Question 2: *What are effective and sustainable mechanisms or processes to integrate local, community, sub-national, national, and regional voices, priorities, and contributions into health system strengthening efforts?*

Partnering with private pharmacies to improve health system performance and client experience for pick-up of antiretrovirals in Uganda

Paul Bitarabeho, Kevin Gibbons, and Le Beau Taljaard | Africa Resource Centre

HEALTH SYSTEMS STRENGTHENING ACCELERATOR

Context

- **In Uganda, HIV/TB clients wait for hours to access medicine.** Median waiting time for accessing HIV/TB services was almost three hours (170 minutes), and surveyed clients gave low scores for the efficiency of HIV/TB services. These long wait times and poor client experience stem from gaps in the human resources and infrastructure available at health facilities.
- **Differentiated Service Delivery (DSD) and public-private partnerships have the potential to improve client experience and health system efficiency.** To improve service delivery convenience and efficiency, the Ugandan Ministry of Health AIDS Control Program (ACP) set a target that 80% of ART clients should be enrolled in less intensive models (LIMs) of differentiated service delivery (DSD). But as of September 2021, only 56.0% (735,864) of Uganda's 1,312,974 million clients were enrolled in LIMs. Community-based DSD models can be expensive and logistically difficult to organize and maintain at scale.
- **Africa Resource Centre (ARC) and ACP began a partnership to improve DSD outcomes.** ARC (an above-site technical assistance implementing partner) and other partners charted a course to improve DSD enrollment outcomes by establishing the Community Retail Pharmacy Drug Distribution Point (CRPDDP) model to improve convenience to clients and reduce congestion in health facilities.
- **ARC's technical assistance process used a systems-thinking approach to find opportunities to improve client services.** ARC began with a Discovery process that included a) geomapping of all health facilities and pharmacies in Uganda and b) stakeholder engagement with relevant MOH departments, service providers, and clients. ARC collaborated with MOH to use the data and findings to design and implement a nationwide extended pilot based on a pharmacy pick-up small pilot that ran in 4 health facilities. Two relevant finding are that in Uganda pharmacies are only located in urban and periurban areas, and there are over 2,000 health facilities in Uganda that provide ART, but less than 150 that serve at least 2,000 clients. Thus, the pharmacy intervention should target those health facilities with the greatest demand and congestion.

Activity Description

Engagement & Policy Formation

From 2019 through early 2021, ACP and ARC met with stakeholders across MOH, service providers, Pharmaceutical Society of Uganda, and client advocates. The model design was iterated based on feedback. The policy framework, implementation toolkits, and extended pilot design were formed and finalized in multi-stakeholder writing workshops.

Service Model Design: Community Retail Pharmacy Drug Distribution Point (CRPDDP)

- Clients are enrolled at their health facility after discussing and consenting with their clinician.
- Clients pick up their antiretroviral medicine (ARVs) for free from a convenient private pharmacy attached to their health facility.
- Pharmacy staff complete wellness questionnaire and dispenses ARVs as per regimen and prescribed dispensing frequency.
- Client visits the health facility at least once per year for consultation and viral load testing.
- The pharmacy receives $0.54 (UGX 2,000) each time it dispenses ARV's.
- Health facilities remains custodian of clients and the private pharmacies act as dispensing arms of the health facilities.
- This public-private partnership provide convenient service to clients by leveraging existing resources in the health system in a way that is cost-effective, scalable, and adaptable to integration and changing conditions.

Commodity Flow

- ARVs flow from National Medical Stores to health facilities, and pharmacies collect authorized orders from the facility.
- Pharmacies submit system-generated requisitions to the health facilities that they are attached to and receive 2-to-4-week amounts of ARV stock.
- Stock movements are approved by the in-charge of the health facilities and fulfilled by the head pharmacist at the health facility.
- Pharmacies are responsible for transporting the stock from the health facility to the pharmacy.

Information Systems (locally developed)

- CRPDDP enrollment, stock movement, and dispensing are completed through digital systems.
- Clients are enrolled in CRPDDP from the health facility in agreement with their clinician through the national HIV electronic medical records (EMR)
- ARTAccess syncs client data from UgandaEMR and provides the ability for pharmacies to request stock.

