigye N, Ssengooba F, Bagenda D, Opio A, Nalwadda C Assessing potential impact, costs of scaling-up medical male circumcision services in Uganda.

Table X: HCT in Uganda

| Authors | Year | Unit of Measurement | Unit Cost-2011 USD | Items included | Cost breakdown |
|-----------------|------|--|--------------------|---|----------------|
| Menzies et al. | 2009 | Cost per person receiving HCT services | \$8.64-\$20.08 | | Not available |
| Muhamadi et al. | 2009 | Cost per person receiving HCT services | \$0.62 | Only staff training is included in the cost | Not available |

| | | | | | |
|-------------------|------|---|--------|--|-------------------------------------|
| Tumwesigye et al. | 2012 | Cost per person reached with bundled services | \$7.52 | | Not available |
| Mulogo et al. | 2013 | Cost per client tested at the facility | \$6.40 | Personnel costs, buildings, furniture and training, sundries, test kits, transport costs | Personnel-\$1.08 Supplies-\$2.59 |
| Mulogo et al. | 2013 | Cost per client tested for home-based VCT | \$5.00 | Personnel costs, buildings, furniture and training, sundries, test kits, transport costs | Personnel-\$1.17 Supplies-\$2.53 |

References

- Menzies N, Abang B, Wanyenze R, Nuwaha F, Mugisha B, Coutinho A, Bunnelli R, Mermin J, Blandford J. The costs and effectiveness of four HIV and testing strategies in Uganda. *AIDS*. 2009; 23: 395-401.
- Muhamadi L, Tumwesigye NM, Kadobera D, Marrone G, Wabwire-Mangen F, Pariyo G, Peterson S, Ekstrom AM. A single-blind randomized controlled trial to evaluate the effect of extended counseling on uptake of pre-antiretroviral care in Eastern Uganda. *Trials*. 2011 Jul 27;12:184. doi: 10.1186/1745-6215-12-184.
- Mulogo EM, Batwala V, Nuwaha F, Aden AS, Baine OS. Cost effectiveness of facility and home based HIV voluntary counseling and testing strategies in rural Uganda. *Afri Health Sci* 2013 (2):423-9
- Tumwesigye E, Wana G, Kasasa S, Muganzi E, Nuwaha F. High uptake of home-based, district-wide, HIV counseling and testing in Uganda. *AIDS Patient Care and STDs*. 2012; 24(11): 735-741

ANNEX H. KEY TABLES

Table 1 Sampling Frame for STAR Districts

| STAR SOUTH-WEST | | STAR EAST-CENTRAL | | STAR EAST | |
|--------------------------|--------------------------|--------------------------|-------------------------|--------------------------|--------------------------|
| Old Districts | New Districts | Old Districts | New Districts | Old Districts | New Districts |
| Bushenyi | Buhweju | Iganga | Luuka | Kapchorwa | Bukwo |
| Kabale | Ibanda | Bugiri | Namayingo | Mbale | Kween |
| Kanungu | Isingiro | Kamuli | Buyende | Pallisa | Bulambuli |
| Kisoro | Kiruhura | Kaliro | Namutumba | Busia | Kibuku |
| Ntungamo | Mitooma | Mayuge | | Sironko | Budaka |
| Rukungiri | Sheema | | | | Bududa |
| | Rubirizi | | | | Butaleja |
| 33% sample (2 districts) | 33% sample (2 districts) | 33% sample (2 districts) | 50% sample (2 district) | 33% sample (2 districts) | 33% sample (2 districts) |

Table 2 List of Sample Districts for the STAR Evaluation

| STAR SOUTH-WEST | | STAR EAST-CENTRAL | | STAR EAST | |
|-----------------|---------------|-------------------|---------------|---------------|---------------|
| Old Districts | New Districts | Old Districts | New Districts | Old Districts | New Districts |
| Bushenyi | Buhweju | Iganga | Luuka | Mbale | Kibuku |
| Ntungamo | Mitooma | Kamuli | Namayingo | Kapchorwa | Bulambuli |

Table 3 Summary of Number of KIIs and FGDS

| Method | Category of Informant | Central Level | STAR-E | STAR-SW | STAR-EC | Total |
|---|---|---------------|--------|---------|---------|-------|
| KIIs | Central Govt. | 12 | NA | NA | NA | 12 |
| | USAID | 8 | NA | NA | NA | 8 |
| | ADPs | 1 | NA | NA | NA | 2 |
| | IPs | 3 | 1 | 1 | 1 | 3 |
| | CAO | | 3 | 4 | 3 | 10 |
| | District DHT Staff | | 3 | 5 | 6 | 14 |
| KIIs - Health In-Charge and Staff (# of Districts /Hard to Reach) | HCIIV Groups | | 12 | 6 | 10 | 28 |
| | HCIH Groups | | 12 | 6 | 10 | 28 |
| | Hospitals | | 1 | | | 1 |
| | District planner, CDO, other groups | | | | 6 | 6 |
| FGDs | - PLHA - Adult Male Groups | | | 2 | | 2 |
| | - PLHA - Adult Women Groups | | 15 | 6 | 6 | 27 |
| | - PLHA - Young Men Groups | | | | 3 | |
| | - PLHA - Young Women | | | | | 3 |
| | - Other Groups(CSOs, CSW,VHTs,MARPS ,VQIT) | 2 | 2 | 2 | 2 | 6 |

Table 4 Annual Expenditure by Project

| US \$ | FY09 | FY10 | FY11 | FY12 | FY13 | FY14 | TOTAL |
|---------|-----------|-----------|-----------|-----------|--------------|-----------|--------------------|
| STAR-E | | 7,268,918 | 6,578,800 | 7,291,409 | 6,737,277 | 8,211,381 | 36,087,785 |
| STAR-SW | | | 6,052,665 | 6,695,637 | 8,838,639 | 8,047,211 | 29,634,152 |
| STAR-EC | 1,289,882 | 4,960,701 | 8,135,570 | 6,424,473 | 8,310,362 | 8,647,004 | 37,767,992 |
| | | | | | Total | | 103,489,929 |

Table 5 Spending for FY13, Broken Down by Program Area

| | STAR-SW | STAR-E | STAR-EC | TOTAL | % of total |
|--|------------------|------------------|------------------|-------------------|-------------------|
| Facility-Based Care, Treatment, and Support | 1,405,049 | 801,785 | 1,410,921 | 3,617,756 | <i>15.1%</i> |
| Community-Based Care, Treatment, and Support | 1,229,417 | 451,661 | - | 1,681,078 | <i>7.0%</i> |
| PMTCT | 1,781,684 | 1,323,133 | 1,316,958 | 4,421,775 | <i>18.5%</i> |
| Voluntary Medical Male Circumcision | 1,317,233 | 1,540,659 | 3,311,005 | 6,168,897 | <i>25.8%</i> |
| HIV Testing and Counselling | 263,447 | 511,485 | 973,464 | 1,748,396 | <i>7.3%</i> |
| Post-exposure Prophylaxis | - | - | 50,370 | 50,370 | <i>0.2%</i> |
| Blood Safety | - | - | - | - | |
| Laboratory | 1,524,577 | 263,253 | 433,100 | 2,220,930 | <i>9.3%</i> |
| Infection Control | 263,447 | 267,587 | - | 531,033 | <i>2.2%</i> |
| Orphans and Vulnerable Children | - | - | - | - | |
| SORP-General Population | 263,447 | - | 489,572 | 753,019 | <i>3.2%</i> |
| Key Populations-PWID | - | - | - | - | |
| Key Populations-FSW | 174,646 | 40,122 | 39,510 | 254,278 | <i>1.1%</i> |
| Key Populations-MSMTG | - | - | - | - | |
| Other Vulnerable Populations-Prevention | 615,693 | 135,522 | 152,782 | 903,996 | <i>3.8%</i> |
| Medically-Assisted Therapy | | | | | |
| SI | | | 8,994 | 8,994 | <i>0.04%</i> |
| Surveillance | | | | | |
| HSS | | 1,402,071 | 123,684 | 1,525,754 | <i>6.4%</i> |
| TOTAL | 8,838,639 | 6,737,277 | 8,310,362 | 23,886,278 | |

Table 6 Spending for FY14 and 2 Years Combined, Broken Down by Program Area

| FY 14 | STAR-SW | STAR-E | STAR-EC | TOTAL | | 2 Years Combined | |
|--|------------------|------------------|------------------|-------------------|-------|-------------------------|--------|
| Facility-Based Care, Treatment, and Support | 2,066,045 | 1,357,224 | 1,030,543 | 4,453,812 | 17.9% | 8,071,568 | 16.5% |
| Community-Based Care, Treatment, and Support | 531,622 | 1,046,559 | 711,362 | 2,289,542 | 9.2% | 3,970,621 | 8.1% |
| PMTCT | 2,390,329 | 699,714 | 908,799 | 3,998,842 | 16.1% | 8,420,617 | 17.3% |
| Voluntary Medical Male Circumcision | 786,266 | 1,046,921 | 3,129,702 | 4,962,889 | 19.9% | 11,131,786 | 22.8% |
| HIV Testing and Counselling | 461,982 | 261,811 | 1,123,597 | 1,847,389 | 7.4% | 3,595,786 | 7.4% |
| Post-exposure Prophylaxis | 9,451 | - | - | 9,451 | 0.0% | 59,821 | 0.1% |
| Blood Safety | - | - | - | - | | - | |
| Laboratory | 650,148 | 378,456 | 441,547 | 1,470,150 | 5.9% | 3,691,080 | 7.6% |
| Infection Control | 80,665 | 104,906 | - | 185,571 | 0.7% | 716,605 | 1.5% |
| Orphans and Vulnerable Children | - | 158,134 | 390,617 | 548,751 | 2.2% | 548,751 | 1.1% |
| General Population – Prevention | 232,569 | 105,691 | 400,938 | 739,198 | 3.0% | 1,492,217 | 3.1% |
| Key Populations-PWID | - | - | - | - | | - | |
| Key Populations-FSW | 299,045 | 89,048 | 44,372 | 432,465 | 1.7% | 686,744 | 1.4% |
| Key Populations-MSMTG | 160,934 | - | - | 160,934 | 0.6% | 160,934 | 0.3% |
| Other Vulnerable Populations-Prevention | 378,155 | 845 | 232,443 | 611,444 | 2.5% | 1,515,440 | 3.1% |
| Medically-Assisted Therapy | - | - | - | - | | - | 0.00% |
| SI | | 1,303,023 | 119,104 | 1,422,127 | 5.7% | 1,431,121 | 2.9% |
| Surveillance | | 216,614 | 113,979 | 330,594 | 1.3% | 330,594 | 0.7% |
| HSS | | 1,442,434 | | 1,442,434 | 5.8% | 2,968,189 | 6.1% |
| TOTAL | 8,047,211 | 8,211,381 | 8,647,004 | 24,905,596 | | 48,791,874 | 100.0% |

Table 7 Breakdown of Expenditure for FY13 and FY14 (Combined) by Level of Spending

| Level of Spending | STAR-SW | STAR-E | STAR-EC | TOTAL | |
|------------------------------|-----------|-----------|-----------|-------------------|--------------|
| Investment (Site Level) | 1,808,814 | 2,069,053 | 1,551,930 | 5,429,797 | <i>11.1%</i> |
| Recurrent (Site Level) | 7,882,074 | 1,949,836 | 8,082,929 | 17,914,839 | <i>36.7%</i> |
| Program Management | 3,051,380 | 6,828,682 | 5,617,492 | 15,497,554 | <i>31.8%</i> |
| Strategic Information | 1,669,332 | 2,658,282 | 1,273,913 | 5,601,527 | <i>11.5%</i> |
| Health Systems Strengthening | 2,474,250 | 1,442,804 | 431,102 | 4,348,156 | <i>8.9%</i> |
| | | | | 48,791,874 | |

Table 8 Cost Drivers of Expenditures FY13 and FY14 (Combined) in All Three Projects

These expenditure categories are standard as required and reported in the PEPFAR expenditure analysis. See also <http://www.pepfar.gov/documents/organization/195700.pdf>. An effort has been made to explain some of the categories below.

| US \$ | FY13 | FY14 | TOTAL | % of total for 2 years |
|------------------------------|-----------|-----------|------------|------------------------|
| Personnel (at all levels) | 9,546,174 | 9,111,340 | 18,657,514 | <i>38.2%</i> |
| Program Management | 6,606,900 | 8,890,654 | 15,497,554 | <i>31.8%</i> |
| Other General/Administrative | 4,571,265 | 6,752,808 | 11,324,073 | <i>23.2%</i> |
| National Level | 3,940,874 | 4,545,220 | 8,486,094 | <i>17.4%</i> |
| Travel and Transport | 3,511,234 | 3,719,979 | 7,231,214 | <i>14.8%</i> |
| Above National | 2,056,802 | 3,619,391 | 5,676,194 | <i>11.6%</i> |
| Training (Site Level) | 3,021,047 | 1,868,978 | 4,890,025 | <i>10.0%</i> |
| Other Supplies (Site Level) | 2,243,895 | 2,499,509 | 4,743,404 | <i>9.7%</i> |
| Consultants | 158,229 | 329,434 | 487,663 | <i>1.0%</i> |

In the paragraph below the previous Table 7, the explanation does not suggest that 32% includes personnel. The explanation attempts to explain the inefficiencies of having a three-tier system of program management and how each tier would require its own resources.

SECTION A: PULL-OUT I DBTA/STAR EVALUATION: STAR- EAST

**USAID/UGANDA'S DISTRICT-BASED TECHNICAL ASSISTANCE
(DBTA) MODEL AS APPLIED UNDER STRENGTHENING
TUBERCULOSIS AND HIV/AIDS RESPONSES (STAR) PROJECT: STAR-
EAST**

20th April, 2015

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LIST OF ABBREVIATIONS AND ACRONYMS

| | |
|----------|--|
| AIDS | Acquired Immune Deficiency Syndrome |
| AIM | AIDS Integrated Model District Program |
| ANC | Antenatal Clinic |
| ARV | Anti-Retroviral drugs |
| ART | Anti-Retroviral Therapy |
| CAO | Chief Administrative Officer |
| CB-DOTS | Community Based Directly Observed Treatment Short Course |
| CDCS | Country Development Cooperation Strategy |
| CME | Continuing Medical Education |
| CSO | Civil Society Organization |
| CSW | Commercial Sex Worker |
| DBMs | District Based Mentors |
| DBTA | District Based Technical Assistance |
| DHO | District Health Office® |
| DHIS 2 | District Health Information Software (Version 2) |
| DHT | District Health Team |
| DO | Development Objective |
| EID | Early Infant HIV Diagnosis |
| E-MTCT | Elimination of Mother to Child Transmission of HIV |
| EPI | Expanded Program on Immunization |
| FBM | Facility Based Mentor |
| FGD | Focus Group Discussion |
| FSG | Family Support Group |
| GoU | Government of Uganda |
| HC | Health Centre |
| HIV/TB | Human Immunodeficiency Virus /Tuberculosis |
| HMIS | Health Management Information System |
| HRH | Human Resource for Health |
| HTC | HIV Testing and Counseling |
| IEC | Information, Education and Communication |
| IP | Implementing Partner |
| KII | Key Informant Interview |
| LQAS | Lot Quality Assurance Sampling |
| MCH | Maternal and Child Health |
| M&E | Monitoring and Evaluation |
| MoH | Ministry of Health |
| MOU | Memorandum of Understanding |
| MMS | Medicines Management Supervisor |
| MNCH | Maternal, Neonatal and Child Health |
| MSH | Management Science for Health |
| MTCT | Mother to Child Transmission of HIV |
| NAC | National Advisory Committee |
| NMS | National Medical Stores |
| NUMAT | Northern Uganda Malaria, AIDS & TB Program |
| OVC | Orphans and Other Vulnerable Children |
| PHA | People Having AIDS |
| PICT | Provider Initiated Counseling and Testing |
| PMP | Performance Monitoring Plan |
| PMTCT | Prevention of Mother to Child Transmission of HIV |
| PNFP | Private Not-For Profit Health Providers |
| QI | Quality Improvement |
| SDS | Strengthening Decentralization for Sustainability |
| SI | Strategic Information |
| STAR – E | Strengthening TB and HIV/AIDS Response – Eastern Uganda |
| TA | Technical Assistance |
| UGX | Uganda Shillings |
| UPHOLD | Uganda Program for Human and Holistic Development |
| USAID | United States Agency for International Development |
| VCT | Voluntary Counseling and Testing |
| VHT | Village Health Team |
| VMMC | Voluntary Medical Male Circumcision |

EXECUTIVE SUMMARY

Introduction and Context

The Strengthening Tuberculosis and HIV/AIDS Responses in Eastern Region (STAR-E) was awarded on March 9, 2009 with a mandate to support comprehensive TB/HIV services in 12 districts of Eastern Uganda and a national mandate to institutionalize and support the application of Lot Quality Assurance Sampling (LQAS) in all the districts of Uganda hosting USAID-funded implementing partners (IPs). Evaluation findings are drawn from four randomly selected (two old and two new districts) using Key Informant Interviews that were conducted at the district and health facility levels. Focus Group Discussions (FGDs) were also conducted with Family Support Groups; Civil Society Organizations (CSOs) and Commercial Sex Workers (CSWs). In addition, client Exit Interviews were conducted to complement the data obtained through the KIIs and the FGDs. Initial and wrap up meetings were also held with the STAR-E management team.

Evaluation Findings

- Improved Capacity and Sustainability:
 - The Most Successful Approaches utilized by the STAR-E Program included the Mentorship Program; Strengthening Demand and Supply linkages for HIV/TB services and Performance Based Contracting to 11 CSOs
 - There were double-edged approaches which on one hand helped to attain rapid results, but on the other hand weakened the management systems. These included: financial incentives to health workers for running HIV clinics, client follow up and integrated outreach services; and the client incentives of nutritional support to HIV clients which included provision of maize flour and shoes for HIV+ children and their mothers.
 - Approaches with Minimal Results were: District Health Team (DHT) leadership and Health System Strengthening; behavioral HIV prevention activities and Quality Improvement (QI) mechanisms.
- Effects of SDS transition on STAR-E Districts: Although the SDS grant was largely confined to the “old” districts, the synergies expected from the two funding mechanisms, to strengthen the decentralized health systems, were largely not realized because the mandates of SDS and STAR E were based on different premises. While SDS emphasized performance based financing for district led activities, STAR-E financed and took the lead in producing the expected program outputs within the specified project timeframe.
- Strengthening management and technical structures: Individuals like the District Biostatistician and district level clinical mentors were targeted for technical capacity development for Strategic Information and clinical services management respectively. However, very little was done to build leadership and management capacity of members of the district or health sub-district teams and the in-charges of the health facilities.
- Strategic information (SI) capacity development: There were substantial and effective efforts towards capacity development in the three Strategic Information technical areas: Monitoring and Evaluation (M&E), Health Management Information System (HMIS) and LQAS surveys.
- STAR-E Contribution to Improved Health Service Delivery: The STAR-E program was the major contributor to the strengthening of the catchment districts' health systems, and there is evidence of improved availability and utilization of Safe Male Circumcision, HTC; eMTCT, ART/TB; and laboratory services.

- **Logistics and Supplies Management Support:** Achievements in this regard included: Improving capacity of health workers in handling health commodities; use of Medicine Management Supervisors (MMS) and facilitating a “Regional approach” to ordering and follow up of deliveries by NMS, as well as Re-distribution of drugs and health supplies in the catchment districts.
- **Effect of Integration on Overall Health Outcomes:** From a programmatic perspective, the evaluation team understands that the overall health outcomes would be changes in health status at the population level, that would be attributable to the TB/HIV/Family Planning integration on the catchment population. These changes would include morbidity, mortality, and quality-of-life, among others. From that angle therefore, given the limitations of this evaluation exercise, it is not possible to determine the overall health outcomes of the TB/HIV/Family Planning integration on the catchment population.
- **Sustainability:** Using the qualitative “likelihood for sustainability” index, it was apparent that interventions that were focused on individual capacity and skills development have higher chances of sustainability than those that were targeted at health systems support for purposes of obtaining rapid results in a short timeframe.

Conclusions

- STAR-E has to a very large extent achieved the program objectives and Intermediate Results, as laid out in its program description, and most especially in increasing availability and accessibility to HIV/TB services.
- Capacity building for HIV/TB services, as well as Strategic Information, was largely at the individual service provider level; less at the institutional level, and least at the district health management level, with a fair chance for sustainability in the medium term
- STAR-E deployed successful program approaches like mentoring of service providers in HIV/TB service provision. At the same time, approaches like direct provision of monetary incentives to the service providers were also used to generate rapid service delivery outputs, while weakening the district health system
- The expected synergy from the STAR-E / DBTA and SDS arrangement did not register significant results. Apparently, the mandate of the two partners were based on different premises. SDS emphasized Performance Based Financing for district led activities, while STAR-E financed and took the lead in producing the expected program outputs. The end result did not provide the expected synergistic effect in strengthening the decentralized health system and hence raising concerns about the sustainability of such approaches.
- **Integration of Services:** While the DBTA/STAR programs supported and enhanced the introduction of all aspects of HIV/AIDS care into peripheral health services, STAR E did not document indicators on which to base an examination of an increase in over-all health outcomes in the Performance Management Plan.

It would therefore be reasonable to conclude that though the STAR-E program was successful in terms of meeting the requirements of its technical assistance contract, the program design, which was largely facility and service delivery output focused, with minimal health systems

strengthening, did not adequately address the needs of what would be regarded as a comprehensive District Based Technical Assistance (DBTA) program.

Lessons Learned

A number of lessons have been learnt from the STAR-E evaluation exercise;

- 1) Innovative approaches such as onsite training and mentorship significantly strengthened the capacity of local government health service delivery structures to improve access, availability, utilization, quality and coverage of HIV/TB services.
- 2) From a policy perspective, the functional support provided by STAR-E to a cluster of districts provides evidence that a “Regional” supportive supervisory and mentoring team can go a long way to improve the functionality of district health systems
- 3) The use of performance based financing for Civil Society Organizations (CSOs) is a practical approach to enhance the demand side of health services utilization.
- 4) Having more than one mechanism in a DBTA arrangement, without synchronizing their mode of approach, does not necessarily result into synergies for the betterment of the district health system. Hence the introduction of SDS did not necessarily generate the desired synergy to improve the functionality of the district health systems.

Recommendations

In order to use this evaluation exercise as a Learning and Adapting opportunity, the team is making the following recommendations;

- District Based Technical Assistance should be provided through ONE main mechanism that can holistically address the district health sector TA needs for effective institutional and health systems strengthening.
- In order to achieve the desired results from a DBTA program, the capacity of District Health Teams should be strengthened and supported to enhance the local government’s leadership roles and functionality of the district health systems.
- The value of LQAS as a Strategic Information tool for district management and evaluation purposes was well-established. There is need to work with the district Local Governments to progressively institutionalize support for the LQAS.
- The provision of monetary incentives to health service providers should be channeled through the relevant management structures of the district health system to enhance accountability and sustainability
- As part of the exit plan, STAR-E should allocate a vehicle to each district to facilitate their health sector supervisory function

EVALUATION PURPOSE AND EVALUATION QUESTIONS

Introduction

USAID is the largest international donor in Uganda's health sector. The Mission's health investment is guided by Development Objective 3 (DO3) of the Country Development Cooperation Strategy (CDCS) which is "Improved health and nutrition status in focus areas and population groups". The main strategy under this Development Objective is "mainstreaming of systems strengthening, including strengthening decentralized health services, with the district as the organizing unit for health service delivery investments in the priority regions of the country".

USAID/Uganda supported District Based HIV/TB programmes since 2001. Among the Mechanisms supported include the AIDS Integrated Model District (AIM) programme supported HIV/TB services which operated in 16 districts, The Uganda Program for Human and Holistic Development (UPHOLD) Programme which supported similar services in 28 districts, while the Northern Uganda Malaria AIDS & Tuberculosis (NUMAT) which supported HIV/TB services in the then nine conflict districts of Northern Uganda. Notably, all the mechanisms were focused on increasing access to, coverage and utilization of HIV/TB services through systems strengthening, quality improvement, strengthened networks and linkages between facilities and communities. In 2009, USAID Uganda supported three District Based Technical Assistance (DBTA) Programs in the Eastern (STAR-E), East Central (STAR-EC), and South Western (STAR-SW) regions of Uganda. These focused on the delivery of comprehensive and integrated services that which aimed at improving access, quality, and availability of integrated health services, as well as health financing and management in each of the, geographical regions. The evaluation findings, that are the subject of this report, are specific to the STAR-E project.

Evaluation Purpose

The purpose of the evaluation exercise was to establish the extent of efficiency and effectiveness of the USAID/Uganda's District Based Technical Assistance (DBTA) project model as applied across the three STAR projects in general and the STAR-E project in particular

Evaluation Questions

The evaluation was designed to provide answers to a number of questions pertaining to improved capacity and sustainability; service delivery; and cost efficiency of the STAR-E project. A key element of the evaluation was to compare what was in place before and after the STAR-E project, to understand changes that could be attributed to the program.

Improved Capacity and Sustainability

The STAR-E program was designed to strengthen decentralized service delivery systems for improved uptake of quality HIV/AIDS and TB services, including the institutionalization of evidence-based program management. Improved district capacity is defined/manifested as the district's ability to:

- ii. deliver quality health services that meet national and/or international standards
- iii. provide leadership, management, functional health management information systems (HMIS), human resources for health, supply chain management, financial management systems, strategic information, physical infrastructure including laboratories for the delivery of quality health services
- iv. CSOs' increased advocacy for efficient and effective service delivery within the health sector

Sustainability is important for the results achieved through these investments to continue making a difference into the future. The deliberate focus on working with the district local

governments as the key provider of health services was to ensure that structures, processes and resources are strengthened, functional and in place to continue providing services even after the end of USAID's support. The evaluation attempted to inform the USAID Uganda Mission on the likelihood that results of the DBTA program can be sustained after USAID support.

The evaluation strived to answer the following questions in this regard:

1. Approaches utilized by STAR-E to strengthen districts and local governments to deliver health services, have evolved over time. What are: a) the most successful and b) least successful approaches applied by STAR-E towards strengthening the institutional, management, and human capacity of CSOs and local governments to deliver health services? What are the facilitators and barriers of these approaches to achieving results? Are the approaches used and results achieved for old/established and relatively new/naive districts significantly different?
2. What was the effect of transition of direct implementation of district led health care management activities from the STAR-E project to district grants through SDS?
3. To what extent has STAR-E developed established and/or strengthened management and technical structures at the local government and health facility levels that will sustainably improve quality, availability and accessibility of HIV/AIDS and TB services?
4. What technical capacity in strategic information has STAR-E developed, built and/or strengthened? Where has this capacity been developed, built and or strengthened? How is it manifested/demonstrated? How sustainable is this capacity after the STAR's exit?

Service delivery

5. How has the support by STAR-E contributed to improved health service delivery, and what are the service delivery outcomes attributed to this DBTA program?
6. What was the effect of integration of HIV/TB, HIV/Family Planning, HIV/AIDS and health on overall health outcomes?

Cost Efficiency

Efficiency refers to the transformation of inputs into results. It is the extent to which the STAR-E program has converted its resources economically into results in order to achieve the maximum possible outputs, outcomes, and impacts with the minimum possible inputs. The primary question to be answered by the evaluation is: To what extent can the STAR-E project be considered cost efficient in strengthening capacity of districts and CSOs to improve health service delivery?

BACKGROUND

STAR-E Programme Description

Strengthening Tuberculosis and HIV/AIDS Responses in Eastern Region (STAR-E) project was awarded on March 9, 2009, to Management Sciences for Health (MSH) through Cooperative Agreement 617-A-00-09-00006-00 valued at \$63,701,157. Working closely with the Ministry of Health and through District Health Management Teams, District Councils, health facilities, and communities, the DBTA project goal was to increase access to, coverage of, and utilization of quality comprehensive HIV/AIDS and TB prevention, care, and treatment services within district health facilities and their respective communities. This was to be achieved through the following objectives;

- Strengthening decentralized HIV/AIDS and TB service delivery systems;

- Improving the quality and efficiency of HIV/AIDS and TB service delivery within health facilities;
- Strengthening networks and referrals systems to improve access to, coverage of, and use of HIV & TB services; and
- Increasing demand for comprehensive HIV & AIDS and TB prevention, care, and treatment services.

The Programme Intermediate Results were; IR1: Increased uptake of comprehensive HIV/TB services within Supported districts; IR2: Decentralized service delivery systems strengthened for improved uptake of quality HIV/TB services and LQAS; IR3: Quality HIV/TB services delivered in all supported health facilities and communities; IR4: Networks, linkages, and referral systems strengthened within / between health facilities and communities; IR5: Increased demand for comprehensive HIV/AIDS/TB prevention, care, and treatment services and IR6: was to strengthen the linkage of facility identified OVC to the appropriate community based services.

During the period of implementation, the STAR-E program had two mandates. One was to support comprehensive TB/HIV services in the 12 districts of Budaka, Bududa, Bukwo, Bulambuli, Busia, Butaleja, Kapchorwa, Kibuku, Kween, Mbale, Pallisa, and Sironko in Eastern Uganda, covering an estimated population of 2,786,444 (*preliminary 2014 Housing and Population Census Results*). The project was in addition given a national mandate to institutionalize and support the application of Lot Quality Assurance Sampling (LQAS) in all the districts of Uganda hosting USAID-funded implementing partners (IPs) working in areas of social services improvement. This evaluation was limited to the DBTA program covering the 12 districts of Eastern Uganda.

STAR – E DBTA Structure

To effectively respond to the Programme goal, objectives, and expected results, the STAR-E management structure has evolved over time, to ensure a comprehensive management structure. The structural evolution was largely influenced by the emerging needs from the districts and new demands from the client, USAID. The structure was organized into the following directorates;

- Directorate of Technical Programs
- Directorate of District Operations
- Directorate of Strategic Information Management
- Directorate of Finance and Management

In the first three years of the project, there was a Directorate of Health Systems Strengthening, which was then merged into the current four directorates as noted above. On the whole, STAR-E maintained a competent team of experts in terms of experience and confidence in project management, organizational development, clinical and public health practice.

District Engagement

At the beginning of the DBTA, a Baseline Survey was conducted in each of the initial eight districts to determine the gaps in HIV/TB services, and also act as the cornerstone for programming and work plan development. In this regard, a Memorandum of Understanding (MoU) was signed between STAR-E and the Chief Administrative Officer (CAO) of each of the target districts.

EVALUATION METHODS

Methodology

The evaluation methodology included reviewing relevant documents, conducting Key Informant Interviews (KIIs); Focus Group Discussions (FGDs), as well as Client Exit Interviews. These methods were supplemented by the relevant observations made by the evaluation Team. In addition, an analysis of secondary data such as programme data as reported on by STAR E, and LQAS data was also performed.

Documentation / Literature Review

The team carried out a comprehensive review of relevant documents, including but not limited to: Work plans, Performance Monitoring Plans (PMP) National HIV and AIDS strategic documents, Project design documents, STAR E Performance reviews and Reports, LQAS reports, Health assessment reports, Project Annual reports, Annual Health Sector Performance Reports etc.

Key Informant Interviews with Stakeholders

Key informant interviews were held with key stakeholders at district, STAR E headquarters and health facilities. The purpose of the interviews was to document the views, experiences and opinions of the district leaders, health managers, STAR E staff, and service providers, on the efficiency and effectiveness of the District Based Technical Assistance project model as implemented by STAR–E in Eastern Uganda.

Focus Group Discussions (FGDs)

Focus Group Discussions were conducted with Civil Society Organizations (CSOs), Organizations that received both technical and financial support from STAR-E project and currently implementing interventions in all the districts covered by the project, members of PLHA networks and family support groups and Commercial Sex Workers (CSWs) as representative of the Key Populations in the region. This group was located in a non-sampled district of Sironko.

The purpose of the Focus Group Discussions was to collect data on STAR–E CSO grantees' and beneficiaries' perception, experiences and needs. The FGDs provided a better understanding of the CSOs and beneficiaries' appraisal of the different service delivery approaches the STAR-E project supported for HIV/AIDS prevention, care and treatment, and TB services. The FGDs also covered stakeholders' assessment of the contribution of the STAR–E project in improving health service delivery and the integrated approach and the impact on intended health outcomes.

Each focus group discussion was composed of 6-12 people and the discussion was led by a team of two people, a moderator and a note-taker using a semi-structured interview guide. The note taker captured the discussions in writing and also took note of participants' nonverbal expressions, and the entire sessions were tape-recorded. The content of the group discussion was analyzed by reviewing the notes and listening to tape recordings. The content was transcribed according to key topics and themes. The moderator synthesized the group discussions by reviewing the notes from the note taker, identifying recurrent ideas and interpreting these ideas. The team has prepared a report for each discussion session.

Client Exit Interviews

Client exit interviews were also conducted with clients in sites where the KIIs and the (FGDs) were conducted. The purpose of the client exit interviews was to validate and triangulate the

KII and FGD findings with specific reference to the extent to which the support by the STAR-E program contributed to improved health service delivery in the program areas.

Sampling of Districts and Facilities

In this evaluation exercise, the 12 project districts of Eastern Uganda comprised the main sampling frame, with the district as the sampling unit. The districts were stratified into Old and New. This is based on the assumption that the newly established districts face a number of health system challenges compared to the old ones. This was likely to apply to the DBTA programmes. For purposes of this evaluation, new districts are those established after March 2009.

A random sampling approach (lottery method) was used to select two districts per cluster (Old and New). This represented one in every three districts in each cluster (33%) and resulted in a total of 4 districts in the sample. At the district level, Health Centres 4 and 3 were prioritized in the selection process, with the aim of having at least 4 health facilities per district. The selected districts and health units are shown in Table 1.

