Community Health System Model to support Health Volunteers to outreach underserved population: A case study of HIV/AIDS program from Tanzania

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Abstract

Major challenges for the HIV program in the Muheza district of Tanzania, East Africa were to increase HIV testing for men and retain HIV patients on treatment. The USAID funded Applied Science to Strengthen, and Improve Systems (ASSIST) project implemented the Community Health System Strengthening (CHSS) model to improve linkages between health facilities and communities to increase HIV testing and retention in care. The project formed a community team from representatives of the formal and informal pre-existing structures and their networks who worked with the local Home-Based Care (HBC) volunteers. The community improvement team members relayed information from the facility to the community households through their community group members and vice-versa. The application of CHSS model was able to increase the testing of males from 42 to 159 in one month. Over the course of seven months, the CHSS system was able to trace 39 of 44 patients who were lost to follow-up; of these, 23 went back to treatment, five had moved to a different health facility, 11 had died, and five were still unaccounted for. This case study describes the process undertaken, and perspectives of the community members and health facility personnel, who were involved in the project.

Keywords : HIV, community health, home-based care

1.1 Background

According to studies, HIV/AIDS was the leading cause of death in Tanzania, with approximately 1.5 million people living with HIV and 80,000 dying from it each year (1,2). Efforts to provide quality care to people living with HIV in Tanzania have increased since the government of Tanzania started implementing HIV/AIDS care and treatment plan in 2003. [5]. Tanzania's National AIDS Control Program (NCAP), through multi sectoral HIV/AIDS, provides HIV prevention, care, treatment, and support services (5). HIV testing services (HTS) are an essential component of HIV/AIDS control programs and an entry point of the HIV care and treatment cascade [4]. Even though the government of Tanzania had made HIV testing free and available in all health facilities and conducted nationwide HIV testing campaigns, only 30% of women and 25% of men tested and received the results (1,4,6,29,30). Despite government efforts to provide free antiretroviral treatment (ART) and the scale-up HIV Testing and Service (HTS), care and treatment in healthcare facilities and communities across the country, 55% of men living with HIV (MLWH) self-reported that they were unaware of their HIV status during the Tanzania Impact Survey conducted in 2016-2017.

People living with HIV who miss scheduled clinic appointment for uptake of ART are called Lost to follow-up (LTFU) patients. This situation of People living with HIV (PLHIV) results because of their death, default, and self -transfer to another cling (7-9). Tanzania National AIDS Control Program (NACP) reported the rate of LTFU among ages 15-24 years was 23.5% (5).

Continued retention of PLHIV to treatment is crucial to mitigate the risk of developing resistance in patients who do not adhere to the ART clinic schedule (21-24). Tracing is effective at reducing the number of LTFU. Engagement studies have shown that as many as 86% of patients who had defaulted from care reengage in care following tracing (8,18,19), and active tracing significantly reduced attrition (11, 20). Systematic reviews have shown that CHWs have played an important role in increasing coverage of essential interventions for child health and

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maternal health (15-20).

CHW programs have provided services to over 200 million people over two decades in Brazil, Bangladesh, and Nepal (22). Implementing a successful community-based intervention program for maternal and child health, which results in a reduction in child and maternal mortality (24-26), improves access to community health care and child growth and development (21; 25-27).

Studies have also found that CHW and CHVs were effective in improving HIV -related knowledge (6), reducing risky sexual behaviors, increasing antiretroviral treatment (ART) uptake (7), and improving access to quality of care (22).

The Home-Based Care (HBC) program was established in Tanzania in 2008 to improve the screening of people for HIV and retain PLHIV on ART at the community level. Tanzania's Health Sector HIV and AIDS Strategic Plan II, 2008-2012, focuses on providing quality HBC services in all districts. Tanzania's government developed National HBC Guidelines, which included the HBC guidelines for providing quality care to PLHIV, a training curriculum for HIV service providers, supportive supervision, and monitoring tools. A well-functioning HBC program offers a continuum of care that extends from a health facility to home stings. There were two HBC volunteers in each village to carry out the HBC program at the community level. The primary function of HBC volunteers was to increase HIV patients' identification, adherence to treatment, and follow-up. However, over the years of experience working with HBC, volunteers have faced challenges in significant geographical coverage, lack of transportation facilities, and lack of regular feedback and support from health facilities supervisors. As a result, HBC volunteers feel "lost in the health system." In this case study, we focused on applying the support CHSS model to support HBC volunteers and increase the coverage of HIV testing, especially for men, and decrease the number of lost to follow-up PLHIV

1.2 Methods

The project conducted an intervention study in five villages in the Muheza district of Tanzania by applying the CHSS model. In addition, the project used a mixed study method to collect the data.

