Bukoba Combination Prevention Evaluation: Effective Approaches to Linking People Living with HIV to Care and Treatment Services in Tanzania

COUNTRY: Tanzania

Tanzania has successfully implemented the standard set of linkage to HIV care and treatment interventions, recommended by the International Association of Providers of AIDS Care (IAPAC), Centers for Disease Control (CDC), and World Health Organization (WHO), to ensure all those persons diagnosed with HIV are ‘linked’ to HIV care and treatment services. This implementation has led to rates of linkage to care and treatment greater than 90%. Initiated at the point of HIV diagnosis, with follow-up for up to 90 days, the Linkages Case Management program takes a people-to-people approach to supporting people living with HIV (PLHIV) and retaining them on treatment.

WHAT WAS THE PROBLEM?

Many people living with HIV (PLHIV) do not enroll early in HIV care and treatment following diagnosis, particularly among those diagnosed in community (i.e. non-facility-based) settings. The need to identify effective linkage to care and treatment strategies, especially for persons diagnosed in community-based settings is paramount to achieving the 95-95-95 goals (95% of PLHIV diagnosed, 95% are on treatment, and 95% are virally suppressed). This need is particularly acute in countries that have a significant gap in reaching and linking men to HIV testing and treatment.

WHAT IS THE SOLUTION?

IAPAC, CDC, and WHO have a standard set of linkage to care and treatment recommendations which providers should implement to help ensure all PLHIV are enrolled in care and treatment in a timely manner. These linkage recommendations have proven effective, through several studies, in increasing linkage to care and treatment compared to standard of care interventions. A linkage case management program was developed based on these recommendations and evaluated in Swaziland (see CommLink solution) and in Tanzania (summarized below).

In Tanzania, the Bukoba Combination Prevention Evaluation (BCPE) implemented an innovative, peer-delivered, linkage-case-management (LCM) program for persons diagnosed in community and clinical settings. Through LCM, HIV-positive clients receive a package of peer-delivered linkage services, as recommended by IAPAC/CDC/WHO.

The LCM intervention targeted all residents of Bukoba Municipal aged 18-49 years. Located in the Kagera region of Tanzania, Bukoba was selected for this program evaluation for several reasons: (1) compared with other urban and rural areas in Tanzania, it has a high prevalence of HIV and tuberculosis (TB) and (2) the HIV prevention and clinical infrastructure was adequate to support implementation of the LCM intervention. LCM clients were recruited from 11 health facilities and community-based HIV
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testing platforms throughout Bukoba Municipal. The 11 health facilities included all eight governmental health facilities in the municipality (excluding facilities for police and military) and 3 ministry-based private health facilities.

The LCM services include:

- Individualized, peer-delivered counseling by HIV-positive, ART-adherent expert client counselors;
- Three face-to-face counseling sessions on HIV care, disclosure, and how to resolve real and perceived barriers to care; supplemental sessions were conducted as needed;
- First-visit escort or transport (if needed), expedited registration and treatment at HIV-care facilities;
- Follow-up support calls and appointment reminders; and
- Integrated index-client HIV testing services (HTS) that support disclosure to partners and facilitate testing and linkage to treatment for HIV-infected sex partners and biological children.

Key Program Features:

- Linkage to care and treatment initiated at the point of HIV diagnosis and continued for up to 90 days.
- Integrated with Provider Initiated Treatment (PITC) in: 5 health centers, 1 regional referral hospital, and 5 dispensaries.
- Integrated with community-based HIV Testing programs operated by 7 field teams and conducted in all 14 wards (7 rural, 6 urban, 1 mixed).
- Targeted newly diagnosed HIV-positive individuals and HIV-positive individuals who have not received HIV care in >90 days.
- Expert counselors trained to provide psychosocial support and counseling on HIV care and ART adherence. From one to four expert counselors per facility and 1 expert counselor per community-based HTS team.
- Implemented in 9 participating HIV-care facilities that provide ART in Bukoba.
- Supported by 6 dedicated linkage and retention nurses (LRC) at clinics and 1 LRC for all community expert clients to manage LCM services, and to expedite and coordinate HIV care and treatment.

Standard operating procedures (SOP) and comprehensive process monitoring systems were developed and maintained from the start of the program. Supervisors and senior staff routinely reviewed case files to ensure SOP fidelity, and CDC routinely provided comprehensive process performance reports to ensure timely and thorough reviews, ensure service milestones were met, and that submitted data were complete and accurate. Senior personnel and supervisors played a key role in training and mentoring new staff.