Table 1: List of Sampled Districts and Health Units

| District | Health Sub-district | Health Unit | Ownership |
|-----------|---------------------|--------------------------|-----------|
| Mbale | Bungokho North | Bufumbo HC 4 | Public |
| | | Nakaloke HC 3 | Public |
| | Bungokho South | Namawanga HC 3 | Public |
| | | Bushikhori HC 3 (PNFP) | PNFP |
| Bulambuli | Bulambuli | Muyembe HC 4 | Public |
| | | Buginyanya HC 3 | Public |
| | | Buyaga HC 3 (PNFP) | PNFP |
| | | Bunambutye HC 3 | Public |
| Kibuku | Kibuku | Kibuku HC 4 | Public |
| | | Buchanagandi HC 3 (PNFP) | PNFP |
| | | Bulangira HC 3 | Public |
| | | Buseta HC 3 | Public |
| Kapchorwa | Tingey | Kapchorwa Hospital | Public |
| | | Tegeres HC 3 | Public |
| | | Sipi HC 3 | Public |
| | | Kaserem HC 3 | Public |

Data Collection

At the district level, KIIs were conducted with the Chief Administrative Officers (CAOs) and the members of the District Health Teams (DHTs). A total of three CAOs participated in the KIIs. At the health facility level, the team conducted KI Interviews with all the 16 facility staff and Focus Group Discussions (FGDs) were conducted with 15 Family Support Groups, and the 11 CSOs in the entire region were represented at a centrally organized FGD in Mbale Municipality. All the FGDs were recorded and transcribed for purposes of extracting the critical information that is included in this report. A special FGD was arranged and conducted with Commercial Sex Workers (CSWs) in Sironko district. Client Exit Interviews were also conducted to complement the data obtained through the KIIs and the FGDs. These were conducted in same sites where the KIIs and the focus group discussions (FGDs) were conducted. The participants included a cross section of clients utilizing HIV/AIDS testing and counseling (HTC), preventing mother-to-child transmission (PMTCT), and recipients of Antiretroviral therapy (ART) services. In total, 211 clients were interviewed.

At the STAR-E level, initial, and wrap up meetings were held with the management staff that included Chief of party, Deputy Chief of Party, Finance, Operations Director and the Technical Programme lead. The initial meeting was to provide an introduction to the operations of the DBTA Programme, while the wrap up meeting was used to fill information gaps that had been identified during the data collection exercise. A special meeting was held with the Clinical Mentors, to get firsthand information on the operations and experiences of the mentorship Programme.

EVALUATION FINDINGS

The evaluation findings are based on a review of the rigorous examination of the project documents, findings from KIIs with STAR-E management staff, the district leadership and health teams, health facility managers and service providers, the Civil Society Organizations, and the beneficiaries including the HIV positive clients. The findings are systematically organized to answer the evaluation questions as set out in the Statement of Work (SOW).

Improved Capacity and Sustainability

Capacity building, defined as the ability of individuals and organizations or organizational units to perform their functions effectively, efficiently and sustainably, was an integral component of the STAR-E DBTA Programme. During the lifetime of the project, the capacity building framework targeted the individual service providers, and some of the institutions of the District Health System. The capacity building process was undertaken using a variety of technical approaches that registered varying levels of success. In an attempt to understand the level of effort, the following questions were addressed: What are: a) the most successful and b) least successful approaches applied by STAR-E towards strengthening the institutional, management, and human capacity of CSOs and local governments to deliver health services? What are the facilitators and barriers of these approaches to achieving results? Are the approaches used and results achieved for old/established and relatively new/naive districts significantly different?

Viability of STAR-E program Technical Approaches

The focus of the evaluation exercise in this context was to examine the various interventions that the DBTA Programme deployed over time to build sustainable district health capacity, and identify those that were most successful and those that were least successful. In the course of identifying the most and the least successful Programme approaches, the evaluation team also identified an additional category of interventions that were termed “double edged.”

The success levels of a particular approach in this context were based on the qualitative score in line with the following criteria;

- Support to the institutional capacity for managing HIV and TB services
- Empowerment of, and ownership by service providers and/or communities
- Improvement in health care equity
- Promotion of client and community involvement and engagement
- Support to the functionality of client follow up linkages
- Financial viability and sustainability of the approach
- Buy-in by the Local Government authorities

Most Successful Approaches

The evaluation team, based on the criteria elaborated above, identified three approaches that were considered to be the most successful as were consistently pointed out by the respondents.

These were also verified using evidence which was collected through the KIIs and FGDs and they included the mentorship program, Strengthening Demand and Supply linkages for HIV/TB services and performance based contracting to CSOs.

Mentorship Program

From the perspective of the district health managers and the health providers, STAR-E did a commendable job in strengthening the skills of the service providers in the realm of ART and TB services, through the Mentorship Program. The districts in the region were divided into 4 clusters of 3 districts each, as indicated in Table 2. A Clinical Mentor was devoted to each cluster and was supervised by the District Health Advisor. The mentorship Programme targeted the HIV/AIDS service delivery points, providing hands-on practice and imparting skills to the service providers. The Programme also involved the training of District Based Mentors (DBMs) who were identified from the DHT and various cadres of service providers at HC 4 and HC 3 levels who were taken for training offsite. Overall, 60 district based mentors were trained over the lifetime of the project.

Table 2: STAR-E District Clusters for the Mentorship Program

| Cluster 1 Districts | Cluster 2 Districts | Cluster 3 Districts | Cluster 4 Districts |
|----------------------------|----------------------------|----------------------------|----------------------------|
| Mbale | Kapchorwa | Busia | Pallisa |
| Sironko | Kween | Butaleja | Kibuku |
| Bulambuli | Bukwo | Bududa | Budaka |

The main benefit of the mentorship program was the improvement in the individual and collective capacity to provide HIV/TB services with confidence, as indicated in Text Box 1.

In order to gauge the individual and collective capacity improvement, attributed to the mentorship program, at the health facility level, the evaluation team conducted a qualitative assessment, of the institutional and health workers' capacity to deliver HIV/TB services, for each of the health facilities visited. Table 3 shows that out of the 16 health facilities, 75 % were rated high, for the capacity of health workers, and 63 % for the institutional capacity to manage HIV/ADS services. The rating was based on the number of staff that had been mentored by the Clinical Mentors or the District Based Mentors (DBMs) and a number of other considerations including:

- Cognitive and practical capacity to handle HIV services
- The reported improvements in the reporting processes and mechanisms
- Expansion to new technical areas of HIV interventions such as male circumcision and option B+

Seven of us have been trained in HIV patient management, and I am confident that any one of the seven can run the ART clinic

*In-Charge, Buginyanya HC 3
Bulambuli District*

Table 3: HIV Services Delivery Capacity Rating at Sampled H/Units

| District | Health Facility | Capacity Rating (Health workers) | Institutional (H/Unit) Capacity Rating |
|-----------------|------------------------|---|---|
| Mbale | Bufumbo HC 4 | High | High |
| | Nakaloke | High | High |
| | Namawanga HC 3 | High | High |
| | Bushikori (PNFP)* | Low | Low |

| | | | |
|--|-------------------------|------|------|
| Bulambuli | Muyembe HC 4 | High | Low |
| | Buginyanya HC 3 | High | High |
| | Buyaga HC3 (PNFP) | Low | Low |
| | Bunambutye HC 3 | High | High |
| Kibuku | Kibuku HC 4 | High | High |
| | Buchanagandi HC3 (PNFP) | High | High |
| | Bulangira HC 3 | High | Low |
| | Buseta HC 3 | Low | Low |
| Kapchorwa | Kapchorwa Hospital | High | High |
| | Sipi HC 3 | High | High |
| | Tegeres HC 3 | High | High |
| | Kaserem HC 3 | Low | Low |
| Capacity Rating for individual health workers was high at 75 % of H/Units and Institutional Capacity was rated as high at 63 % of H/Units | | | |

The mentorship Programme however, had a number of challenges;

- The workload for the mentors progressively increased from an initial 36 to the current 154 ART sites, translating into approximately 40 sites per cluster. This heavy load meant less and less time spent with the service providers, and thus undermined the quality of the mentorship Programme.
- Information provided by district officials, coupled with observations made by the evaluation team, clearly showed that some of the new districts visited like Kibuku and Bulamburi are grossly understaffed and therefore the people to be mentored are limited
- Intra-district transfers tend to disorganize the capacity built at certain health facilities, especially when the general staffing levels are low
- A number of service providers in the health facilities visited had a negative attitude towards the mentorship programme and this made the mentoring exercise fairly difficult
- The District Based Mentors (DBMs) who are facility located, were largely utilized to support their own ART sites due to the logistical constraints at the DHT level to enable them move to other ART facilities.

Strengthening Demand and Supply linkages for HIV/TB services

Improving availability, access and utilization of health services required the maintenance and balance between the supply and demand for HIV/TB services. The main components of the supply side in the STAR-E supported districts included, training of Service Providers; Buffer/Redistribution of Drugs and Supplies; Equipment for laboratory and MCH services; Outreach Services (VMMC, HCT, Immunization, Postnatal). The program put in place a mechanism to strengthen networks and linkages between health facilities and communities and in the process strengthened the client follow up systems. This in turn contributed to the improvement in access and utilization of HIV/TB services.

Use of Linkage Facilitators to strengthen Demand and Supply Linkages

STAR-E established a network of 268 expert clients, often referred to as linkage facilitators, whose mandate was to mobilize community members for service delivery, follow up on clients, provide non-clinical HIV/AIDS related services like counseling and organization of client records, and linkages with VHTs. Linkage facilitators were institutionalized in the health care delivery system, and were given a quarterly allowance by STAR E. Linkage facilitators were used to demonstrate effective Task-shifting for HIV services mainly at the facility level. They were also following up HIV/AIDS patients who were enrolled on treatment and had defaulted. This approach to service delivery was highly commended by the health workers, HIV clients, CSOs and district officials. At the time of the evaluation, the STAR-E program was already in the close – up mode and the linkage facilitators were no longer receiving their allowance, but were still very actively engaged in the delivery of HIV services at the sampled health facilities. The important role of the expert clients was evident in one of the facilities where they reported earlier than the designated health workers and they were seen providing information to the visitors and were confident about the service delivery activities at the facility.

Utilizing Community Based Workers to create demand for TB services

The other successful approach that strengthened the demand –supply chain was through the use of Sub-county workers that targeted TB services in particular, focusing on community mobilization for TB testing and Community Based Directly Observed Treatment - Short Course (CB-DOTS). These were supplemented by Village Health Teams, and PHA networks that were supported through the CSOs.

Performance Based Contracting of CSOs

Capacity building for Civil Society Organizations was effectively implemented through the use of Performance Based Approaches. A total of 11 CSOs were identified in the region and they were progressively assessed in the areas of HIV services; Financial Management; Strategic Information; Performance Management; and Results based accountability. Grants were provided to support defined service delivery areas, and were based on evidence of performance improvement .The CSOs became eligible for further financial and non-financial input into the defined service delivery areas. In a discussion with the CSOs (FGDs) they reported that although the approach was initially slow and painful, it was very beneficial because at the end of it all, they registered significant improvement in capacity to:

- Mobilize communities and create awareness for health services
- Revitalize and improve functionality of VHTs
- Perform Monitoring and Evaluation services
- Manage USAID grants

Double-Edged Approaches

As indicated in section 4.1.1, there are certain approaches that have had a very successful output, but at the same time have contributed to the weakening of institutional systems and capacities.

Monetary Incentives for HIV Services

The practice of providing monetary incentives to service providers was inherited by STAR-E from previous USG mechanisms. The support to ART clinics in a form of 5,000 UGX per provider per clinic day has gone a long way to raise the morale of the service providers in the wake of increased HIV/TB workload. Generally, and especially at HC 3 level, the incentive is shared between all the staff members, irrespective of whether they directly work in the ART clinic or not. This served to build provider solidarity for ART and other services. Monetary incentives were also provided for Provider Initiated Testing and Counseling (PITC), ART and

Option B+ Client follow up; Continuing Medical Education sessions (CMEs) and Voluntary Medical Male Circumcision (VMMC) outreaches / Camps, as well as EPI / Integrated outreach services that target to capture postnatal mothers and their infants for HIV services.

The low side of this approach is that in some facilities, especially those that did not manage the incentive equitably, service delivery components were monetized and from the responses it was apparent that some of the HIV/TB services would not continue after the allowances are scrapped. Health providers are reluctant to undertake services that are not “motivation attached”. For example health workers preferred going for outreaches because they received allowances. Some of the health workers in almost all the facilities assured the evaluation team that when the allowances stop, they would not go for the outreaches and will not work extra time in the ART Clinics. More still, the modality of STAR-E staff directly administering this incentive undermined the management relationship between the health facilities and the DHT.

Provision of Nutritional / Other Client Incentives

Maize flour and sugar were provided to the ART sites to facilitate the clients to make porridge on clinic days. This not only boosted the nutritional status of the clients but also helped to boost the demand side of ART services. Provision was also made to supply shoes to mothers and children in the ART clinics, as well as availing child play items in the same clinics. On one hand, some components of this service, for example the shoes exclusively for HIV patients, were stigmatizing these beneficiaries because people started relating the shoes to the HIV patients, while others, like the provision of maize flour and sugar were not sustainable, especially when STAR-E came to a close. For example, by the time of the evaluation, this provision was no longer available for most facilities yet the clients and health workers wanted it to continue. It is however gratifying to note that plans were underway as was reported by the STAR-E Program to transition the responsibility of provision of the nutritional component to the clients and facilities, and this was already being tried out in the district of Bukwo where the clients were bringing maize flour to prepare porridge and share with their peers.

The least successful Approaches

A number of approaches deployed by STAR-E registered minimal results, which included: DHT leadership and Health System Strengthening Mechanisms; Behavioral HIV Prevention activities and Quality Improvement (QI) mechanisms.

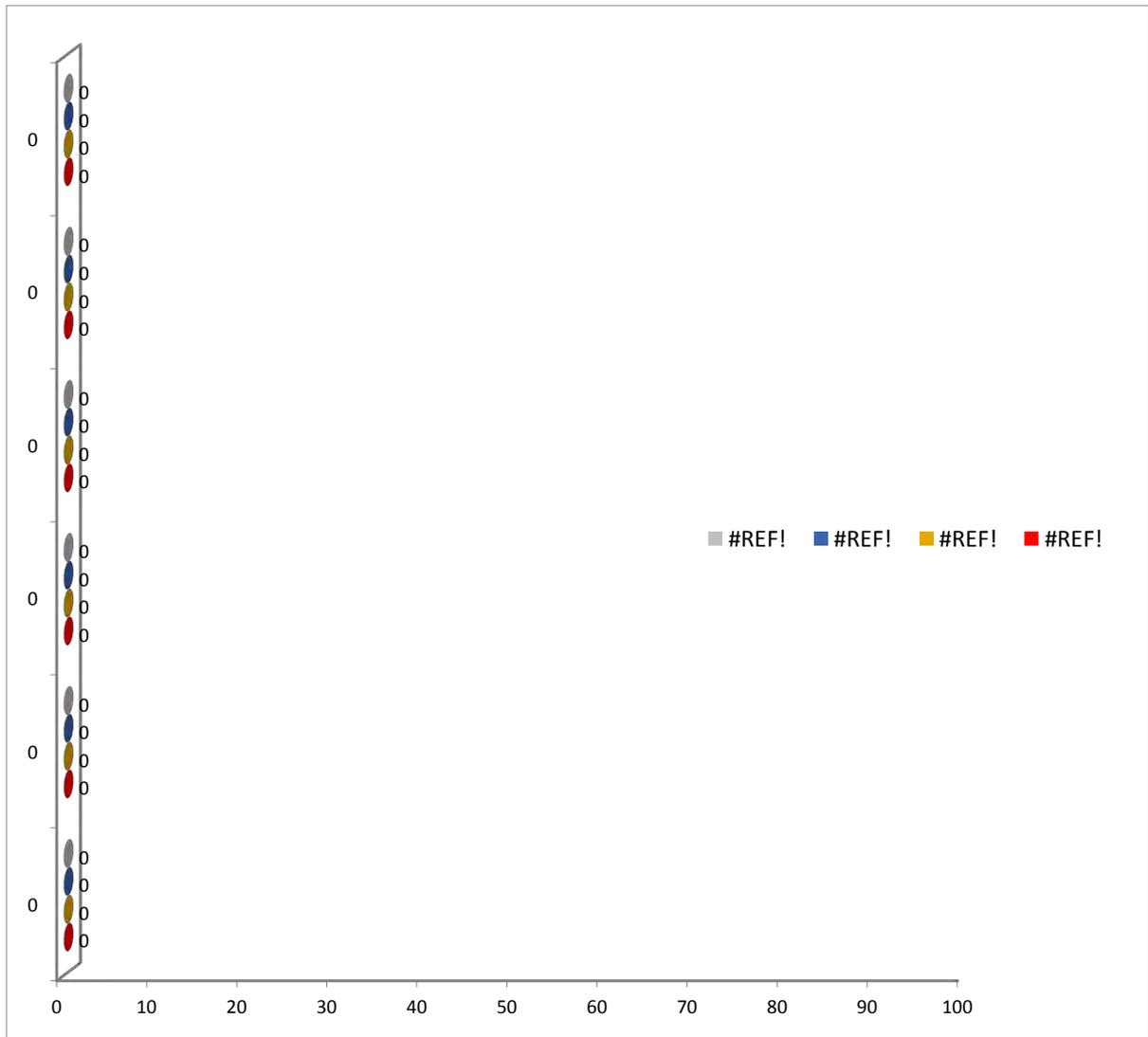
Strengthening of DHT leadership

There were limited investments in building district, health sub-district and sub-county capacities to facilitate more effective leadership and coordination functions. From the discussion with the STAR E staff and district leaders, the evaluation team found out that the intensity of capacity building was mainly focused on service delivery and little was done to strengthen district leadership in managing and coordinating service delivery. During the evaluation team’s interactions with the service providers, it was evident that the Health Unit managers and service providers relied more on STAR-E than on the DHT to solve some of their critical operational challenges. This was made worse by the modalities of response that were utilized by STAR-E, excluding the DHT in most cases. This was a common occurrence when it came to drug shortages and other supplies. Without discussing or liaising with the districts, STAR E provided solutions to the facilities. It was also noted that STAR-E paid health workers some fees and provided other forms of incentives which the district managers were not fully aware. The monetary transactions were conducted through the mobile money accounts of the beneficiaries and this undermined the authority of the district health teams.

Behavioral HIV Prevention Activities

The national HIV Prevention Strategy (2011–2015) emphasizes the need for combination prevention, with a focus on both behavioral and biomedical components. The main focus of HIV prevention activities in the STA-E program were largely on biomedical prevention approaches, including safe male circumcision, condom distribution, eMTCT and reducing community viral load through anti-retroviral therapy. The sexual behavior approaches focused on sexual prevention had little attention. This corroborates well with the performance of the project on some of the outcomes of the HIV prevention interventions. As illustrated in figure 1, Population based surveys using LQAS have shown stagnated performance on the risky sexual behaviors. For example, individuals who used a condom at high risk sexual encounter was high in the first two years of the project (between 79-67%) but significantly declined during the last 2 years of the project (51-52%). In addition, those who had sex with a non-marital or cohabiting partner (23-25%) and those with more than one sexual partner (17-18%) for the entire project period remained the same.

Figure 1: Highlights of the behavioral and biomedical interventions Source: LQAS survey data



Quality Improvement (QI) mechanisms

Quality improvement was one of the core concepts of the STAR-E program. Overall, the understanding and practices related to QI did not match the required standards as portrayed in the national Quality Assurance Framework. The practice of QI was mostly visible in the area of records and information management. However, it was not evident in other aspects of service delivery. According to project staff, in addition to supporting clinical safety precautions, quality assurance was meant to address other small but important day to day practices such as reduction of waiting time, cleanliness, staff respect for patients, records management, triage and fast tracking of patients. However, the understanding and practice of Quality Assurance by the health staff was not clear. Some of the health workers reported to have received training in the QI concept of the 5 'S'. However, they were not able to show or explain how they had been able to apply the concept into the workplace, and the resultant Quality Improvement they had registered.

ENABLING FACTORS

A Conducive HIV/AIDS Policy framework

There is a national HIV/AIDS policy in Uganda. The project and the district staff were well guided in terms of what was required of them. The project technical team with support from Ministry of Health (MOH) and the DHTs was well placed to respond to any changes in the policies and implementation guidelines.

Committed Leadership at District Level

The evaluation team observed that the district leadership (both administrative and technical) exhibited good will towards the STAR-E program. MoUs were signed with the district leadership, including CAOs and DHOs. Although not all expectations were met, the district health teams saw the value addition from the project and were willing to do all it takes within their means to make it a success. It is important to note that by and large, the new districts displayed more engagement and commitment to the STAR-E program. In Bulambuli district, the leadership wished STAR E had their offices in the district to enable easier and closer interaction. To them, the role of STAR E was vital in the delivery of priority health services to their citizens.

“We do not have enough local revenue and so we need STAR E to help us with putting up essential services, and the health sector which STAR E supports is our priority.”

LC 5 Chairman Bulambuli

The Technical Competencies of the STAR-E Team

Despite the rather high turnover, the staff hired by the project was competent in the required technical areas. This was articulated by the DHT members who acknowledged that the clinical advisors and mentors were highly specialized and practically competent. Health workers who benefited from the mentoring also acknowledged the mentors' level of competence. This was also evident when the DHO and facility staff often requested to be given more time for mentoring.

The use of community structures

The use of community structures, including expert clients, was instrumental in facilitating the provision of HIV/TB services in the STAR-E region. Each health facility providing HIV/AIDS services has got a network of expert clients who support HIV counseling at the health facilities, organize files and also participate in mobilizing people to come for the services, as well as client

follow up. STAR E found it easy to consolidate this group into what they referred to as linkage facilitators. The CSOs who are involved in community mobilization and other family support services, also found these expert clients very instrumental in helping them reach their targets.

Receptivity for Technical and Financial Assistance

The technical assistance introduced by STAR E was well received at the district and health facility levels. The focus of the technical interventions was the most deserving and most critical health services and hence the TA was viewed as investable. The national government and districts left alone would not afford provision of these services both in terms of finances and the required expertise.

Sufficient Resources for the Critical TA Interventions

Availability of sufficient funds to implement the mandated activities was a cross cutting facilitator. Most of the approaches were highly funded and this motivated the health workers, and linkage facilitators to continue providing the services. There were costs that were incurred in transport refund, lunch allowances for health workers in HIV clinics, support supervision and running of male circumcision camps. Money was also at the disposal of the IP to flexibly spend on adhoc requests from USAID, Ministry of Health and Local Governments. This kind of arrangement enabled continuity of the critical services.

BARRIERS / CHALLENGES TO THE DBTA MODEL

The identified barriers and challenges to the implementation of the DBTA model program in the STAR-E region were both programmatic and implementational in nature.

Shortfall in Program Design

A critical examination of the STAR-E program description, with a focus on the overall goal and the four objectives, clearly shows that this was a District Located but Health Facility and catchment community Focused Technical Assistance, meant to concentrate on increasing both the supply and demand sides for HIV and TB services, with little emphasis on systems strengthening. The actual spirit of the program is well reflected in the approved STAR-E Performance Monitoring Plan (PMP), with hardly any systems strengthening component among the Key Performance Indicators. This is further compounded by the very ambitious service delivery output targets, especially in the VMMC and eMTCT program areas, that were expected to be delivered in short timeframes. This design inevitably forced an Implementing Partner to take short cuts to achieve the required results while building some capacity along the way. The design therefore, which should have focused on strengthening both the service management and service delivery structures, fell short of what one would expect for a DBTA program for decentralized health services in Uganda.

Inadequate Human Resource for Health (HRH)

The problem of human resource affected both the project and districts. At the project level, due to the up-country location of the STAR-E program headquarters, the attrition rate was rather high. Even though the district health teams reported that they were not adversely affected by the program staff turnover, it definitely affected the smooth flow of Technical Assistance, as well as the STAR-E institutional memory. In the districts, especially the new ones, recruitment and retention of medical officers, midwives, clinical officers and laboratory technicians, was a nightmare. The Chief Administrative Officers (CAOs) also cited the limitations in the district wage bill as another challenge to get the critical human resource for health on board. However, this was partly ameliorated through the HRH SDS grants that enabled districts to recruit critical staff for the district health system, with the understanding that they will be absorbed by the

districts at the end of the program. STAR-E also assisted districts to select trainable individuals from existing support staff, and they were trained as “Microscopists” to support TB diagnosis at HC 3 facilities in general and hard-to-reach facilities in particular.

Health System Weaknesses

The health system in Uganda is characterized by a number of inherent weaknesses which include low emoluments, poor infrastructure, and inadequate equipment, among others. Due to low emoluments for the health workers, the project resorted to the ‘double edged’ financial incentive schemes to encourage staff to continue to provide HIV/AIDS services. Measures to address poor infrastructure included the provision of tents for HIV clinics. In one of the facilities in Kibuku district, the tent that was being used as an ART shelter was blown away by the wind a day before the evaluation team visited the facility. Laboratory infrastructure was also limited in many facilities, with staff expressing concern for their safety from contracting TB when conducting TB microscopy. The issue of equipment was to a large extent addressed by the program which ensured that the basic equipment for delivering the minimum health care package were provided to all the supported facilities.

Health Sector Leadership Challenges

A number of districts in the STAR-E region had health sector leadership challenges and this affected district capacity to absorb and utilize the available technical assistance. There were many situations of incomplete District and Health Sub-district management structures, with many officers in “Acting” capacities. Health facility leadership faced the same dilemma. It was observed that even where STAR-E had built capacity at facility level, the institutional capacity rating remained low for those facilities that had incompetent In-charges.

The dynamic nature and evolution of HIV Interventions/ Policies

The dynamic nature of HIV has continued to evolve, and so have the policies. The policy changes overtime affected programming especially in terms of orienting service providers with the changes in implementation guidelines. During the lifespan of STAR-E, the eMTCT policy of Option B+, and the Safe Male Circumcision policies were the most prominent examples, and they had a significant impact on resource allocation, and implementation planning.

Stock Outs of Vital Commodities

Stock outs of ARVS, test kits and reagents were a common occurrence that affected service delivery. The STAR E program had to often run around the different facilities in the region to check whether there are any reserves, and to facilitate re-distribution to those facilities that would be running out of stock.

EFFECTS OF SDS TRANSITION ON STAR-E DISTRICTS

After one year of STAR-E implementation, USAID introduced Strengthening Decentralization for Sustainability (SDS) as a supplementary mechanism that would focus on strengthening Local Government Systems, as well as providing Performance-Based Grants to districts to complement service delivery resources. It was therefore imperative to assess the effects of transitioning to the SDS grants on the DBTA. The findings indicate that the recipient districts were happy with this arrangement. However, a number of issues were also evident;

- The grant was largely confined to the “old” districts while the new districts that were more needy were given less attention
- After the advent of SDS support, STAR-E could no longer fund district operational plan activities directly – in both old and new districts. Some of the operational activities

- slackened due to delays in the SDS disbursement schedules. In essence STAR-E continued to fund some of the activities indirectly, using its own funds, and through improvised financial pathways.
- The mandates of SDS and STAR-E in this DBTA arrangement were theoretically supplementary and complementary, but practically divergent. Whereas SDS emphasized Performance Based Financing for district led activities, STAR-E financed and took the lead in producing the expected program outputs. This negatively impacted on the expected synergy and hence total effect of the two DBTA project (SDS and STAR E).

New versus Old districts

At inception, STAR-E was mandated to support the eight districts of Budaka, Bududa, Bukwa, Busia, Butaleja, Kapchorwa, Pallisa, and Sironko. Mbale district was brought on board during Year 3 of implementation. The new districts of Kibuku, Bulambuli, and Kween came into effect in July 2010 but remained operating under their mother districts of Pallisa, Sironko, and Kapchorwa respectively. As indicated in table 4, the three new districts were relatively disadvantaged, especially in terms of SDS support, and transport for District Health Services.

Table 4 : Highlights of Comparative DBTA Support to New Versus Old Districts

| Old Districts | New Districts |
|--|---|
| SDS Support | No SDS Support except for HRH |
| No direct financial work plan support from STAR-E | No direct financial work plan support from STAR-E |
| Greater Access to STAR-E Vehicle for supervisory activities | Limited access to the STAR E vehicle for supervisory activities |
| Health facility and Community focused STAR-E support | Health facility and Community focused STAR-E support |
| <i>The new districts of Kween, Bulambuli and Kibuku were relatively disadvantaged in this DBTA and largely handled under the umbrella of their ‘mother districts’. (Effect of USAID policy towards creation of new districts)</i> | |

In practical terms, although USAID did not recognize the three new districts as additional administrative units in the DBTA, STAR-E was able to pay particular attention to the new districts to minimize the apparent support gaps between the old and the new districts.

STRENGTHENING MANAGEMENT AND TECHNICAL STRUCTURES

The evaluation team was tasked to find out the extent to which the STAR-E DBTA developed management and technical structures that would sustainably improve quality, accessibility and availability of HIV/TB services in the catchment districts. The team found that;

- Individuals, like the District Biostatistician and 60 district based clinical mentors, were targeted for technical capacity development for Strategic Information and clinical services management respectively
- Although STAR-E facilitated DHMT meetings, very little was done to build leadership capacity of members of the district or health sub-district teams

As a result, and especially for the new districts, there was a general tendency for the DHT members to abdicate their management responsibilities to STAR-E. In turn, the STAR-E team was “forced” to take on some of the district management responsibilities. Health unit managers and service providers admitted to the evaluation team that in their day to day activities, and in cases of crises, they relate more with the STAR-E program management than with the DHT.

STRATEGIC INFORMATION (SI) CAPACITY DEVELOPMENT

In the context of this evaluation, Strategic Information is the composite of three distinct, highly integrated, technical areas: Monitoring and Evaluation (M&E), Health Management Information Systems (HMIS), and Surveillance and Surveys (S&S). HMIS focuses on the collection, flow, and management of health data, while M&E relates the data to the program goals and objectives. M&E also focuses on strengthening data quality, analysis, interpretation, and use. S&S pertains to systematic data collection, analysis, and interpretation, by specifically sampling data from service populations.

The purpose of the evaluation in this area was to evaluate the magnitude, focus, and sustainability of the Strategic Information technical capacity supported by the STAR-E Program in the catchment districts. In addition, the evaluation team was interested in the evidence of utilization of the available strategic information. The team conducted an assessment of key SI framework components, and the results are shown in Table 5. The table shows that most of the key components of SI were adequately and visibly attended to.

Table 5: STAR-E Achievements against Key SI Framework Components

| SI Framework Component | Achievements |
|---|---|
| Human Capacity for SI | Trained Biostatisticians, HMIS Focal Persons, Records Assistants, CSOs and Service providers in data management, analysis and utilization |
| Routine Monitoring | Provided HMIS Tools and trained service providers in their use. They also participated in support supervision activities. |
| Surveys and Surveillance | Provided technical and financial assistance to districts to conduct Annual LQAS surveys |
| Database | Supported Data entry into DHIS 2 |
| Data Quality Assessments | Built district capacity and supported HIV related Data Quality Assessments |
| Data Dissemination and Use | Supported Quarterly District Performance Review Meetings |
| Operations Research (Learning and Adapting) | Very little done (One time activity in PY 5 regarding retention of Option B+ mothers) with no clear outcomes |

Strategic Information (SI) Technical Capacity

STAR-E built district SI capacity in the areas of Monitoring and Evaluation M&E, HMIS and LQAS surveys. District Biostatisticians, HMIS focal persons, Records Assistants, health unit managers, and CSOs were all well-grounded in data and information management, LQAS surveys. They were also equipped with skills on how to conduct Data Quality Assessments, starting with HIV and TB data. The team however noted that Operations Research, which would have played an important role in providing continuous Learning and Adapting, was not conducted adequately.

Manifestation of the SI Capacity

The evaluation team made observations and took note of spontaneous manifestations of SI capacity among the district respondents. The commonest expressions of direct or proxy manifestations of SI capacity are indicated below;

- Improvement in reporting for HMIS data: Over the years STAR E reported improvement of HMIS data for all districts where the project is implemented. District monthly reporting timeliness and completeness was over 95 % for all the 12 STAR-E districts for the Year 2013; and Mbale district reported that their performance in the District League Table had moved from the 38th position in 2012/13, to 11th position in 2013/14, due to an improvement in health information management.
- Utilization of LQAS and HMIS Data: For all the districts visited, there was demonstrable evidence of Strategic Information Use (wall charts displaying LQAS and HMIS data). Most of the districts visited, reported utilization of LQAS to inform planning and resource allocation, as well as strengthening functional networking. Many DHT members expressed confidence in being able to conduct LQAS without external technical support
- Performance Review Meetings. Performance reviews are an important component of the M&E system in particular and Strategic Information in general. Monthly and quarterly performance review meetings have been led by the districts over the years. The meetings are meant to improve intra and inter-sectoral coordination, whereby the district health departments and CSOs would share their immediate plans, present experiences from the activities/processes, future plans and share routine information and integrate all these into the district plans.

Sustainability of the SI Capacity

Looking at the SI framework components, it is apparent that the critical investment was in the human resource, and this is sustainable, assuming that the districts are able to retain the staff. The districts were aware of the financial implications for sustaining HMIS and on-going M&E, but were confident that some of these costs could be met using PHC conditional grants. The cost of LQAS surveys varied between 15 and 20 Million UGX but there is evidence that this can be reduced to about 8 million UGX, and it was encouraging to note that all STAR-E districts that were visited plan to include LQAS in their future annual budgets considering that at the time of the visit, LQAS activities were being funded by the project.

Contribution to Improved Health Service Delivery

The evaluation team was interested in obtaining answers to the following questions;

- How has the support by STAR-E contributed to improved health service delivery in the targeted districts?
- What are the Service delivery outcomes attributed to the STAR-E Program?
- What was the effect of integration of HIV/TB, HIV/Family Planning, HIV/AIDS and health on overall health outcomes?

STAR-E Contribution to Improved Health Service Delivery

The STAR E project region has a number of implementing partners that contribute to health service delivery. The STAR-E program may be singled out as the major contributor to the catchment district health systems. The contributions that made greatest impact on health service delivery as a whole include;

- Support to districts to Adopt national health policies, especially in the areas of Safe Male Circumcision, Option B+, and ART
- Clinical capacity building and mentoring through technical advisory services in PMTCT, Paediatric HIV, Laboratory services, and TB services.
- Laboratory rehabilitation and provision of equipment. Over 100 microscopes were provided for TB microscopy, and this boosted laboratory services in general. Similarly, the haematology and chemistry machines provided to Kapchorwa, Masafu and Busolwe hospitals helped to improve diagnostic and patient management services at those facilities.
- Consolidation of supply and demand linkages for HIV/TB services in particular and health services in general

Service delivery Outcomes Attributed to STAR-E

In the set-up of a District Based Technical Assistance (DBTA) program, it becomes difficult to attribute specific service delivery outcomes to a single partner. However, in the case of the STAR-E program, there is evidence to show that, in the catchment districts, it had significant involvement in the generation of HIV/TB service delivery outcomes, based on the following criteria;

- Health Facility Improvement through upgrades and provision of essential equipment
- Service provider training, both off – site and on – site
- Demand creation for health services in general and HIV/TB services in particular.

