Improving Access to HIV Treatment Services through Community ART Distribution Points in Uganda

COUNTRY: Uganda       IMPLEMENTING PARTNER: The AIDS Support Organization (TASO)

In Uganda, stable clients need ways to access medications closer to their homes to minimize the cost and disruption of staying adherent to ART. In 2006, The AIDS Support Organization (TASO) developed a new program to provide ART care and treatment to eligible patients at “community drug distribution points” (CDDP). The project promotes a sustainable, cost-effective, and community-based option in ensuring adherence to ART.

WHAT WAS THE PROBLEM?

The majority of ART services are provided in resource-limited settings in standardized, yet inefficient ways, which make long-term ART adherence and retention difficult. Differentiated Models of Care (DMOC) reduce the cost for patients to remain adherent on ART, can provide tailored ART adherence support, reduce congestion in ART facilities and provide the foundation for patient centered chronic disease wellness systems. Different elements of the traditional service delivery model can be modified to make long-term HIV treatment easier for patients and health care workers alike, though this requires ongoing monitoring and refinement to optimize service delivery models for different populations. In Uganda, stable clients needed ways to access medications closer to their home, which could minimize the cost and disruption of staying adherent to ART.

WHAT IS THE SOLUTION?

In Uganda, The AIDS Support Organization (TASO), a Ugandan non-governmental organization (NGO) originally formed to provide support to people living with HIV, developed a community based ART delivery program starting in 2006 whereby ART care & treatment is delivered to consenting stable patients on ART at a pre-identified community based site, called the “community drug distribution point (CDDP)”. Patients are eligible if they have been on ART for 10 weeks, have no evidence of opportunistic infections and have stable weight measurements. A viral load test has not been required for eligibility, though as viral load testing has gradually replaced CD4 testing as the preferred way to monitor effectiveness of ART, it can be used as another criterion to enroll a patient on community ART delivery. Consenting clients are provided a 2-month supply of ART and an appointment at the CDDP for continued care. Core services provided at the CDDP by TASO staff in collaboration with expert patients includes:

- Refills every two-three months
- Assessment of clinical status by the clinical team every 6 months
- Psychosocial support by expert clients
- TB screening, weight measurement and lab testing

The chosen Community site is any location chosen by a group of clients from that locality in consultation with the local leaders. The clients convene regularly to receive their drug refills and other services including counseling and treatment monitoring. This site should be at least 5 km from the nearest ART
accredited health facility, and may be a school, place of worship, a residence or a local government building. Patients with new health concerns are re-referred to the ART clinic for assessment and follow-up. The objectives of the model include:

- To reduce the cost of delivering ARVs to clients while increasing access
- To maximize use of human resources available - including community volunteers and ART clients themselves who reside in the communities
- To continuously work towards a sustainable community based option in ensuring adherence to ART.
- To enhance monitoring of adherence to ART and promote HIV prevention following the national goals of accelerated HIV prevention through the index client as an entry point to the community at grass root level.

CDDPs have been implemented in all districts supported by TASO in Uganda. Through September 2017, approximately two thirds of patients supported on ART by TASO receive their drugs through a CDDP (~80,000 PLHIV), across 20 districts in 8 regions of Uganda. The clinical team (based at the health facility) visits each CDDP twice per year – a schedule is drafted at the beginning of the year to ensure two visits where clinical teams visit patients at the CDDP to provide a clinical assessment and lab testing (e.g. viral load). In between these visits, a team of 1-2 social workers (depending on the size of the CDDP) brings pre-packed ARV and basic attendance/monitoring registers to the CDDP every two-three months to distribute ARVs and ask basic screening questions for potential problems. ARVs are pre-packed before each visit at the health facility using the attendance registers.

For patients who do not show up for their CDDP visit, the Community ART Support Agents (CASAs) report back to the facility by phone. When time allows at the day, the staff visiting the CDDP visit the homes of the clients that have missed appointments. If that is unsuccessful, health facility staff continue to reach out by phone.

**Monitoring and Evaluation:** For drug pickup visits, attendance registers are used to document drug pickup at the CDDP and flag patients who do not attend. These registers are separate from MOH ART registers, and brought from the health facility when the team visits the CDDP. The information collected on these attendance registers returns with the visiting team and the attendance information is input into the health facility’s health management information system (HMIS). (These are typically electronic, but can also be paper registers). For the clinical visits, which occur every six months, the facility-based health cards are also brought to the CDDP for completion when the clinical team assesses each patient. Data from these visits is brought back to the health facility, where it is entered into the HMIS. The facility-level HMIS includes a field to identify who is receiving ART through CDDPs, and is able to analyze outcomes for those enrolled in CDDPs.

