

Decentralized Drug Distribution in Botswana: Final Report

Background

Botswana has made great progress toward HIV epidemic control. Estimates from the Joint United Nations Programme on HIV/AIDS (UNAIDS) from 2019 reported that 92 percent of people living with HIV (PLHIV) were aware of their status, 82 percent of PLHIV were on ART, and 79 percent of PLHIV were virally suppressed.¹ However, Botswana remains one of the countries most affected by HIV, with an adult HIV prevalence of 20.3 percent despite its provision of universal free antiretroviral therapy (ART) for all PLHIV. While differentiated service delivery (DSD) models have been adopted in the national response to accelerate ART initiation and retention, some populations remain underserved, including key populations, adolescents and young people, and men. The COVID-19 pandemic also threatens to reverse the gains made in the HIV response as resources are diverted from routine ART services to the pandemic response. In addition, PLHIV may struggle to access care as a result of lockdowns, movement restrictions, limited transportation options, and fear of exposure to COVID-19 at overcrowded facilities. To ensure uninterrupted access to ART and viral load (VL) testing during the COVID-19 emergency in Botswana, the Meeting Targets and Maintaining Epidemic Control (EpiC) project, funded by the United States Agency for International Development and the U.S. President's Emergency Plan for AIDS Relief, provided technical assistance (TA) to introduce decentralized drug distribution (DDD) of ART through the private sector. This report summarizes the achievements and lessons learned from this initiative and provides recommendations for how private sector DDD models can be scaled up and integrated into service delivery packages in Botswana and other countries.

Botswana DDD models

From September 2020 to March 2021, FHI 360 supported the decentralization of two services in Botswana through the EpiC project: (1) home delivery of ART using courier services and (2) decentralized VL testing through private laboratories. These DSD models were rolled out in Tebelopele Wellness Centers (TWC), which are community clinics. The TWC were prioritized to

¹ <https://www.unaids.org/en/regionscountries/countries/botswana>

EpiC is a global cooperative agreement dedicated to achieving and maintaining HIV epidemic control. It is led by FHI 360 with core partners Right to Care, Palladium International, Population Services International (PSI), and Gobe Group. For more information about EpiC, including the areas in which we offer technical assistance, click [here](#).

demonstrate proof of concept prior to expansion to public facilities as recommended by the Ministry of Health and Wellness (MOHW) and USAID. The TWC are supported by two FHI 360 projects—EpiC and Accelerating Progress in Communities (APC 2.0)—which serve key populations and adolescent girls and young women, respectively. In addition to implementing home delivery of ARVs and VL testing through private labs, the EpiC project also assessed the feasibility of the private pharmacy model, which uses private pharmacies to dispense ARVs.

Stakeholder engagement

Consultative meetings with the Ministry of Health and Wellness

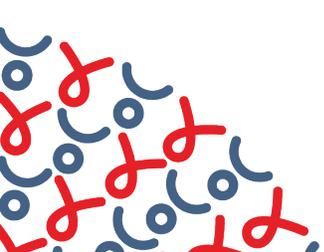
Following USAID’s approval of the scope of work for DDD in Botswana, EpiC held several consultative meetings with the Ministry of Health and Wellness (MOHW) and other stakeholders to seek approval for the introduction of DDD models to the clients of public facilities, beyond the TWCs, and report on progress.

Table 1. Timeline of stakeholder engagements

Timeline of Stakeholder Engagements					
June 2020	July 2020	August 2020	October 2020	November 2020	February 2021
EpiC and USAID presented the proposal for DDD models to the MOHW senior management team. The team was asked to conduct a needs assessment jointly with the ARV program.	EpiC commenced consultative meetings with the ARV program and the National Health Laboratory. EpiC received permission to conduct the health facility assessment and client survey. EpiC conducted the assessments from July-August 2020.	EpiC presented findings from the assessments. Botswana Post also presented the HD model to the MOHW, which gave approval for EpiC to do a proof of concept of the HD model and VL testing via private labs within FHI 360-supported clinics only.	EpiC presented an update on the rollout of DDD models to the MOHW senior management team. The ARV program and EpiC were assigned to do a costing analysis of DDD models.	At a virtual stakeholders meeting with the MOHW, related departments (National Health Laboratory, Pharmacy Services, Central Medical Stores, and Monitoring and Evaluation), and USAID, EpiC presented the costing analysis of DDD models.	A follow-up stakeholders meeting was assembled to finalize the costing analysis to present to the MOHW senior management team and to seek approval to implement DDD models with public facilities.