There are a few system-level differences between CommLink (Swaziland’s linage case management program) and the BCPE LCM program. CommLink has a comprehensive individual-level electronic M&E
system that is able to track and report intervals (in days) from program consent and linkage services to enrollment in care, ART initiation, and ART refill. However, BCPE has a register-based M&E system with monthly reporting of compiled (aggregated) indicators. The register-based M&E system does not track intervals between services and outcomes such as ART initiation. Operationally, since December 2015, most facility clients in Bukoba were escorted to the co-located HIV clinic on the day of diagnosis and received same-day ART (if eligible at CD4 < 500). We know this because our registers included dates of clinic services. During Test & Start, after 8 November 2016, most community clients received point-of-diagnosis, same-day ART with near universal subsequent transport/escort and enrollment in facility-based care on that day. If we had an individual-level M&E system in Bukoba, we most likely would be able to report similar proportions as CommLink of clients who received same-day or rapid ART (i.e., within 7 days of diagnosis).

WHAT WAS THE IMPACT?

Between Oct 2014 -March 2017, BCPE enrolled 3,918 (93%) of 4,205 cases in HIV care within 90 days (95% of 1,650 males and 92% of 2,555 females). The BCPE LCM intervention has been adapted and scaled-up by ICAP as part of their community-based program, which is being implemented in 9 regions. CDC-Tanzania implementing partners will implement the LCM intervention as part of their FY18 activities. Facility IPs are currently working on establishing 1-2 demonstration sites to inform program adaption.

The program provides linkage services for a maximum period of 90 days or until the client enrolls in HIV care and initiates on ART (if eligible), and returns to care at least once (after ART initiation). Outcomes are only documented through 90 days from the date of consent.

Between Oct 2014 and March 2017 (intervention period), 4,805 eligible clients were identified from community-based HTC and provider initiated testing and counseling in the outpatient department of the 11 participating facilities. 4,273 of eligible clients consented to receive LCM services, of which 4,205 cases were closed and compiled for M&E. Of the closed cases, 93% registered for HIV care within 3 months of consenting to the LCM program. During the test and start era (from Oct 2016), 97% of 752 closed cases enrolled in care within 90 days.
BCPE results (see attached information sheet for more results):

- 3,918 (93%) of 4,205 cases that consented to LCM services enrolled in care (95% of 1,650 males and 92% of 2,555 females).
- 2,521 (60%) initiated ART within 90 days.
  - 47% of 2,232 clients during CD4 <350 era
  - 67% of 1,221 clients during CD4 <500 era
  - 86% of 752 clients during Test & Start era

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HOW DOES IT WORK?

INDIVIDUAL LEVEL

Target populations: newly diagnosed persons and known positives, who have not been in care for > 90 days, who were identified in community and facility-based settings.
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Linkage to care is diminished by economic, geographic, transportation, and distance barriers, as well as stigma and discrimination, and the emotional process of accepting one’s HIV diagnosis. All of these potential barriers are addressed in the LCM implemented by BCPE, in efforts to optimize the HIV care continuum.

- 3 sessions dedicated to:
  - Providing psychosocial support and informational & motivational counseling on the benefits of early enrollment in HIV care and ART initiation
  - Encouraging disclosure of HIV status and providing partner & family testing, if needed
  - Assessing and resolving barriers to enrolling and remaining in HIV care
- Supplemental sessions:
  - Providing HTS services for partners and family members (index-client HTS)
  - Providing additional support, counseling, barriers resolution, etc.

SYSTEMS AND SERVICES LEVEL

BCPE implemented a linkage case management model that is in accordance with IAPAC, CDC, and the WHO’s recommendations with the aim to optimize the HIV care continuum.

Prompt engagement in HIV care optimizes individual and public health outcomes. Peer navigators are individuals who assist patients to navigate through the continuum of care, ensuring that barriers to care and treatment are resolved and that each stage of care is as seamless as possible. It is well documented that people living with HIV (PLHIV) can be trained to effectively act as peer navigators for other patients, particularly in settings with a severe shortage of human resources for health. The benefit provided by patient navigators in relation to linkage to care is also well documented. Newly diagnosed HIV-positive persons have been more successfully linked to care when supported or encouraged by a peer patient navigator. Case managers have been successfully used to strengthen patient outcomes throughout the HIV care continuum, including early linkage to care, retention in care, and sustained ART adherence. Lastly, models of community-based support and ART delivery to complement facility-based ART programs can be effective strategies for enhancing psychosocial support and improving access to and outcomes across the HIV care continuum. The cost-effectiveness and potential relevance of this approach in countries with a high HIV burden have been documented.

PEPFAR OPERATING MODEL

Exceptional collaboration among all partners (CDC-Tanzania & CDC HQ, ICAP, local health authorities, and MOH) was critical to the successful implementation of LCM. The implementing partner, ICAP, also established a strong relationship with facility staff, who in turn embraced the intervention. ICAP routinely met with the aforementioned parties to provide updates on the interventions and discuss challenges.
LOCAL ENVIRONMENT

Regional and municipal health authorities were engaged in the early planning and implementation phases of the intervention. The implementing partner routinely met with the authorities to provide project updates. Additionally, the LCM intervention was embraced by facility staff and well-integrated into the health care facilities.