Patients are eligible to receive ARVs through a CDDP once they have been on ART for 10 weeks, have no evidence of opportunistic infections, have stable weight measurements, are adherent to treatment and voluntarily consent to participate in CDDP. Both male and female patients who meet the eligibility criteria are enrolled into CDDP, as well as some HIV+ children who are stable and who’s caregivers are also receiving ARVs through the CDDP. For clients living with HIV, CDDPs address the following challenges:
PEPFAR SOLUTIONS
PLATFORM (BETA)

- Congestion and long waiting times at the health facilities
- Long distances of travel by patients to health facility
- For patients in formal employment, they do not have to frequently ask for permission from employers for clinic ART appointments
- This reduces the cost to individual patients to attend clinic

In setting up a new CDDP, TASO has identified high-volume facilities (which would benefit from decongestion), then approached district health leadership, usually in collaboration with community leaders or PLHIV support groups (where they exist). Together they identify an appropriate location for the CDDP.

Community Adherence Support Agents (CASAs), who are typically expert clients (people living with HIV) support the formation (e.g. setup) and implementation (e.g. are part of the health care team bringing ARVs) of the CDDP model.

WHAT WAS THE IMPACT?

ART outcomes show that CDDP is an effective alternative service delivery model. As of September 2017, approximately 80,000 patients on ART receive their medications through the CDDP model. Wait times for ART refills at health facility pharmacies which have an associated CDDP decreased from an average of 2-3 hours to an average of 30-45 minutes. (As such, this provides some improvement in the quality of care for patients not receiving drugs at a CDDP). Travel time and costs for CDDP patients are reduced as patients are receive their ART refills closer to their homes.

Of patients enrolled in CDDPs, approximately 65% are women, though this reflects the overlying gender distribution within all TASO-supported ART sites. Some children and adolescents are engaged in CDDPs, though typically children are those whose parents are already enrolled in a CDDP. While CDDPs are not offered to pregnant women at ANC, there are women who are enrolled in CDDPs who become pregnant – they continue to receive ARVs through the CDDP, while attending ANC. Two sites have begun KP-specific CDDPs with approximately 200 FSWs enrolled.

Overall ART retention for patients receiving drugs through a CDDP is 98%. While this is higher than among patients at TASO-supported sites overall (71%), in part this reflects a selection bias, where stable, adherent patients are selected to be enrolled in CDDPs. Virologic suppression testing is beginning to get scaled nationwide, though has not yet achieved sufficient scale for analysis.

HOW DOES IT WORK?

INDIVIDUAL LEVEL

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**SYSTEMS AND SERVICES LEVEL**

**Systems and services level:** Describe how the innovative solution works within, improves or addresses barriers to existing systems and services, or fills a critical gap in services. What are the key linkages between this solution and other systems and services? How does the intervention impact the effectiveness, quality and safety of health care services and systems? Table 6 connections

At the level of the health system, community ART distribution through CDDPs has led to decongestion at ART sites, as 80 000 people are seen through the community ART distribution approach. This allows health care workers at health facilities to focus on new and more complicated patients. Interestingly, this has improved both health worker and patient satisfaction in ART service delivery. While there are costs to running the CDDP model (e.g. petrol and health care worker time away from the health facility), these may be more cost-effective over time if it results in higher rates of patient retention and virologic suppression.

**Key Linkages between CDDP and other systems and other services:**

Each CDDP is a linked to a health facility. Patients seen in CDDPs are recruited voluntarily from health facilities based on fulfilment of eligibility criteria. Each CDDP is coordinated and supported by a health care worker from the facility. Patients are seen every 6 months at the health facility they are affiliated to and if a patient needs medical attention, they are referred back to the health facility through a self-referral, by a health care worker or through peer referral.

**Impact of intervention on effectiveness, quality and safety of health care services and systems:** CDDP is an effective alternative service delivery model. Waiting times for ART refills at pharmacies linked to CDDPs decreased from 2-3 hours to 30-45 minutes. Travel time and costs for patients are reduced as patients are receiving their ART refills at community level closer to their homes. ART retention for patients participating in CDDP was 98%. Naturally, some clients do need to be re-referred back to the health facility at certain time points. These include those that have unsuppressed viral load, women that
become pregnant and patients who demonstrate challenges with adherence to ARVs. This is estimated to be ~5-10% of clients.