Community Health Strengthening System Model (CHSS model)

Most communities in rural settings possess informal support and social welfare systems where community members make decisions and work together to improve the health of community members and the general welfare of the community. The CHSS model combines formal and informal pre-existing structures and their networks to create an integrated health service delivery system. For example, the system may consist of formal community groups such as local government, schools, religious groups, farmer's groups, savings and credit groups, etc. In this model, representatives from each community group come together to form an improvement team, find out the gaps in health services and develop and test strategies to overcome the identified gaps. Over time, all components of the community health system will function well with the leadership of community health workers, then the health services become more accessible to the community members, and information exchange between health facilities and households occurs more efficiently.

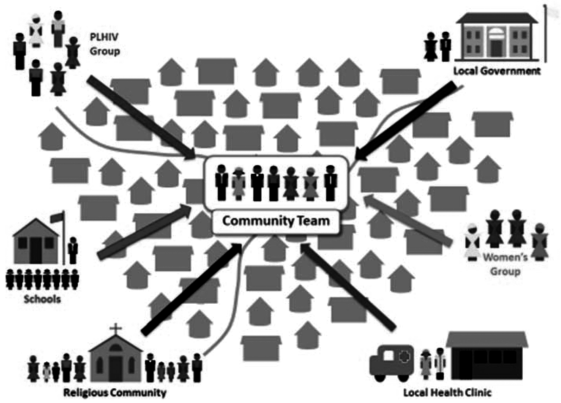

Figure 1: Ram Shrestha's Community Health System Strengthening (CHSS) Model

CHSS Model implementation in Muheza

The project and HBC identified and made a list of the existing local groups that were active in five pilot villages. Then, they identified a village committee in each community with the most representation from all community groups; and engaged that committee as a community improvement team. The project added members to ensure full representation from community groups in this community health improvement team when needed. Each team also included a local HBC volunteer.

The project conducted training for the community improvement team which was composed of one representative from each community group. The participants discussed HIV-related issues, including the importance of HIV testing and treatment adherence, and explored ways to increase support for HIV care in the community.

The project also trained district and health facility coaches to support the community improvement teams. The community improvement teams first focused on increasing HIV testing in their communities to familiarize themselves with the process and obtain some early success before addressing retention.

Picture 1: Community Group Members ConductingTheir Regular, Group Meeting Where They Also Discuss Health Issues.

During the first improvement team meeting in January 2014, the HBC volunteer and community improvement team members discussed the low number of HIV testing. The facility data brought to the meetings by the HBC volunteers showed that 106 people went for testing in January (42 men and 64 women, shown in Figure). The reason for this low number of HIV testing was that the HBC providers assigned in each village could not reach all households to sensitize people to go to the health centers for an HIV test.

While implementing the CHSS model, the community improvement team members approached other members of their groups. First, they asked their group members to discuss the importance of HIV testing and staying on ART treatment with their family members. Subsequently, each group member then talked to their families, urging them to go for HIV testing, highlighting the importance of knowing their health status and the family's health.

1.3 Results and Discussion

The qualitative and quantitative data reports indicated a positive result of applying the CHSS model to improve HIV care. Applying the CHSS model increased the reach of the HBC providers and was a practical approach for reaching more households within a short period. In addition, the open discussion of HIV issues in multiple community venues seems to have reduced the fear of discussion with the household and may have helped with disclosure.

There were two main results seen from the work of five community improvement teams:

A. Increase in number of people testing for HIV:

There was a significant increase in the number of people tested in all five villages. The most striking result was the number of men seeking testing in all five villages, which was a big problem before the application of CHSS model. Figure 2 shows an initial spike in number of community members that tested for HIV, which reflects community members who were not previously tested and includes the results of specific outreach activity in Kwemsala village in February that resulted in a large turnout.