Consultative meetings with the private sector

EpiC had consultative meetings with the Pharmacy Association of Botswana and Business Botswana, which is the overarching body for allied health businesses (including private clinics and pharmacies), and private laboratory networks including Diagnofirm and Lancet Laboratories to seek their buy-in on the DDD models and recommendations on how EpiC and the MOHW could partner in the rollout of DDD.



Baseline assessments

Prior to implementation, EpiC conducted a needs assessment to understand stakeholder opinions and inform the design of DDD models. Assessments were conducted with health facilities, ART clients, and private pharmacies.

Rapid assessment of high-volume facilities

A standardized assessment tool was used to assess 10 high-volume (>1000 PLHIV) health facilities on their client-provider ratio, client-provider interaction time, and services provided. The average number of ART clients seen for clinical consultation per day was 49 (range: 35-70) with an average of 93 ARV refills per day (range: 62–200). Seventy-five percent of providers thought that the provider-client interaction time was not adequate to respond holistically to clients' needs and complete the necessary paperwork. Overall, the majority showed willingness to devolve clients to the private sector.



Photo credit: Ontshepile Matebisi

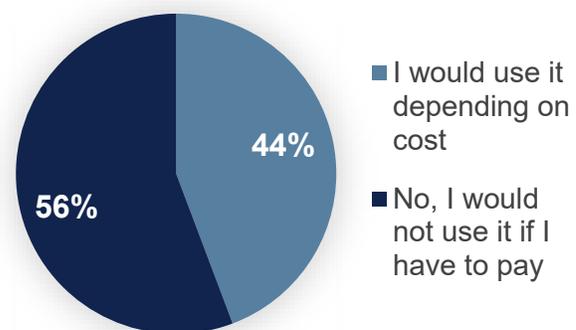
Waiting area of private pharmacy.

Client experience and opinions on accessing ART through private pharmacies

A client survey was also conducted to understand the experiences of PLHIV in accessing ART services, and their willingness to use private pharmacies for ART refills if a fee were required. Of the 62 clients interviewed (26 males, 36 females), the majority (54%) lived within 30 minutes of the clinics where they received HIV services. The average waiting time at the facility for the majority (58%) was one to three hours. Overall, 44 percent expressed interest in using private pharmacies for refills with a dispensing fee, depending on the cost (Figure 1). Among them, 41 percent were willing to pay if the dispensing fee at a private pharmacy was less than 50 BWP (~US\$5) per refill twice a year.

Figure 1. Clients' willingness to pay dispensing fee

Payments at private pharmacies



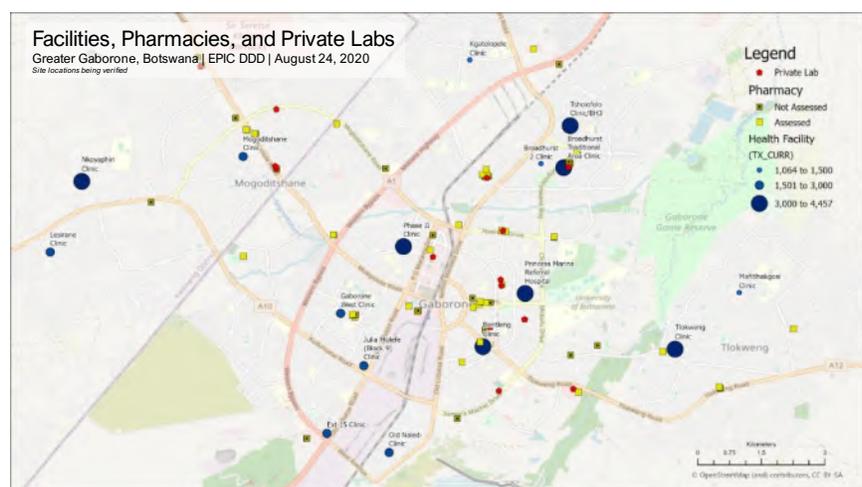
Willingness of private pharmacies to distribute ARVs on behalf of the public health sector