PEPFAR OPERATING MODEL

The CDDP model evolved over time, originally beginning as home-based support for patients with advanced HIV disease. As ART became more widespread, and patients began to thrive, the community-based platform was utilized for ARV drug delivery. There has been continued coordination of activities by the implementing partner, TASO, with local and national health officials as well as with the PEPFAR team.

LOCAL ENVIRONMENT

The designated place for drug distribution is chosen by the patients within their communities. Additionally, the District Health Management team is involved early on to assist with oversight and approvals. Typically, expert patients/CASAs come from the local community where the CDDP is established.

NATIONAL ENVIRONMENT

While a formal national policy on differentiated care models was not adopted until 2016, TASO has worked closely over the years with the MOH to scale this model up, even before formal policy was in place. In particular, there is heavy engagement with District Health officers & district health teams, to ensure district-level buy-in. At the national level, the AIDS Control Programme (ACP) has been supportive.

SCALABILITY

The CDDPs have been scaled to all TASO-supported districts, with approximately 80,000 patients receiving drugs through CDDPs. This model is being implemented in 20 districts in 8 regions. At this stage, it has not been scaled by other implementing partners.

Describe important factors (management, socio-cultural, political, etc.) that have contributed to the success of the innovative solution. Include any external, non-USG “champions” that were critical in making the project successful.

Important management and operational factors that have allowed the CDDP model to scale effectively include:

- Participatory planning with meaningful involvement of the clients
- Involvement and engagement of local community leadership to support the initiative including offering space to allow clients meet. Some have offered churches, mosques, schools, subcounty halls to host CDDPs.
- Engagement of the clients (Community ART Support Agents(CASAs)) in the implementation of the model.
• Investment in client literacy and empowerment to allow greater self-management.
• Facilitation of teams with transport means
• Support from TASO senior management and funders (PEPFAR, GFATM)

Additionally, socio-cultural factors are important. Addressing stigma towards HIV/AIDS has been critical. TASO has invested time, effort and other resources in community sensitization through community dialogues, drama groups, and mass media campaigns. This made acceptability of this clients and the CDDPs greater in the respective communities.

Describe important issues and challenges to be considered when scaling the innovation (these could be issues that were considered when the innovation was scaled or those that are being considered now, as the innovation begins to scale up).

The CDDP model seems more appropriate and efficient at high volume sites as well as underserved communities, where the distance to ART clinics is far. The model is more efficient for larger ART sites (>500 clients on ART), where the decongestion effect allows those sites to perform better, and justifies the resource inputs required to set up a CDDP. While originally an innovation designed to offer more service delivery points when there were not many accredited ART sites, even with the rise in number of accredited sites offering ART, CDDPs continue to be a popular choice for clients. This could be attributed to the community feel of the approach, minimal waiting time, ease of access and minimal stigma.

The group is preferable to be between 30-40 clients. Below that, it may not be cost effective to transport drugs especially when the distance is significant. Above 40, the risk of overwhelming the one social worker and 2 CASAs increases, and the wait time may be lengthened for clients. Considering that the CASAs need to follow up the clients, 15-20 clients per CASA are optimum.

MANAGEMENT & OVERSIGHT

**PEPFAR Team Involvement:** TASO received technical guidance and support from the CDC/Uganda team when it pioneered this innovation at the 11 Centers of Excellence. The support included objective critique of the model’s impact on client clinical outcomes through performance reviews, IP coordination meetings, and played a key role in advocating for the adoption of TASO CDDP model into the revised MOH 2016 treatment guidelines.

**Implementing Partner:** To ensure fidelity of scale-up, TASO staff are involved in the initial setup and training for new CDDPs, with extra effort required for health facility staff who are based at a facility that has not yet supported a CDDP. Periodic assessments can be made to look at the effectiveness of the CDDP model by querying outcome data (e.g. viral load data or drug pickup data) for patients receiving drugs at the CDDP and for those who receive their drugs at the facility.