Improved availability of HIV/TB Services

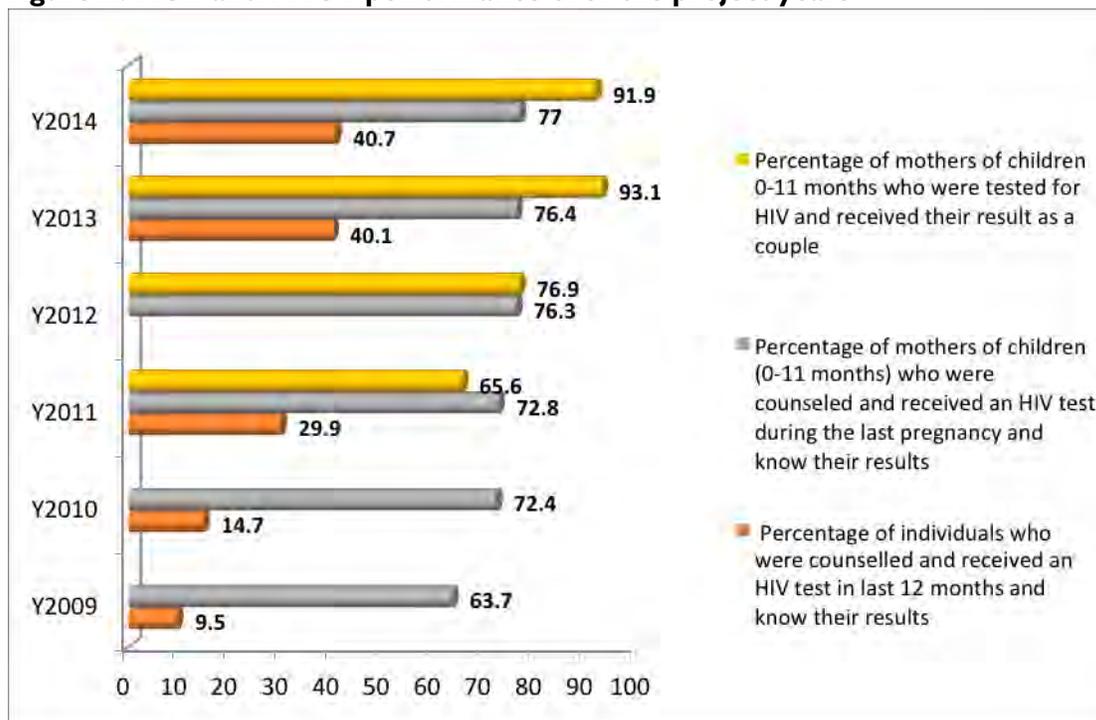
Over the STAR-E implementation period, ART sites increased from 13 to 154; PMTCT sites increased from 64 to 154; TB diagnostic sites increased from 44 to 100; TB treatment centers increased from 75 to 134. Access and utilization of HIV services also increased significantly, as indicated in Table 6.

Table 6: Service Delivery Outputs – Increased Accessibility

| Year | ART New Clients | HIV Care – New Clients | ART Pregnant Women | PMTCT Prophylaxis | VMMC (# of Males Circumcised) |
|------|-----------------|------------------------|--------------------|-------------------|-------------------------------|
| 2009 | 44 | 735 | | | |
| 2010 | 1,376 | 3,337 | 25 | 1,085 | 75 |
| 2011 | 2,130 | 5,703 | 150 | 2,956 | 4,800 |
| 2012 | 3,024 | 7,935 | 259 | 3,147 | 30,915 |
| 2013 | 3,274 | 6,720 | | 4,379 | 70,833 |
| 2014 | 5,639 | 7,917 | | | 74,873 |

As illustrated in figure II, the population based LQAS surveys showed steady improvement in HCT and PMCT performance over the entire project period. For example the individuals in the entire population counseled, tested and received their results steadily increased over the years. Better still, PMCT coverage increased tremendously from 5% in 2011 to 92% in 2014.

Figure II: HCT and PMCT performance over the project years



Source: LQAS survey data from 2009-2014.

Evidence from the client exit interviews also showed that there was increased accessibility of HIV/AIDS services as was reported by 73% of the clients, while 59% reported waiting of less than 30 minutes before receiving a service at the health facility. In terms of perceived quality of HIV/AIDS services, 98% of the clients felt they were attended in a friendly and respectful way; 97% reported that they had sufficient privacy; 100% of the females, and 91% of the males reported having received all the prescribed medicines on that clinic day.

The other notable service delivery outcomes that the evaluation team attributed to STAR-E were;

- Improved quality of HIV/TB services through clinical capacity improvement
- Effective demand creation for HIV/AIDS services
- Reduced loss to follow up of HIV/AIDS clients
- Improved detection and management of TB patients
- Better health information management with resultant improvement in individual patient management.

Logistics and Supplies Management Support

Logistics and supplies management plays a fundamental role in the delivery of quality health services. The evaluation team paid attention to the logistics and supplies management support provided by STAR-E to the catchment districts, and noted the following achievements;

- Improved capacity of health workers handling health commodities & test kits – stores personnel, ART clinic managers & HMIS focal persons, in ordering for ARVs and lab commodities, including using the web based ordering system (WAOS). This improved the ordering level, and reduction in stock out rates.
- Use of Medicine Management Supervisors (MMS) who were tagged to specific health facilities that (i) were accredited for ART & PMTCT, ii) pull ARVs and lab commodities including test kits, so that they would be able to, conduct bimonthly reporting by ensuring that facilities place their order on time; ensure that the orders are authentic and appropriate; support weak facilities in the area of drug management i.e. helping in selection, quantification & stores management. As a result of this approach at the time of the evaluation, 93% of the facilities were ordering on time.
- Facilitated a “Regional approach” to ordering and follow up of delivery by NMS. This included a system of tracking orders by the MMS from the facility, to the DHO, the regional office of National Medical Stores (NMS). STAR E project supported the process with a safari day allowance for the Medicines Management Supervisors.

Effect of Integration on Overall Health Outcomes

Integration of Health Services

Integration of health services is generally acknowledged to be the most logical way of organizing a health system. However, “integrated health services” tends to mean different things to different people. In the context of this evaluation, the team understood integration to refer to the delivery of a “one-stop shop” package of health services to HIV and TB clients, with emphasis on TB and HIV; and HIV and Family Planning. The findings on the ground indicated that the definition and interpretation of integration varied greatly between districts, and more so between health facilities. The evidence of integration, from the expectations of the evaluation team, manifested through:

- Combined TB / HIV clinics
- Provision of Provider Initiated Testing and Counseling (PITC) services
- Provision of Family Planning Services in a PMTCT setting
- Mother – Baby Points of care for following up of Mother-Baby pairs in eMTCT
- Integrated Outreach services, covering ANC, Immunization, EID, HTC, and eMTCT
- Comprehensive orders covering supplies and logistics for all the service areas namely; ARVs, essential medicines, HIV test kits, other laboratory supplies and TB medicines, gradually leading to integrated logistics management

Effect of Integration On Overall Health Outcomes

Clearly, the manifested forms of integration, are largely confined to the HIV /TB / MCH areas of service delivery. The evaluation question in this context was looking for the contributions of these forms of integration to overall health outcomes. Overall health outcomes, in this context, are defined as the results or the impact that the integrated TB/HIV/Family Planning health care activities have had on the catchment population. These outcomes can be measured in terms of changes in morbidity, mortality, cost of care, and quality of life, among others. From that angle therefore, given the limitations of this evaluation exercise, it is not possible to determine the

overall health outcomes of the TB/HIV/Family Planning integration that was supported by STAR-E.

COST EFFECTIVENESS / VALUE FOR MONEY

In the context of this evaluation, the cost effectiveness / value for money assessment was looking at the extent to which the STAR-E program had been able to convert its resources economically into results in order to achieve the maximum possible outputs, outcomes, and impacts with the minimum possible inputs. This analysis included desk analysis of data and documents at the STAR-E project headquarters, and a few selected districts. The primary question for the evaluation team was: “To what extent could the STAR-E as a DBTA program, be considered cost efficient in strengthening capacity of districts and CSOs to improve health service delivery ?”

Total Project Spending

STAR-E project started in 2009 and over a period of five years, the project has spent approximately \$36.1 million (Table 7). Of this total spending, over 43.7% of total spending (\$36.1 million) was spent on personnel and related allowances.

Table 7 : Total Project Spending (FY 11 - FY 14)

| US \$ | FY2010 | FY2011 | FY2012 | FY2013 | FY2014 | TOTAL |
|---------------------|-----------|-----------|-----------|-----------|-----------|-------------------|
| Actual Expenditure | 7,268,918 | 6,578,800 | 7,291,409 | 6,737,277 | 8,211,381 | 36,087,785 |
| Total Budget | | | | | | 37,507,585 |
| Remaining for FY15 | | | | | | 1,419,800 |

Source: Project documents

The PEPFAR Expenditure Analysis tool was introduced in FY 2013, so a detailed analysis of the project’s expenditure is only feasible for two years (FY 2013 and FY 2014). The findings from the detailed expenditure analyses for these two years are presented in turn.

Expenditure by Program Areas

Table 8 provides a summary of expenditure broken down by program areas, as well as indicating the level at which it spent.

Table 8 : Detailed Expenditure by Program Areas (FY 2013 and FY 2014)

| Program Area | FY 2013 Expenditure (US \$) | % of total | Program Area | FY 2014 Expenditure (US \$) | % of total |
|--------------|-----------------------------|------------|--------------|-----------------------------|------------|
| FBTCS | 801,785 | 11.9% | FBTCS | 1,357,224 | 16.5% |
| CBCTS | 451,661 | 6.7% | CBCTS | 1,046,559 | 12.7% |
| PMTCT | 1,323,133 | 19.6% | PMTCT | 699,714 | 8.5% |
| VMMC | 1,540,659 | 22.9% | VMMC | 1,046,921 | 12.7% |
| HCT | 511,485 | 7.6% | HTC | 261,811 | 3.2% |
| PEP | 0 | | PEP | 0 | |
| BS | 0 | | BS | 0 | |

| Program Area | FY 2013 Expenditure (US \$) | % of total |
|---------------|-----------------------------|------------|
| LAB | 263,253 | 3.9% |
| IC | 267,587 | 4.0% |
| OVC | 0 | |
| SORP-GP | 0 | |
| SORP-IDU | 0 | |
| SORP-CSW | 40,122 | 0.6% |
| SORP-MSM | 0 | |
| SORP-KP Other | 135,522 | 2.0% |
| SI/HSS | 1,402,071 | 20.8% |
| TOTAL | 6,737,277 | |

| Program Area | FY 2014 Expenditure (US \$) | % of total |
|--------------|-----------------------------|------------|
| LAB | 378,456 | 4.6% |
| IC | 104,906 | 1.3% |
| OVC | 158,134 | 1.9% |
| GP-PREV | 105,691 | 1.3% |
| KP-PWID | 0 | |
| KP-FSW | 89,048 | 1.1% |
| KP-MSMTG | 0 | |
| OVP-PREV | 845 | 0.0% |
| MAT | 0 | |
| SI | 1,303,023 | 15.9% |
| Surveillance | 216,614 | 2.6% |
| HSS | 1,442,434 | 17.6% |
| TOTAL | 8,211,381 | |

For FY 2013, findings of the expenditure analysis show that:

- \$6.74 million was spent by the STAR-E project, of which \$1.25 million (18.6%) was spent on Care, Treatment and Support (facility-based, community-based); about \$1.32 million (19.6%) on PMTCT; about \$1.54 million (22.9%) on male circumcision; and \$1.4 million on strategic information and surveillance and health systems strengthening.

For FY 2014, findings of the expenditure analysis show that:

- \$8.21 million was spent by the STAR-E project, of which \$2.4 million (29.2%) was spent on Care, Treatment and Support (facility-based, community-based); about \$0.7 million (8.5%) was spent on PMTCT; about \$1.05 million (12.7%) on male circumcision; \$1.3 million (15.9%) on Strategic Information; and \$1.44 million (17.6%) on health systems strengthening. Other program areas (such as prevention activities for the general population and key populations) together took up a relatively small proportion of total expenditure.

Expenditure by Level

Information presented in Table 9 shows the level at which money was spent.

Table 9 : Summary of Expenditure by Level of spending (FY 2013 and FY 2014)

| Level of Spending | FY 13 (US \$) | | FY 14 (US \$) | |
|------------------------------|------------------|--------|------------------|--------|
| Investment (Site level) | 1,455,766 | 21.6% | 613,287 | 7.5% |
| Recurrent (Site Level) | 782,157 | 11.6% | 1,167,679 | 14.2% |
| Program Management | 2,496,396 | 37.1% | 4,332,286 | 52.8% |
| Strategic Information | 1,651,568 | 24.5% | 1,006,714 | 12.3% |
| Health Systems Strengthening | 351,390 | 5.2% | 1,091,414 | 13.3% |
| | 6,737,277 | 100.0% | 8,211,381 | 100.0% |

For FY 2013:

- A total of \$2.24 million (33% of total annual spending) was spent at site level (i.e. at district level).
- \$2.5 million (37% of total annual spending) was spent on Program Management (at site, national and above-national levels).
 - Of this \$2.5 million, about \$2.24million was spent on national level Program Management activities.
- Furthermore, \$0.35 million (5% of total annual spending) was spent on Health Systems Strengthening activities, while \$1.65 million (24.5% of total annual spending) was spent on supporting and improving Strategic Information.
- These findings show that only one third of total spending for FY13 was spent on direct technical support to support HIV/AIDS service provision, while the remaining two-thirds was spent on technical support for an enabling environment and administrative services.

For FY 2014:

- A total of \$1.78 million (21.7% of total annual spending) was spent at site level (i.e. at district level) for direct technical support to HIV/AIDS service provision.
- This implies that over 78% of total funds were spent on supporting an enabling environment which includes: program management, strategic information and health systems strengthening.
- Specifically, a total of \$4.33million (53% of total annual spending) was spent on Program Management (at site, national and above-national levels).
 - Of this \$4.33 million, about \$2.65million (61%) was spent on national level Program Management and the remaining \$1.69 million was spent above national program management (implying that this not spent in-country).
- Furthermore, \$1.09 million (13% of total annual spending) was spent on Health Systems Strengthening activities, while \$1 million (12.3%) was spent on supporting and improving Strategic Information.
- These findings point towards some degree of allocative inefficiency, with a relatively high level of spending on program management, and particularly high levels of spending outside the country and at national level to administratively support the project. This approach to supporting improvements in service delivery is both expensive and not sustainable in the long run.

The Main Cost Drivers of Project Expenditure

A further look into the expenditure on specific line items reveals the main cost drivers of project expenditure (see Table 10). This assessment provides better insight around the efficiency of resource allocation and use.

Table 10 : Summary of Cost Drivers (FY 2013 and FY 2014)

| US \$ | Exp FY 2013 | % of total Exp FY 2013 | US \$ | Exp FY 2014 | % of total Exp FY 2014 |
|---------------------------|--------------------|-------------------------------|------------------------------|--------------------|-------------------------------|
| Personnel (at all levels) | 3,036,108 | 45.1% | Program management | 4,332,286 | 52.8% |
| Program management | 2,496,396 | 37.1% | Other General/Administrative | 3,667,881 | 44.7% |
| National level spending | 2,239,998 | 33.2% | National level | 3,034,757 | 37.0% |

| US \$ | Exp FY 2013 | % of total Exp FY 2013 | US \$ | Exp FY 2014 | % of total Exp FY 2014 |
|-------------------------------|------------------|------------------------|-------------------------------|------------------|------------------------|
| | | | spending | | |
| Other General/Administrative | 1,576,165 | 23.4% | Personnel (at all levels) | 2,706,406 | 33.0% |
| Training (Site level) | 1,384,811 | 20.6% | Above National | 2,304,243 | 28.1% |
| Travel and Transport | 440,887 | 6.5% | Travel and Transport | 653,922 | 8.0% |
| Above National | 256,398 | 3.8% | Training (Site level) | 612,471 | 7.5% |
| Other supplies (Site Level) | 98,979 | 1.5% | Other supplies (Site Level) | 83,583 | 1.0% |
| Total Expenditure FY13 | 6,737,277 | | Total Expenditure FY14 | 8,211,381 | |

Table 10 shows that the first cost driver is spending on personnel in FY 2013 and program management in FY 2014.

- About 45% and 33% of project funds were spent on Personnel in FY 2013 and FY 2014 respectively.
 - For FY 2013: of the \$3.04 million, about \$1.71 million (56%) is spent on personnel at district level and the remaining is spent at national or above-national personnel.
 -

This finding implies that supporting human resources for health (for provision of HIV/AIDS services) took up a reasonably high proportion of the project funds. Although the project relied on existing structures to deliver services, this level of spending on personnel points to two important issues:

That existing human resources were very inadequate and without additional support directed to personnel, there would be very little achievement in terms of the outputs reported in the districts supported.

That while this approach to supporting the health systems indeed results in achieving excellent health outputs, it may also at the same time cause distortions in the human resource market. We think this may be the case because without additional HR financial support (in the form of allowances), the health system may actually completely shut down. This issue indicates that the DBTA approach is not sustainable without donor support because Government of Uganda may not be in position, in the short to medium term, to increase HR emoluments to the level at which the project has been supporting HR at health facilities.

In interpreting these findings, it is important to note that health care service provision is a labor-intensive process which requires skilled and motivated human resources. Therefore, the issues raised above notwithstanding, it is difficult to achieve reasonable health outcomes without investing in human resources.

- The second cost-driver is “Other General/Administrative” expenses which accounted for 23.4% and 44.7% of total expenditure in FY 2013 and FY 2014, respectively. These general/administrative expenses are incurred under Program Management, Strategic information and health systems strengthening.

- Program management took up about 37% and 52.8% of total project expenses in FY 2013 and FY 2014, respectively. There is a significant increase in spending on program management from \$2.5 million in FY 2013 to \$4.3 million in FY 2014.
 - As noted earlier, this level of spending on program management is not efficient. To make the DBTA approach more efficient, it is imperative to find ways of minimizing “above national” expenditure, but also program management costs at all levels. A more in-depth analysis of what program management entails is recommended.
- Lastly, the DBTA approach had a heavy investment in training which took up 20.6% and 7.5% of total expenditure in FY 2013 and FY 2014, respectively. All training expenses were incurred at district level. In the third and fourth years of the project, we note significantly high levels of spending on training due to the nature of the project. Consistently high levels of spending on training is attributed to the many changes in treatment guidelines for ART and PMTCT, as well as changes in the HMIS systems that have changed several times over the course of the project. This notwithstanding, a more detailed assessment of investment in training is recommended, with the view to ascertain whether the approaches used for the trainings are efficient.

A Synopsis of Unit Expenditure

Results presented in Table 11 point to some degree of technical efficiency for most of the interventions, with the exception of PMTCT where the unit expenditure is relatively higher than the unit costs used for benchmarking. **A quick disclaimer follows however, relating to the fact we should be cautious in interpreting these results.** Firstly, *unit expenditures* are not reflectively of the full cost of providing a services. As such, they should not be compared with unit costs, not matter how much adjustments are made to try and get a comparison of “apples with apples”. But in the absence of any other benchmark, we are making these comparisons.

Table 11 : Summary of Unit Expenditure (FY 2013 and FY 2014)

| | FY 2013 | FY 2014 | Comparison (US \$) | Unit Cost | Source | Manipulation |
|-------|---------|---------|--------------------|---|--|--|
| FBTCS | 146.0 | 183.0 | 198.45 | \$441 as Cost per person on Treatment | PEPFAR | Reduce unit cost by 55% to remove cost of ARVs, drugs for OIs and TB |
| CBCTS | | | | \$497 as cost per person on treatment | Uganda HIV Investment Case | |
| LAB | | | | \$124 cost per person pre-ART | Uganda HIV Investment Case | |
| PMTCT | 304.4 | 217.9 | \$75 - \$122 | \$291.50 Cost per woman receiving HAART | Tanzania (2010): Robberstad et al. | Subtract \$168.64 for Drugs; and possibly \$47 for personnel |
| VMMC | 20.8 | 22.8 | \$19.5 - \$30.55 | \$8.46 - \$18.20 (Kit) \$ 30.55 (PrePex) | Uganda (2012): Kuznik et al. Uganda (2013): Duffy | |

| | FY 2013 | FY 2014 | Comparison (US \$) | Unit Cost | Source | Manipulation |
|--------------------------|---------|---------|--------------------|--|--|--|
| | | | | \$22.65 (Surgical) \$19.50 - \$22.23 (Surgical) | et al. Uganda (2013): Duffy et al. Uganda (2010): Wabiwire-Mangen et al. | |
| HTC | 1.4 | 0.6 | \$1.15 | \$5 Cost per person tested (home based); \$6.4 cost per person at health facility | Uganda (2013): Mulogo et al | Subtract \$1.17 personnel, \$2.53 supplies, \$0.85 training, \$0.7 infrastructure |
| SORP-CSW / FSW | 4.1 | 11.2 | \$9.48 - \$17.40 | \$9.48 cost per sex worker; | Uganda HIV Investment Case (2014) | |
| SORP-KP Other / OVP-PREV | | | \$15 - \$17.4 | \$15 Cost per trucker reached, \$17.4 Cost per fisher folk reached | Uganda HIV Investment Case (2014) | |

Key Lessons Learned

- We note a lack of consistency in allocation of funds between FY 2013 and 2014, with Care and Treatment consistently taking the largest proportion of total project funds, and VMMC taking up the second largest share. The allocation of funds between program areas may be reflective of the project priorities in the different years, which are not necessarily prioritized in the order of the NSP.
- STAR-E has the highest level of spending on Program management. Spending close to 53% of total funds on program management in FY 2014 requires further inquiry and may be indicative of poor management practices.
- Overall, we note that in both FY 2013 and F 2014, the STAR-E project allocated a relatively high proportion of resources (67% and 78%, respectively) to *systems strengthening, strategic information, and program management*, compared to the proportion allocated to support direct provision of HIV/AIDS services. This points to allocative inefficiency and requires more in-depth inquiry.

SUSTAINABILITY

In the context of this evaluation, sustainability was defined as the extent to which there is evidence that programs and initiatives introduced under the STAR-E program were integrated into the institutions and communities with which the STAR-E program was working. As the evaluation team explored the sustainability concept with the STAR-E staff, as well as the district partners, a number of issues became evident;

- The definition of sustainability differed widely across the Program implementation structure, starting with STAR-E management, and going up to the health facility managers and service providers

- At both the district and health facility level, all respondents were worried about the fate of the district HIV/TB services following the end of STAR-E support
- The over-riding sustainability factor is availability of funds
- Technical and institutional capacity is expected to be sustained for some time

In the final analysis, the evaluation team, using the “likelihood for sustainability” approach, looked at a number of selected interventions and categorized them accordingly, as shown in Figure III.

Figure III : Likelihood for Sustainability Ranking for Selected STAR-E DBTA Interventions

| Intervention | Likelihood for Sustainability | | |
|---|--------------------------------------|---------------|-------------|
| | Low | Medium | High |
| Technical skills (To a large extent) | | | ✓ |
| District Based Mentorship | | ✓ | |
| Laboratory Equipment/Infrastructure | | | ✓ |
| Logistics and commodities Management skills | | | ✓ |
| LQAS | | ✓ | |
| Integrated Support Supervision | | ✓ | |
| Procurement of HMIS Tools | | ✓ | |
| Most of the HRH Incentives | ✓ | | |
| Client incentives | ✓ | | |
| Sample transportation | ✓ | | |

Human resource capacity building (both technical and managerial) was considered to have a high likelihood of sustainability in the long run. Once skills are imparted to individuals, they will continue to use these skills even after the project has ended if other conditions remain constant. The same applies to the equipment such as the laboratory equipment which can last longer than the project if there is a mechanism for maintenance. Incentives to staff and clients and sample transportation were considered to have the least likelihood for sustainability. As already noted, some health workers indicated they would withdraw their dedicated services once the allowances are withdrawn.

It is apparent that interventions that focused on individual capacity and skills development had higher chances of sustainability than those that targeted the health support systems for purposes of obtaining rapid results in a short timeframe.

CONCLUSIONS

Having internalized the operations and results of the STAR-E program in light of the program description and the spirit and intent of the evaluation questions, a number of conclusions can be drawn;

- STAR-E to a very large extent achieved the program objectives and Intermediate Results, as laid out in the program description, and most especially the result of increasing availability and accessibility to HIV/TB services.
- Capacity building for HIV/TB services, as well as Strategic Information, was largely at the individual service provider level; less at the institutional level, and least at the district health management level, with a fair chance for sustainability in the medium term

- STAR-E deployed successful program approaches such as the mentoring of service providers in HIV/TB service provision. At the same time, approaches like direct provision of monetary incentives to the service providers were also used to generate rapid service delivery outputs and results, which weakened the district health systems
- The expected synergy from the STAR-E / DBTA and SDS arrangement did not register significant results. Apparently, the mandate of these partners were based on different premises. Whereas SDS emphasized Performance Based Financing for district led activities, STAR-E financed and took the lead in producing the expected program outputs. The end result did not provide the expected synergistic effect in strengthening the decentralized health systems.
- Integration of Services: While the DBTA/STAR programs supported and enhanced the introduction of all aspects of HIV/AIDS care into peripheral health services, there are no indicators on which to base an examination of an increase in over-all health outcomes.

It would therefore be reasonable to conclude that though the STAR-E program was successful in terms of meeting the requirements of its technical assistance contract, the program design, which was largely facility and service delivery output focused, with minimal health systems strengthening, did not adequately address the needs of a comprehensive District Based Technical Assistance (DBTA) program.

LESSONS LEARNED

A number of lessons were learned from the STAR-E evaluation exercise;

Innovative approaches like onsite training and mentorship significantly strengthened the capacity of local government health service delivery structures to improve access, availability, utilization, quality and coverage of HIV/TB services.

From a policy perspective, the functional support provided by STAR-E to a cluster of districts provides evidence that a “Regional” supportive supervisory and mentoring team can go a long way to improve the functionality of district health systems

The use of performance based financing for Civil Society Organizations (CSOs) is a practical approach to enhance the demand side of health services utilization.

Having more than one mechanism in a DBTA arrangement, without synchronizing their mode of approach, does not necessarily result into synergies for the betterment of the district health system.

RECOMMENDATIONS

In order to use this evaluation exercise as a Learning and Adapting opportunity, the evaluation team is making the following recommendations;

- District Based Technical Assistance should be provided through ONE main mechanism that can holistically address the district health sector TA needs for effective institutional and health systems strengthening.
- In order to achieve the desired results from a DBTA program, the capacity of District Health Teams should be strengthened and supported to enhance the functionality of the district health systems.

- The value of LQAS as a Strategic Information tool for district management and evaluation purposes was well-established. There is need to work with the district Local Governments to progressively institutionalize support for the LQAS.
- The provision of monetary incentives to health service providers should be channeled through the management structures of the district health system to enhance accountability and sustainability
- As part of the exit plan, STAR-E should allocate a vehicle to each district to facilitate their health sector supervisory function

ANNEX I: PERSONS MET AND INTERVIEWED

| NAMES | POSITION/ Titles. | |
|--|-------------------------------------|--|
| STAR-E MANAGEMENT TEAM | | |
| 7. Edward Ssemafumu | COP STAR-E (Out-going) | |
| 8. Bud Crandall | COP STAR-E (In-coming) | |
| 9. Peter Dungu. | D/COP STAR-E | |
| 10. Daniel Waswa | Contracts Manager | |
| 11. Paul Lusoke | Director Finance and Administration | |
| 12. Francis Wagasami | Director Monitoring and Evaluation | |
| MBALE DISTRICT HEALTH TEAM (11/11/2014) | | |
| 9. Dr. John Bosco Wanyai | DHO | |
| 10. Madoi Ayub | DHI | |
| 11. Luwano Rogers. | Biostatistician | |
| 12. Jennifer Wandawa. | DNO | |
| 13. Waniale Paul. | District Drugs Inspector | |
| 14. Madaya Patrick. | HMIS/Focal Person | |
| 15. Ochieng Galex. | District Vector Control Officer | |
| 16. Nirema Fatuma. | Stores Assist | |
| Namwanga health center IV (13/11/2014) | | |
| 7. WabuleWarble Lydia | ECN | |
| 8. Nambozo Saphira | EIN | |
| 9. Masawi Harriet | HIA | |
| 10. Stephen Orena | Lab. Technician | |
| 11. Akello Edith | ELM | |
| 12. Sakwa Jane | SCO | |
| BUFUMBO HEALTH CENTRE IV STAFF (12/11/2014) | | |
| 4. Kabuya Miriam | Clinical officer in charge | |
| 5. Rosemary Achieng | Nursing officer PMCTCT focal person | |
| 6. Kusasira loyce | Senior nursing officer | |
| NAKALOKE HC 3 TEAM (12/11/2014) | | |
| 5. Wangiro Rehema | I/Charge and HIV Focal Person | |
| 6. Logose Perusi | PMTCT Focal Person | |
| 7. Samuel Wafenya | Lab Assistant / HCT Focal Person | |
| 8. Arikod Mary | QI Focal Person | |
| BUSHIKORI CHRISTIAN CENTRE (13/11/2014) | | |
| 4. Levert Wafula | MO | |
| 5. Namwano Recheal | R/A | |
| 6. Nambuya Oliver | Lab / Microscopist | |
| BULAMBULI DISTRICT HEALTH TEAM (17/11/2014) | | |
| 10. Nebuza Isaac | SCO/DQITR | |
| 11. Waniaza Stephen | ADHO/ MCH | |
| 12. Dr. Mulongo Muhamed | DHO | |
| 13. Alele Alfred | N/O / YCC | |
| 14. Kabala Enoch | MO | |
| 15. Woniala Richard | CO / DTLS | |
| 16. Okiror Thomas | L/T | |
| 17. Khankha Stephen | SAA | |

| | | |
|--|-------------------------------------|--|
| 18. 9. Mr. Aloka Aloisius | Chief Administrative Officer | |
| MUYEMBE HEALTH CENTRE 4 TEAM (17/11/2014) | | |
| 12. Mary Abuke | Nursing Officer | |
| 13. Jacob kiplangat | Public Health Dental Officer | |
| 14. Muzaki Jenifer | E/N | |
| 15. Mugide Jackline | E/N | |
| 16. Khandehe Apofia | Clinical Officer | |
| 17. Nandudu Rachael | E/M | |
| 18. Aruto Judith Martha | E/M | |
| 19. Wakhasa Boaz | Askari | |
| 20. Negesa Betty | Porter | |
| 21. Nanzira Proscovia | Porter | |
| 22. Nadunga Filis | Porter | |
| BUGINYANYA HEALTH CENTRE III (18/11/2014) | | |
| 10. Mabonga Caroline | EPN | |
| 11. Alisa Agnes | E/M | |
| 12. Masete Elise | MCO | |
| 13. Wamulira Anna | PORTER | |
| 14. Wamboza Andrew | MLT | |
| 15. Muzaki Jastine | H/A | |
| 16. Nabukonde Saphiri | N/ASS | |
| 17. Nakabugo Jackline | HIA | |
| 18. Wazemba Francis | Askari | |
| BUYAGA HEALTH CENTRE III (18/11/2014) | | |
| 8. SABILA GEORGE | Linkage Facilitator | |
| 9. AKISA Esther | EIN | |
| 10. Nambozo Ronnah | NA | |
| 11. Walebu Hakim | PORTER | |
| 12. Nambafu Rose | VOLUNTIER VACCINATOR | |
| 13. Matsanga William | ASKARI | |
| 14. Khamiri Benaya | T.B focal person | |
| BUNAMBUTYE HEALTH CENTRE (19/11/2014) | | |
| 12. SEELA Carloline | EN | |
| 13. Namisi John | N/A | |
| 14. Buyi Alex | Askari | |
| 15. Wabuyi James | LF | |
| 16. Gidoi Sulaina | PORTER | |
| 17. Musani Isaac | L/A | |
| 18. Aiki Hellen | S.C.O | |
| 19. Nengone Codes | N/A | |
| 20. Muduwa Salimah | N/O | |
| 21. Toko Manisur Ijagason | HIA | |
| 22. Robert Wangaire | TB/Leprosy Assistant | |
| KIBUKU DISTRICT HEALTH TEAM (20/11/2014) | | |
| 10. Watuwa Jenipher | NO | |
| 11. Mondo Erick | Coordinator | |
| 12. Ssentongo Gerlad | MSH / STAR E clinical mentor | |
| 13. John Emamu | Capacity building specialist Star E | |
| 14. Byekwaso Julius | Orthopedic officer / EPIFP | |
| 15. Kolyanga John | DTLS | |

| | | |
|--|--------------------------------------|--|
| 16. Lamu Robbert | DSA | |
| 17. Muneko Joseph Paul | DCCA | |
| 18. Opade John Francis | H/ Inspector | |
| KIBUKU HEALTH CENTRE 4 TEAM (20/11/2014) | | |
| 7. Sango William | Clinical Officer | |
| 8. Yazit | Clinical Officer | |
| 9. David | E/N and Public Health Dental Officer | |
| 10. Taiba Christine | R/Midwife | |
| 11. Sadam | HMIS Focal Person | |
| 12. Byekwaso | Orthopaedic Officer / MMC F/Person | |
| BUSETA HC 3 TEAM (24/11/2014) | | |
| 10. Jackline Mugala | C/Officer I/Charge | |
| 11. Lydia Naula | Lab. Assistant | |
| 12. Monica Kadondi | E/Nurse | |
| 13. Akumuroit Anne | E/Midwife | |
| 14. Enock Padere | Lab. Assistant (Volunteer) | |
| 15. Musibika Beatrice | N/Assistant | |
| 16. Amagoro Veronika | N/Assistant | |
| 17. Kanuku Annette | N/Assistant | |
| 18. Mpuhimba Elias | Porter | |
| BULANGIRA HC 3 TEAM (21/11/2014) | | |
| 6. Mutegule Gideon | Senior Clinical Officer | |
| 7. Beatrice Adangan | Registered Midwife | |
| 8. Muloni George | Nursing Officer | |
| 9. Naguti Amina | Nursing Assistant | |
| 10. Masese Rosette | Nursing Assistant | |
| BUCHANAGANDI HC 3 TEAM (21/11/2014) | | |
| 8. Hellen Adengo | In-Charge | |
| 9. Zenei Stella | Enrolled Comprehensive Nurse | |
| 10. Moses Kapisa | Nursing Assistant | |
| 11. Mulira Amiri | Enrolled Comprehensive Nurse | |
| 12. Emmanuel Kawikizi | Senior Clinical Officer | |
| 13. Agnes Chaba | Student Nurse | |
| 14. Sam Wazige | Clinical Officer | |
| KAPCHORWA DISTRICT HEALTH TEAM (25/11/2014) | | |
| NAMES | POSITION/ Titles. | |
| 8. Abas Margret | Stores Assistant | |
| 9. Bossy Aggrey | Leprosy T.B focal person | |
| 10. Wilson Kiprotich | Biostatician | |
| 11. Obonyo Ofumbi | District Surveillance focal person | |
| 12. Joweti John | DHE | |
| 13. Ekoroi John Robert | Acting DHO | |
| 14. Damba Henry | Deputy CAO | |
| KAPCHORWA HOSPITAL TEAM (25/11/2014) | | |
| 5. Anna Achen | E/Midwife | |
| 6. Martin Chemtai | HMIS Focal Person | |
| 7. Chebandege Anne | E/Nurse / Counsellor | |
| 8. Amadi James | I/C Chronic Care | |

| SIPI HC 3 TEAM (26/11/2014) | | |
|---------------------------------------|------------------|-----------------------------|
| 6. | Wamasebu Timothy | Senior Clinical Officer |
| 7. | Chepop Juliet | R/Midwife and I/C MCH |
| 8. | Kusuro Jackline | E/N |
| 9. | Mwanga Patrick | Nursing Officer |
| 10. | Khayiyi Sarah | Health Inspector |
| TEGERES HC 3 TEAM (26/11/2014) | | |
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| 8. | Katusi Caroline | R/Midwife |
| 9. | Hussein Shifa | E/N |
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| 11. | Chelimo Diana | E/N |
| 12. | Akalo Rose | R/Midwife |
| KASEREM HC 3 TEAM (27/11/2014) | | |
| 7. | Chelimo Willy | N/Officer In-Charge |
| 8. | Arapsiwa Huzairi | Records Assistant |
| 9. | Chepkru | Lab. Technician |
| 10. | Cherop Zam | Vaccinator |
| 11. | Kamarir Sadiq | Laboratory Microscopist |
| 12. | Salim Okeba | Chairman HUMC |

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SECTION B: PULL-OUT 2 DBTA/STAR EVALUATION: STAR- SOUTH WEST

**USAID/UGANDA'S DISTRICT-BASED TECHNICAL ASSISTANCE
(DBTA) MODEL AS APPLIED UNDER STRENGTHENING
TUBERCULOSIS AND HIV/AIDS RESPONSES (STAR) PROJECTS: STAR
SOUTH-WEST**

**Evaluation Team
Dr. Andrew Balyeku and Phyllis Joy Mukaire**

LIST OF ABBREVIATIONS AND ACRONYMS

| | |
|-------|--|
| ABC | Abstinence, Being faithful, Condom use |
| CSO | Civil Society Organization |
| DACC | District AIDS Coordinating Committee |
| DBTA | District Based Technical Assistance model |
| DHIS | District Health Information System |
| DHMT | District Health management Team |
| DHO | District Health Office |
| DHT | District Health Team |
| EGPAF | Elizabeth Glaser Paediatric AIDS Foundation |
| FSG | Family Support Group |
| HC | Health Centre |
| HMIS | Health Management Information System |
| HSD | Health sub-District |
| HUMC | Health Unit Management Committee |
| HW | Health Worker |
| IP | Implementing Partners |
| JSI | John Snow Inc. |
| LMIS | Logistic Management Information System |
| LQAS | Lot Quality Assurance Survey |
| MARPS | Most at Risk Populations |
| MEEPP | Monitoring and Evaluation of the Emergency Plan Progress |
| MIP | Multi Year Implementation Plan |
| MJAP | Mulago-Mbarara Teaching Hospital's Joint AIDS Program, |
| MMHF | Mayanja Memorial Hospital Foundation |
| MNCH | Maternal, Newborn and Child Health |
| MoH | Ministry of Health |
| OI | Opportunistic Infections |
| OVC | Orphans and Vulnerable Children |
| PDSA | Plan-Do-Study-Assess |
| PHP | Private Health Practitioners |
| PLHA | People with HIV/AIDS |
| PMTCT | Prevention of Maternal to Child Transmission of HIV |
| QIT | Quality Improvement Team |
| RPMT | Regional Performance Monitoring Team |
| SMC | Safe male Circumcision |
| UHMG | Uganda Health Marketing Group |
| VHT | Village Health Team |
| VMMC | Voluntary Medical Male Circumcision |

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EXECUTIVE SUMMARY

STAR SW project is part of the USAID/Uganda's District Based Technical Assistance (DBTA) model featuring regional focus in improving access, quality and availability of integrated health service delivery as well as health financing and management. Working in close collaboration with Ministry of Health and through District Health Management Teams, District Councils, health facilities, and communities. The project goal was to increase access to, coverage of, and utilization of quality comprehensive HIV/AIDS and TB prevention, care, and treatment services within district health facilities and their respective communities. The STAR SW project commenced in September 2010 and covered 13 districts in South Western Uganda.