Forty-three pharmacies from three health districts of Botswana were surveyed. Seventy-nine percent (n=34) were in Gaborone, 12 percent (n=5) in South East, and 9 percent (n=4) in Kweneng East. All private pharmacies that responded were willing to provide ART on behalf of public facilities, although 62 percent (n=26) indicated they would require a dispensing fee of about 60 BWP (range: 50–100 BWP; ~US\$5–10) per refill. Among the 42 pharmacies that responded, all were already dispensing ART to private clients. They reported having adequate space in the waiting areas and a designated private area for counseling. They also operated at least 12 hours per day on weekdays, compared to eight hours per day among public sector pharmacies, and were open on Saturdays. However, only 33 (78.5%) operated on Sundays and public holidays.

Mapping of private pharmacies and labs to high-volume facilities

A mapping exercise was conducted to assess distribution and proximity of private pharmacies, private laboratories, and post offices to the high-volume ART facilities in Gaborone. A network of hub facilities and DDD outlets has been identified using the mapping results for scale-up (Figure 2).

Figure 2. Mapping of potential DDD outlets to health



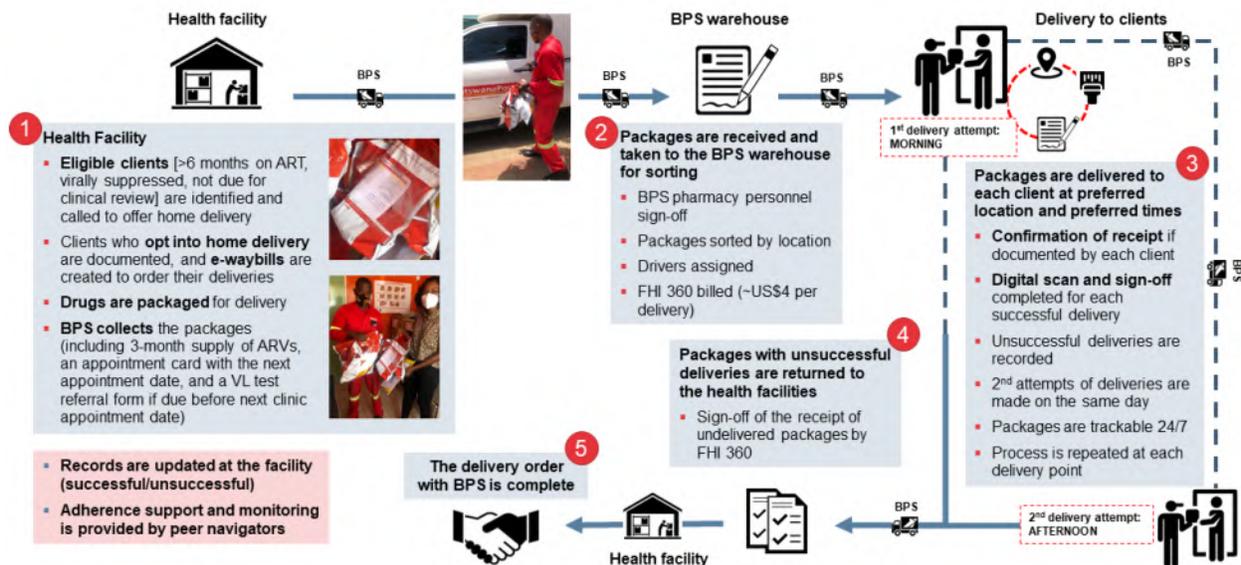
Home delivery through Botswana Postal Service

Botswana Postal Services (BPS) is a parastatal mail and courier service provider in Botswana. It has been contracted by the MOHW for warehousing and distributing medicine to all health facilities in Botswana. BPS was chosen as a DDD partner in large part because of its experience in handling medicine, strong processes for quality assurance and client confidentiality, and widespread presence in the country. BPS and FHI 360 signed a service-level agreement with the negotiated cost of the home-delivery (HD) services.