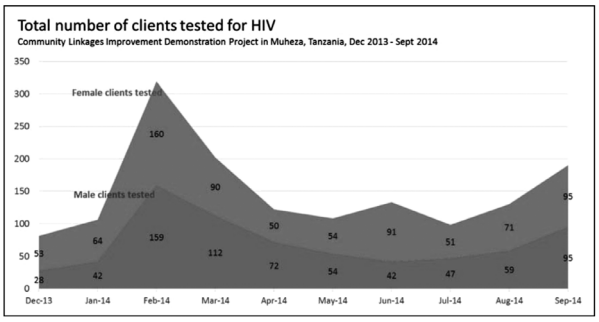

Figure 2: HIV Testing in Five Communities in Muheza District, Tanzania

a. Identified barriers to referral and improved referral system

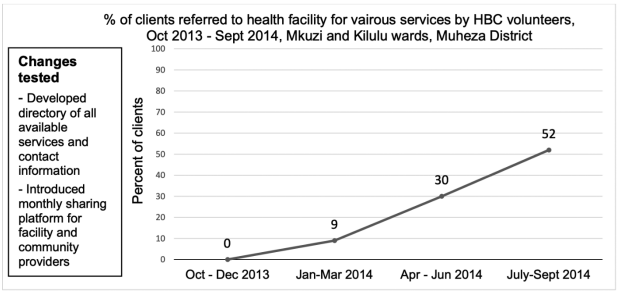

Figure 3: Improved Referrals through Engagement of Community Groups

The situational analysis found that the failure to track clients referred to the health facilities by HBC was because the health facilities did not respect the referral from the HBC volunteers. To address this problem, the community improvement teams created a referral network of the facility and community-based actors, whereby the HBC volunteer and the community improvement teams began using existing referral slips to track patients.

b. Meeting the increased demand for outreach in HIV testing and counseling by the community groups

Some villages far from health facilities requested outreach services to make HIV testing available in their communities. The community improvement team and facility staff established an outreach clinic day to cover the communities within their locations. The facility developed a plan for staff and logistics to manage the process. Community groups mobilized community members and communicated the dates of outreach visits. The facility staff made testing services available and accessible for people who had been mobilized. Community group members encouraged the uptake of services through intra-household discussions.

B. Reduced lost to follow-up of PLHIV by engaging community system

- Use of treatment supporters by HBC volunteers to trace clients:

The community system and improvement approach helped HBCs become more functional and connected throughout the community. The HBC volunteer and PLHIV groups obtained contact information and addresses of clients and treatment supporters from the health facility. They helped HBC volunteers trace those lost to follow-up (LTFU) and update clients' contact information. PLHIV also helped HBC trace their peers who were lost. The HBC volunteer and PLHIV groups used this information to track treatment supporters and patients who had fallen out of care. In March 2014, community improvement teams started tracing those clients who were lost to follow-up and brought patients back to ART.

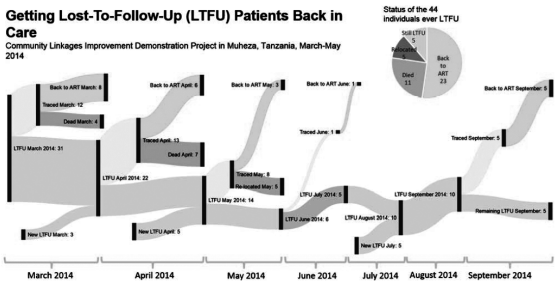

Figure 4: Reduction of Lost to follow up in Five Communities, Muheza District, Tanzania

As shown in Figure 4, over seven months, out of 44 individuals ever lost to follow-up, they brought back 23 clients and found that five had relocated and 11 had died. As of September 2014, only five of the 44 patients were still lost to follow-up. The project established an active system established for tracing and bringing back clients to care as soon as possible.

1.4 Conclusion

Tanzanian government established HBC volunteers in each village to cover 20 to 25 households, making it difficult to reach all the households with the community health service package. Community groups and networks have shown that HBC requires support from community-based groups and networks. The case study of the application of the CHSS model in the five communities in Muheza District demonstrates the utilization of community groups in the increasing update of HIV testing and reduction in lost to follow-up, and improved retention in HIV care. The results showed that it was a promising approach to strengthen linkages in lost to follow-up and improved retention in HIV care as well as between health facilities and the communities they serve.

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