Evaluation of USAID/Uganda's District-Based Technical Assistance (DBTA) Projects, Strengthening Tuberculosis and HIV&AIDS Responses (STAR) Project in South-West Uganda was an external evaluation, commissioned by USAID Uganda. The purpose of the evaluation was to establish the extent of efficiency and effectiveness of the USAID/Uganda's District Based Technical Assistance (DBTA) project model that features comprehensive and integrated service delivery towards improving access, quality and availability of integrated health service delivery as well as health financing and management tailored for specific regions. Integrated regional based health service delivery approaches are a key feature of the current USAID Uganda's Development Objective 3 targeted at improving health and nutrition in targeted populations. This evaluation was to therefore provide key lessons on the implementation process and value of the approach.

The evaluation was conducted in four randomly selected districts of Bushenyi, Buhweju, Mitooma and Ntungamo, two representing old ones and two new districts. Data was collected using Key Informant Interviews (KII) at the district and health facility levels, Focus Group Discussions (FGDs) with PLHIVs and Civil Society Organizations (CSOs), and document review. In addition, Client Exit Interviews were conducted to complement the data obtained through the KIIs and the FGDs.

Major findings

- Three approaches stood out as most successful in STAR-SW namely District led integrated onsite training and mentorship, Evidence-Based Quality Improvement Management and, the Multi-prong community and beneficiary Engagement. The least successful included contracting CSOs as partners, and approaches involving new leadership and management structures. There was no significant difference in approaches used and results achieved for old/established and relatively new/naive districts but rather the intensity of technical assistance
- The SDS granting and the DBTA started around the same time and therefore no transitioning was experienced. However, the evaluation considered the collaborative strengths between SDS and the DBTA as seen for example in improved district capacity to lead and manage service development and expanding district capacity for partnership
- Most of the structures established by the project are deemed sustainable. The notable are districts based trainers/mentors/supervisors as the technical hub for expanding and sustaining service availability and quality improvements; Structures for generating and utilizing strategic information; Quality Improvement Teams; Supply Logistics System and; the community resource networks

- There was no significant difference in approaches but rather the intensity of technical assistance. Significant difference was that new districts compared to the mother districts absorbed technical assistance from the DBTA much faster given that they were low resourced, enthusiastic to perform and ready to be supported.
- In the SDS granting and the DBTA started around the same time and therefore the transition was not felt.
- **On strategic information system:** The technical assistance involved both normative and field program activities. Outputs of the normative support include availing technical forms, methodology and guidelines for data collection, while field program activities involved HMIS implementation, technical backstopping and training of data producers and users in the system, monthly data review sessions, and mentoring and provision of computers and storage.
- **On service delivery:** STAR –SW contributed to improved health service delivery following the MOH national strategy to scale up ART through decentralization of service delivery to lower level facilities. Some areas supported include expansion of services to HCs, strengthened linkages and referral systems with the community, building district health system capacity to identify and implement local best practices, strengthening laboratory support, reducing impact of human resource deficits. Based on available data, there are improvements in service delivery outcomes attributable to the project, but data on ART outcomes was lacking.

Conclusions

In conclusion, the DBTA model was generally effective in strengthening the district capacity to implement decentralized HIV care and ART services. The project made significant contribution to establishing delivery of HIV/TB care services at Health centre level and strengthening the district management capacity especially in areas of planning and in strategic information management, quality improvement management and the delivery of integrated HIV and TB prevention care and treatment.

Lessons Learned

- Most of the bottlenecks to logistics system lie within and can be solved by a district based commodity tracking system for monitoring supply orders and stock levels at service delivery points and this can minimize/eliminate stock-out levels.
- Onsite training and mentorship significantly expand service delivery capacity sustainably.
- Data and GIS map products can be used effectively for policy and programmatic decision-making on a regular basis.
- FSG is appreciated as a personal support system and attracts over 95% PMTCT follow-up attendance compared to ART clinic days.

Recommendations

- Invest in developing the leadership capacity of existing health management committees at the health facility level.
- Funding for the implementation of LQAS methodology should be a multi-departmental approach in the district, with the participation of CSOs and other development partners.
- Strengthen and expand data collection and recording systems to generate data for supervision, monitoring, and evaluation of integrated HIV, TB and FP services.

- Re-design and invest in expanding district capacity for quality improvement management to include a community-based feedback system for monitoring client satisfaction
- Invest in learning the feasibility and acceptability of integration and determine investment in a DBTA integration model
- More investment in male involvement particularly for eMTCT and within decentralized ART
- There is need to carry out a more rigorous impact evaluation study to assess the evidence of integration of HIV services on pre-ART care

EVALUATION PURPOSE AND EVALUATION QUESTIONS

Introduction

STAR SW project is part of the USAID/Uganda's District Based Technical Assistance (DBTA) model featuring regional focus in improving access, quality and availability of integrated health service delivery as well as health financing and management. STAR SW was implemented by Elizabeth Glaser Pediatric AIDS Foundation (EGPAF) in partnership with John Snow Inc. (JSI), Mulago-Mbarara Teaching Hospital's Joint AIDS Program (MJAP), Uganda Health Marketing Group (UHMG) and Mayanja Memorial Hospital Foundation (MMHF). Application of the DBTA method was designed to strengthen decentralized service delivery for improved uptake of quality HIV/AIDS and TB services. The project commenced in September 2010 and covers 13 districts in South Western Uganda namely; Kisoro, Kabale, Kanungu, Rukungiri, Ntungamo, Busheya, Isingiro, Kiruhura, Ibanda, Sheema*, Mitooma*, Rubirizi* and Buhweju*.

Evaluation Purpose and methodology

The purpose of the evaluation was to establish the extent of efficiency and effectiveness of the USAID/Uganda's District Based Technical Assistance (DBTA) project model that features comprehensive and integrated service delivery towards improving access, quality and availability of integrated health service delivery as well as health financing and management tailored for specific regions. The evaluation assessed the viability of the DBTA method's application with reference to (i) Improved Capacity and Sustainability, (ii) Improvements in Service Delivery, and (iii) Evidence of Cost Efficiency in the three STAR program areas.

The evaluation applied mixed methods approach of collecting data which included the use of qualitative and quantitative methods as well as document review. Qualitative data was collected from a total, 27 interviews with STAR SW project Staff, districts officials, supported CSO, government and Private Not for Profit (PNFP) health facilities.

Documentation / Literature Review

The team carried out a comprehensive review of relevant documents, including but not limited to: Work plans, Performance Monitoring Plans (PMP) National HIV and AIDS strategic documents, Project design documents, STAR SW Performance Reports, LQAS reports, Health assessment reports, Project Annual reports, Annual Health Sector Performance Reports, Annual Programme Performance data (APR 2009-2014).

Key Informant Interviews with Stakeholders

Key informant interviews were conducted with key stakeholders at district, STAR SW and health facilities. The purpose of the interviews was to document the views, experiences and opinions of the district leaders, health managers, STAR SW staff, and service providers, on the efficiency and effectiveness of the District Based Technical Assistance project model as implemented by STAR-SW

Focus Group Discussions (FGDs)

Focus Group Discussions were conducted with Civil Society Organizations (CSOs), Organizations that received both technical and financial support from STAR-SW project and currently implementing interventions in all the districts covered by the project, members of PLHA networks and family support groups and young adolescents. A total of 10 focus group discussions (FGDs) were held with clients, community support groups, and health workers and,

* Newer districts established after the STAR SW had started.

client exit interviews conducted in the 7 sampled facilities to validate and reinforce the information that was collected through the FGDs.

Client Exit Interviews

Client exit interviews were conducted with clients in sites where the KIIs and the (FGDs) were conducted. The purpose of the client exit interviews was to validate and triangulate the KII and FGD findings with specific reference to the extent to which the support by the STAR-SW program contributed to improved health service delivery in the program areas.

Sampling of Districts and Facilities

Four districts were sampled for the in-depth assessment namely Bushenyi, Ntugamo, Buhweju and Mitooma. In each sampled district two health facilities were selected for inclusion in the evaluation, one HC IV and one HC III.

A random sampling approach (lottery method) was used to select two districts per cluster (Old and New). This represented one in every three districts in each cluster (33%) and resulted in a total of 4 districts in the sample. At the district level, Health Centres 4 and 3 were prioritized in the selection process, with the aim of having at least 4 health facilities per district. The selected districts and health units are shown in Table I.

Limitations and constraints

Although the evaluation sought to understand USAID/Uganda DBTA's contribution to strengthening district capacity to manage HIV and TB prevention, care and treatment, its attribution to the overall health outcomes cannot be singled out given that government and other development partners also make significant contribution to the health sector. Data collection process was also constrained by lack of a partner CSO in sampled districts to enable comprehensive assessment of the CSO contribution to the DBTA model.

STAR-SW Program Background

The STAR-SW project was designed to provide a comprehensive service package of HIV counseling and testing (HCT), prevention of mother to child transmission (PMTCT), HIV/AIDS chronic care services, HIV/TB collaborative services, community based directly observed TB treatment-short course (CB-DOTS); and antiretroviral treatment (ART) for both ARV-naïve people living with HIV/AIDS (PLWHAs) and the transitioned TREAT and TASO ART Clients. This program was to foster the development of strong partnerships with other district-based TB and HIV/AIDS programs in the region in order to improve coordination; expand the referral network; and ensure more efficient use of resources. It was also to strengthen the capacity of civil society organizations in the region to advocate for efficient and effective service delivery within the health sector through direct technical support and grants. The grants to local governments districts were through the USAID/Strengthening Decentralized Services (SDS) mechanism to cater for the management activities while STAR SW provided assistance for the technical components.

STAR SW project's five objectives were: (1) increase uptake of HIV/AIDS and TB services, (2) strengthen decentralized service delivery systems for improved uptake of quality HIV/AIDS and TB services, and institutionalizing LQAS at district level, (3) ensure quality HIV/AIDS and TB services delivered in all supported health facilities and community organizations and activities, (4) establish or strengthen networks, linkages and referral systems within and between health facilities and communities and, (5) increase demand for comprehensive HIV/AIDS and TB prevention, care and treatment services.

FINDINGS

Improving Capacity and Sustainability

Effectiveness of Capacity Strengthening Approaches Used

What are: (i) the most successful and (ii) least successful approaches applied by STAR-SW towards strengthening the institutional, management, and human capacity of CSOs and local governments to deliver health services? What are the facilitators and barriers of these approaches to achieving results? Are the approaches used and results achieved for old/established and relatively new/naive districts significantly different?

The approaches identified as successful are those processes by which the DBTA model effectively: (i) transitioned responsibilities and authority to district and facility teams for greater sense of ownership and sustainability; (ii) promoted evidence-driven processes for strengthening health systems in local government and CSOs, to perform core functions of HIV and TB service delivery sustainably; (iii) facilitated district-lead effort for change in health outcomes; and (iv) promoted partnerships between public and private sector. In addition, approaches considered most successful are those judged by the evaluation team to exhibit three or more of the above characteristics of effective capacity building under each of STAR SW objective.

Most successful approaches applied by STAR-SW towards strengthening the institutional, management, and human capacity of CSOs and local governments to deliver health services

The three most successful approaches as identified in STAR-SW include onsite training and mentorship, Evidence-Based Quality Improvement Management and, the Multi-prong Community and Beneficiary Engagement.

District led integrated onsite training and mentorship: This was applied as an on-going capacity building processes rather than one-time event. The mentorship process was 'person-centred' and thus a 'holistic' approach to capacity building. Although the approach was task-oriented, skills-focused, directed and time-bound, it also focused on open-ended personal development of district managers and service whenever gaps emerged such as the frequent changes in national ART clinical guidelines or policies.

"We have gained from on job training and mentorship. We started ART just last year in 2013 and have graduated clients to ART - 312 adults and children..."

(Service Provider HC III)

"Before STAR intervention there was no HIV enrolments, in the ART clinic we had one technician, one nurse, after the training staff can now freely rotate and perform other duties"

(Service Provider HCIV)

Mentor teams were established at the regional, district and Health Sub district (HSD) level, teams. The teams addressed managerial areas such as ART data management and service organisation and, clinical performance. The criteria for selecting and developing clinical mentors included proven prior experience in technical aspects of service areas which are included in the program under DBTA support. To establish rapid local adaptation capacity, STAR SW

"Mentorships and coaching in financial management, exhibited respect for each other that made it easy for both partners to willingly and transparently share information, and getting constructive feedback. There was mutual respect for each other"

(FGD CSO)

established a regional team of clinical mentors as no single district could possibly come up with a team. Working alongside STAR SW technical team, the regional team also established district clinical mentorship teams selected from different facilities and included clinical officers and nurses.

Through the mentorship approach, skills health workers were equipped with skills to manage clients that were transitioned from high volume stand-alone sites to HC III and II level; The approach also facilitated facility managers and service providers to achieve higher service delivery quality through small continuous improvement processes under the STAR program.

“We has seen improved baseline CD4 from 34% to 95%; update CD4 from 66% to 95% and have enabled streamlined services for follow up”

(Service provider KII HCIV)

“We have been able to maintain 27 mothers with increased quality of data from 0 to 54%....routine visits are at 85% now”

“160 exposed babies were graduated to negativity and this was 100%”

(Service provider KII HCIII)

Combined with on-site training, follow up mentorship enabled the health workers to perform multiple tasks hence produced multi-tasked clinical teams at high volume health facilities. from only two skilled service providers to seven per site. This approach ensured practical learning that was tailored to the real working context, with minimal disruption in service delivery. The mentorship sessions also addressed technical gaps identified during supervision, clinical audits and performance data review session/meetings, albeit under full facilitation from the project. In all KII interviews, mentees at district and facility level and from CSOs identified mentorship as the main process through which they learned and mastered skills/practices.

Operationalization of Quality Improvement (QIs) in Health Facilities:

STAR SW built the capacity of district and health facility staff in Quality Improvement. Quality Improvement Teams (QITs) were established to assess the risk and plans for quality improvement in the health facilities thus improving HIV prevention and treatment outcomes. QI was an analytical approach of using routine data to enable health facility staff have better understanding ways of addressing HIV prevention, care and treatment strategies for PMTCT and ART clients, as well as TB affected patient.

Using data to identify risks, gaps, and plans to make improvement was a successful approach which contributed to increased: medical benefits of HIV care and treatment such as adherence to treatment; and the number of individuals with HIV who adopt and sustain HIV risk reduction behaviours.

STAR-SW demonstrated that strategic information and data was the driving force behind quality improvement management and it yielded significant outcomes in HIV and TB services. QITs at district and facility level reviewed performance data on a regular basis, and identified indications of risk or gaps in the management of quality of services. Performance was monitored based on the six quality improvement

“We refer to data to establish areas that need the services such as areas with high HIV prevalence, many children and hence provide the necessary services (e.g. outreaches) basing on the number of clients concentrated in area.”

“.. the dash board was yellow, and now we see improvement it is green”

(Service provider KII HCIV)

“We has seen improved baseline CD4 from 34% to 95%; update CD4 from 66% to 95% and have enabled us to streamline services for follow up”

“We have been able to maintain 27 mothers with improved quality and increased use quality of data from 0 to 54%....routine visits are at 85% now”

(Service providers KII HCIII)

domains which include safety, effectiveness, and efficiency, client-centeredness, timely and equitable. The Service quality topics, for which evidence was applied included: CD4 assessment follow-up, mother-baby follow-up, TB detection and completion rates, ART retention rates, nutrition assessment for HIV positive infants etc.

During the implementation tenure, STAR SW conducted a number of preparatory undertakings such as building the capacity of district mentors and service providers in data quality management through onsite training and mentorship. Introduced monthly performance reviews and learning sessions at district and facility level to inculcate the culture of using evidence to plan improvements for better health outcomes. The QI performance review meetings involved clients, peer educators, facility staff coming together in identifying gaps and plan facility level improvement steps. Additionally, Clinical Audits were also conducted and these were a source of information for discerning shortfalls in key quality of care indicators, since these are not routinely collected from the HMIS. The results from the clinical audits were also used to develop site-specific action plans to address the gaps and feed into the mentoring plans of the district mentoring teams. Consequently, client referral and follow-up mechanisms were streamlined and other specific quality improvement interventions were identified and supported.

Community and Beneficiary Engagement: This was critical in creating demand as well as the effective referral and follow-up mechanisms for TB, ART, PMTCT and HIV prevention services. Engagement with the community included: conducting community partner mentoring, supporting creation and functioning of Family Support Groups (FSGs), VHTs, Mentor-Mothers, community leaders and piloting community quality improvement teams. The use of existing community structures in the STAR SW region enabled the community to increase demand for HIV/TB services. They also supported the strengthening of a complete and effective referral system in the different areas of operation.

The project supported districts to organize outreach and community service delivery platforms, including family health days, six-tent activations and moonlight clinics. The innovative methods enabled the delivery of integrated health service packages. Service data from STAR SW reports indicates a relatively effective method of reaching adolescents, men and MARPs who may not have utilized health facility services. In addition, the use of religious leaders was another means of championing and mobilizing for Voluntary Male Medical Circumcision (VMMC) camps/outreaches reaching more clients (95%) than static services (5%).

Least successful approaches to strengthening the institutional, management, and human capacity of CSOs and local governments to deliver health services

Contracting Civil Society Organizations (CSOs) without engaging the district: The CSOs were identified through a competitive process and the selection and contracting was by STAR SW without the input of district authorities. Notably, STAR SW did not nurture an enabling district environment for civil society to sustainably participate in routine district or facility coordination, planning and performance assessments. Although CSOs played a critical role in implementing and delivering results for none facility-based interventions like targeting MARPs and adolescents, the effort was not an integral part of the district program supported by STAR SW. Separate coordination, planning and performance review meetings, specifically for CSOs were convened at STAR SW offices and the reports were submitted to STAR SW and not the districts. Under these circumstances, the CSOs engaged by STAR SW thus acted as an extension to the project rather than as a partner to the district health system.

Creating new leadership and management structures STAR SW introduced regional structures such as regional mentors, trainers, strategic information committees and commodity tracking system which are not linked to the district/ Ministry of Health (MOH) known structures such as Regional Performance Management Teams. In addition, in most districts QITs, VHTs and FSGs are not fully incorporated in official management or/and governance structures at the district level and depend on SDS grants. They are not likely to continue beyond STAR project funding. Furthermore, the evaluation observed that management of STAR supported structures, for HIV/AIDS care and treatment were not linked to official decentralized HIV/ADS coordination structures like the District, sub-County and Parish AIDS Coordinating Committee (D/S/PACC).

Although STAR SW successfully used regional mentors, trainers, committees and a commodity tracking system, the DBTA model had no provision for such regional arrangements within local government or MOH structures. Operations of such structures depend on project support and phasing out STAR funding renders them unsustainable

Facilitators and barriers of these approaches in achieving results

Facilitators:

A Conducive HIV/AIDS Policy framework

There is a national HIV/AIDS policy in Uganda. The project and the district staff were well guided in terms of what was required of them. The project technical team with support from Ministry of Health (MOH) and the DHTs was well placed to respond to any changes in the policies and implementation guidelines.

- Existence of MOH led initiatives, policy frameworks, HMIS, Web-based supply ordering system, clinical guidelines, training curricula and monitoring and evaluation tools
- Working in partnership with other USAID Implementing Partners (IPs) like SDS, ASSIST, TRAC TB, and SPRING enabled STAR SW to secure additional expertise, tools and training materials. This helped to leverage resources hence increased availability and access of services.
- Proximity of STAR SW staff to the districts and health facilities, project team coordinated TA provision from within the region and at cluster level two districts assigned to one staff
- SDS coordination of USAID funded partners and provision of district grants ensured effective coordination, supervision and benefit from a partnership approach to provision of technical assistance

Barriers

- Using incentives to improve clinic attendance and to improve facility reporting rates undermined key elements of program sustainability; beneficiary participation and contribution. Providing transportation to PMTCT clients and for some SMC clients diminished client's willingness to "invest" in own health. Paying allowances for delivering facility reports as a way of improving reporting rates undermined efforts in developing a culture of public accountability in the public sector. This is a barrier to potential sustainability
- Non-functioning of mandated AIDS coordination committees at district level, leading to an over reliance on the health sector to coordinate what would otherwise be a multi-sectoral response. As a result STAR supported health response not considered or perceived as part of the district AIDS response.

- High levels of HIV related stigma in most communities, implied/mentioned in focus group discussions particularly in relation to attitudes about knowing one's status, partner disclosure, male involvement and spousal communication.
- Human resource constraints at district and at facility level, including staff shortage, turnover, and re-assignments and high client/provider ratios are barriers to the provision of TA by STAR SW. Health facilities with only 6 medical practitioners attended to more than 200 clients on a single clinic day and also attended to managerial and technical duties, in this case service providers were likely not to have time to fully attend and participate in the on-site training. This was also worsened by the challenges of a manual system of maintaining patient records in all the HC IV that were sampled. Findings from FGD with clients also showed that client/provider ratios are high.

Difference in approaches used and results achieved for old/established and relatively new/naive districts

There was no significant difference in approaches but rather the intensity of technical assistance. The new districts were located in hard to reach remote areas, understaffed for both the managerial and technical functions. Although at the time of designing the DBTA, new districts were not yet carved from the old districts, they were a priority in the implementation of DBTA in STAR SW region. Significant difference was that new districts compared to the mother districts absorbed technical assistance from the DBTA much faster. The new districts were more receptive to technical assistance from STAR SW given that they were low resourced, enthusiastic to perform and ready to be supported.

Notwithstanding the above positivity, new districts had limitations in the leadership and management structures when compared with mother districts. They were understaffed and had poor infrastructure. Consequently, STAR SW concentrated on building capacity for service delivery rather than managerial capacity.

Effect of Grant Management Transition

What was the effect of transition of direct implementation of district led health care management activities from the STAR SW project to district grants through SDS?

In the South Western region, SDS granting and the DBTA started around the same time and therefore the transition considered by this evaluation is from collaborative relationship between SDS and the DBTA.

Strengthening district capacity to lead and manage service development: SDS Grants facilitated effective planning at the district level. Working in close collaboration, SDS and the DBTA ensured proper coordination of the planning process in each district, including sharing of approved work-plans, budgets with other USAID funded health and HIV initiatives with district political and technical teams. The districts were also supported to develop Multi-year and annual implementation plans, determining key activities for achieving targets for HIV program.

Provision of Performance based grants: SDS provided performance-based grants to the districts and this supported service delivery coordination within a district and within a region and coordination of USAID support to district health sector program. SDS strengthened the district capacity to manage vital strategic information. The support provided for; recruitment of additional staff at facility level and technical positions in the district planning office, HMIS training that benefited all STAR SW districts, printing and re-production of HMIS reporting

registers/forms, convening coordination meetings for strategic information committees and implementation of LQAS-related activities.

Strengthening of District capacity for managing partnership: SDS coordinated USAID funded activities and contributed to improving district capacity to engage multiple funding sources effectively. The role SDS in the districts promoted alignment of USAID support to districts hence priorities and linkages between partners were aligned. However, weak partnership between districts, CSOs, training institutions, Private Health Partners (PHPs) and non-PEPFER partners still exist.

Institutionalizing the culture of transparent accountability for both results and finances. The ability for districts to manage grants and account transparently while linking financing to performance was a major breakthrough for sustained district leadership for greater outcomes in service delivery.

Sustainability of improving quality, availability and accessibility of HIV/AIDS and TB services

To what extent has the STAR-SW program developed, established and/or strengthened management and technical structures at the local government and health facility levels that will sustainably improve quality, availability and accessibility of HIV/AIDS and TB services?

STAR-SW built capacity in four major areas: capacity of the health workforce, district and health facility ability to generate and use strategic information, effective laboratory services, and community engagement. The extent to which these structures can sustainably improve quality, availability and accessibility of HIV/AIDS and TB services depended on whether the structures, mechanisms, and practices were institutionalized as part of the district health system. It also depended on whether mechanism for feedback was strengthened to incorporate learning and propel locally led improvements in service quality, availability and accessibility.

Districts based trainers/mentors/supervisors as the technical hub for expanding and sustaining service availability and quality improvements: STAR SW initiated districts based teams of trainers, mentors and supervisors who could serve as a hub of technical expertise for expanding and sustaining technical competencies of the health workforce in the district. Each district had a team of five (5) trainers and twelve clinical mentors (12) from both district and health facility levels. Trainers managed training activities for newly introduced technical approaches/aspects and this was followed by post-training mentorship by mentors responsible for the respective health facilities. This was also integrated with support supervision by district health teams. This structure was mainstreamed in the district health service system and each respective health facility had the capacity to sustain on-site training and mentorship. On average, the structure supported development and maintenance of teams of seven to eight multi-skilled service providers at 346 HC IV and III. It is anticipated that after the closure of STAR SW the structures would continue hence sustainability.

Structures for generating and utilizing strategic information: Structures for generating and utilizing strategic information include Strategic Information Committees, LQAS teams, quality improvement teams, district-based logistics supply teams and linkage facilitators in each of the STAR SW districts. STAR SW focused on building skills for different people involved in the generation and utilization of strategic information. Notably is the capacity building for the district staff in the application of Lot Quality Assurance Sampling (LQAS) methodology. STAR-SW District LQAS Teams were established in each district with over 400 health workers trained in LQAS concepts, principles, data collection and analysis. The idea of District-Based

strategic information committees (SIC) was good as long as the leadership and composition of the committee is predominantly members of the district local government. The role of SIC was mainly to build capacity for generating quality data for the DHMIS2, coordinating introduction and distribution of data collection materials, oversee monitoring of data quality, and overseeing performance data reviews.

Quality Improvement Teams (QITs):

Quality improvement teams as a structure that might assume leadership and management of quality improvement strategies at district and facility level as long as they are sustainable. Except for Bushenyi

district where QI teams are incorporated in the District Health Team (DHT) management and coordination meetings, there is a likelihood of sustainability. Other districts however treat functions of QI teams as activities that address only HIV and TB issues and this brings to question their sustainability. Similarly, linkages of facility QITs to facility management Committee are still weak.

Supply Logistics System: STAR-SW improved supply chain management in the region by establishing district logistics teams to coordinate ordering of supplies, monitor availability of supplies and coordinate the redistribution of excess stock across facilities, Capacity of health workers in forecasting, quantification, stock management and timely ordering via the Web-based ARV Ordering and Reporting System (WAOS) was strengthened. The project facilitated and provided technical assistance to all districts in the region in rolling-out the Web-based ARV Ordering and Reporting System (WAOS). As a result of the improved coordination and hands-on-TA the proportion of sites that reported stock-out of HIV commodities reduced in FY 2014 with an average of less than 2% sites reporting stock out of HIV test kits and ARVS during the last six months period (FY 2013-2014 annual report).

Strengthening community resource networks; the project used and worked through the existing community structures such as VHT structures, Peer educators, expert clients, VHTs and Family Support groups to support home and facility based HIV services. These helped to deliver effective referral services at community and health facilities. These were often tracked through the use of MoH referral forms and ensuring that all referrals from the community are appropriately received and directed to different service points. Through structured meetings that are convened at health facility provided an opportunity to discuss barriers to HIV/AIDS service access and quality as well as remedial actions. Such meetings include VHTs' Quarterly review meetings and FSG monthly meetings. Improvements resulting from these meetings include; improvement in Mother-baby pair follow up, improvement in the use of referral forms, and mobilizing spouses. However, it is not likely that VHT quarterly review meetings and FSG activities will continue once STAR phases out as their facilitation is from project support and not the district system.

Strategic Information Capacity Development

What technical capacity in strategic information have the STARs developed, built and/or strengthened? Where has this capacity been developed, built and or strengthened? How is it manifested/demonstrated? How sustainable is this capacity after the STARs' exit?

"LQAs has been very useful and we have often referred to the information in our planning and budgeting".

"... data collected helped the district team to analyse and plan, for example HIV will be streamlined in district work plan, we have to recruit more workers to extend services"

"Results collected by LQAS help us in planning because it is evidence based as compared to HMIS development plans. This helps in resource allocation"

(KII DHT)

Technical capacity in strategic information STAR SW developed, built and/or strengthened

Use of the Geographical Information System (GIS):

District resource mapping provided direct evidence for geographic clustering of HIV affected populations across the respective districts, providing strategic information for identifying priority geographical areas where MARPs are located and where clients who were being transitioned from JCRC and TASO could

be served. STAR SW used GIS mapping to secure geographical data to improve efficiency in ART and HIV prevention programming. The geographical structure of HIV affected population in the region is ultimately a consequence of the drivers of the epidemic and the population susceptible to the infection. The adjacent excerpt depicts experience in utilizing strategic information from the mapping exercise, to particularly improve efficiency in programming.

“According to MOH policy ART sites are at Hospital, HC IV or HC III.... but when we analyzed data from mapping, we realized that there were many clients from a location with an HC II..... the district decided to establish an ART site and MOH agreed”

Capacity building in data management; STAR-SW worked in close collaboration with MOH and SDS to strengthen implementation of the National Health Information System. Trainings were conducted for district-based Biostatisticians, HMIS focal persons, PMTCT focal persons, DHOs and health sub-district records officers in revised tools for the HMIS and in how to use and maintain the new DHIS2. The DHOs were trained to oversee and support biostatisticians in data entry and analysis. STAR SW supported each of the districts to reprint the required HMIS tools and any forms used in documenting various aspects of service delivery. In addition, STAR SW supported the rolling out of the Patient-level electronic medical record system (MOH Open-MRS) in 17 High volume facilities. As a result there was quicker retrieval and access of patient medical records.

Application of LQAS methodology: District staff were trained in the application of LQAS methodology. Among the LQAS processes the district team participated in included conducting training, data collection, data analysis and dissemination. As a result LQAS findings were used to generate district specific information on a number of HIV service delivery outcome indicators.

Other strategic data processes/efforts at district level: These entailed establishment of capacity to coordinate and oversee generation and use of strategic information, creation of Strategic Information Teams (SITs), commodity tracking system, and institutionalization of HMIS data review and feedback processes, and district and facility level platforms for reviewing performance, and opportunities for learning from each other.

Manifestation and Utilization of Strategic Information

Strategic information was fundamental to the delivery of effective decentralization of ART services delivery. Quality improvements management in STAR-SW was data driven. At the time of the evaluation, the districts had capacity to collect quality data and use it in different ways to get the systems to realizing outcomes as evidenced in the data used in the monthly data management meetings and regular performance review sessions. During the data driven meetings, the facility HMIS focal persons,

“... the monthly data review districts meetings ensure that all facilities complete their summaries, including internal data quality assessment on time” STAR-SW KII

“I have used LQAS information for accountability during district council meeting” DHO

work as a team to identify and solve many issues affecting the quality of data in DHIS2 (completeness, integrity, reliability, timeliness and completeness) and thus identify ways of improving.