TWC nurses were trained on BPS' electronic waybill system, which is a platform used to order door-to-door deliveries, generate labels and packaging of medication, track deliveries in real-time, and generate reports. Standard operating procedures (SOPs) were developed to quickly deploy this model to eligible clients, who were PLHIV who had been on treatment for more than

six months, were virally suppressed, and did not need clinical review. Clients were contacted by phone, offered the option of participating, and asked for their consent. Figure 3 illustrates the steps from order to successful delivery.

Figure 3. Home delivery process flow



VL testing with private labs

After a competitive selection process, EpiC contracted with a private laboratory, Diagnofirm Medical Laboratories, based on their capacity to provide VL testing through multiple sample collection points in 10 districts and to return results within 24 hours. EpiC successfully negotiated a price of US\$20 per VL test down from the usual cost of US\$50 per test.

Providers at the facilities serving ART clients offered clients referrals to the private lab for VL testing and gave them a list of depots where they could have samples collected at locations and times convenient to them, including weekends. Clients had the option of presenting a provider referral slip at a depot for sample collection or having the sample collected at the facility. Samples collected at the facility were transported to and processed by the private laboratory. Results were reported back to the referring provider through an electronic platform, and printed copies were given to clients. An SOP was developed on how to identify, refer, and track eligible clients to receive VL testing through Diagnofirm and to document and share the results with clients. A VL testing surge, with a goal of testing 105 eligible PLHIV per day, was conducted from September 2020 to March 2021.

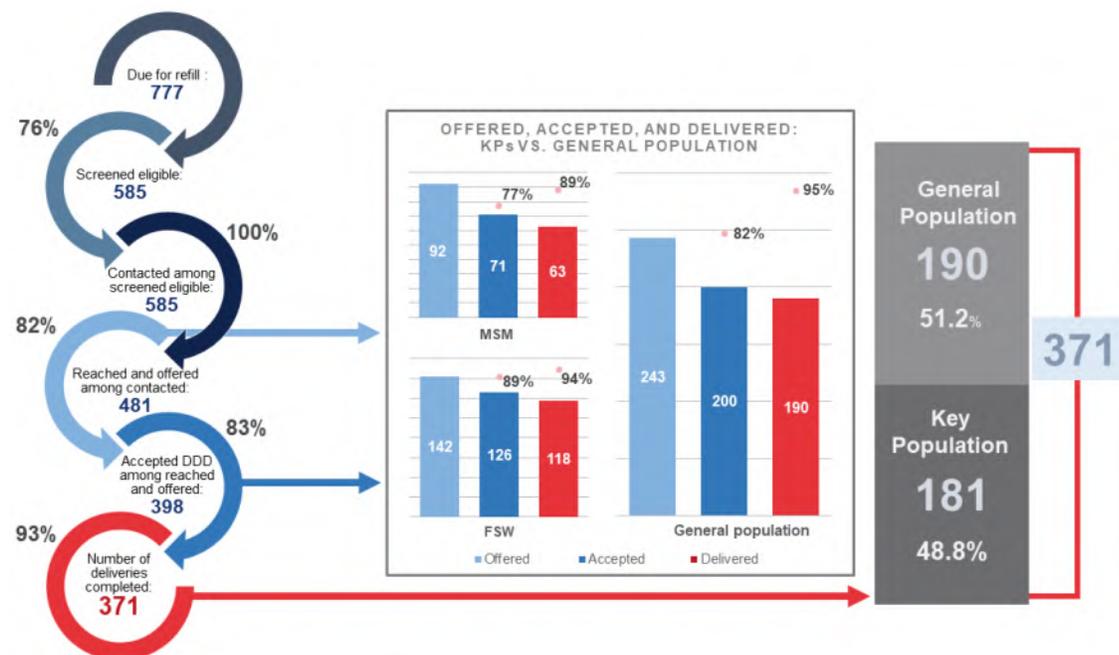
Accomplishments

From September 2020 to March 2021:

- A total of **371** home deliveries of ARVs were completed, with **48.8 percent** of these for KP individuals.
- A total of **1,594** VL tests were conducted via private labs, with **31 percent** for KP individuals.
- VL testing coverage increased from **83 percent to 96 percent** among KP individuals and from **86 percent to 91 percent** among the general population.
- **97 percent** of KPs who had a viral load test through the private lab and **98 percent** of the general population who had a viral load test through a private lab were virally suppressed.

The implementation of these models remains at small scale while the MOHW approval is pending for EpiC to implement DDD models with public facilities and to implement the private pharmacy model. The achievements presented are from implementation in the three TWC. MOHW approval will enable scale-up to additional public facilities (Figure 2).

Figure 4. Acceptance of the home delivery model among eligible PLHIV, September 2020–March 2021



Acceptance rates for the HD model were highest among FSWs at 89 percent, followed by the general population at 82 percent, and lowest among MSM at 77 percent. The overall success rate for completed deliveries was 93 percent (Figure 4). The most common reason for failed deliveries was clients being unreachable by phone on the day of the delivery. A large proportion

(30%) of clients who provided a reason opted out of the HD model because they preferred to pick up ARVs at the facility. Nineteen percent opted out because they had mobile jobs that made it difficult to have a stable delivery address, and 15 percent cited workplace constraints (e.g., domestic helpers did not want their ARVs delivered when their employers were home).

Figure 5. Number of home deliveries, September 2020–March 2021

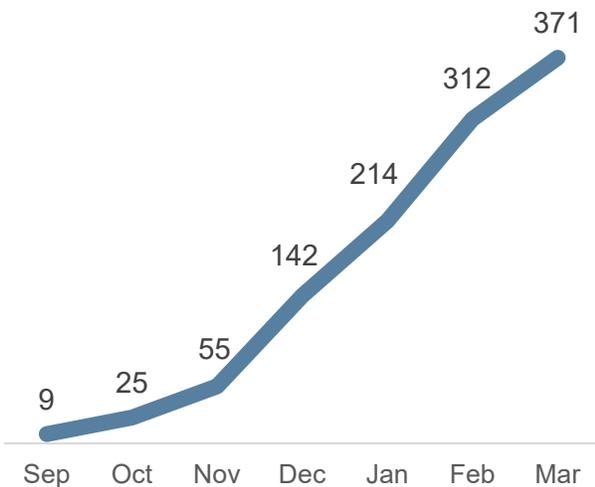


Figure 5 shows the increase in home deliveries by month, from September 2020 to March 2021. The increase between November and December came after the expansion of HD to the APC 2.0 project and to a second district, Molepolole.

Among KP clients, more noncitizens accessed decentralized VL testing than citizens (Figure 6). This reflects the proportion of noncitizens in the KP program. More females than males accessed VL testing in both target populations, with males representing 36.9 percent of tested KPs and 44.8 percent among the general population.