NATIONAL ENVIRONMENT

The package of linkage services that are provided through LCM align with the linkage to care recommendations from the 2013 Tanzania National HTC guidelines. Per these guidelines, the following interventions should be implemented to strength linkage to care services:

- Strengthening partnerships between HTC and HIV care and treatment;
- Providing additional counselling or social support services by an expert client or PLHIV who can share their experience with HIV care and treatment, offer practical guidance, and help clients overcome real and perceived barriers to care;
- Seek consent to continue tracking patients through SMS reminders, phone calls, or conducting home-visits to follow-up on referrals; and
- Strengthen M&E systems to track linkages.

Additionally, the LCM intervention was endorsed by MOH and featured as a key service delivery model in the Mapping HIV Service Delivery Strategies released in June 2017. The interventions featured in this report will inform recommendations for service delivery models that are included in the 2017 National Guidelines for the Management of HIV and AIDS.

SCALABILITY

BCPE LCM intervention has been adapted and scaled-up by ICAP as part of a community-based program, being implemented in 9 regions. CDC-Tanzania facility implementing partners will implement the LCM intervention as part of their FY18 activities. Facility implementing partners are currently working on establishing 1-2 demonstration sites to inform program adaption in 2018.

In addition to the strong collaboration between implementing partners, CDC, and national and local health authorities, the expert client (EC) counselors and supportive supervision provided by linkage and retention nurses were critical to the success of the intervention.

Trained, dedicated, and well-managed EC counselors are essential to the success of the linkage program. The availability of national tools to document services provision and measure linkage to care is also another important consideration. Tanzania does not have a tool to document and measure linkage to care services. As part of BCPE, the study team developed a set of tools that helped ensure that they received quality LCM services and track clients’ clinical outcomes.
MANAGEMENT & OVERSIGHT

**PEPFAR Team Involvement:** CDC HQ generated a monthly process indicator report, which was used to track the intervention’s progress. PEPFAR Tanzania was critical to the success of the BCPE LCM intervention and its scale-up in Bukoba. The CDC Tanzania office was instrumental in helping to facilitate the dissemination of LCM methods and findings to MOH, implementing partners, and other United States’ government agencies in Tanzania. Given the success of the intervention in Bukoba Municipal, all CDC facility implementing partners have included plans to adapt and implement LCM in their FY18 work plans.

**Implementing Partner:** The supportive supervision systems established by the implementing partner (ICAP) were instrumental to the success of this intervention. When expert clients had challenges with a case, they referred it to the linkage retention coordinator, who would then refer the case to a member of the ICAP technical team, if he/she could not resolve the issue. Additionally, the monthly process indicator report helped the implementing partner and CDC HQ identify areas for improvement and take necessary actions.

**Monitoring:** The following oversights were used to monitor the program’s impact:

- Strong oversight by PEPFAR team (IP & USG)
- Additional process indicators (in addition to MER) generated on a monthly basis to monitor key linkage services, enrollment in care, and clinical outcomes
- Granular data analysis (age and sex disaggregated, by setting of diagnosis and diagnostic status—new and prior)

**IM management:** No major challenges arose during the implementation of this solution.

**Communication and feedback loops:** CDC Tanzania and CDC HQ had weekly calls with the implementing partner to discuss progress and implementation challenges.

Below (in the resource section) find LCM case management forms and our standard process and outcome indicator report. Note that forms are completed over the course of the linkage service 90-day period after at least three face-to-face sessions.

**BUDGET**

**Cost of innovative solution:** The preliminary analysis in Tanzania indicated that the majority of costs were for research/study purpose to support M&E and to ensure data completion. The costs will be adjusted to reflect the intervention’s programmatic costs. For example, some tasks could be performed by public-sector staff; M&E can be part of the routine system; and personnel costs will be based on the efforts required to deliver services instead of the number of staff hired for the project. Personnel and transportation costs would be the key inputs to implementing the intervention. Preliminary data suggests that the incremental program cost per LCM client was $54 and personnel costs accounted for
72% of the total program cost for LCM. Expert client staffing at facilities were determined by patient volume.

**Efficiency measures:** Efforts will be made to transition from the study/research focus to programmatic implementation. These include utilizing and capacitating the exiting public sector staff to perform the tasks, using and enhancing the existing infrastructure to support the intervention, and optimizing staff capacity.

**RESOURCES**

BCPE Methods & Outcomes Flyer (PDF)

BCPE Linkage Case Management Program Forms (PDF)

Bukoba Combination Prevention Project Linkages Program Register (PDF)

BCPE Process Indicators Summary (xls)