In addition, STAR-SW supported quarterly data and performance reviews at the district level. These meetings are attended by health workers from all implementing sites in each district and focused on reviewing quarterly data, identifying best practices that could be disseminated to other sites; identify performance gaps and developing action plans. This was a platform for enhancing collaborative learning.

Strategic data was used at district for the annual performance assessments. The data is used when developing District Implementation Plans, and other health service delivery programs beyond HIV and TB. In Mitooma district, LQAS data showed poor performance in sanitation and the district council formulated a by-law to improve community response to WASH interventions.

Sustainability of Strategic Information Management Capacity

Sustainability of district capacity for strategic information management, under STAR depends on sustained demand for and utilization of the data generated and having a broad range of investors or data users. Current use of strategic data generated with support of the DBTA is limited to the health departments and not by district and sub-district district civil and political leadership. Though data is disseminated widely in reports and dashboard, utilized to identify and address program implementation or performance challenges and constraints, there was little or no evidence of how data informed programming or policy. There were also no tactical/strategic changes made in programming HIV and TB prevention, care and treatment.

There seemed to have been no effort, over the life of STAR-SW, to solicit strategic information on client satisfaction. The findings from the FGDs and the client exit survey pointed to a number of areas of dissatisfaction that the project could have attended to. The concerns were expressed as: long client wait time, crowded clinic sessions, clients not getting services on appointed dates - decision to service a few clients on a particular day even when many have turned up; limited staff who get tired of long lines, lack of drugs/medication at times; client' files are missing; not receiving treatment at the point of diagnosis; CD4 machine not in working condition and consequently clients missing their treatment schedule; and not finding service providers at referral points.

Furthermore, the challenge of sustaining capacity for strategic information management is such that the majority of the strategic information and data products of STAR-SW are predominantly related to HIV/AIDS and TB programs. There is very little on other health services and the integrated approach of service delivery under the DBTA. The Strategic information generated by STAR SW at district and facility level was predominantly used in driving service quality improvement processes, annual planning of the health response for HIV and TB programs. LQAS and other strategic information are used more for accountability to top district officials/for a rather than in making decisions. No other sector or development partner is contributing to producing strategic information. Though districts feel they own the LQAS, they insist that they have no financial resources for its sustenance arguing that monthly DHO budget is approx. 19m, much less than the cost of one LQAS application (Approx. 20m).

Other potential limitations to sustaining capacity for strategic information management are: the exclusion of the private sector in the whole institutionalization of LQAS as a management tool

yet they are key stakeholders; application and utilization limited to the health sector; and that financing is only from USAID and no any other development partner.

Service Delivery

Impact on Service Delivery

How has the support by the STARs contributed to improved health service delivery? What are the Service delivery outcomes attributed to the DBTAs

STAR –SW Contributions to Improved Health Service Delivery

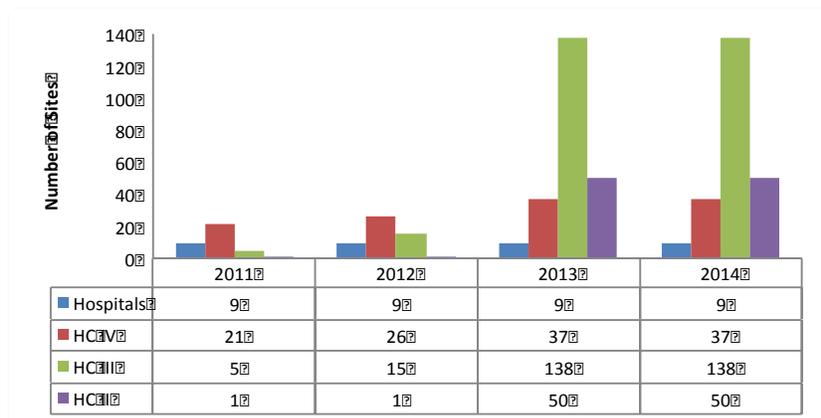
The DBTA supported and contributed to MOH national strategy to scale up ART through decentralization of service delivery to lower level facilities. This strategy enabled eligible clients to be initiated and maintained on antiretroviral therapy at HC III and II levels. This in effect would increase access to care, improve health outcomes, and enhance retention in treatment. The evaluation observed that the support to various districts through STAR SW significantly contributed to improving health service delivery in the following ways:

Decentralization and expansion of ART services delivery to lower level facilities:

STAR SW supported the accreditation of a number of

Figure 3: Number of ART sites accredited by Year health

services in the districts to enable increased access and utilization of comprehensive HIV and TB services (See Fig 1). The number of health centers accredited to provide HIV and TB services increased from 27 to over 215 in the four years thus availing services closer to the community.



STAR SW assisted facilities

to meet nation standards for providing HIV/TB and ART services. The proportion of facilities complying with TB/HIV and ART national standards increased from 63% and 43% respectively in 2010 to 100%. This was further evidenced with findings from the client exit interviews where 79% of clients reported that they found it easy to access and utilize HIV/TB services in the district. Despite the efforts, clients from the hard to reach areas still reported long distance as one of the challenges they face which is also characterized with the high and an affordable costs of transport.

Strengthening linkages and referral systems with the community: Working with community structures such as the VHTs, FSGs, mentor-mothers, Six-Tent camps, and peer educators increased availability of services beyond the health facilities. Linkages between the facility and the different service delivery settings increased access to a comprehensive package of HIV prevention, care and treatment. This also facilitated and streamlined the implementation of an effective referral system where follow-up mechanisms for retention and reduction of loss to follow up especially within the elimination of mother to child transmission of HIV (eMTCT) program. Evidently, over 120,000 clients were referred in 2014 with a referral completion rate

up to 70%. Referrals from the by VHTs and peer educators are mainly for HCT, couple HCT, ART, ANC, PNC, SMC, safe attended delivery, and TB screening across facilities. Coordinated delivery of Community based and outreach services under CSOs, linked to the respective lower level facilities are important service delivery platforms targeting MARPs, Adolescents and men who are not easily accessed by the facility services.

Building district health system capacity to identify and implement service delivery best practices. The support enabled districts and facilities to address challenges faced by providers and patients to increase service delivery integration and efficiency. This was mainly through the establishment of QI processes, data /performance reviews and learning sessions and the Continuation of Response (COR) approach, initiated in 2014. The capacities developed at district and facility level managed to ensure continuous identification, learning and sharing of experiences as the district system capacity gradually improve.

Strengthening laboratory services: Laboratory diagnosis and treatment support was critical to establishing ART at lower HC levels since they totally lacked requisite laboratory capacity. STAR SW supported the districts with the construction and renovation of laboratories, in the districts of operation. In addition, STAR SW supported districts to prioritise the recruitment laboratory staff using SDS Grants on condition that staff is absorbed in the district budget in the long run. The average population per project supported TB microscopy laboratory reduced from 269 in 2010 to 196 in 2014. Supporting the transport resulted in reducing rejected samples reduced to less than 2% of the total samples transported and received at laboratory hubs. In addition, improvement in laboratory services has improved linkages between laboratory and clinical work by reducing turn-around time for CD4.

Reducing human resource deficits: Rapid expansion of multi-skilled service providers and decentralizing HIV related service delivery to lower levels (shifted from hospital-based and doctor-led care, to peripheral clinical officer/nurse-led care) pressure of high doctor/patient ratio. In this regard, task-shifting objectives in HIV care were realized, a benefit from on-site and mentorship of service providers including community-based support agents.

However, critically weak was the public-private partnership strengthening. There was little effort to leverage the private health sector in scaling up services especially in populations not accessing the supported sites. The benefits of leveraging the private sector are high especially in light of finite donor resources.

Maximized benefit of integration: Services were integrated when same service providers offered more than one service during a single contact with patient, through referral of clients for services not offered at point of contact but is within same facility, accompanied clients from point of contact to another unit, referred clients to another facility. Referrals were followed and documented/recorded as effective only when clients got the services

Linkages with other health services:

Working in partnership with JSI led SPRING project, STAR SW supported the integration of nutrition services into the delivery of routine health services using the Nutrition Assessment, Counselling, and Support (NACS)

“When you come for PMTCT and have other complaints such as pains, fever, cough they do give you treatment..... They also tell us about Family Planning, TB and teach us a lot of things about nutrition and income generating activities, child health and share experiences amongst ourselves.”
(FSG FGDs)

“At community level we offer a package of services and the demand of services are overwhelming as a result of Integration that has helped clients to receive services at a one stop over and in one visit”
(KII DHO)

“STAR supported our organization to develop a policy framework and HIV is now integrated in all health care in all facilities. Integration is done through the peers, VHTs, village workers who are trained and given a full package in Busingiro as a result of integration of services resulted into 86 babies being graduated with positive mothers”

(CSO FGD)

approach. More than 175 health workers were trained in the MOH NACS curriculum to integrate the NACS approach in ANC and ART clinics. Service providers at health facility level III and IV were mentored in improving delivery of both HIV preventative and treatment-oriented nutrition services. STAR-SW also supported introduction of data management measures in this program area and introduced simple data collection tools, scorecards, and register adaptations to capture nutrition service delivery data. To link this integration to quality improvement efforts, all District QI teams were oriented on nutrition indicators to ensure that both Nutrition Assessment Counselling Services (NACS) and the PHFS are part of the improvement plans. Clients, service providers and CSOs shared their experience shown in the excerpt.

Service Delivery Outcomes Attributable to STAR SW

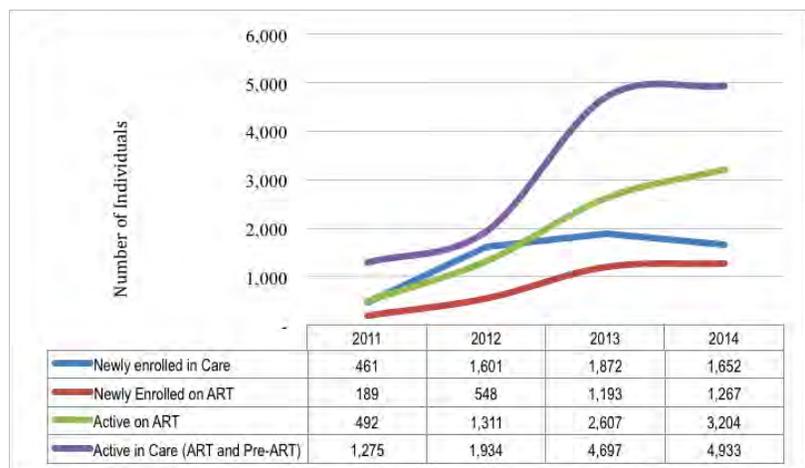
Following national rationalization of HIV/AIDS partners, STAR SW was by the major partner in South Western districts implementing the ART and HIV care expansion and decentralization services. Therefore, most of the outcomes in the project districts assessed may be considered attributable to STAR SW technical assistance support

Rapid increase in ART Uptake: There was an increase in the number of newly enrolled individuals on ART by almost 5 fold, from 3,600 in 2011 to over 17,000 by September 2014. Data from high volume facilities showed marked improvement in the newly enrolled clients for Care and ART (see Fig 2).

Figure 4: Trend in Some ART Service Access Outcomes

The increase contributed to by the national Test and Treat policy together with revision of ART eligibility threshold to <500 for adults and all children under 14 in July 2013.

Currently, lower level Health centers enrolling more new clients for HIV care and Treatment services compared to the hospitals hence increased availability and accessibility of health services. Reports from the PEPFAR annual programme reports



showed an increase in the proportion of new patients enrolling in HIV care in the region, at Health Centers which doubled from 44% to 88% between 2011 and 2014.

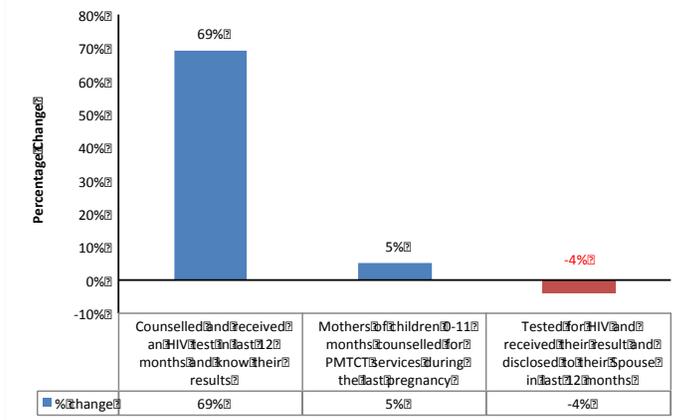
Reduction in ART retention: Although testing, there was improvement in the coverage for HIV care and treatment services in the region, significant numbers of HIV-positive individuals still drop out of HIV treatment. The proportion of clients known to be alive and on treatment 12 months after initiation of antiretroviral therapy reduced from 98% to 89% between 2011 and 2014 thus signifying challenges in the retention of clients in care and treatment.

Improvement in HIV/TB services: The district median percentage of registered TB cases that are HIV-positive on ART rose from 14% to 74% in the region. The district of registered TB cases that are HIV-positive on ART 3% to 78% between 2011 and 2014

High achievements for Safe male Circumcision (SMC): Number of males circumcised as part of the minimum package of MC for HIV prevention service has risen from 1,775 in 2011 to over 110,435 in 2014 (MEEP). This was achieved through mainly program support to SMC

outreaches rather than static sites. However, this is a national wide occurrence (MoH 2014 supervision report).

Figure 5 : Percentage Change in PMTCT Indicators between LQAS 2011 and 2014



Improvement in HIV Testing:

There was a tripple increase in individuals counseled tested for HIV and given results over the four year implementation period. The numbers tripled from 14,819 to over 41,200 annually. Data from the LQAS shows a 69% increase in number of adults who were counseled, received HIV test results in last 12 months and also know their results over the four-year period of 2011-2014.

However, there is modest increase in mothers counseled for PMTCT services during the last pregnancy from 71% to 75%. Disclosure to

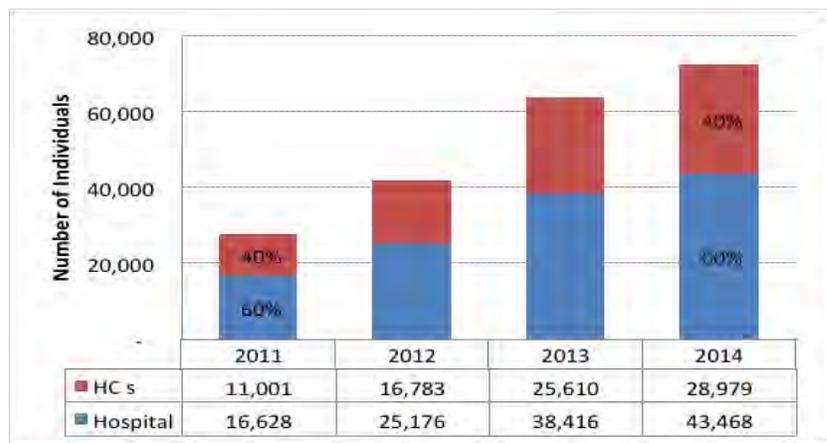
spouse has however reduced from 75% to 72% over the same period.

HIV Prevention: STAR SW also focused on the Most at Risk persons (MARPs) through supporting various HIV prevention activities that were implemented by CSO to reach MARPs. STAR SW 2014 Annual programme Reports (APR) shows that by September 2014, 33% of MARPs targeted by the project received an HIV Test in the past 12 months. Nevertheless, HIV non-biomedical prevention behaviors remained poor in the general population.

Improvement in client satisfaction: The majority of clients reported improvement in the delivery of PMTCT (73%) ad ART (68%) services. Almost all clients felt that facilities was clean (95%), were attended to in a respectful manner (97%), had adequate privacy (94%) and received all prescribed drugs (93%).

Key Shortfalls: Despite the increased numbers of patients accessing services at the lower level facilities 40% over the four years, the proportion of clients seen at lower level facilities remains low hence implying that most clients are seen in Hospitals as seen in Fig 4. Male involvement when accessing HIV/ TB services still remains low as was noted in STAR SW APR reports when only one third of the newly enrolled are men, which may be attributed to the Test and Treat –Option B+ started in 2013.

Figure 6: Proportion of Clients in Hospitals and HCs



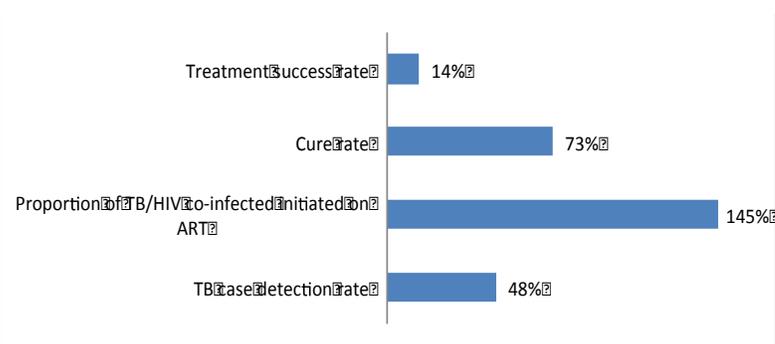
Nevertheless, Focus group discussions showed that stigma is still high in the communities.

Effect of Service Integration

What was the effect of integration of HIV/TB, HIV/Family Planning, HIV/AIDS and health on overall health outcomes?

The effect of integration was assessed on the outcomes related to other health services within the general population and where data is available specific to HIV positive. The evaluation did not compare before and after service integration but looks at the changes that occurred shortly after integration in 2010 and after three years of implementation in 2014.

Figure 7: Percentage Change in TB/HIV Indicators (2010-2014)



Effect of integration on TB

service outcomes: At the National level, efforts were made to ensure that there was integration in the delivery of HIV, TB and FP services. Guidelines and new ART guideline were rolled out in the districts of implementation. In addition, STAR-SW promoted the “one-stop centre” TB/HIV for integration model at high volume facilities.

There are significant improvements reported for Case detection Rates (CDR), case notification rate (CNR) and the TB/HIV collaborative indicators as shown in Figure 5. Over four-year period of 2010-2014, TB case detection rate rose from 44% to 65%; the proportion of TB/HIV co-infected clients initiated on ART increased from 33% to 81%, TB Cure rate from 33% to 57% and TB Treatment success rate from 71% to 81%. However, community based TB "Directly Observed Treatment, Short-course" (DOTS) Direct Observation Therapy and HIV community component remained a parallel program. Data shows that ART decentralisation is linked to improvement in indicators for TB service delivery.

Effect of integration on HIV/Family Planning outcomes: The Family planning demand in the community is low. The proportion of sexually active women age 15-49 years who used any modern method of family planning increased from 34% to 40% over the four-year period of 2011-2014. STAR SW APR 2011-2014 data showed a concomitant decrease in the percentage of women 15-49 years who desired to use a family planning method in the last 12 months but could not access it from 7% to 4%. Measurement of HIV/Family Planning data has recently been added to the HMIS and unavailable for this evaluation.

Effect on maternal health outcomes: The evaluation team also observed that integration was only initiated once mothers came for ANC but not during the community education effort by STAR SW. The delivery of PMTCT in ANC services had significant impact on uptake of ANC and facility delivery from 2011 to 2014. The proportion mothers attending ANC at least 4 times rose from 43% to 59% and mothers delivering in a health facility rose from 65% to 77% over the four years (STAR SW APR reports). There was also an increase in uptake of HIV testing service during pregnancy. The proportion of mothers counselled for PMTCT services during pregnancy increased from 71% to 80%; mothers tested for HIV and receiving their result as a couple from 84% to 99%.

Effect on other health services outcomes: There was generally no negative impact on other services. For example, in child health, the percentage of children under 6 months of age

who are exclusively breastfed increased from 55% to 73%, the percentage of mothers of children 0-11 months who received Vitamin A supplementation within 2 months after delivery increased from 52% to 63%.

Notwithstanding all the integration efforts discussed above, except for HIV/TB integration, there was little use of integration indicators for routine monitoring and evaluation of HIV/FP and HIV and other health services. Data on sexual and reproductive health outcomes among PLHIV was captured only for 2014. Unmet need for FP among STAR-SW region PLHIV and their spouses was not established and uptake of contraceptives among PLHIVs who wished to prevent pregnancy was not documented. Improvement in nutrition outcomes for HIV exposed infants was not reported.

Cost Efficiency

The Cost efficiency assessment covering all the four years showed that over 28% of total STAR SW spending was spent on personnel and related allowances. In FY13 key issues were that nearly 30% of project funds (\$2.61 million) were spent on Personnel, of which about \$2.27 million (86.7%) was support for district level personnel. The second cost-driver was “Other General/Administrative” expenses (\$2.12 million), which accounted for 24% of total expenditure. In this budget category, \$1.18 million (55.5%) was spent on “above national”, \$0.82 million (38.6%) at district level, and the remaining \$0.13 million (5.9%) at national level. The third cost driver was “other supplies” to support service delivery at district level, with all expenditures at facility level but excluding key commodities used in Care and Treatment, such as: test kits, ARVs and non-ARV drugs, and condoms. In FY13, a total of \$1.88 million (21.3% of total expenditure) was spent on “other supplies”. Program management took up about 18.5% of total project expenses in FY13, while “above-national” expenses took 15.4% of total expenditure. Training and Travel took up 12.3% and 8.5% of total expenditure, respectively and all training expenses (\$1.09 million) were incurred at district level.

Key issues in FY 14 were that nearly 28% of project funds (\$2.25 million) were spent on Personnel, of which about \$1.92 million (87.5%) was to support personnel at district level. The second cost driver was “other supplies”, with a total of \$2.2 million (27.3% of total expenditure) was spent on “other supplies”. The third cost-driver is “Other General/Administrative” expenses (\$2.1 million) accounting for 25.7% of total expenditure. Of this, \$1.1 million (54.6%) is spent “above national”. Program Management took up about 17.6% of total project expenses and “above-national” expenses took up 16.3% of total expenditure.

CONCLUSIONS

The DBTA model made a significant contribution to building district capacity in strategic information management, quality improvement management and the delivery of integrated HIV and TB prevention care and treatment. A combination of mentorship and on-site training approaches nurtured program sustainability to the extent that each facility has a larger team of multi-skilled health workers and in-house capacity to replace or replenish this team exists. The process of capacity building transitioned responsibilities and authority to district and facility teams for a greater sense of ownership and sustainability. The DBTA paid particular attention to enhancing mechanisms that would sustain results in service delivery by institutionalizing platform for performance reviews and learning. The respective districts and facilities are committed to evidence-driven processes sustainably. Using a new approach to pursuing and influencing the effective fulfilment of core functions of HIV and TB service delivery in a district health system.

USAID/Uganda DBTA model successfully nurtured and strengthened the ability of districts to integrate comprehensive HIV and TB prevention, care and treatment into increasing access to services to the community. Districts had the capacity to provide a complete package of ART, PMTCT, SMC and HCT services at the health center level, currently attending to 40% of ART patients in the region. With this development and the evidence that integration in STAR SW led to improved TB treatment outcomes and prioritized ART initiation, rationalize the rollout of comprehensive HIV/TB service delivery model. While addressing current treatment, care and support needs of most at risk populations, the DBTA has supported strategic investments in preventing new HIV infections by focusing on PLHIV and MARPs. The DBTA operationalized an evidence-based approach to managing quality improvements, and this was a strong foundation for sustainability of outcomes that are attributable to the DBTA.

The DBTA Model was successful in transferring ART service delivery capacity to districts health system. It enabled more clients to access services at lower level health facilities in the short run, on particular clinic days rather than daily-integrated chronic care. The approach focused on HIV/AIDS and TB services with no apparent plan to use HIV/AIDS as stepping stone for the broader health system functioning. Except in the case of TB/HIV collaboration, STAR SW did not generate strategic information for indicators of integration, hence minimal investment. With modifications to address strategic considerations in the design, the DBTA model could make a significant contribution to reducing the HIV and TB burden in South West Uganda region.

Data showed that the integration of ART in health center service delivery increased HIV testing, care and treatment coverage. Nevertheless, quality of ART when viewed from reduced retention on ART, is still a challenge. There was little data regarding pre-ART dropout, but it is expected to be more significant. Expansion of scope of services covering PMTCT, TB and ART has had little or no negative impact on outcomes of the other health services.

In terms of cost efficiency, there are three cost areas that contributed to high levels of spending on program management. Significantly high expenditure on personnel and related allowances, general administration and “other supplies” to support service delivery.

RECOMMENDATIONS

Capacity building and sustainability:

1. Invest in developing the leadership capacity of existing health management committees at the health facility level. These structures are the mandated link between the health facilities and the community, and their role is to coordinate initiatives among different institutions to improve quality and responsiveness of health services.
2. DBTAs in SW should nurture partnerships between district health system and both the private sector and CSOs as an entity that is working directly with and among communities and therefore strategically positioned to represent the voices of these communities. Their engagement will promote collaborative partnership for the implementation of community participatory strategies that enhance sustainable developments. One critical area is increasing the potential for sustaining LQAS as an analytical tool in the strategic information management and utilization.
3. DBTAs should strengthen and expand data collection and recording systems to generate data for supervision, monitoring, and evaluation of integrated HIV, TB and FP services.

Information needs for measuring program success that is attributable to integration must be defined so that future DBTAs generate information on what needs improvement, replication or scaling up. Organizational changes will have to be addressed, and roles clarified; to be able to measure the effect and benefit of a DBTA model of integration

4. DBTAs should contribute to strengthening coordination and management of the local government HIV/AIDS Response as a whole. STAR supported response has been predominantly medical, and this was probably necessary to quickly expand care to HCs. The emphasis should be on strengthening coordination structures and partnerships. Additionally, it is essential for the DBTA to mobilize and work through CSO District Umbrella bodies, PHA District Networks and Forums and other planning platforms like the Annual District AIDS Forums.

Service delivery:

5. Invest in redesigning and expanding district capacity for quality improvement management to incorporate a Community-Based Feedback system for monitoring client satisfaction
6. Invest in incorporating a fully-fledged Male Involvement strategy to enrich particularly and yield sustain outcomes for eMTCT, ART, integrated family planning and also to reduce stigma.
7. Invest in rigorous impact evaluation study to There is a need to carry out a more rigorous impact evaluation study to establish a baseline that will evidence effects of integration and Positive Prevention programming. Including but be not limited to; family planning knowledge, perception, practices and intentions among PLHVI.

LESSONS LEARNED

The evaluation is presenting the most significant positive and negative lessons learned from STAR SW operations experience. These lessons reflect proposed arrangements for post-completion of STAR SW and follow-up operations or/and any other next step for USAID/Uganda.

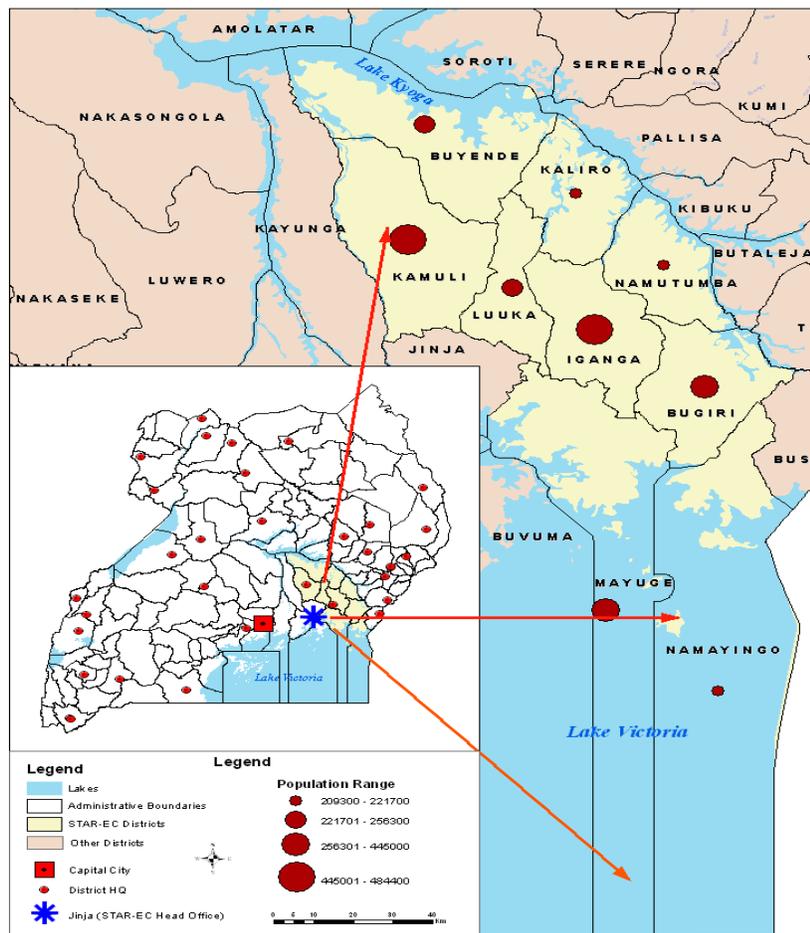
1. Most of the bottlenecks to logistics system lie within the district system and on introducing a commodity tracking system these gaps were identified and addressed successfully. Stock out rate significantly reduced and in most districts in 2012 and 2013 there was zero stock out. Strengthening the district capacity to detect and address bottlenecks that are within the district system can sustainably improve supplies logistics management and consequently improve quality, access and availability of services
2. Innovative approaches such as onsite training and mentorship significantly increased the capacity of local government systems to develop rapidly multi-skilled teams to deliver and sustain integrated HIV/TB prevention, care, and support. This strategy alone significantly improved access, availability, utilization, quality and coverage of needed services.
3. Data and GIS map products are effective for policy and programmatic decision-making on a regular basis. District mapping in STAR SW provided substantial evidence for

critical decision making in the rational allocation of resources, distribution of service sites. Justifiably this led to accrediting some HC II as potential ART sites.

4. FSG turned out to be a personal support system that is appreciated by members and are a major attraction for PMTCT attendance. Most PMTCT clinics realize 100% follow-up attendance compared to ART clinics where many clients send friends, village mates or family members to collect their medication. They provide the opportunity to address a broad range of integrated services.
5. Although decentralization of ART and HIV care services in STAR SW increased the number of clients enrolled for ART and PMTCT, the proportion of those managed at HCs has not changed and remains at only 40%. It implies that even when the capacity for HCs improves for HIV care including ART services, the workload is overwhelming. The referral link between lower facilities and hospitals need to be maintained.
6. Though integration requires moving away from specialized HIV clinic days, to integrate HIV care into routine OPD work, health centers are forced to hold special clinic days. They make the most efficient use of the limited human resource to cope with large client numbers and allows the clients to interact and share experiences together.

SECTION C: PULL-OUT 3 DBTA/STAR EVALUATION: STAR- EAST CENTRAL

USAID/UGANDA’S DISTRICT-BASED TECHNICAL ASSISTANCE (DBTA) MODEL AS APPLIED UNDER STRENGTHENING TUBERCULOSIS AND HIV/AIDS RESPONSES (STAR) PROJECTS: STAR EAST CENTRAL



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STAR EC EVALUATION PULL-OUT REPORT (05/06/2015)

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EXECUTIVE SUMMARY

USAID/Uganda's District Based Technical Assistance (DBTA) model was designed with a regional technical assistance focus to improve access, quality and availability of integrated health service delivery as well as on improving health system financing and management. The USAID/Uganda funded STAR (Strengthening TB and HIV and AIDS Responses) project in East-Central was designated one of USAID/Uganda's projects to implement the DBTA model. The program is implemented by John Snow International (JSI) in East-Central Uganda and will end in September 2015. The program is expected to strengthen decentralized service delivery systems for improved uptake of quality HIV/AIDS and TB services.

The STAR EC evaluation was undertaken by a team comprised of two consultants supported by two research assistants. The evaluation utilized a cross sectional study design employing both qualitative and quantitative data collection techniques. The techniques included: reviewing relevant documents, conducting Key Informant Interviews (KII); Focus Group Discussions (FDGs), as well as Client Exit Interviews.

Application of the DBTA method was designed to strengthen decentralized service delivery for improved uptake of quality HIV/AIDS and TB services. Accordingly, while not expected to focus on targets achieved by the three STAR programs, the evaluation team was expected to assess the viability of the DBTA method's application with reference to (i) Improved Capacity and Sustainability, (ii) Improvements in Service Delivery, and (iii) Evidence of Cost Efficiency in the three STAR program areas. Key findings for each of these three assessment issues are summarized below.

Key findings

Improved Capacity and Sustainability

Viability of approaches implemented under the STAR EC DBTA model. The key elements of the DBTA model were all addressed in the STAR EC design and implementation. Impact was most evident in: human resources for health; data and information management; and enhancing service delivery through targeted health infrastructure improvements. Community structures are well utilized in building effective mechanisms for identifying and linking pregnant women, PLHIV and persons with (or suspected to have) TB to community- and facility-based services. Impact was less evident with respect to: leadership and management; supplies management; sustainable financing and reaching younger adults.

Effect of transition from the STAR programs to district grants through SDS: USAID-supported program interventions have become more aligned with the district development plans with little duplication of activities among the different USAID implementing partners. The performance-based financing approach has led to greater attention to service delivery, information use and timely accountability by districts.

Sustainability: The greater involvement in planning, implementation and monitoring of HIV/AIDS activities and effective partnerships resulting from the improvement of local capacity of entities such as the District coordination structures, Quality Improvement (QI) teams, Service providers, PLHIV networks, VHTs and CSOs, promotes sustainable improvement of the quality, availability and accessibility of HIV/AIDS and TB services. While the support provided by STAR-EC is technically sustainable; its financial sustainability is dependent on massive increase in government financing to district health services, and/or substantial external investments in the short to medium term.

Use of strategic information: STAR EC has effectively strengthened capacity to manage and use data in the government HMIS at all levels (district, health facility, and community); and has built and utilized capacity to conduct annual LQAS surveys to inform district-based service review and planning. However, this capacity has been largely utilized in short-term operational planning (micro-planning) for service delivery; and less in strategic and long-term service improvement planning.

Service Delivery

Improved Health Service Delivery: STAR-EC support enabled the scale up and integrated delivery of HIV/TB services across all target districts; with most focus and results among MARPs and PLHIV, and in specific previously underserved communities (e.g., Islands and other fishing communities). Specific outcomes attributable in large part to STAR-EC support include: increased community-level coverage with HTC, PMTCT; and SMC (as demonstrated in annual LQAS surveys); and increased access to ART (as evident in ART enrolment and retention trends from HMIS reports).

