Decentralized Drug Distribution in Lesotho: Final Report

Background

Lesotho has made significant strides toward meeting the Joint United Nations Programme on HIV/AIDS (UNAIDS) 95-95-95 targets with an estimated 94 percent of people living with HIV (PLHIV) aware of their status, 82 percent on treatment, and 80 percent virally suppressed.[1] Given the country's HIV prevalence of 21.1 percent — the second highest in the world — innovative approaches for effective and sustainable delivery of antiretroviral therapy (ART) to the growing number of PLHIV accessing treatment are needed. These approaches should make services more convenient for clients, reduce the burden on health systems and, in the context of the COVID-19 pandemic, safeguard health care workers and clients.

To close the gaps in access to treatment, the Government of Lesotho (GOL) introduced differentiated service delivery through community ART distribution models, including community ART groups (CAGs), in 2016. However, clients continued to access ART at crowded health facilities with long wait times, causing them to have to choose between missing work/school or keeping their refill appointments and, ultimately, to disengage from routine clinic care. The scale-up of client-centered decentralized drug distribution (DDD) models to support treatment continuity was, therefore, urgently needed. Further, during the COVID-19 pandemic, the need to accelerate community-based ART distribution models was heightened. To address these needs, the Meeting Targets and Maintaining Epidemic Control (EpiC) project, through Right to Care, implemented the BonoloMeds DDD program with the support of the U.S. President's Emergency Plan for AIDS Relief (PEPFAR) and the United States Agency for International Development (USAID). This report summarizes implementation of the program from January 2020 through September 2021.

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[1] https://www.unaids.org/en/regionscountries/countries/lesotho

What is BonoloMeds?

BonoloMeds is a DDD program that supports client-centered care by facilitating the collection of medication outside of health facilities, including at semi-automated pick-up points (PUPs) (i.e., private pharmacies, CAG meeting locations, other static PUPs) and at fully automated PUPs (eLockers). The name is derived from a combination of the Sotho word "bonolo," meaning easy or convenient, and "meds" for medicine. The program delivers medication, including ART,

through a central dispensing unit (CDU) and leverages the Right ePharmacy™ software (eRx solution) to support the packaging and distribution of commodities through a unique coding system. The CDU is the location where all ART supplies distributed through BonoloMeds are collected from the national or district warehouse to package secure and serialized client parcels based on the prescriptions in the national electronic medical records (Photo 1). The CDU also packs grouped parcels for community health workers responsible for distributing multiple parcels in communities. Following the

Photo credit: Makoae Mosothoane, Senior M&E Manager, Right to Care

Photo 1. Patients' medicine parcels are prepackaged at this CDU building prior to being delivered to the various pick-up points.

packaging at the CDU, the parcels are transferred to the PUP using Riders for Health, a social enterprise nonprofit engaged as a partner to deliver client parcels for the BonoloMeds program. Riders for Health is a locally registered logistics organization with extensive experience in transporting health products, including client blood samples and laboratory results to and from health facilities and laboratories across the country.

Eligible ART clients are enrolled into the BonoloMeds program at their health facilities and then referred to collect their three or six months (i.e., three-month multimonth dispensing [3-MMD] or 6-MMD) dispensation of ART, through their preferred PUPs. Health facility providers generate the prescriptions, which are transmitted electronically to the CDU, initiating the BonoloMeds supply chain system (Figure 1).

Figure 1. BonoloMeds supply chain system
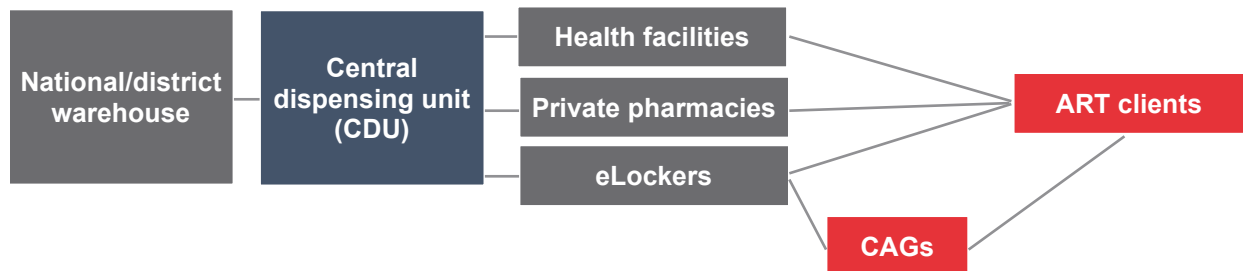
For semi-automated PUPs, the pharmacist or other staff member scans the parcels in upon receipt from Riders for Health and then scans them out when the client arrives at the PUP with their refill collection card. For automated PUPs, the logistics partner delivers the parcels to the secure eLocker (Photo 2). Upon receiving notification that their parcel is ready for pick-up, the client goes to the eLocker to collect the parcel using their one-time pin (OTP). While they receive their ART refills through an unmanned system, they can phone the call center for support as needed using a free mobile number. A community health worker can also pick up parcels on behalf of a CAG to deliver the parcels to the clients at the preferred location. The community health worker then scans in the parcel upon accessing the eLocker and scans it out upon delivering it to the client.