**Monitoring:** Indicators related to the performance of CDDPs are part of the performance monitoring plan in TASO’s workplans; they are also included in quarterly reports to the funder (CDC/Uganda). Currently, these involve collection of additional indicators outside the national HMIS tools, so are made available to the ministry of health when requested (but not routinely). These indicators include virologic suppression rates (where available), CD4 count strata, on-time drug pickup data, and 12-month retention rates for the patients enrolled in CDDPs.
Data from clients at CDDPs is reviewed monthly at the ART sites and quarterly at TASO headquarters to identify challenges and opportunities for improvement. Client data tracked as part of this effort includes: CD4 levels, viral load suppression, whether they have been monitored on schedule, and client satisfaction. Through the data available, TASO is able to make decisions for improvement, such as splitting high-volume CDDPs into two, modifying the CDDP visit calendar, or providing additional training to CASAs.

**IM management:** From the start, in 2007, the funder (CDC/Uganda) was greatly supportive of the innovation to allow scale up of CDDPs across all supported districts. Generally, there have not been any major challenges on the agency side. Implementation of CDDPs were always included in the annual plans and budgets and approved for implementation. Challenges have centered around other Implementing Partners in regions where TASO centers were operating. However, with constant engagement and information sharing, these were overcome. This has since been made easier with the adoption of differentiated service delivery models nationally in the Consolidated Prevention and Treatment guidelines.

**Communications and feedback loops:** With the clients, we have leaders amongst them that link the clients to the staff. These are the Community ART Support Agents that regularly interact with the clients and the report to the staff and vice versa.

On a quarterly basis, TASO conducts client exit interviews to collect and document feedback from the clients regarding their appreciation of the services. This is usually shared at the performance reviews and usually informs the quality improvement initiatives as well as changes in the models depending on the feedback from the clients.

Each TASO center has a staff, Client Relations Officer, whose roles among others is to link clients and management. This is an avenue for feedback that has helped in communicating issues regarding the CDDP and CCLAD. He/she works with the client council that is a team of 11 democratically chosen members of the client body that spearhead coordination and mobilization of clients.

**BUDGET**

**Cost of innovative solution:** As the original community-based support provided by TASO was home based, the modification of support to create CDDPs was initially a very cost-saving measure (e.g. visiting one CDDP rather than many homes). Initial start-up costs to stand up a CDDP include meetings and consultations with community leaders and district health officers, and identification and training for CASAs. Ongoing cost drivers include transportation costs for health care workers to visit CDDPs and printing of materials, such as registers. A retrospective cost analysis was performed for three task-sharing models (including TASO's CDDPs) in 2014\(^1\). No comparisons to a “standard of care” were part of this analysis, though the analysis showed an equal distribution of costs across different categories (i.e. personnel, drugs, etc.) and that costs reduced with greater scale. As part of the investment case to adopt universal Test & Start, modeling on the effect of differentiated service delivery estimated a 15%

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reduction in the unit cost per person on ART from scale-up of DMSD in Uganda; while this reflected all DMSD in Uganda, this incorporated significant feedback from TASO, as they have been implementing their models longer than other IPs in Uganda. An ongoing true cost analysis of multiple differentiated service delivery models, including the CDDP, is occurring in 2018.

Efficiency measures: To enhance efficiency of the community ART models, TASO has taken several measures:

- TASO has formed Community Client Led ART Delivery (CCLAD) groups of 10 members as a variation of the CDDP model. In this model, clients select a group leader who picks drugs on behalf of the other members. This CCLAD model saves on the fuel and health worker travel time that would be expended when the health worker dispenses the drugs to clients in the community. It also increases the meaningful involvement of clients in their care.
- TASO began implementing ART refills at 3-month intervals (originally it was monthly) to the eligible clients in the CDDP and CCLAD to minimize the travel costs and time spent in the field serving the clients. This also minimizes cost incurred by the clients. This began within the last two years, though is hampered by concerns of short stock supply.
- Encouraging utilization of motorcycles for most of the trips to the CDDP which is less costly than travel by car.
- The scheduling of refills to CDDPs is done in a way that encourages refilling several CDDPs on the same route on the same day. This minimizes transport and time costs.
- For the 6 monthly clinical reviews that include laboratory monitoring, there is merger of CDDPs that are in close vicinity of each other.
- Lastly, some large groups (>50 clients) are broken into two smaller groups with nearby locations. While this does not impact the cost to the health system, it does reduce the time required by patients to attend clinic, allowing them to lead more productive lives.

RESOURCES

CDDP Summary Presentation TASO
CDDP Summary Document 2015
CASA Reporting Form
Dispensing List Template
Task Shifting ART Models Costing Report