Integration of Services: While there is ample evidence for integrated delivery of HIV prevention, care and treatment services, and to a less extent between HIV and TB services; the evaluation was not able to find dependable indicators (and their consistent and sustained measurement over time) to accurately demonstrate the effect of this integration on over-all health outcomes.

Cost efficiency

Cost effectiveness: While each the STAR EC program has been able to achieve substantial progress, inefficiencies in program management suggest that more could have been achieved with the same level of funding

Recommendations

1. MOH, with support from USAID, should empower districts to continue driving a strategic and internally-driven approach to strengthening district health systems. Priority should be placed on the identified gaps in the health system building blocks of: leadership and management; supplies management; and sustainable financing.
2. Districts should strengthen further the implementation of comprehensive strategies to fully integrate VHTs, PLHIV volunteers, CSOs/CBOs, FBOs, and all other stakeholders in sustainable networking, linkages and referrals; as an integral element in community systems strengthening for health
3. USAID should refine the DBTA model to include specific attention to financial sustainability within the broader framework of integrated and sustainable financing for district health systems
4. Districts, with support from MOH and partners should develop and implement strategies for integrated generation and utilization of strategic information through different mechanisms at all levels within and beyond the health sector.
 - a) Population based and facility-based service provision surveys should be conducted annually; building on the capacity and experience in LQAS surveys
 - b) Routine service provision data (e.g., in HMIS) should be analyzed and utilized to inform planning and service improvement at all levels

- c) Community-based data (e.g., in VHT records) and facility data should be linked and analyzed together to generate more comprehensive understanding and inform better planning
 - d) The roles and complementarities of sector-based information systems and integrated information in district planning units should be clarified and harnessed
5. USAID should include in future DBTA models clear requirement to address integration across the entire spectrum of related health services; with specific indicators to track and report on achievement of such integration and its impact on overall health outcomes.

INTRODUCTION

STAR-EC program

STAR EC is one of the USAID/Uganda's District-Based Technical Assistance (DBTA), Strengthening Tuberculosis and HIV/AIDS Responses (STAR) Projects and was implemented in the East Central region of Uganda. The project overall goal was to increase access to, coverage of and utilization of quality comprehensive HIV/TB prevention, care and treatment services within district health facilities and their respective communities. STAR EC project had four objectives which include:

- i. Strengthen decentralized HIV/TB service delivery system, with emphasis on health center IV's, III's and community outreaches.
- ii. Improve quality and efficiency of HIV/TB service within health facilities and community service organizations/groups.
- iii. Strengthen networks and referrals systems to improve access to, coverage of and utilization of HIV/TB services.
- iv. Intensify demand generation activities for HIV/TB prevention, care and treatment service.

The project had five key results for the program, with a results' logic as illustrated in the Figure 1.

In this logic framework, strengthening of decentralized service delivery systems and creation of demand for comprehensive HIV/AIDS/ TB services are the foundational bases in the program. This was based on the assumption that the system strengthening undertaken adopts a comprehensive approach in line with the WHO building blocks for health systems strengthening. An interpretation of the system strengthening as focusing only on the service delivery block in the WHO framework would shift the box for Result 2 to be alongside Result 3 as corresponding and co-related elements.

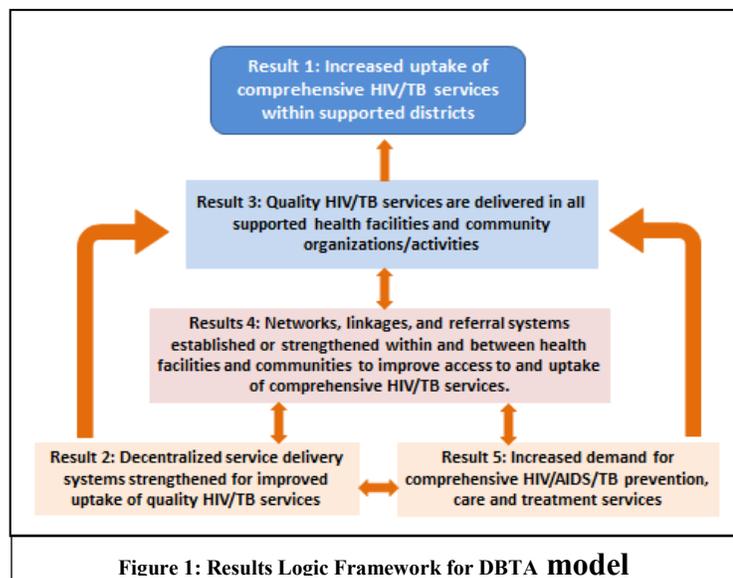


Figure 1: Results Logic Framework for DBTA model

In the current framework, the networks, linkages and referral systems in Result 4 include elements of systems strengthening (especially at the community level); critical contribution to demand creation; and an element of quality service delivery (especially at the community level). This explains the intermediate position of the Result 4 box. The foundational results (Result 2 and Result 5) have a direct relationship and contribution to strengthening quality service delivery (Result 3); together with the indirect influence mediated through Result 4. The delivery of quality HIV/TB services (in Result 3), as dependent on realization of the 'lower level results (Result 2, 5 and 4 in the framework), is the direct and immediate basis for realization of the program outcome (Result 1). The program's main constituent elements for each result area, as indicated in the RFA are presented in Annex 4.

Evaluation Purpose and Evaluation Questions

Evaluation Purpose

The purpose of the evaluation was to establish the extent of efficiency and effectiveness of the USAID/Uganda's District Based Technical Assistance (DBTA) project model that features comprehensive and integrated service delivery towards improving access, quality and availability of integrated health service delivery as well as health financing and management tailored for specific regions. The focus of the evaluation was to provide key lessons on the implementation process and value of the approach in the East Central region.

Evaluation Questions

The evaluation was designed to provide answers to a number of questions pertaining to improved capacity and sustainability; service delivery; and cost efficiency of the STAR-EC project. A key element of the evaluation was to compare what was in place before and after the STAR-EC project, to understand changes that could be attributed to the program.

Improved Capacity and Sustainability

The STAR-EC program was designed to strengthen decentralized service delivery systems for improved uptake of quality HIV/AIDS and TB services, including the institutionalization of evidence-based program management. Improved district capacity is defined/manifested as the district's ability to:

1. deliver quality health services that meet national and/or international standards
2. provide leadership, management, functional health management information systems (HMIS), human resources for health, supply chain management, financial management systems, strategic information, physical infrastructure including laboratories for the delivery of quality health services
3. CSOs' increased advocacy for efficient and effective service delivery within the health sector

Sustainability is important for the results achieved through these investments to continue making a difference into the future. The deliberate focus on working with the district local governments as the key provider of health services was to ensure that structures, processes and resources are strengthened, functional and in place to continue providing services even after the end of USAID's support. This evaluation attempted to inform the USAID Uganda Mission on the likelihood that results of the DBTA program can be sustained after USAID support.

The evaluation strived to answer the following questions in this regard:

7. Approaches utilized by STAR-E to strengthen districts and local governments to deliver health services, have evolved over time. What are: a) the most successful and b) least successful approaches applied by STAR-EC towards strengthening the institutional, management, and human capacity of CSOs and local governments to deliver health services? What are the facilitators and barriers of these approaches to achieving results? Are the approaches used and results achieved for old/established and relatively new/naive districts significantly different?
8. What was the effect of transition of direct implementation of district led health care management activities from the STAR-EC project to district grants through SDS?
9. To what extent has STAR-EC developed, established and/or strengthened management and technical structures at the local government and health facility levels that will sustainably improve quality, availability and accessibility of HIV/AIDS and TB services?

10. What technical capacity in strategic information has STAR-EC developed, built and/or strengthened? Where has this capacity been developed, built and or strengthened? How is it demonstrated? How sustainable is this capacity after the STAR's exit?

Service delivery

11. How has the support by STAR-EC contributed to improved health service delivery, and what are the service delivery outcomes attributed to this DBTA program ?
12. What was the effect of integration of HIV/TB, HIV/Family Planning, HIV/AIDS and health on overall health outcomes?

Cost Efficiency

Efficiency refers to the transformation of inputs into results. It is the extent to which the STAR-EC program has converted its resources economically into results in order to achieve the maximum possible outputs, outcomes, and impacts with the minimum possible inputs. The primary question to be answered by the evaluation is: To what extent can the STAR-EC project be considered cost efficient in strengthening capacity of districts and CSOs to improve health service delivery?

Evaluation Methods and Limitations

The STAR EC evaluation was undertaken by a team comprised of two consultants supported by two research assistants. The evaluation utilized a cross sectional study design employing both qualitative and quantitative data collection techniques. These techniques included: reviewing relevant documents, conducting Key Informant (KII) Interviews; Focus Group Discussions (FDGs), as well as Client Exit Interviews.

- a) *Documents reviewed* The team carried out a comprehensive review of relevant documents, including but not limited to: Work plans , Performance Monitoring Plans (PMP) National HIV and AIDS strategic documents, Project design documents, STAR E Performance reviews and Reports, LQAS reports, Health assessment reports, Project Annual reports , Annual Health Sector Performance Reports. A detailed review of secondary data such as Lot Quality Assurance Sampling (LQAS), PEPFAR annual reports was also performed
- b) *Key informant interviews* were conducted with; STAR EC program officers, District health teams, other district local government officials (district planners, district community development officers), political leadership and health facility staff. A list of the key informants is presented in annex 2.
- c) *Focus group discussions* were held with; PLHIVs (mentor mothers, expert clients, male champions), village health team (VHT) members, and beach management unit (BMU) members. The FDGs provided a better understanding of the different service delivery approaches the STAR-EC project supported for HIV/AIDS prevention, care and treatment, and TB services. Each focus group discussion was composed of 6-12 people and the discussion was led by a team of two people, a moderator and a note-taker using a semi-structured interview guide. The note taker captured the discussions in writing and also took note of participants' nonverbal expressions, and the entire sessions were tape-recorded. The content of the group discussion was analyzed by reviewing the notes and listening to tape recordings. The content was transcribed according to key topics and themes. The moderator synthesized the group discussions by reviewing the notes from the note taker, identifying recurrent ideas and interpreting these ideas. The team has prepared a report for each discussion session. A list of the focus group discussants is presented in annex 2.
- d) *Client exit interviews* were conducted among at least 9 clients who had received an HIV/AIDS service (PMTCT, HCT and ART) from a health facility. An average of 27

- respondents per facility was interviewed from each of the health facilities in each sampled district.
- e) *Sampling of Districts* In this evaluation exercise, the 9 project districts of Eastern Central Uganda comprised the main sampling frame, with the district as the sampling unit. The districts were stratified into Old and New. This is based on the assumption that the newly established districts face a number of health system challenges compared to the old ones. This was likely to apply to the DBTA programmes. For purposes of this evaluation, new districts are those established after 2006. A random sampling approach (lottery method) was used to select two districts per cluster (Old and New). This represented one in every three districts in each cluster (33%) and resulted in a total of 4 districts in the sample. At the district level, Health Centres 4 and 3 were prioritized in the selection process, with the aim of having at least 4 health facilities per district. The selected districts and health units are shown in

Table 1: List of Sampled Districts and Health Units

| District | Health Unit | Ownership |
|------------------|--------------------|------------------|
| Iganga | Busesa HC IV | Public |
| | Bugono HC IV | Public |
| | Busembatya HC III | Public |
| | Busiro HC III | Public |
| | Bunyiiro HC III | Public |
| Luuka | Kiyunga HC IV | Public |
| | Waibuga HC III | Public |
| | Irongo HC III | Public |
| | Ikumbya HC III | Public |
| Namayingo | Buyinja HC IV | Public |
| | Banda HC III | Public |
| | Bumooli HC III | Public |
| | Busiro HC III | PNFP |
| Kamuli | Namwendwa HC IV | Public |
| | Balawoli HC III | Public |
| | Nankahdhulo HC IV | Public |
| | Lulyabumzi HC III | Public |

Limitations of the Evaluation Exercise

Due to contributions from other stakeholders (includes GOU, developments partner and CSOs) in health service delivery, attribution of improvements in overall health outcomes to STAR EC may not be objective.

FINDINGS

Improving Capacity and Sustainability

Effectiveness of Capacity Strengthening Approaches

The approaches adopted by STAR-EC to realize the DBTA results focused on; system strengthening, strengthening of quality service delivery and strengthening demand creation.

What are the most successful approaches applied by STAR-EC towards strengthening the institutional, management, and human capacity of CSOs and local governments to deliver health services?

The most successful approaches applied by STAR-EC to strengthen institutional, management and human capacity of local governments and CSOs to deliver HIV/TB services were mainly in three broad areas:

1. **Specific investments** in enhancing human capacity in management and service delivery at different levels;
2. **Emphasis on partnership and coordination strengthening** especially between government and CSOs; and
3. **Specific innovations in enhancing integrated health service delivery**, and in delivery of particular elements of HIV prevention, care and treatment.

A) Mentorship:

Capacity Building for District and Health Facility Staff

The STAR-EC entry focus in human capacity building was service delivery strengthening, in line with the emergency objective of DBTA's rapid service scale up. This was undertaken through a combination of on-site training at high-volume health facilities able to mobilize adequate trainees for cost-efficient training; and off-site training; usually at centres of excellence in specific HIV/TB service elements within or outside the region. National or regional-level trainers delivered the initial training; usually working alongside STAR-EC and district level staff who progressively took on the subsequent training responsibilities. A key feature in this training was an integrated approach to cover multiple aspects of HIV prevention, care and treatment, in line with the national and global guidelines for Integrated Management of Adolescent and Adult Illnesses (IMAI) and Integrated Management of Pregnancy and Childbirth (IMPAC). This was particularly important as a mechanism to ensure optimum delivery of all services in government health facilities where staff shortage is a key constraint to service delivery through a specialized cadre-focused approach.

The STAR-EC approach also included a process of bottom-up progressive skills upgrade, in which trained health workers were enabled to train other staff in the same health facility through hands-on practical training and sessions for Continuing Medical Education (CME). This was gradually expanded to include support supervision and mentoring staff at other health facilities, and to become part of the district-based training and mentoring teams to sustain the capacity building process. In a few cases, such growth extended to referring selected staff to opportunities for longer-term training to receive additional health care qualifications for personal career development. Each of the four districts visited in this evaluation had 7-15 people trained and experienced in practical training and on-going mentoring in different areas of HIV/TB services, as a direct result of STAR-EC support.

Capacity Building for CSO staff

Another successful element in STAR-EC support to human capacity building was training for CSO staff and other leaders. These were based on annual Organizational Capacity Assessments (OCA) for each partner. In a number of cases, such CSO training processes were designed to complement and advance the work of health facilities and local government systems in the locations where such CSO partners were working, to enhance collaboration with these systems in the HIV/TB service delivery and promotion.

“STAR-EC supported Organizational Capacity Assessments for all CSO partners; and subsequent mentoring and coaching was aligned to the OCA results. Most CSOs adopted and implemented the recommendations from OCA. Some CSOs had boards of governors which were dormant or incompetent, or had inadequate manuals in use. In other cases, existing manuals were not known to the employees. Such issues have been addressed; there is great improvement.” [KI, STAR-EC Staff]

“In my organization, we have secured funding to continue serving Sex Workers, OVCs and Boda Boda. We attribute this success to our improved governance and management systems; which we achieved through the OCA exercises and follow-on capacity building.” [KI, STAR-EC CSO Partner]

B) Partnership and coordination between government and CSOs

STAR-EC was successful in playing a ‘middle-man’ role between local governments and CSOs, through its partnerships with both entities to strengthen HIV/TB service promotion and delivery. This was seen and used as an opportunity for integration between the operations and services of both government and CSOs. The evaluation found a number of examples of actual collaboration across both entities, through direct STAR-EC support. These were evident at the level of coordination and joint planning (e.g., between CSO and district or sub-county local governments); and as service delivery linkages and partnerships between CSOs and government health facilities or VHTs. The successful partnership was particularly demonstrated in; outreach planning, promotion and implementation in the islands of Namayingo and Mayuge districts, structured collaboration between districts and PNFP health facilities, and Community-level collaboration between VHTs, traditional healers, drug shops, and government health facilities to promote TB case identification, referral and follow up – as part of a specific strategy to promote private sector participation in TB control.

What are the facilitators of these approaches to achieving results?

Government institutions, systems and policies – the STAR-EC program was fully aligned with government policies and guidelines for HIV/TB services, and further informed by global standards and experiences. This included flexibility to adapt to changes in such guidelines over the period of program implementation, such as: PMTCT transition to Option B+; ART initiation at higher CD4 count; and intensified focus on VMMC for HIV prevention.

There was sustained growth in government investment in the national health system at all levels, which further facilitated achievement of results in the STAR-EC program. For example, the government health budget increased from UGX 436 billion in FY 2009/2010 to UGX 713 billion in FY 2013/2014. The budget outturn (actual disbursement) grew over the same period from UGX 417 billion in FY 2009/2010 to UGX 619 billion in FY 2012/2013. Evaluation respondents mentioned other specific government investments that complemented STAR-EC support in ensuring results. Examples include: provision of bicycles for VHTs; equipment and supplies for

HIV services (e.g., CD4 machines and ARVs); and increased funding for operations at health facilities.

“We are happy that government gave us 500 bicycles (2 for each village) and these helped a little. These bicycles are used by all 5 VHTs in each village, and are difficult to manage. They were also weak and broke down very quickly. We need stronger bicycles; and if possible enough for each VHT to have one.”
[FGD, VHTs, Namayingo District]

“In many cases, the role of STAR-EC has been to complement what MOH is already doing. For example; when MOH supplied 19 CD4 machines (PIMA type) for health centres, STAR-EC supported their delivery, installation and initial training of users.” [KI, STAR-EC Staff]

Partnership with other institutions – the implementation of STAR-EC included partnership with CSOs, FBOs, and the media in promotion and delivery of specific HIV/TB services. STAR-EC also collaborated with private sector actors such as Banks, Microfinance institutions, mobile phone service providers, media houses, etc.; in campaigns for integrated service delivery and community transformation. Effective delivery of services supported by STAR-EC through these partnerships benefited from the networks and institutional capacities and systems of the partners.

Existence of Complementary programs in the STAR EC region STAR-EC work was complemented by other USG funded activities among which included (STRIDES, SCORE, ASSIST, Marie Stopes Uganda SUNRISE, SPRING, SDS). This enabled a comprehensive delivery of services in the region.

What are the least successful approaches applied by STAR-EC towards strengthening the institutional, management, and human capacity of CSOs and local governments to deliver health services?

Integration between HIV/TB and other services – There was limited success in the approaches used in STAR-EC to integrate HIV prevention, care and treatment with efforts to meet the other health needs of PLHIV such as family planning and other sexual and reproductive health needs. There was also little accomplishment in the approaches to integrate improvements in HIV/TB services with the broader routine health care and health promotion services in the participating health facilities. Similarly, the approaches used to provide HIV/TB services with ‘other wrap-around’ services to meet the non-health needs of PLHIV and their families (such as OVC support, family economic empowerment, etc.) realized limited results.

Eliminating stock-outs through improved supplies chain management – The evaluation team also noted continuous stock outs for HIV/TB drugs and commodities at some of the health facility stores visited. The specific items in this regard include: HIV test kits, VHT stationery (especially for referrals), CD4 test reagents, and general purpose gloves

Youth friendly services - the other area of limited success in HIV/TB service strengthening was in the approaches used to reach adolescents and young people that are HIV positive with comprehensive HIV prevention, care and treatment services. The evaluation noted that there was limited investment in enhancing the capacity of service providers to meet the unique needs of young people; or in the training and deployment of young positives as peer service providers.

In most of the care facilities, services for young positives are still included in the regular services for all adults, and this restricts the service effectiveness and quality for young people.

“We attend the same services with older people. Sometimes you find yourself in the same clinic with your auntie or a neighbor and friend of your parents at home. You cannot be free to discuss all your problems.” [FGD, Young Positives; Luuka District]

“Sometimes we come from school to attend the clinic, and need to go back quickly so that we do not remain behind in studies. When you try to explain this to the health workers, they just shout at you and refuse to listen.” [FGD, Young Positives; Iganga District]

Management strengthening of DHT and health facility teams – the majority of the respondents pointed out the limited success in STAR-EC approaches in enabling the necessary capacity growth for specific people responsible for routine management and oversight for the district health system. At the district level, they included DHTs and the Health or Social Services Secretary/Committee of the District Council. At the Health Sub-District (HSD) and health facility levels, they included: a) the health professionals charged with the respective leadership and management responsibilities; and b) the district and sub-county management staff (for example the Assistant Chief Administrative Officers and Senior Assistant Secretary); and the Health Unit Management Committees (HUMC).

What are the barriers of these approaches to achieving results?

- a) Inadequate staffing at the health facilities, and the need to refer clients to other centers for specialized services such as the long term permanent methods (LTFP). Some of the health centres did not have the capacity to provide clients with all the required family planning methods of choice. This was a greater concern in the new districts of Luuka and Namayingo, where a large proportion of staff positions in the health sector are still unfilled. However, it is encouraging that concerted efforts are being taken to address this crisis, as illustrated in the quotes below.

“Our staffing situation has improved in many ways, but still has big gaps. We improved from 19% to 32% of the established staff position filled. STAR-EC and SDS have helped a lot in this area. Government has given us new mandate to recruit another 45 staff, and this is in process already.” [KI, District Leader, Namayingo]

“As political leaders, we also want to have healthy voters; and we support the idea of continuing the recruitment drive until we get to at least 80% of positions in health sector filled. We are now at 60% and we thank SDS for the support to get to this level.” [KI, District Leader, Luuka]

- b) Unavailability of some of the necessary services like the long-term and permanent family planning methods, OVC services, etc);
- c) Limited capacity at district, health sub-district and health facilities to accurately project the stock needs, ensure timely and adequate ordering, and negotiate supply allocations and deliveries.
- d) Absence of a position for professional counsellors in the staffing structure for health facilities and government HIV services. The other factor noted in this regard was the

- limited inclusion of communication and counselling in the training curricular for different health professionals
- e) Understaffing in many of the district health offices; and in the leadership and management positions at health sub-districts.
 - f) Limited inclusion of national level policy makers such as Members of Parliament representing the communities in the STAR-EC districts, who have the mandate and opportunity to influence necessary budget appropriations and policy changes.
 - g) The strong STAR-EC presence in the region and close direct working with CSO, health facilities and other implementing partners was highlighted as an ‘indirect barrier’ to district management strengthening. On one hand, it was felt that some of the district systems were ‘by-passed’ in the direct STAR-EC relationship with implementers. This not only increased dependence on the STAR-EC systems to support service delivery; it also masked the need to strengthen the government systems to meet this responsibility, and the value-addition from any government investments in this area.

Are the approaches used and results achieved for old/established and relatively new/naive districts significantly different?

Evaluation interviews with different stakeholders and review of program reports found that there was no explicit difference in STAR-EC design and implementation in the old and new districts. However, contextual differences in the region and its experience of the HIV epidemic, and differences in capacity and outlook of district leaders resulted in some unique experiences in the different districts. Table 2 presents the STAR-EC districts in three clusters based on the implementation experiences.

Table 2: Clusters of STAR-EC districts based on implementation experience

| Cluster 1 – Mayuge and Namayingo | Cluster 2 – Bugiri, Iganga, Kamuli | Cluster 3 – Buyende, Kaliro, Luuka, Namutumba |
|---|---|--|
| Districts with islands and lakeside communities <ul style="list-style-type: none"> • High HIV prevalence • Previously underserved (general health and HIV specific services) High focus and results from STAR-EC support <ul style="list-style-type: none"> • Also attributed to commitment of the district leaders and service systems to make a difference in poorly served (<i>hard to reach, hard to work, hard to stay</i>) communities | Older districts with more established/functional systems <ul style="list-style-type: none"> • Able to quickly and effectively absorb initial STAR-EC support • Transition to SDS resulted in lower STAR-EC support in management (more focus on ‘technical assistance’) Strong presence of other partners was related to relatively low engagement with STAR-EC | Newer districts, weaker structures and systems <ul style="list-style-type: none"> • Required closer engagement and guidance in the STAR-E support process • Progress was often delayed by inadequate personnel numbers and capacities Some (e.g., Luuka) had unique challenges in the health department that constrained STAR-EC <ul style="list-style-type: none"> • No substantive DHO for long • Kiyunga HC IV maternity destruction in accidental fire |

Some of the unique characteristics and experiences observed in the two new districts visited during the evaluation (Luuka and Namayingo) include:

- a) Greater challenges with numbers and skills of health staff, and thus a higher level of effort to address these through training and recruitments; and
- b) Under-developed systems at health facilities and district offices (e.g., power connection, communication network coverage, etc.), which required and often attracted a higher levels of attention, with well appreciated results.

Both districts exhibited a high level of involvement and commitment from district political leaders, MPs, technical leaders (CAO, DPU, etc.); and a high sense of appreciation that STAR-EC had made a felt difference in their start up as districts.

“STAR-EC and the other partners have helped us a lot in our take-off as a district. The outreach services to the islands have brought all communities on board and they appreciate the value of having our own district. As a district, we would never manage to provide such a great service; even now we are not ready to sustain it.” [KI, District Leader, Namayingo]

“As a new district, our health care system was very weak – with few staff, and inadequate infrastructure at health facilities – for services and for staff housing. STAR-EC helped us to strengthen the grassroots structures such as VHTs and Expert Clients. This has helped to bridge the service delivery gap, and help more people.” [KI, District Leader, Luuka]

On the other hand, in the two old districts visited at the time of the evaluation was common in three main aspects:

- a) Availability of a number of other health partners and well-staffed DHTs, and thus a lower sense of ‘dependence’ on STAR-EC;
- b) A limited sense of structured health partnership between the district and CSOs supported by STAR-EC.

Effect of SDS transition

What was the effect of transition of direct implementation of district led health care management activities from the STAR-EC project to district grants through SDS?

The focus of SDS support in the old (established) districts was through a granting mechanism. SDS provided annual grants of approximately USD (\$) 100,000 primarily for coordination and health planning by the districts. Table 5 illustrates STAR-EC participation in the SDS integrated plan for Kamuli district.

“Before SDS came on board, we were doing the technical assistance and funding of those activities. When SDS came, we would do the work planning with the district but SDS would fund those work plans which then meant that our role was to work plan with the district and provide technical assistance to the district while SDS do the funding”. [KII, STAR EC]

Table 3: STAR-EC contribution to Kamuli district integrated plan for Jul 2014 to Dec 2015

| Item | STAR-EC contribution | District co-financing |
|---|-----------------------------|------------------------------|
| Number of activity areas (Total = 41 areas) | 23 | 10 |
| Total budget contribution (Total overall = 421,075,860) | 314,271,560 | 26,839,500 |
| Percent budget contribution (Total = 100%) | 74.6 | 6.4 |

STAR-EC financing supported more than half of the activity areas in the entire district plan. The total UGX 314.3 million contributed by STAR-EC included a total UGX 198.0 million passed directly to the district SDS account, and UGX 116.3 million for specific activities under the direct control of SDS.

SDS funding was based on district performance under the District Operational Plans (DOP) mechanism. The DOP mechanism was initiated essentially as an MOU for all partners working in a particular district (both USAID and non-USAID who are not signatories). DOP meetings take place at the district and all partners are invited on a quarterly basis under District management committee (DMC) meeting led by District planner. On a quarterly basis all IPs send their reports to the district detailing what has been done and highlighting costs and challenges.

Districts summarize all activities of the partners and also outline their plans. The meeting acts as a peer review mechanism. The effect of transition to the SDS granting mechanisms has therefore led to the following outcomes in the supported district:

- a) USAID-supported program interventions are aligned with the district development plans
- b) There is little duplication of activities and complementary support is provided among the different USAID implementing partners
- c) Collaboration and communication between local governments and the different stake holders (DBTAs) working within districts has improved
- d) Improved overall district leadership (coordination, monitoring and evaluation) of activities within the districts
- e) Strong emphasis on timely accountability of funds received for activity implementation to ensure continuity in funding support
- f) The performance validation system under the DOP mechanism created a platform for constructive evaluation of performance against set standards that districts have to achieve. The STAR-EC supported districts have registered steady improvements in performance over the years and currently all the six supported districts qualify to receive over 75% of funds from SDS within a particular quarter

“At the beginning we started with a score below 28 percent but for the last 2 years, we are scoring above 85 percent.” [KI, District Leader, Iganga District]

An analysis of the MOH country wide district performance data (League table 2014), showed that Iganga district improved in its performance score and ranking over the period 2009 to 2013 (2009/10 – rank 53 score 53, 2010/11 – rank 32 score 59.9, 2011/12 - rank 26 score 65, 2012/13 – rank 20 score 68.4). This to some extent may be attributed to SDS interventions i.e. performance validation system that is a component of DOP.

Sustainability

To what extent has the STAR-EC program developed established and/or strengthened management and technical structures at the local government and health facility levels that will sustainably improve quality, availability and accessibility of HIV/AIDS and TB services?

The management and technical structures strengthened by STAR EC to sustainably improve quality, availability and accessibility of HIV/AIDS and TB services were:

- a) Establishment of District coordination and supervision structures - District AIDS Committees (DACs) and District AIDS Task force and Sub county AIDS Coordination mechanisms. These are supported to convene regular review meetings. The Coordination mechanisms were also trained in strategic planning and resource mobilization as some of their key responsibilities. To ensure sustainability the Coordination mechanism the support for their operations was integrated into SDS grant A to promote ownership of the response by the respective districts.
- b) Strengthening of the District, health facility and CSO quality improvement (QI) teams. In partnership with the MoH, STAR EC trained and established 9 district QI teams, 84 facility QI teams and 9 CSO QI teams. STAR-EC initiated a process of expanding quality improvement beyond HIV by integrating QI methods in all health service delivery areas including the outpatient department, maternity, Laboratory, etc. The health facility QI teams were tasked to co-opt members from all the departments at the health facility

and help them form work improvement teams. In an effort to promote a sense of ownership and institutionalize QI activities, STAR-EC utilized more of district and facility mentors to support health workers to become more independent, confident and proactive in providing quality health care services and monitor the quality of care, measure improvements, collect and utilize data for further improvement and submit quarterly reports that can be used for decision making.

- c) Establishment of District PLHIV networks. Support was provided by STAR EC to form a district PLHIV network as well as sub county PLHIV networks in the 9 districts. The PLHIV networks were trained in leadership and governance, strategic planning, resource mobilization and advocacy. As a result this increased meaningful involvement of PLHIV in increasing access and uptake of HIV and AIDS services in the region as well as relieving health workers in high volume sites of non- clinical tasks through the task shifting approach.
- d) Strengthening of community structure such as the village health teams. STAR EC supported teams to conduct community mobilization, referrals and networking. The teams were also supported with the required data collection tools, meetings were regularly convened regularly to review progress made on key indicators. The teams were also instrumental in increasing access and uptake of services as shown in the section on most successful approaches.
- e) Civil society organizations. STAR EC improved the organizational, technical and institutional capacity of through a participatory processes which involved both technical and management personnel of these organizations. This ensured that even without activity support from STAR EC the organizations may be in position to develop and implement strategic plans that could be funded by alternative partners.

The increased involvement in planning, implementation and monitoring of HIV/AIDS activities and effective partnerships, resulted from the improvement of local capacity of entities such as the coordination structures, QI teams, PLHIV networks, VHTs and CSOs promotes sustainable improvement of the quality, availability and accessibility of HIV/AIDS and TB services.

Strategic Information Capacity Development

What technical capacity in strategic information has STAR-EC developed, built and/or strengthened? Where has this capacity been developed, built and or strengthened? How is it manifested/demonstrated? How sustainable is this capacity after the STAR-EC exit?

Technical Capacity: STAR EC strengthened technical capacity for strategic information in the following areas: alignment of district information systems to national health systems for data management and reporting sustainability; use of revised HMIS tools analysis and presentation of HMIS data; use of web based data systems; use of the national league table in tracking district performance at national level; data quality assessment (DQA) and its routine validation; collection, tabulation and use of LQAS data; and use of *OpenMRS® Express*. The capacity was strengthened among district staff (biostatisticians and HMIS focal persons) and health facility staff (record assistants and health care providers including laboratory staff).

Manifestation and Utilization: The improved technical capacity was demonstrated through;

- a) Phasing out of parallel reporting systems i.e. reporting done based on HMIS tools. The district systems are aligned to national health systems for data management and reporting sustainability.
- b) District led performance reviews where health facility specific data is discussed. In the reviews Health Management Information System (HMIS) and LQAS results are disseminated in comparison to past program year performance since baseline. The District technical heads discussed results in relation to sub-county, district, regional and national targets by technical area and subsequently made action plans aimed at fixing identified gaps and improving performance. The Districts LGs are able to integrate their performance review findings in their work plans and action plans for performance improvement developed
- c) District led LQAS data collection, tabulation of results and use of information (see performance reviews above). The districts has used LQAS results to identify gaps and prioritize activities so that greatest impact can be realized from the limited resources

“We have the skills to collect data, do data tabulations manually and reporting.” [KII, Kamuli DHT]

- d) The capacity of health facility staff to generate statistics greatly improved at the facility level. Among the several related quotes from the health facility staff interviewed, a KII reported the following;

“The in charge at facility can make simple analysis of data collected in a month or a quarter to identify any striking issues that might need attention of the facility. For example check number of clients per service and compare it to previous month or quarter. Find out loss of follow up clients who were on ART, PMTCT or TB treatment. This data has informed the facility to generate action points for the coming month or quarter.” [KII, Busembatya HCIII]

- e) A community based data system is now implemented by VHTs and mentor mothers for PLHIV, TB, and forms a basis for referral and follow up and has resulted in greater service utilization

“We have the referral books and with follow up we get to know the clients in the area. There are VHTs based at health facilities and community based VHTs. Every month we have parish meetings organized by the parish VHT coordinator and we synchronize the data and write in the parish register from which we make the report.” [FGD, VHT, Busesa]

Sustainability: The support to align the district systems to national health systems and capacity improvement of district and health facility staff ensures that the districts have sustained tools and skills that can be applied beyond the program lifetime.