Figure 6. Distribution of VL tests conducted with private labs among KPs and the general population, September 2020–March 2021

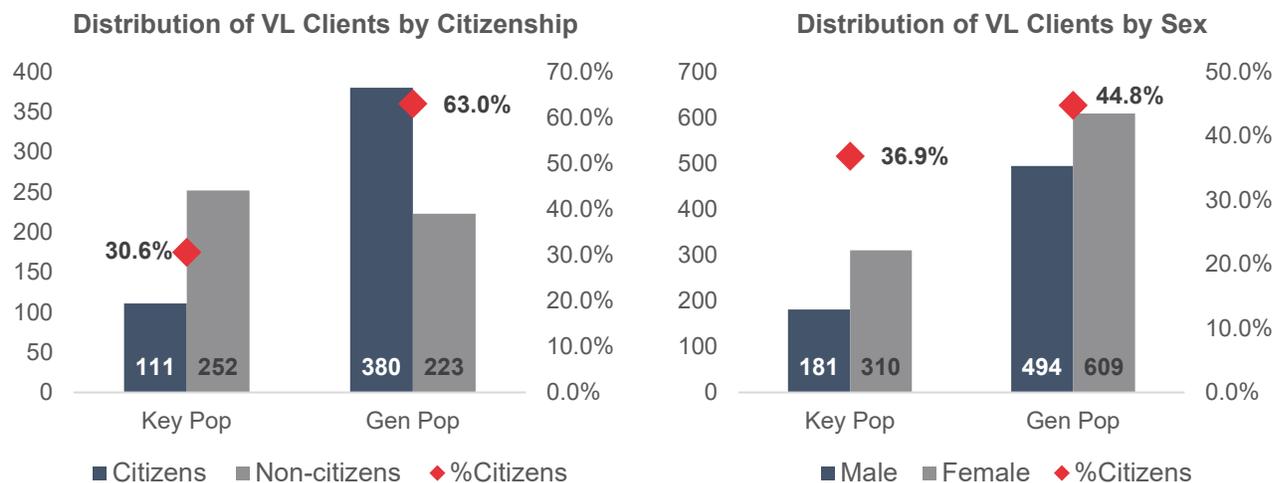


Figure 7. VL tests conducted with private labs by week, September 2020–March 2021