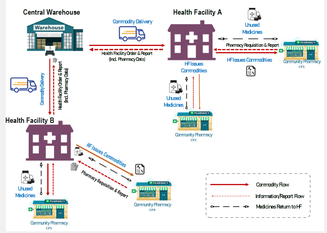
Implementation

- Program activities include training health facility and pharmacy staff, pharmacy assessments, MOU signing with district governments, oversight of digital systems, and enrollment of clients.
- Activities implemented by implementing partners (through support from PEPFAR and other agencies) and Regional Referral Hospitals receiving direct government-to-government grants.
- Client information through posters translated into multiple languages, information shared at health facilities by health care workers and expert clients, and consultation with ART clinicians.
- DSD Uganda website (https://dsduganda.com) and CRPDDP Tracker Dashboard (https://dsduganda.com/crpddp-tracker) have been important in helping ACP to distribute materials and coordinate the program at scale. ACP and ARC conduct regular engagement meetings and support supervision site visits to address any issues that arise.

Annual ART Client Pickup Schedule

	Month 1	Month 4	Month 7	Month 10
3-month refills	Health Facility	Pharmacy	Pharmacy	Pharmacy
6-month refills	Health Facility		Pharmacy	

CRPDDP Commodity Flow



Activity Impact

In the extended pilot, the CRPDDP model has enrolled over 40,000 clients from 70 high-traffic health facilities and 107 private pharmacies across Uganda. The target for 2023 is to reach over 100 health facilities, 200 pharmacies, and 100,000 clients to position the program for rapid enrollment and adoption.

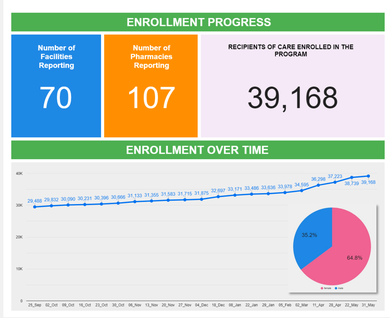
Here are some of the key impacts of CRPDDP implementation thus far:

- **About 40,000 clients from 70 high-traffic health facilities and 107 private pharmacies across Uganda.**
- **Clients have high levels of retention and viral load suppression.**
  - 98% of clients have been retained in care.
  - 98% of clients remained virally suppressed.
  - 98% of clients have returned to the facility for viral load checking.
- **Clients are satisfied with the service delivery and would recommend the model to others.**
  - 99.2% of clients stated that they would recommend the model to their friends.
  - 92% of clients stated that they were treated "respectfully" or "very respectfully" at the pharmacy.
  - 69% of clients waited less than 10 minutes, and 28% between 10 and 20 minutes.
- **Congestion at high-traffic health facilities has reduced.**
- **CRPDDP model has been added to National HIV Guidelines as recommended DSD model.**
  - These models are now built into the service delivery of IPs and health facilities around the country, and MOH is leading the efforts.
- **CRPDDP is being adapted for integration of more commodities.**
  - Potential commodities include pre-exposure prophylaxis (PrEP), family planning (DMPA-SC and contraceptive pill), anti-hypertensive medicine, diabetes treatment, and tuberculosis screening, testing, and treatment.

Evidence

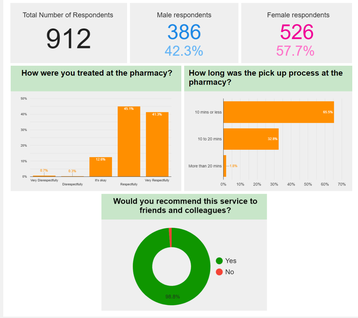
There has been steady progress in client enrollment. Partners are currently pushing to bring on more health facilities and pharmacies and to speed up enrollment. Modeling shows that over 400,000 clients could be enrolled in the model at scale. Enrollment numbers are obtained from the ARTAccess software. CRPDDP Client Satisfaction Survey collected by members of the National Forum for People Living with HIV/AIDS Network of Uganda (NAFOPHANU) through Google Forms across the country.