Service Delivery

Impact on Service Delivery

How has the support by the STAR-EC contributed to improved health service delivery? What are the Service delivery outcomes attributed to STAR-EC

STAR-EC was effective in enabling rapid and sustained scale up in delivery and uptake of a wide range of HIV/TB services. Three examples are presented in this section to illustrate the specific approaches that were used to achieve this:

- Combination prevention for the delivery of HIV/TB services which included HIV Testing and Counseling (HTC) to comprehensive behavior change communication targeting specific Most At Risk Populations (MARPs); follow-on EMTCT and ART services; and a package of Positive Health, Dignity and Prevention (PHDP) interventions as well as care and treatment.
- Introduction and rapid scale-up of Voluntary Medical Male Circumcision (VMMC), especially through outreach camps based at peripheral health facilities and selected community sites.
- Linked EMTCT and ART services at health facilities and outreach points; supported by an extensive network of trained VHTs and PLHIV volunteers as the main providers of on-going counseling and social support

Increased access of HIV/TB services through Combination HIV prevention that targeted MARPs

STAR-EC supported the scale-up for HTC services through three main areas which included:

- Expansion HTC services from 62 to 129 sites (details in Table 4), and enabling HTC delivery as a provider-initiated service, largely provided by PLHIV and VHT volunteers with the necessary skills; This was done through accreditation of a number of lower level health facilities.
- Institutionalized outreach and home-based HTC as an integral element in 'routine health services' and a mechanism to enhance and sustain HTC service uptake; and
- Integrated HTC as a key element and entry point in the comprehensive package of services for combination HIV prevention.

Table 4: Distribution of HCT sites in PYS – by District and Health Facility Level

| District | HC II | HC III | HC IV | Hospital | Grand Total |
|--------------------|-----------|-----------|-----------|----------|-------------|
| BUGIRI | 7 | 11 | 1 | 1 | 20 |
| BUYENDE | 3 | 6 | 1 | | 10 |
| IGANGA | 1 | 12 | 2 | 1 | 16 |
| KALIRO | 1 | 5 | 1 | | 7 |
| KAMULI | 3 | 13 | 2 | 2 | 20 |
| LUUKA | | 6 | 1 | | 7 |
| MAYUGE | 9 | 5 | 2 | 1 | 17 |
| NAMAYINGO | 16 | 8 | 1 | | 25 |
| NAMUTUMBA | | 6 | 1 | | 7 |
| Grand Total | 40 | 72 | 12 | 5 | 129 |

All hospitals and HC IV, and 83% of HC III in the target districts have sustained HCT service delivery services

STAR-EC supported HCT services at HC II level especially in the lakeside and island communities in Namayingo, Mayuge and to a less extent Bugiri districts.

Combination prevention was largely achieved through partnerships among health facilities, CSOs, PLHIV networks, and VHTs. Innovative campaigns (e.g., community camping, couple

weeks, know your child's status, etc.); and integration of provider-initiated testing and counselling (PITC) were central elements in the STAR-EC support to HTC. The priority MARPs targeted with the HTC and BCC combination in the STAR-EC program included:

- a) Fishing communities;
- b) CSW and their clients;
- c) PLHIV (with emphasis on those in discordant sexual relationships); and
- d) Truckers and other transport workers (e.g., motor-cycle taxis, boat transporters, etc.).

The other population groups targeted included: a range of persons in a sustained or repeated 'captive audience context' (e.g., plantation workers, bar/lodge/video hall staff and patrons, prison inmates, etc.); couples; and youth in different community/out-of-school settings. STAR/EC used two broad approaches to deliver the combination prevention interventions in these groups: a) multimedia BCC (e.g., peer-based dialogue, IEC materials, community participatory drama, radio, etc.); and b) promotion and provision of specific bio-medical preventive action (e.g., condoms, SMC, EMTCT, ART, etc.).

A particularly effective element in this approach was the involvement of male champions (a mixture of male PLHIV and HIV negative males in discordant sexual relationships), whose role in promoting and provision of HTC was important in reaching couples and mobilizing greater male participation.

“Our good progress in getting many men circumcised was because of the work of male champions. Some of them are HIV positive and doing well on treatment; others got circumcised and have seen for themselves the benefits. They explain the benefits in all places, and convince many to also go for the service.” [Focus Group, Adult PLHIV, Iganga District]

“We are 16 male champions at this health centre and we work well with the staff here and the VHTs in the community. We were trained together on many health issues; our role is to educate people at home and encourage them to use the right health services. We encourage men to accompany their pregnant wives to ante-natal clinics; families to bring children for immunization at the right time; and PLHIV to persist in taking medicine.” [Focus Group, PLHIV volunteers, Kamuli District]

A key innovation in the STAR-EC support to combination prevention was comprehensive promotion of (Positive Health, Dignity and Prevention) PHDP, with focus on achieving four core goals of this approach:

1. Keeping PLHIV physically healthy;
2. Keeping PLHIV mentally and psychologically healthy;
3. Preventing transmission of HIV; and
4. Involving PLHIV in HIV prevention activities, program design, implementation and monitoring, leadership, and advocacy.

The minimum package of PHDP services as promoted in STAR-EC is presented in the text box I.

Box I: Minimum Package of PHDP Services

| | |
|-----------------------------------|---|
| Adherence counselling | HTC for discordant couples |
| Disclosure counselling | Reproductive Health and Family Planning |
| Condom education and distribution | PMTCT and EMTCT |
| CD4 monitoring | Economic and income generating support |
| STI screening and treatment | Balancing work and rest |
| Nutrition and balanced diet | |

Introduction and rapid scale-up of VMMC

STAR-EC pioneered structured and sustained support to VMMC as an HIV prevention intervention in the region, starting in 2009 with preparatory activities that included:

- a) Capacity building partnership negotiation with the two premier VMMC programs at the time – the Rakai Health Sciences Program and the Makerere University-Walter Reed Program; and
- b) Initial training of service delivery and service promotion personnel, and site preparation at selected health facilities.

Start-up service delivery commenced in May 2010, and was rapidly scaled up from 7 sites in 2010 to 22 sites in 2014. In keeping with the STAR-EC commitment to combination prevention services; HTC and couple attendance were an integral element in supported VMMC service delivery.

EMTCT and ART services

STAR-EC was successful in rapidly scaling up associated EMTCT and ART services within the public primary health care system of health facilities and VHTs; primarily through training of personnel, and through three other approaches:

- a) Critical infrastructure, equipment and supplies adjustments at health facilities (especially Health Centre IV and III, and selected Health Centre IIs);
- b) Strengthening referral mechanisms between health facilities and communities, and across the different levels of health facilities; and
- c) Expanding family-based support and follow up mechanisms for HIV positive pregnant mothers and their HIV-exposed infants.

Expansion and improvement of Infrastructure for HIV/TB services at selected health facilities

The key infrastructure improvements at health centres mainly focused on expanding and re-designing service delivery space to accommodate large numbers of chronic care clients, especially in clinical care and counselling, and for the necessary and often repeated laboratory services. STAR/EC addressed this by constructing waiting sheds (especially at Health Centre IVs), and refurbishments of clinical care and laboratory areas. The other areas of space modification and furnishing STAR/EC addressed was for systematic storage of large amounts of client records inherent in the high volume chronic care clinics; and in storage of HIV/TB supplies such as medicines, surgical kits for male circumcision, etc., by provision of shelves, store pallets, file folders, etc.

As a result of STAR-EC support, the number of health facilities in the targeted districts providing EMTCT services increased from 35 in 2009 to 115 in 2014. Delivery of EMTCT and ART services as illustrated above was closely aligned, a critical requirement to enable all pregnant HIV positive mothers to access ART and PMTCT services.

Strengthened community support mechanism in delivery of PMTCT services

The STAR-EC support enabled establishment and operation of a sustainable mechanism for EMTCT and ART referral between communities and health facilities, based on appropriately trained, equipped and facilitated VHTs and PLHIV volunteers.

Strengthened delivery points for HIV positive mothers

Another key element in STAR-EC support to effective EMTCT scale up was establishment of dedicated points at health facilities where HIV positive mothers and their HIV-exposed infants can received the full package of care and treatment including ART, EID, CD4 monitoring, nutrition assessment and counselling, etc. Such mother-baby care points were established at all health facilities providing PMTCT and ART services, and were fully integrated into the routine post-natal and young child care services at these facilities. This was further complemented by Family Support Groups (FSG) established at 78 of the 115 EMTCT sites. Active mother-baby care points were found at 10 of the 16 health facilities visited during this evaluation. Operation of the care points at five health facilities was constrained by inadequate staff (the only midwives at the sites were either on leave or away on training). The care point at one health facility had been suspended eight months before the evaluation, when fire destroyed the maternity block at the facility. Active FSGs were found at all five visited health facilities where they had been established.

HIV/TB laboratory services

The STAR-EC strengthened HIV/TB laboratory services and this was achieved through staff training, refurbishment of space, water and power back up systems, and equipment provision. Support was also provided to revitalize TB diagnosis services at health facilities and through outreach based at sub-counties. It was reported at evaluation that the STAR-EC support enabled optimum HIV/TB laboratory services at all HC III and IV and hospitals in the STAR-EC districts, in line with national standards. This was indeed confirmed at all 16 health facilities visited. The key constraints in laboratory operations noted at evaluation were: the constant stock outs of supplies (especially for HIV and CD4 testing); and inadequate access to electricity, running water and space to ensure optimum infection control (especially at rural HC III with no dedicated laboratory space in the original design of the service space).

In addition STAR-EC complemented MOH support to six laboratories in the region (three at hospitals and three at HC IV) by providing additional equipment and necessary operational support, to enable them serve as hubs within the national framework for HIV/TB laboratory services. All six hubs were indicated as functional at the time of evaluation.

Strengthened HIV/TB supply chain management (SCM)

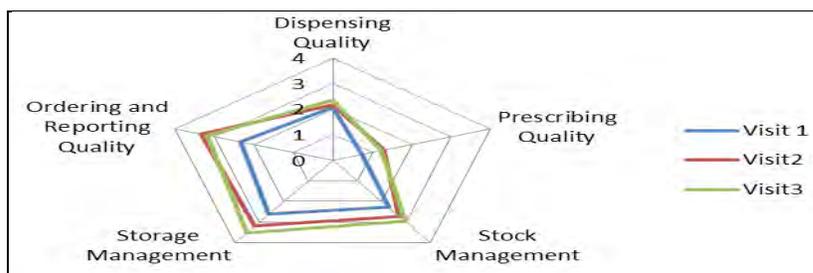
STAR-EC support in this area focused on enabling districts to improve:

- a) Management of logistics records and data, and using the information to rationalize ordering and necessary redistribution of medicines and other supplies
- b) Refurbishing storage space at health facilities to ensure orderly and safe storage of client records, and of medicines and other supplies. This was especially important at lower health facilities that had limited or no previous experience handling ARVs and large volumes of chronic care client records.
- c) Provision of buffer stocks of critical HIV/TB supplies to minimize stock-out experiences at health facilities
- d) Training and operational support to logistics management teams at district and health sub-district levels to enable necessary support supervision; and
- e) Provision of training, infrastructure refurbishment, and key equipment and supplies for health care waste management. This included attention to efficiency and safety in

management of different categories of waste from health care processes; and unique focus on management of the large volumes of waste from male circumcision using disposable kits.

STAR-EC worked closely with MOH and support programs dedicated to SCM and waste management (e.g., SURE, AIDSTAR-One, etc.) to enable rapid, sustainable and scaled-up absorption of such external support in the targeted districts. Also supported training and operation of logistics management teams at district and health facilities; supported delivery and installation of incinerators; and complemented district transport systems for re-distribution of supplies and on-going support supervision. Evaluation discussions and review of records found evidence of major improvement in supply chain management (illustrative example in Figure 2); but also highlighted persistent problems especially with stock-out of test kits.

Figure 2: Improvements in supply chain management



What are the service delivery outcomes attributed to the DBTAs?

Utilization trends of selected HIV/TB services

HCT: There was a sustained increase in the number of people receiving HCT in the STAR-EC districts; from 178,303 in project year (PY)2 (the first year of scaled up HCT services over the entire 12 month period); to 798,150 in PY6. Females were consistently higher than males among reached clients; at an overall proportion of 55 percent; ranging between 51 percent and 61 percent over the program period.

The STAR-EC focused on promoting HTC for couples was well reflected in the progressive increase in number of couples reached, from 7,558 couples (9% of all clients reached) in PY2 to 63,007 couples (13% of all clients reached) in PY6. The proportion of HTC clients reached as couple was slightly higher in PY4 and PY5 (at 15% and 16% respectively); a possible reflection of more intensive focus and/or greater effectiveness in targeting couples.

The proportion of HTC clients that were HIV positive was similar among females and males; and declined over the program period as presented in Table 5 below. This may reflect an overall decline in new HIV infections in the region.

Table 5: Trend of HIV positive tests among HTC clients 2009 to 2014

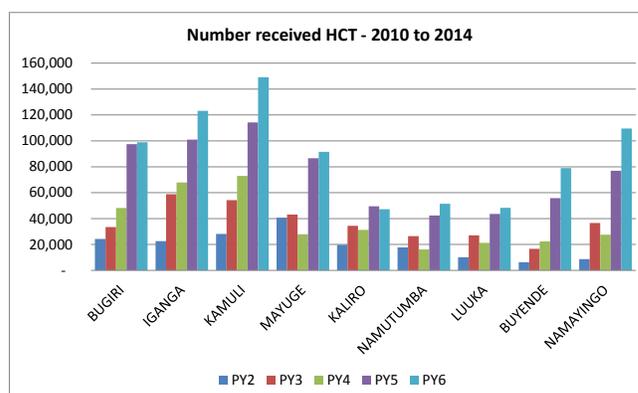
| | Female | Male | Total |
|-----|--------|------|-------|
| PY1 | 3.6 | 3.6 | 3.6 |
| PY2 | 5.0 | 4.9 | 5.0 |
| PY3 | 5.5 | 5.3 | 5.4 |
| PY4 | 4.1 | 3.9 | 4.0 |
| PY5 | 3.0 | 2.3 | 2.7 |
| PY6 | 2.4 | 1.7 | 2.1 |

The trend in number of people reached with HTC in the different districts over the program period is presented in Figure 3. It reflects sustained increase in the number reached in each successive year across all districts

The district trends in numbers reached over the years suggest three clusters of districts with similar trends:

- Cluster 1: Bugiri, Iganga, Kamuli and Mayuge (all in place before 2005) generally have the highest numbers reached in the different years
- Cluster 2: Kaliro, Namutumba and Luuka (two of them created in 2005, one in 2010) the numbers reached are modest, and did not change over the years as dramatically as in the other two clusters
- Cluster 3: Buyende and Namayingo (both districts created in 2010), started at very low numbers in PY2, but rapidly increase, especially in PY5 and PY6.

Figure 3: Clients receiving HCT



To illustrate the intensity of HCT penetration in each district, the number reached in PY6 (Oct 2013 to Sep 2014) was compared to the total district population as reported in the 2014 census. Table 6 below presents this comparison and reflects a trend of close similarity in the districts as clustered above.

Table 6: Persons reached with HTC in PY6 as a proportion of the 2014 district population

| District | Percent of population reached |
|-----------|-------------------------------|
| BUGIRI | 25.3 |
| IGANGA | 24.3 |
| KAMULI | 30.4 |
| MAYUGE | 19.1 |
| KALIRO | 19.9 |
| NAMUTUMBA | 20.3 |
| LUUKA | 20.0 |
| BUYENDE | 24.6 |
| NAMAYINGO | 49.1 |

VMMC: STAR-EC provided all the required additional support to districts (training, equipment and supplies, and operational support to VMMC outreaches) to enable rapid scale up of circumcision services starting in May 2010, and lasting throughout the program period. A cumulative total of 347,873 males were reached between May 2010 and September 2014 (Details in Figure 4 and 5 below).

Figure 4: Males reached with VMMC in each of the program years

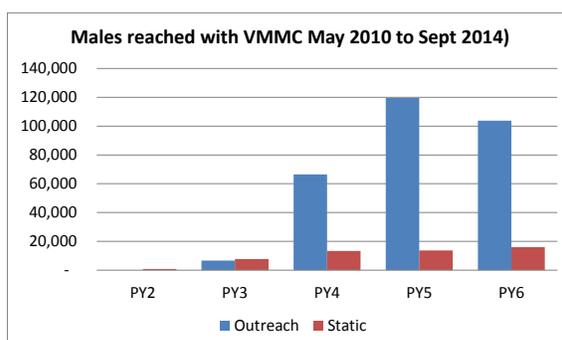
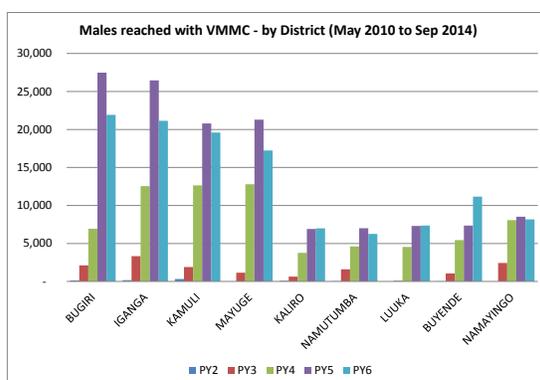


Figure 5: Males reached by VMMC by District



The district-specific trends in VMMC reach over the program period closely mirror the three district clusters discussed for HTC. In keeping with the STAR-EC commitment to combination

prevention services; HTC and couple attendance were an integral element in supported VMMC service delivery. To illustrate success in this regard, 94% of the 119,808 VMMC clients in 2014 accepted an HIV test, and 97 among them (0.1%) were found HIV positive and enrolled into HIV care services. A total of 14,780 women received HTC through VMMC services; having escorted their male partners receiving the VMMV service.

EMTCT: The EMTCT services supported by STAR-EC reached more than 20,000 HIV positive mothers and provided critical support, care and treatment to improve their health and protect their babies (table 7a and 7b).

Table 7a: Number of pregnant women with known HIV status (includes women who were tested for HIV and received their results in STAR EC region

| Year | 2010 | 2011 | 2012 | 2013 | 2014 |
|-----------------|--------|---------|---------|---------|---------|
| Number of Women | 64,796 | 106,075 | 108,395 | 116,312 | 112,632 |
| HIV+ | 1,752 | 3,996 | 5,891 | 2,263 | 1,701 |
| %age | 2.7 | 3.8 | 5.4 | 3.0 | 1.5 |

Source: MEEPP DATA 2014

Table 7b: Number of HIV-positive pregnant women who received antiretroviral to reduce risk of mother-to-child-transmission in STAR EC region

| Year | 2011 | 2012 | 2013 | 2014 |
|-----------------|-------|-------|-------|-------|
| Number of Women | 3,418 | 3,660 | 4,918 | 3,640 |

Source: MEEPP DATA

Table 7c: HIV positive mothers enrolled in PMTCT – by District (Cumulative PY2 to PY6)

| District | ANC | | New, identified in labour | New, in PNC/YCC | Total |
|--------------|----------------------|---------------|---------------------------|-----------------|---------------|
| | Known and Documented | New | | | |
| BUGIRI | 760 | 1,328 | 38 | 98 | 2,224 |
| IGANGA | 1,502 | 2,107 | 123 | 155 | 3,887 |
| KAMULI | 1,541 | 2,418 | 186 | 226 | 4,371 |
| MAYUGE | 741 | 1,281 | 23 | 80 | 2,125 |
| KALIRO | 896 | 1,029 | 76 | 121 | 2,122 |
| LUUKA | 326 | 452 | 33 | 64 | 875 |
| NAMUTUMBA | 541 | 818 | 11 | 110 | 1,480 |
| BUYENDE | 656 | 1,017 | 54 | 98 | 1,825 |
| NAMAYINGO | 792 | 1,027 | 58 | 82 | 1,959 |
| Total | 7,755 | 11,477 | 602 | 1,034 | 20,868 |

As shown above, more than one-third (37 percent) of the mothers already had a known and documented HIV positive status by the time of first ANC visit; while 55 percent had the HIV

positive status first established during ANC. This means that 92 percent of the mothers were reached in ANC and thus had opportunity for optimum benefit from the EMTCT services. The 8 percent of the mothers that was only reached during or after labour did not have this opportunity and their protection was partial.

The EMTCT program was less effective in reaching the infants with necessary care; as presented in Table 8a and 8b. Only 59 percent of the HIV-exposed infants born at health facilities were given Niverapine syrup. This was partly attributed to widespread stock out of Niverapine, especially in PY5 and PY6.

Table 8a: Reaching HIV exposed infants with ARV protection

| | Total HIV-exposed infants born at health facilities | HIV-exposed infants given NVP | Percent 'protected' |
|--------------|--|--------------------------------------|----------------------------|
| BUGIRI | 961 | 606 | 63.1 |
| IGANGA | 1,761 | 1,105 | 62.7 |
| KAMULI | 1,305 | 867 | 66.4 |
| MAYUGE | 874 | 480 | 54.9 |
| KALIRO | 838 | 402 | 48.0 |
| NAMUTUMBA | 652 | 267 | 41.0 |
| LUUKA | 387 | 228 | 58.9 |
| NAMAYINGO | 663 | 354 | 53.4 |
| BUYENDE | 792 | 574 | 72.5 |
| Total | 8,233 | 4,883 | 59.3 |

Table 8b: Number of HIV+ lactating mothers followed up in the community for infant feeding, early infant diagnostic services, or linkage to into chronic HIV care

| Year | 2013 | 2014 |
|------------------------|-------|-------|
| Number of women | 5,929 | 8,202 |

Source: MEEPP DATA

HIV/TB: The STAR-EC concurrent and complementary support to HIV and TB services was well reflected in the high levels of TB screening among HIV+ clients, as presented in Table 9. From a low starting point in most districts in PY2, the screening rate attained and sustained levels above 90 percent in all the following years.

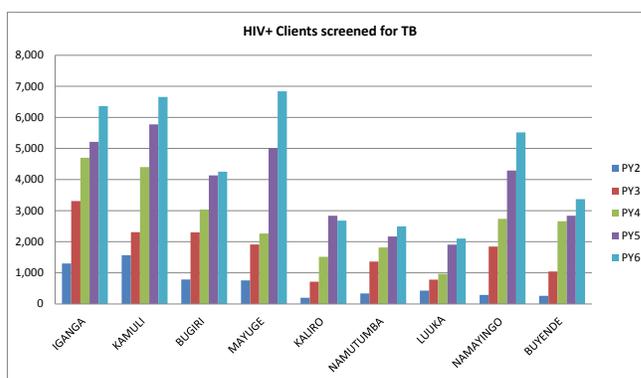
Table 9: TB screening rate among HIV+ clients

| DISTRICT | PY2 | PY3 | PY4 | PY5 | PY6 |
|-----------------|------------|------------|------------|------------|------------|
| IGANGA | 96.5 | 95.8 | 98.5 | 100.7 | 99.6 |
| KAMULI | 92.6 | 84.5 | 96.8 | 99.7 | 99.9 |
| BUGIRI | 80.2 | 96.2 | 99.7 | 95.7 | 99.0 |
| MAYUGE | 78.8 | 98.1 | 100.0 | 98.8 | 100.0 |
| KALIRO | 68.6 | 95.1 | 100.0 | 99.4 | 99.7 |
| NAMUTUMBA | 57.6 | 93.9 | 100.0 | 99.6 | 99.9 |

| | | | | | |
|--------------|-------------|-------------|-------------|-------------|-------------|
| LUUKA | 99.3 | 96.3 | 100.0 | 99.7 | 99.9 |
| NAMAYINGO | 63.6 | 97.5 | 99.7 | 99.2 | 95.4 |
| BUYENDE | 86.6 | 82.8 | 100.0 | 98.5 | 99.4 |
| TOTAL | 84.1 | 93.3 | 99.0 | 99.0 | 99.1 |

The progress in screening rate is also reflected in the absolute numbers of HIV positive clients screened over the program period, as reflected in Figure 6.

Figure 6: HIV+ Clients screened for TB



A total of 1,810 TB cases were identified among HIV+ clients in the STAR-EC districts and were started on TB treatment between PY2 and PY6. This number increased from 205 in PY2 to 624 in PY3.

Table 10: TB detection rate among HIV+ clients (per 1,000 people)

| DISTRICT | PY2 | PY3 | PY4 | PY5 | PY6 |
|---------------|-----------|-----------|-----------|----------|-----------|
| IGANGA | 72 | 100 | 31 | 3 | 16 |
| KAMULI | 18 | 30 | 13 | 2 | 9 |
| BUGIRI | 20 | 23 | 17 | 2 | 3 |
| MAYUGE | 36 | 19 | 6 | 1 | 10 |
| KALIRO | 20 | 18 | 15 | 4 | 6 |
| NAMUTUMB A | 36 | 18 | 13 | 5 | 15 |
| LUUKA | 19 | 54 | 34 | 2 | 19 |
| NAMAYING O | 41 | 20 | 13 | 3 | 22 |
| BUYENDE | 12 | 17 | 13 | 1 | 6 |
| TOTAL | 35 | 40 | 17 | 2 | 12 |

The proportion of TB patients under care in STAR-EC districts that received HTC was high, between 96 percent and 99 percent over PY3 to PY6 (table 11).

Table 11: HTC rate among TB patients

| | PY3 | PY4 | PY5 | PY6 |
|---|------------|------------|------------|------------|
| Number of people on TB treatment register | 2,422 | 1,810 | 2,062 | 2,115 |
| Number received HTC | 2,334 | 1,796 | 2,004 | 2,088 |
| Proportion received HTC0 | 96.4 | 99.2 | 97.2 | 98.7 |

The rate of HIV detection among TB patients (table 12) varied widely across the STAR-EC districts over the program period, ranging from 221 to 574 in every 1,000 TB patients. It is notable that the same districts had relatively higher occurrence of TB among HIV+ clients (Iganga, Luuka and Namayingo), also reflected higher levels of HIV among TB patients. This may be a reflection of greater likelihood of HIV/TB co-infection in these districts; and/or greater effectiveness in linkage between HIV and TB services.

Table 12: HIV detection rate among TB patients (per 1,000 patients)

| DISTRICT | PY3 | PY4 | PY5 | PY6 |
|-----------------|------------|------------|------------|------------|
| IGANGA | 386 | 370 | 367 | 350 |
| KAMULI | 353 | 290 | 221 | 267 |
| BUGIRI | 298 | 280 | 316 | 234 |
| MAYUGE | 332 | 280 | 253 | 285 |
| KALIRO | 221 | 270 | 183 | 222 |
| NAMUTUMBA | 249 | 309 | 236 | 262 |
| LUUKA | 493 | 333 | 339 | 387 |
| NAMAYINGO | 409 | 540 | 509 | 574 |
| BUYENDE | 258 | 288 | 280 | 284 |
| TOTAL | 340 | 334 | 313 | 313 |

Linkage of the HIV+ TB patients into HIV care was near universal across all districts; except in PY4, where only one district (Kamuli) attained 90 percent.

Table 13: Linkage into HIV care for HIV+ TB patients

| DISTRICT | PY3 | PY4 | PY5 | PY6 |
|-----------------|------------|------------|------------|------------|
| IGANGA | 94.7 | 75.8 | 99.0 | 100.0 |
| KAMULI | 100.0 | 91.1 | 100.0 | 100.0 |
| BUGIRI | 98.3 | 60.5 | 99.1 | 100.0 |
| MAYUGE | 93.9 | 32.1 | 100.0 | 100.0 |
| KALIRO | 95.2 | 85.0 | 104.8 | 100.0 |
| NAMUTUMBA | 100.0 | 88.2 | 100.0 | 100.0 |
| LUUKA | 100.0 | 47.4 | 100.0 | 100.0 |
| NAMAYINGO | 95.9 | 80.5 | 95.2 | 100.0 |
| BUYENDE | 100.0 | 69.6 | 100.0 | 100.0 |

| | | | | |
|--------------|-------------|-------------|-------------|--------------|
| TOTAL | 96.7 | 69.7 | 99.0 | 100.0 |
|--------------|-------------|-------------|-------------|--------------|

AIDS care and treatment: STAR-EC support contributed to a rapid increase in the number of HIV+ people identified through HTC, and a corresponding increase in number of HIV+ persons under care. Table 14 below presents a comparison between the cumulative number of HIV+ persons identified from HTC, and the corresponding growth in number of HIV+ persons under care.

Table 14: Linking HIV positive persons into care

| | PY2 | PY3 | PY4 | PY5 | PY6 |
|---|------------|------------|------------|------------|------------|
| Cumulative HIV+ from HTC services | 9,293 | 27,142 | 40,615 | 58,396 | 74,871 |
| HIV+ clients under care | 7,041 | 16,684 | 24,335 | 34,517 | 40,660 |
| HIV+ clients under care as percent of cumulative HIV+ | 75.8 | 61.5 | 59.9 | 59.1 | 54.3 |

There is a sustained decline in the proportion under care, from 76 percent in PY2 down to 54 percent in PY6. This may be a reflection of:

- HIV+ persons that test multiple times over the years
- HIV+ persons that may seek care outside the STAR-EC districts (especially in Jinja)
- Declining efficiency in linkage of the HIV+ persons into care – in part attributable to the rising numbers that test positive

Table 15: Clients on ART as a proportion of total clients under care

| DISTRICT | PY2 | PY3 | PY4 | PY5 | PY6 |
|-----------------|-------------|-------------|-------------|-------------|-------------|
| IGANGA | 34.1 | 30.0 | 23.0 | 26.9 | 24.8 |
| KAMULI | 25.0 | 42.5 | 22.8 | 25.0 | 24.9 |
| BUGIRI | 18.8 | 31.4 | 26.2 | 24.0 | 26.1 |
| MAYUGE | 19.3 | 19.7 | 19.7 | 22.4 | 21.1 |
| KALIRO | 39.7 | 34.1 | 23.1 | 31.8 | 23.5 |
| NAMUTUMBA | 15.2 | 34.7 | 20.6 | 16.2 | 19.0 |
| LUUKA | 24.9 | 25.6 | 21.1 | 21.5 | 22.8 |
| NAMAYINGO | 25.9 | 33.9 | 27.2 | 34.6 | 28.9 |
| BUYENDE | 7.4 | 12.0 | 13.3 | 20.1 | 21.3 |
| TOTAL | 25.2 | 30.5 | 22.3 | 25.1 | 24.1 |

Over the STAR-EC program period, the proportion of HIV+ clients under care that were on ART was general stable, between 22 percent and 31 percent. Namayingo and Kaliro districts had higher proportions on ART; while Buyende, Luuka, Mayuge, and Namutumba had lower proportions. The other three districts (Iganga, Kamuli and Bugiri) were close to the overall average proportions.

ART: As a result of the expansion of ART service delivery supported by STAR-EC, a total of 30,775 PLHIV were enrolled into ART; progressing from 1,776 people in PY2 to 9,779 in PY6.

Figure 7: HIV positive under care

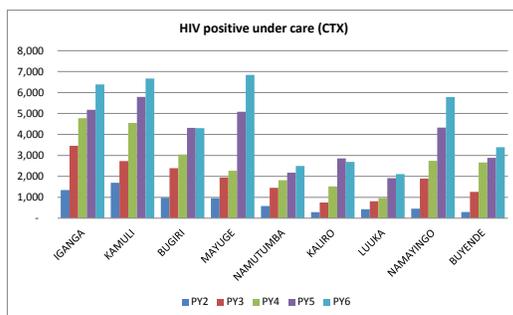


Figure 8: Clients enrolled on ART

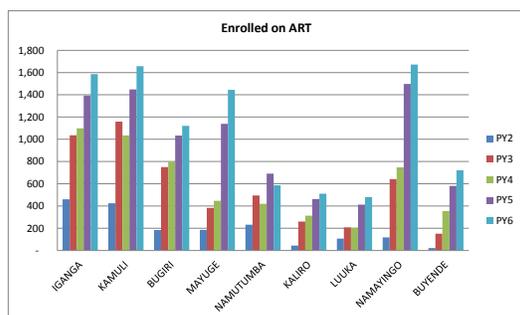


Figure 9: Cumulative enrollment

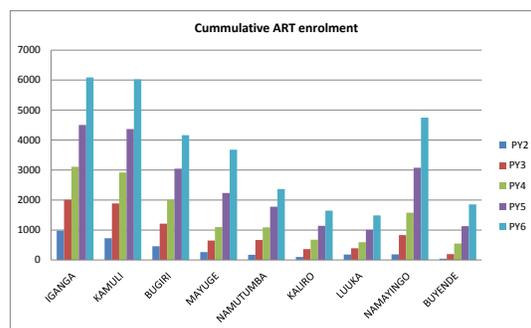


Figure 10: Clients active on ART

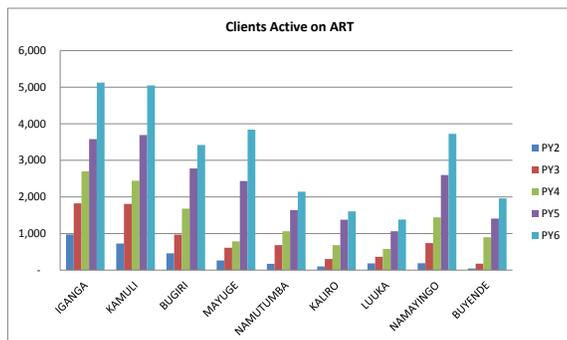


Table 16 : Clients active on ART as a proportion of the cumulative ART enrolment

| DISTRICT | PY2 | PY3 | PY4 | PY5 | PY6 |
|----------|-------|-------|------|-------|-------|
| IGANGA | 100.0 | 90.8 | 86.9 | 79.5 | 84.2 |
| KAMULI | 100.0 | 95.9 | 83.7 | 84.5 | 83.8 |
| BUGIRI | 100.0 | 80.3 | 83.6 | 91.3 | 82.1 |
| MAYUGE | 100.0 | 94.1 | 71.9 | 109.0 | 104.3 |
| KALIRO | 100.0 | 102.4 | 97.7 | 92.2 | 90.7 |

| | | | | | |
|--------------|--------------|-------------|-------------|-------------|-------------|
| NAMUTUMBA | 100.0 | 84.5 | 101.3 | 121.0 | 97.6 |
| LUUKA | 100.0 | 93.4 | 97.0 | 105.4 | 92.7 |
| NAMAYINGO | 100.0 | 89.0 | 91.4 | 84.5 | 78.4 |
| BUYENDE | 100.0 | 90.8 | 163.5 | 124.7 | 105.8 |
| TOTAL | 100.0 | 91.3 | 90.1 | 92.4 | 88.1 |

System performance tracking (HIV/TB system outcome indicators)

An illustration of system performance using selected indicators is shown in table 17. The indicators presented are: TB notification rate, TB case detection rate, TB treatment success rate ART retention rate

Table 17 Performance on selected HIV/TB outcome indicators

| | Baseline (2008) | PY2 | PY3 | PY4 | PY5 | PY6 | Target (EOP) |
|---------------------------------|------------------------|------------|------------|------------|------------|------------|---------------------|
| TB Case detection rate | 31.7 | 38.8 | 42.8 | 31.0 | 34.0 | 36.0 | 70 |
| TB case notification rate | 44 | 51 | 75 | 41 | 44 | 62 | 95 |
| TB treatment success rate | 82 | 66.9 | 83.3 | 85.0 | 88.0 | 86.0 | 95 |
| ART retention rate at 12 months | NA | 60 | 72 | 61 | 80 | 79 | 90 |

On average it is noted that there is an improved performance on all the indicators from 2008 to 2014 in the STAR EC region.