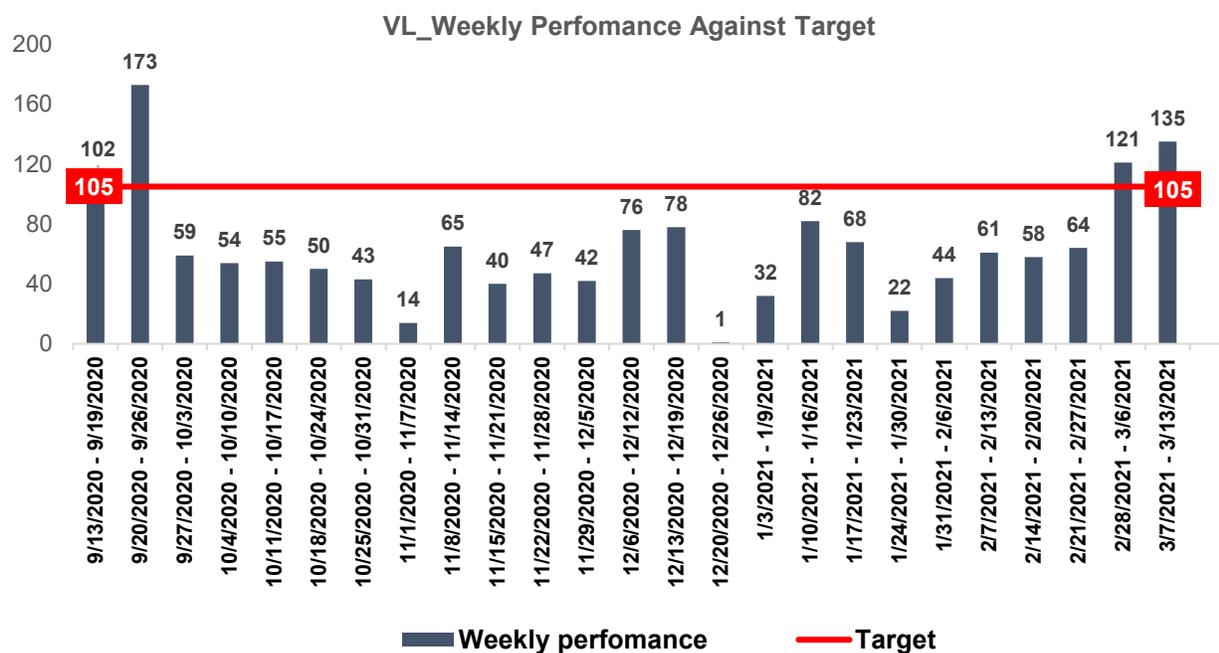


Figure 7 shows the number of VL tests conducted per week against the weekly target of 105 VL tests. The weekly target was achieved during the first surge in September, when clients who had been waiting to receive a VL test were reached, and in March 2021, when EpiC conducted another surge.

Table 2. Achievements, September 2020–March 2021

Indicators	Results		
	Gaborone District	Other Districts	Total
1. DDD_HF : Number of health facilities from which clients are devolved to DDD pick-up points (PuP) or other DDD modalities for treatment ARVs and/or PrEP	1	2	3
2. TX_CURR_DDD : Number of adults and children currently accessing ARVs through DDD PuP or other DDD modalities (currently all home deliveries)	341	30	371
3. Number of people trained/retrained in DDD	3	9	12
4. Number of clients who received viral load testing through the private laboratory model	1,090	504	1,594

Business case development

Costing of decentralized drug delivery and viral load

A costing analysis using data from 10 high-volume districts was conducted to model the costs of expanding DDD (home delivery, automated lockers, and private pharmacy models) and decentralizing VL testing to the private sector. The results showed cost savings to both the clients and the government, as well as its partners. The analysis found approximately US\$500,000 in annual savings to the government if, among the estimated 172,472 PLHIV ages 18 and over eligible to enroll in DDD, 41,298 clients (24%) accessed ART through one of the DDD models. This would be a 2.4 percent cost savings to the government and other donors. The savings would increase to 7.5 percent if 40 percent of stable ART clients received treatment through DDD models. Additionally, decentralized VL testing was associated with US\$5,000 in cost savings in one year if 41,299 clients (20%), among the estimated 205,395 ART patients ages 18 and over, accessed VL testing through the private sector, equivalent to 1.1 percent savings in VL service costs. This would increase to 4 percent savings if 40 percent of ART clients had their VL testing done through the private sector.

Lessons learned

Experiences during the project offered lessons for future work:

- Stakeholder engagement in the planning and conceptualization phases is critical for the adoption of interventions, especially where government approval is needed.
- Getting buy-in from all MOHW departments is a long process but can be improved if all departments (National ARV Program, Pharmacy Department, Central Medical Store, National Health Laboratory, Monitoring and Evaluation, and the MOHW Senior Management Team) get on board early in the planning phase.
- The private sector (pharmacies, BPS, and private lab networks) is willing to partner with the government and FHI 360 in rolling out DDD models, and they have the capacity to provide quality services and absorb high volumes of clients from the public sector.
- Provision of capacity building and mentorship for providers is key to having their buy-in on new interventions, rapid deployment, and scale-up.
- There is no one-size-fits-all for service delivery. Despite the availability of home delivery, 30 percent of clients still preferred to come to the facility for their medication pick-up.
- The home delivery model may be more suitable to urban areas where there is better physical planning of roads and infrastructure.

Next steps and transition plan for April to September 2021

- EpiC and the MOHW ARV Program will finalize the costing of the DDD models and present the recommendation to the MOHW Senior Management Team for approval.
- National Health Laboratory (NHL) recommended a pilot for a proof of concept for VL testing via private labs with clients of public facilities in one district. A needs assessment was conducted jointly by FHI 360, the MOHW ARV Program, and NHL in March 2021. The findings indicated a gap in VL testing, with 3,700 PLHIV who needed testing. Additional funding will be needed to carry out this pilot.
- Continue engaging with MOHW (MOHW ARV Program, Pharmacy Department, and Central Medical Stores) to introduce other DDD models, including the private pharmacy model and automated dispensing models.

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