Progress of CRPDDP Onboarding and Enrollment



Data available at https://dsduganda.com/crpddp-tracker

Results of CRPDDP Client Satisfaction Survey



Data available at https://dsduganda.com/crpddp-satisfaction

Facilitators

- **Involvement of key stakeholders.** Representatives from ACP, the MOH Pharmacy Department, the Pharmaceutical Society of Uganda, PLHIV advocate organizations, implementing partners, and IT support organizations were all involved in the policy formation, extended pilot design, training, and coordination of the model. ARC's role was to harmonize activities and ensure that issues were quickly addressed.
- **Scaling up of existing pilot and systems, rather than starting from scratch.** A pilot had already been run by Infectious Diseases Institute, so ACP and stakeholders were able to adapt the pilot for national scale. This included simplifying the workflow so that a nurse was not required to sit in the pharmacy to dispense medicine and adjusting the ARTAccess software to incorporate new workflows and sync with national systems.
- **Leadership from ACP and PEPFAR agencies to prioritize implementation.** Since there are so many implementing partners and health facilities involved in the program around the country, success has been dependent on having ACP and PEPFAR donor agencies coordinate activities and emphasizing the importance of implementation.
- **Network of implementing partners to support rollout.** All the work of program implementation, onboarding, promotion, enrollment, and dispensing is conducted by implementing partners, health care workers, and pharmacy staff. The capacity and professionalism of these people and organizations has made CRPDDP possible.

Challenges

- **Initial delays in program implementation.** The program took some time to get off the ground because of delays caused by COVID restrictions and by lack of clarity on how to get approval from local government officials in each of 50+ districts that needed to sign an MOU for work to begin. These slow downs required regular visits to district government and health facility officials to clarify work modalities and speed up onboarding.
- **Issues with two software systems syncing.** In the early days of implementation, the two systems did not sync reliably in all health facilities. ARTAccess is a web-based platform hosted centrally. The UgandaEMR (an OpenMRS implementation) software sits on separate servers around the country and had unique challenges that needed to be addressed one-by-one in order for the program to work at a national level.
- **Slow enrollment of clients.** Some health care workers have been hesitant to advocate for the model and enroll clients because they believe that they might lose their jobs if too many clients leave the health facility. CRPDDP advocates have described the improvement in client experiences and highlighted that moving stable clients to the pharmacies allows health care workers to focus more on clients with more issues.
- **Differing levels of commitment by IP staff and health care workers.** Some implementers are just more enthusiastic about the model, and that difference comes our in the enrollment numbers. IPs and health facilities have a great deal of autonomy in the Ugandan health system, so this variance is to be expected.

Lessons Learned

- **Focus on incorporating client perspectives and improving client experiences.** Our charge from the beginning was to improve client experiences, and that allowed us to focus on clients from the beginning. What clients wanted was more convenience and lower waiting times, and this model is perfect for that.
- **Involve all relevant stakeholders when designing a model for nationwide implementation.** There were times when implementation was delayed because a stakeholder's perspective needed to be addressed. The stakeholder engagement was necessary for the scalability of a public-private-partnership model that cuts across different service areas.
- **Ensure that all processes and information systems work before beginning full implementation.** The software systems and reporting procedures had some gaps in the early days of implementation. We would recommend a closely monitored pilot in a couple of sites initially before beginning the full rollout.
- **Budget for time and travel to address the issues that arise from various stakeholders.** Though the CRPDDP model is a service-delivery intervention, it also turned out to be a political project that requires regular interactions with relevant entities. It is difficult to quantify that engagement, but it has been necessary for the project to run.
- **Make it possible for MOH to lead.** Many organizations undertake pilots with minimal consulting with MOH. By focusing on the needs of MOH, engaging with relevant departments, and providing MOH with tools that allowed them to monitor progress toward targets, implementation at scale was possible.
- **Design models that can be adapted to integrate additional services.** The CRPDDP model is now well positioned to incorporate additional commodities. Clients, MOH departments, and donor agencies are all advocating for integration of additional services, and the clarity of the workflows in the model make this possible.

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