Client perceptions

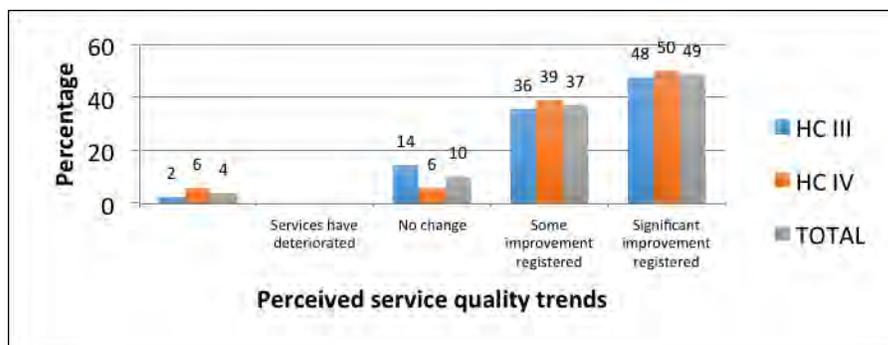
Information from the client survey indicates high levels of satisfaction about the perceived improvement and current quality of HTC, EMTCT and ART services in the STAR-EC region. The levels of satisfaction with respect to HTC were generally similar across the three STAR programs, as presented in table 18.

Table 18: Exit Clients' satisfaction with HTC services

| Parameter | EAST-EC (n=79) | TOTAL (n=238) |
|---|-----------------------|----------------------|
| Clients who felt that they were appropriately counseled | 87.3 | 83.2 |
| Health worker discussed with clients specific actions to be taken in view of their HIV results | 74.7 | 76.9 |
| Would want to see HTC service delivery processes clients improved | 30.4 | 33.2 |

Similarly, perceptions on the quality of EMTCT services were generally appreciative, as presented in figure 11.

Figure 11: Perceptions on HIV service quality

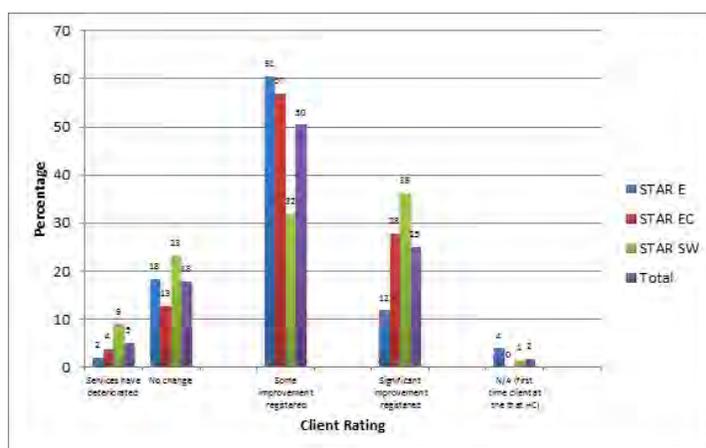


Source: Client Exit Interviews

Respondents in STAR-EC region were more appreciative about the quality of counseling, availability of medicines and education about FP; and less glowing in their views about education on infant feeding, and laboratory testing (especially for infants).

ART services were also appreciated as improved over the STARs program period; as presented in figure 12.

Figure 12: Client ratings of ART services



Similar to the perceptions on EMTCT services, clients were more appreciative of the counseling and education on TB, FP and nutrition; and less so with respect to laboratory services.

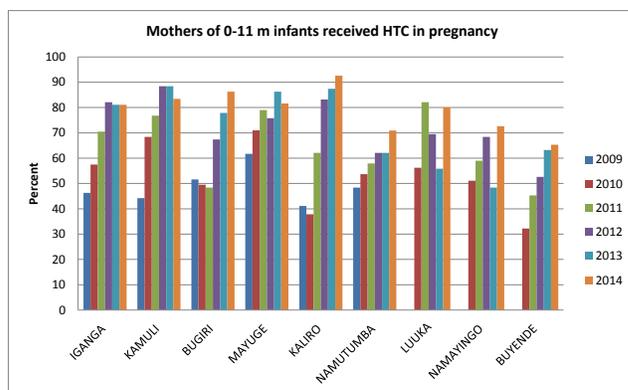
The positive about the Specific improvements related to ART noted by respondents included: a) greater adherence to ART clinic schedules, b) health workers are friendlier, provide appropriate counseling, and manage clinic time better; c) adequate and un-interrupted availability of ARVs; and d) improved waiting areas (more space, seats, etc.)

Selected LQAS results

HCT: results from annual district surveys conducted since 2009 show a sustained increase in population-level coverage with HCT, as presented in Figure 9 below. Coverage is consistently above 20% over the STAR-EC program period in all districts. The increase is especially steep in the new districts (e.g., Buyende, Luuka); where past access to services was particularly poor.

EMTCT: The proportion of mothers with infants 0-11 months old who were counseled and tested for HIV during the last pregnancy, and know the result increased in all districts over the STAR-EC period, as presented in Figure 15.

Figure 15: Mothers of 0-11 months who received HTC in pregnancy



Source: Annual LQAS surveys (supported through STAR-E)

Effect of Integration

What was the effect of integration of HIV/TB, HIV/Family Planning, HIV/AIDS and health on overall health outcomes?

Integration is one of the key characteristics specifically required for the HIV/TB services expected in the DBTA program. Integration is discussed in JSI's final proposal design in reference to: a) planned interventions in STAR-EC support to strengthen health systems at district level; b) planned capacity building for STAR-EC partners to deliver an integrated package of services; and c) the intention by STAR-EC to take an integrated approach to supporting PMTCT as part of a wide spectrum of connecting and overlapping services for HIV, health and gender-related concerns. However, the proposal did not provide explicit details on the nature of the intended integration, and the specific approaches to be adopted to achieve the three categories of integration indicated in the USAID RFA.

Integration between HIV, TB and other health services

Evaluation respondents' largely focused on integration between HIV, TB and other health services. An integrated approach was adopted to service delivery planning; in training of health facility staff, VHTs and PLHIV volunteers; and in service delivery and monitoring. This was in line with current government guidelines on integrated management of adolescent and adult illnesses (IMAI), and on integrated management of pregnancy and childbirth (IMPAC). STAR-EC encouraged and facilitated collaboration with other support programs and different MOH units to ensure effective integration across the different program elements. Integration in HIV/TB service delivery, and indeed with a broader scope of services, was especially promoted in STAR-EC in delivery of integrated outreach services, and in the promotion of networking, linkages and referrals between communities and health facilities. The integrated outreach model was especially useful in service delivery to islands and other fishing communities with high concentrations of MARPs, and previously underserved with health and other social services.

We have had quarterly integrated outreaches and through these outreaches, the number of people on ART and those who had VMMC increased meaning that

people received the services which are nearer to them and continuous. Before these outreaches, people used to miss out on ART refills but now, they don't. [Focus Group, CSO service providers]

Integrated outreaches using the '4 tent model' were particularly effective in decreasing stigma for HIV and TB because any person would move between the tents and only stop at the point where the relevant service is provided. They were also noted as effective in attracting men; especially when located in the towns where most of them spend the day. In some cases, inclusion of additional services (e.g., IGAs, micro-finance, etc.) was an added boost to wider attendance. Evaluation respondents noted that integration of services has created a positive relationship with the health facilities and CSOs.

Initially, we were working in isolation of each other but with the integrated outreach, you go out together as a team and this has improved relationship helping us to serve the community better by bringing the services near to them and even reach those hard-to-reach areas. [Focus Group, CSO service providers]

Integration was also promoted in the strengthening of linkages and referral between health facilities and the community level. This focused on the VHTs and PLHIVs who were trained and facilitated to mobilize and refer people for services, conduct follow up of clients as needed, and to participate in service delivery processes in both the community and health facility settings. It also involved CSO and PLHIV networks working at this level; and their collaboration with health facilities in HIV/TB service promotion and delivery.

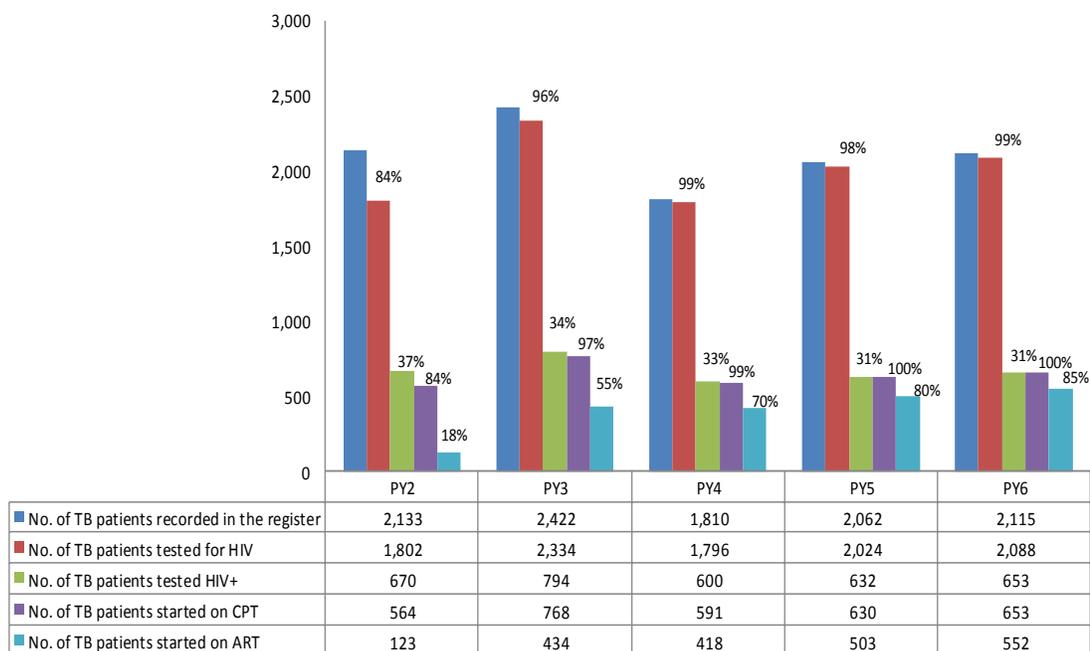
We have the VHT, M2M and expert clients at facility level who help in the work. When a volunteer tests and finds a positive case of HIV, they will direct you to the next desk for further attention. The same thing is done by mentor mothers; if they find a woman who is pregnant and HIV positive, they will directly you to the next level to get PMTCT services immediately. [Focus Group, CSO service providers]

The other area of integration in STAR-EC highlighted in the evaluation was in 'combination HIV prevention. Health facilities, CSOs, VHTs and PLHIV were all empowered through training and mentoring, and facilitated to work together in delivering integrated services for HTC, EMTCT, SMC, BCC for safer sex, ART, and TB care. The quotes below illustrate some of the approaches and achievements in this regard.

We now have Knowledge Rooms for MARPs which are manned by peer educators and other lay health workers who carryout moonlight mobilization and services, and make follow up referrals. Some of these knowledge rooms are near the health facilities making the referrals very easy. [Focus Group; CSO service providers]

a) Effects of integration on HIV/TB service

The effects of integration on HIV/TB service outcomes in the STAR EC region are demonstrated in figure 16



HIV testing among TB patients increased while the numbers started on prophylaxis and treatment also increased over the project period.

b) Effects on maternal health outcomes

The implementation of PMTCT in ANC resulted in improvements in uptake of ANC services. The proportion of mothers attending ANC at least four times rose from 42% to 50% between 2011 and 2013 in the STAR EC region (LQAS data).

Integration across elements of HIV-related services

In addition to the integration of HIV prevention, care and treatment services the evaluation found efforts in STAR-EC support to link this to support and empowerment to address non-health impacts of HIV and AIDS. This included social and economic empowerment to address vulnerability to HIV (e.g., among youth out of school, sex workers, women subject to gender-based violence, etc.); and meeting the needs of OVCs. Integrated outreaches to the islands included such a broad range of services; to give opportunity to the communities to access all services rarely provided there. Other opportunities used to enable such integration included: integrated planning at district level (e.g., under SDS coordination); and service linkage and referral between health facilities, CSOs and religious institutions.

We identified several OVC initially through family support group but we are not focused on OVC. We do referrals and link them to other projects that provide additional services. Our challenge is that there are not many CSOs that are providing comprehensive OVC services. [KII, STAR-EC]

Integrated outreaches create psychological therapy to the community-sometimes we go with specialists in child rights and gender based violence and they talk to the community about child protection. Sometimes we have other specialists like for NAADS and Microfinance, and these greatly benefit the community.

[Focus Group, CSO service providers]

Integration within the broader district health system

This was mainly addressed through the coordination facilitated by SDS. Advancing integration included integrated planning for different district development services, and joint review meetings to identify opportunities for synergy and cross-referral.

Cost Efficiency

To what extent can the DBTA design be considered cost efficient in strengthening capacity of districts and CSOs to improve health service delivery?

The level spending by the STAR EC program is shown in table 18.

Table 18: Breakdown of expenditure for FY 13 and FY 14 (combined) by level of spending

| Level of Spending | STAR-EC |
|------------------------------|----------------|
| Investment (Site level) | 1,551,930 |
| Recurrent (Site Level) | 8,082,929 |
| Program Management | 5,617,492 |
| Strategic Information | 1,273,913 |
| Health Systems Strengthening | 431,102 |

There is a relatively high allocation of funds to program management. Program management is the second highest cost driver for the project. This level of spending on the program is inefficient and cannot be sustained if one has to achieve more outcomes with fewer resources.

CONCLUSIONS

1. **The STAR-EC design match to the DBTA model:** The key elements of the DBTA model (as defined in the USAID RFA) were all addressed in the STAR EC design and implementation. However, the STAR-EC design that subsumed result 4 (networking, linkages and referrals) under result 5 (demand creation) resulted in limited attention to the system strengthening requirements and opportunities relevant to result 4.
2. **Strengthening decentralized service delivery systems:** All the WHO building blocks for health systems strengthening were addressed in the STAR-EC program; fully based in and managed by the program office. Impact was most evident in the three building blocks of: human resources for health; data and information management; and enhancing service delivery through targeted health infrastructure improvements. Impact was less evident with respect to: leadership and management; supplies management; and sustainable financing and reaching younger adults.
3. **Strengthening Community Structures through networking, linkages and referral:** are well utilized in building effective mechanisms for identifying and linking pregnant women, PLHIV and persons with (or suspected to have) TB to community- and facility-based services. However, systematic and sustainable inclusion of CBOs, FBOs and other civil society structures has been inadequate.
4. **Demand creation:** Demand for HIV prevention, care and treatment services has been well matched to the progressive growth in supply of these services. Demand for HTC and SMC services has exceeded the available service supply over most of the project lifetime.
5. **Effect of transition from the STAR programs to district grants through SDS:** USAID-supported program interventions have become more aligned with the district development plans with little duplication of activities among the different USAID implementing partners. The performance-based financing approach has led to greater attention to service delivery, information use and timely accountability by districts.
6. **Sustainability:** While the support provided by STAR-EC was technically sustainable; its financial sustainability is dependent on massive increase in government financing to district health services, and/or substantial external investments in the short to medium term.
7. **Capacity for management of strategic information:** STAR EC has effectively strengthened capacity to manage and use data in the government HMIS at all levels (district, health facility, and community); and has built and utilized capacity to conduct annual LQAS surveys to inform district-based service review and planning. However, this capacity has been largely utilized in short-term operational planning (micro-planning) for service delivery; and less in strategic and long-term service improvement planning.
8. **Improved Health Service Delivery:** STAR-EC support enabled scaled up and integrated delivery of HIV/TB services across all target districts; with most focus and results among MARPs and PLHIV, and in specific previously underserved communities (e.g., Islands and other fishing communities). Specific outcomes attributable in large part to STAR-EC support include: increased community-level coverage with HTC, PMTCT; and SMC (as demonstrated in annual LQAS surveys); and increased access to ART (as evident in ART enrolment and retention trends from HMIS reports).

9. **Integration of Services:** While there is ample evidence for integrated delivery of HIV prevention, care and treatment services, and to a less extent between HIV and TB services; the evaluation was not able to find dependable indicators (and their consistent and sustained measurement over time) to accurately demonstrate the effect of this integration on over-all health outcomes.

RECOMMENDATIONS

1. MOH, with support from USAID, should empower districts to continue driving strategic and internally-driven approach to strengthening district health systems
 - a. Priority should be placed on the identified gaps in the health system building blocks of: leadership and management; supplies management; and sustainable financing.
2. Districts should strengthen further the implementation of comprehensive strategies to fully integrate VHTs, PLHIV volunteers, CBOs, FBOs, other civil society structures and all other stakeholders in in sustainable networking, linkages and referrals; as an integral element in community systems strengthening for health
3. USAID should refine the DBTA model to include specific attention to financial sustainability within the broader framework of integrated and sustainable financing for district health systems
4. Districts, with support from MOH and partners should develop and implement strategies for integrated generation and utilization of strategic information through different mechanisms at all levels within and beyond the health sector.
 - a) Population based and facility-based service provision surveys should be conducted annually; building on the capacity and experience in LQAS surveys
 - b) Routine service provision data (e.g., in HMIS) should be analyzed and utilized to inform planning and service improvement at all levels
 - c) Community-based data (e.g., in VHT records) and facility data should be linked and analyzed together to generate more comprehensive understanding and inform better planning
 - d) The roles and complementarities of sector-based information systems and integrated information in district planning units should be clarified and harnessed
5. USAID should include in future DBTA models clear requirement to address integration across the entire spectrum of related health services; with specific indicators to track and report on achievement of such integration and its impact on overall health outcomes

LESSONS LEARNED

1. Participation by districts and MOH in the design of the DBTA model enhances comprehensive attention to all critical elements in district health systems; and the opportunities for effectiveness and sustainability.
2. Appropriately trained and adequately supervised VHTs and PLHIV volunteers are able to provide quality HIV/TB services such as HTC, TB screening and on-going counseling and social support for PMTCT and ART clients.
3. Dissemination of appropriately packaged strategic information is a critical mechanism for enhancing appreciation and commitment to DBTA programs and their interventions at different levels of the district health system.

4. Quality improvement interventions in HIV/TB services at health facilities can be strengthened through management support from DHT, and community feedback through VHTs and PLHIV volunteers.

ANNEXES

Annex I List of Acronyms

| | |
|--------|---|
| AIDS | Acquired Immunodeficiency Syndrome |
| ANC | Antenatal care |
| ART | Antiretroviral therapy |
| BCC | Behavioral Change Communication |
| BMU | Beach Management Unit |
| CAO | Chief Administrative Officer |
| CBDOTS | Community Based TB Directly Observed Therapy Short course |
| CBOs | Community based organizations |
| CD4 | Cluster of differentiation 4 |
| CDO | Community development officer |
| CSAs | Community support agents |
| CSO | Civil society organization |
| DAC | District AIDS Committee |
| DAT | District AIDS Taskforce |
| DBTAs | District based technical assistance partners |
| DDP | District Development Plan |
| DFPP | District Focal Point Person |
| DHO | District health officer |
| DHT | District health team |
| DHMT | District Health Management Team |
| DHIS2 | District Health Information System 2 |
| DMC | District Management Committee |
| DOP | District operational plan |
| DOTS | Directly observed short course |
| DQA | Data Quality Assessment |
| DTLS | District tuberculosis and leprosy supervisor |
| EID | Early infant diagnosis |
| eMTCT | Elimination of mother-to-child transmission of HIV |
| FBOs | Faith Based Organization |
| FGD | Focus group discussion |
| FLEP | Family Life Education Program |
| FSG | Family support group |
| GIPA | Greater Involvement of People Living with HIV&AIDS |
| GoU | Government of Uganda |
| HC | Health center |
| HFA | Health Facility Assessment |
| HIV | Human immunodeficiency virus |
| HMIS | Health management information systems |
| HTC | HIV testing and counseling |
| HUMC | Health Unit Management Committee |
| IEC | Information, education, and communication |
| IPT | Isoniazid Preventive Therapy |
| JSI | JSI Research & Training Institute, Inc. |
| KYCS | Know Your Child Status |
| LC | Local council |
| LMIS | Logistics management information system |
| LQAS | Lot quality assurance sampling |
| MARPs | Most-at-risk populations |

| | |
|-----------|---|
| MCPs | Multiple concurrent partnerships |
| MDR | Multi-drug resistant tuberculosis |
| MIPA | Meaningful Involvement of People Living with HIV&AIDS |
| m2m | Mothers2mothers |
| MoH | Ministry of Health |
| NACWOLA | National Council of Women Living with HIV&AIDS in Uganda |
| NAFOPHANU | National Forum for People Living with HIV&AIDS Networks in Uganda |
| NMS | National Medical Stores |
| OCA | Organization Capacity Assessment |
| OPD | Out Patient Department |
| OVC | Orphans and Vulnerable Children |
| PACE | Program for Accessible Health Communication and Education |
| PCR | Polymerase chain reaction |
| PEP | Post-exposure prophylaxis |
| PEPFAR | President's Emergency Fund for AIDS Relief |
| PLHIV | Person living with HIV |
| PMP | Performance Monitoring Plan |
| PMTCT | Prevention of mother-to-child transmission of HIV |
| PY | Program year |
| QI | Quality improvement |
| RTC | Routine testing and counseling |
| SACCOS | Savings and Credit Cooperative Organizations |
| SCMS | Supply Chain Management Systems |
| SCORE | Sustainable comprehensive responses for vulnerable children |
| SCHW | Sub county health workers |
| SDS | Strengthening Decentralization for Sustainability program |
| SMC | Safe Male Circumcision |
| SOPs | Standard Operating Procedures |
| SPAI | Service Performance Assessment and Improvement |
| SRH | Sexual Reproductive Health |
| STAR-E | Strengthening TB and HIV&AIDS Responses in Eastern Uganda |
| STAR-EC | Strengthening TB and HIV&AIDS Responses in East Central Uganda |
| STIs | Sexually transmitted infections |
| SURE | Securing Uganda's Right to Essential Medicines project |
| SUSTAIN | Strengthening Uganda's Systems for Treating AIDS Nationally |
| TB | Tuberculosis |
| TSR | Treatment success rate |
| UHMG | Uganda Health Marketing Group |
| URHB | Uganda Reproductive Health Bureau |
| USAID | United States Agency for International Development |
| VHTs | Village health teams |
| VMMC | Voluntary Medical Male Circumcision |
| YCC | Young Child Clinic |

Annex 2 List of Respondents

| Names | Position |
|--------------------------|------------------------------|
| STAR-EC and CSO Partners | |
| Alex Mugume | STAR-EC Chief of Party |
| Kazibwe Francis | STAR-EC Technical Director |
| Emmanuel Tihendwana | STAR-EC Training Coordinator |

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|-------------------------|--|
| Martin Ndifuna | STAR-EC HIV/AIDS Specialist |
| Andrew Mugisha | STAR-EC HIV/AIDS Specialist |
| Florence Ajok Odoch | STAR-EC HIV/AIDS Specialist |
| Tom Emulugut | STAR-EC BCC Specialist |
| Alex Batwaula | STAR-EC TB/AIDS Specialist |
| Harriet Ndagire | STAR-EC Referral and Networks Officer |
| Martin Kaleeba | STAR-EC Programs Director |
| Robinah Takwaza | STAR-EC Grants Manager |
| Patrick Jacamunga | STAR-E Grants Officer |
| Edith Kagoya | BIWIHI Coordinator |
| Bogere Stephen | BIWIHI M&E Officer |
| Yusuf Kumbuga | FLEP Coordinator |
| Waiswa Saul R. | FOC-REV Coordinator |
| Michael Gwanjaye | UDHA Deputy Ed |
| Juliet Kalegere | UDHA Program Results Manager |
| Andrew Busuge | FLEP M&E Officer |
| Suzan Mugabane | NAFOPHAN Regional Coordinator |
| Justine Mpagi | NAFOPHAN Regional Coordinator |
| Patrick Omogi | Jinja Diocese M&E Officer |
| Dorcus Musabaho | Jinja Diocese Coordinator |
| Richard Isiko | Jinja Diocese Accountant |
| Umar Wasswa K. | URHB Data Officer |
| Jacqueline Nyongo J. | URHB Coordinator |
| Charles Kimbowa | YOUTH ALIVE Regional Coordinator |
| Shafic Lukyamuzi | YOUTH ALIVE Programs Officer |
| Collins Businge | STAR-EC DCOP /Director Strategic Information |
| Tony Odong | Monitoring and Evaluation Specialist |
| Ronald Kimuli | Data Manager |
| | |
| DISTRICT LEADERS | |
| Muwanguzi D.G. | Iganga DHO |
| Namutamba Sarah | Iganga HMIS Focal Person |
| Mpiira Margaret | Iganga N/O HCT Coordinator |
| Tusubira Herbert | Iganga Stores Assistant |
| Magala Dickson | Iganga Bio-statistician |
| Namusaabi Ruth | Iganga ADHO/Med |
| Kintenge Moses | Iganga DHE |
| Kisira Joy | Iganga SNO |
| Magemeso Richard | Iganga Accountant |
| Mukasa Joseph | Iganga DTS |
| Okotel Beatrice | Iganga PNO |
| Kayemba Janan | Iganga Planner |
| Ogwang Go | Iganga D/CAO |
| Balunywa Peter | Iganga District Secretary for Health |
| Lwanga Sam | Namayingo DLEP |
| Mukyala Veronica | Namayingo District ART Coordinator |
| Okongo Davo | Namayingo Senior Clinical Officer |
| Kalumba Charles | Namayingo Senior Clinical Officer |
| Mutumba Robert | Namayingo DHI |
| Kasiira Zebbie | Namayingo Senior Nursing Officer |

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| Namukose Jaliat | Namayingo N/O |
| Mukoka James | Namayingo HMIS FP |
| Kitundi Aaron | Namayingo DTLS |
| Kalege Godfrey | Namayingo Medical Officer |
| Kayenga N. Irene | Namayingo District Planner |
| Ouma James H | Namayingo District Secretary for Health |
| Ndira Connie A | Namayingo District Secretary for Production & Marketing; District Chairperson |
| Osinye Patrick | Namayingo District Secretary for Finance |
| Nandudu Betty M. | Namayingo District Community Development Officer |
| Nakalungi Sarah | Namayingo CAO |
| Ahimbisibwe Esther | Luuka DNFP |
| Tibagalika Harriet | Luuka HMIS |
| Mirembe Cissy | Luuka PLHIV COORD. |
| Bikaba Frank | Luuka SMCO/ART COORD. |
| Bewa Mugisha | Luuka EMG |
| Nkulega Samson | Luuka DLFP |
| Mutawulu Joy | Luuka DF-PMTCT |
| Kalule Charles | Luuka MRA |
| Kabweru Paul | Luuka DTLS |
| Ngobi Henry | Luuka DCCA |
| Bogere Moses | Luuka MRA/MMS |
| Mipenbe Jusine | Luuka DHV/EPI |
| Mukisa Gloria | Luuka OCO |
| Mugabe Moses | Luuka DHE |
| Baladhrea Martin | Luuka DSFP |
| Ssegonga Margaret | Luuka ASS. DHO/STAR-EC DFP |
| Kiiza Lydia Shirley | Luuka Population Officer |
| Bikadho Hamis | Luuka Ag. DCDO |
| Isabirye Mugaga | Luuka District Secretary for Health |
| Osire Victoria | Kamuli SNO |
| Mwesigwa Geoffrey | Kamuli Biostatistician |
| Nangobi Mbago Eunice | Kamuli N/O |
| Tenywa Paul | Kamuli SMCO, STAR EC Focal Person |
| Nakiganda Dinah | Kamuli DHO |
| Mirembe Josephine | Kamuli HMIS FP |
| Kalende George | Kamuli SMCO District ART FP |
| Banafamu Robert | Kamuli District Planner |
| Basalirwa John | Kamuli Vice Chairperson |
| Muwangala Moses | Kamuli Secretary for Health and Education |
| | |
| Health Facility level respondent groups | |
| FGD – Young Positives | Busesa HC IV |
| FGD – Adult Positives | Busesa HC IV |
| FGD – VHTs et al | Busesa HC IV |
| Group KII – Staff Team | Busesa HC IV |
| Group KII – Staff Team | Busembatia HC III |
| Group KII – Mentor Mothers, Expert | Busembatia HC III |

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|---|--------------------|
| Clients, VHT | |
| FGD – Staff Team (inc. Expert Client) | Bugono HC IV |
| Group KII – Staff Team | Bunyiro HC III |
| FGD – Staff Team | Buyinja HC IV |
| FGD - VHTs | Buyinja HC IV |
| FGD – Young Positives | Buyinja HC IV |
| FGD – Mentor Mothers, Expert Clients | Buyinja HC IV |
| Group KII – Staff Team, HUMC | Busiro PNFP HC III |
| Group KII – Staff Team | Banda HC III |
| Group KII – Staff Team | Bumooli HC III |
| FGD - BMU | Lugala Beach |
| KII – Knowledge Room Officer | Lugala Beach |
| FGD - BMU | Busiro Beach |
| FGD - VHT | Kiyunga HC IV |
| FGD - PLHIV | Kiyunga HC IV |
| FGD – Mentor Mothers, Expert Clients, CSA | Kiyunga HC IV |
| FGD – Staff Team | Kiyunga HC IV |
| Group KII – Staff Team | Ikumbya HC III |
| Group KII – Staff Team | Irongo HC III |
| Group KII – Staff Team | Waibuga HC III |
| Group KII – Staff Team | Namwendwa HC IV |
| FGD – VHT, Mentor Mothers, Expert Clients | Namwendwa HC IV |
| FGD – Young Positives | Namwendwa HC IV |
| Group KII – Staff Team | Lulyambuzi HC III |
| Group KII – Staff Team | Balawoli HC III |
| Group KII – Staff Team | Nankandhulo HC IV |

Annex 3 List of Documents reviewed

1. Request for Applications RFA Number 617-08-017; District Based HIV/TB Program in Three Distinct Regions of Uganda (South West/West, East Central and Eastern)
2. USAID Monitoring and Evaluation Management Services Project (2007) AIM Project Evaluation Final Report; Management Systems International/USAID Uganda
3. USAID Monitoring and Evaluation Management Services Project (2007) UPHOL final Evaluation Report; Management Systems International/USAID Uganda
4. USAID Monitoring and Evaluation Management Services Project (2007) External Assessment of the Elizabeth Glaser Paediatric AIDS Foundation Call-to-Action Pilot Program; Management Systems International/USAID Uganda
5. The World Bank (2007) Implementation Completion and Results Report (IDA-34590 IDA-3459A) Uganda HIV/AIDS Control Project
6. STAR-EC Program (2009) Strengthening TB and HIV/AIDS Responses in East-Central Uganda (STAR-EC) Program Year I, Annual Report
7. STAR-EC Program (2010) Strengthening TB and HIV/AIDS Responses in East-Central Uganda (STAR-EC) Program Year II, Annual Report
8. STAR-EC Program (2011) Strengthening TB and HIV/AIDS Responses in East-Central Uganda (STAR-EC) Program Year III, Annual Report
9. STAR-EC Program (2012) Strengthening TB and HIV/AIDS Responses in East-Central Uganda (STAR-EC) Program Year IV, Annual Report
10. STAR-EC Program (2013) Strengthening TB and HIV/AIDS Responses in East-Central Uganda (STAR-EC) Program Year V, Annual Report
11. STAR-EC Program (2014) Strengthening TB and HIV/AIDS Responses in East-Central Uganda (STAR-EC) Program Year VI, Annual Report
12. STAR – EC (2014). External Evaluation Briefing Book
13. Kamuli District Local Government (2014) Kamuli District Local Government – Round 4 Grant Agreement

Annex 4 Main elements of the DBTA results – as indicated in RFA*

| | |
|---|---|
| <p>Result 1: Increased uptake of comprehensive HIV/TB services within supported districts</p> <ul style="list-style-type: none"> • Prevention • HIV Counseling and Testing • PMTCT • HIV care and support, including pain and symptom management • TB/HIV integration • ART • Laboratory services | |
| <p>Result 3: Quality HIV/TB services are delivered in all supported health facilities and community organizations/activities</p> <ol style="list-style-type: none"> 1. Adherence to national and international standards, guidelines and protocols for HIV/AIDS care (including accreditation assessments, certification and periodic review) 2. Application of continuous quality improvement in all service components and service delivery sites (including quality improvement teams; tracking of quality improvement indicators; measuring client satisfaction; etc.) 3. Attention to specific areas of HIV/TB services, such as: <ul style="list-style-type: none"> • TB case detection and TB treatment adherence monitoring • Management of pain and symptoms integrated into routine care • PMTCT follow up care (including screening for TB and HIV infection among HIV-exposed infants) • Promotion of infection control practices by PLHAs and their families. 4. Specific attention to laboratory services (including standard laboratory operation procedures and basic safety standards; quality assurance for AFB microscopy; HIV-disease monitoring; etc.) 5. Focus on service delivery management strengthening (e.g., integrated support supervision) | |
| <p>Result 4: Networks, linkages, and referral systems established or strengthened within and between health facilities and communities to improve access to and uptake of comprehensive HIV/TB services.</p> <p>Support best practices and proven interventions/approaches to improve access to continuum of HIV/AIDS services</p> <ul style="list-style-type: none"> • Integration of Village Health Teams into strategies to strengthen the continuum of care • Support to organic networks of volunteers (PLHA, religious leaders), community groups and organizations to provide intermediate HIV care in communities and referrals to specialized facility care • Linkages and referrals to ‘wrap-around services’ (e.g., household economic strengthening OVC education and protection support, etc.) | |
| <p>Result 2: Decentralized service delivery systems strengthened for improved uptake of quality HIV/TB services</p> <ul style="list-style-type: none"> • Leadership and management, • Strategic information: including Health Management Information Systems (HMIS) and Lot Quality Assurance Sampling (LQAS) survey | <p>Result 5: Increased demand for comprehensive HIV/AIDS/TB prevention, care and treatment services</p> <p>Improving the quality of demand creation approaches and activities</p> <ul style="list-style-type: none"> • Audience segmentation • Targeting of messages • Designing multipronged reinforcing |

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| <ul style="list-style-type: none"> • Human Resources for Health • Supply Chain Management • Health facility infrastructure (including laboratories) • An efficient and transparent grants mechanism for funding and providing technical support to civil society to facilitate behavior change and uptake of comprehensive services | <p>approaches</p> <p>Achieving long term results</p> <ul style="list-style-type: none"> • Improving health seeking behavior • Rational use of services • Continuity of service use |
|---|---|

** Aligned to the DBTA results logic as presented in Figure 1*

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