Clients receive SMS reminders prior to and on the date of collection, which helps them not miss pick-ups. In both the semi-automated and automated scenarios, the barcodes of the parcels enable secure tracking and tracing of commodities, allowing commodity forecasting. The availability of individual client dispensing data also enables targeted treatment support and client tracking for clients who have missed their appointments. The centralized data allow for predictive

Photo 2. Patients enrolled in the program pick up their medicine parcels at an eLocker.

Photo credits: Reabetsoe Motloi and Relebohile Mokone, Right to Care, Demand Creation Officers

analysis of supply chain needs and client behaviors. The centralization of packaging and distribution of commodities facilitates MMD of ART and eliminates the burden on health facilities to manage high-volume inventories, dispense ART, and support last-mile operations to PUPs.

Accomplishments

The objective for fiscal year (FY) 21 was to launch and scale up the BonoloMeds program in Maseru District. The program focused on governance and stakeholder engagment, identification of private sector pharmacies and strategic sites for eLockers, collaboration with and training of service delivery partners, installation of the CDUs and eLockers, and demand creation to improve client enrollment in the program.

GOVERNANCE AND STAKEHOLDER ENGAGMENT

As a result of senior leadership changes in the Ministry of Health (MOH) and the evolving policies pertaining to antiretroviral (ARV) dispensation in Lesotho, the EpiC team focused their efforts on governance in the BonoloMeds program. This included collaboration with the Lesotho

MOH departments supporting the national HIV program (Disease Control, Pharmacy Department, Supply Chain Management Directorate [SCMD], and National Drug Service Organization [NDSO]); PEPFAR implementing partners in the country (Elizabeth Glaser Pediatric AIDS Foundation [EGPAF], Chemonics Baylor Pediatric Foundation); and the Lesotho Network of AIDS Services Organizations (LENASO), which represents Basotho living with HIV.

EpiC established a technical working group (TWG) to oversee the DDD program with clearly defined objectives, as follows:

(a) Advocate for the implementation of the BonoloMeds program within existing national ART guidelines to establish an enabling environment for this innovative approach to ARV refills.

(b) Facilitate an enabling environment through advocacy targeting the health care workforce responsible for program implementation at the site level.

(c) Participate in the provision of health education on BonoloMeds as well as enrollment of clients into the program.

(d) Participate in the decision-making process for supplying the key health commodities needed for successful implementation of the program.

(e) Engage Basotho clients at the five selected health facilities — Senkatana Health Centre (H/C), Baylor Centre of Excellence (COE), St. Joseph's Hospital, Thamae H/C, Maseru Seventh Day Adventist (SDA) — and assess their acceptability of BonoloMeds.

EpiC also contributed to the concept note and guidelines on the community ART delivery DDD model developed in collaboration with other community ART distribution (CAD) partners (EGPAF, Mothers 2 Mothers [M2M], and LENASO) for adoption by the MOH.

Collaboration with Service Delivery Partners to Create Patient-centered Models

EpiC collaborated with service delivery partners, the MOH, EGPAF, and Baylor Lesotho to complete an assessment of five health facilities having more than 2,000 clients on ART (Table 1). Staff at these facilities were subsequently oriented on BonoloMeds to secure their support for implementing the program. In collaboration with health facility staff, information on the following areas was collected during the assessment:

Table 1. TX_CURR of assessed health facilities, as of March 2020

Health Facility	TX_CURR
Senkatana H/C	5,724
Baylor COE	2,617
Maseru SDA	3,524
Thamae H/C	3,510
St. Joseph's Hospital	2,770

- Facility staff availability and trainings received

- Facility operating hours and services

- Client wait times

- Retention

- Barriers to high-quality care

Assessment findings included:

- All facilities were interested and willing to participate in the program.

- Three of the assessed health facilities (i.e., Senkatana H/C, Baylor COE, St. Joseph's Hospital) had space to install eLockers on their premises.

- The health facilities assessed had qualified and appropriately trained health personnel across different cadres ranging from clinicians, pharmacy personnel, data clerks, and counselors that would enable them to implement the BonoloMeds program.

EpiC disseminated tools to the five health facilities to support client enrollment, including prescription books, prescription log sheets, operations manuals, screening checklists, and color-coded file stickers.

IDENTIFICATION OF PICK-UP POINTS

A total of 21 private pharmacies, two malls (Pioneer and Maseru), and the five health facilities were also assessed to identify strategic locations for eLockers and potential PUPs, and three buildings were assessed for the potential CDU location. The PUPs and locations of the eLockers were selected based on ease of geographical access (e.g., being near selected health facilities, factories, city center, bus stops, and institutions of higher learning), which could potentially contribute to higher enrollment rates. An assessment was conducted using ArcGIS Survey123 to collect the geolocation of the health facilities and the other assessed sites.

Right to Care staff (nurses, pharmacy personnel, data clerks) collected data for the assessment using electronic forms on tablets. EpiC analyzed the data to identify the locations for the CDU, eLockers, and private sector pharmacy PUPs. Sixteen private pharmacies were selected as PUPs, as they provided the required government documents (i.e., legal registration with Ministry of Trade, Lesotho Revenue Authority for tax compliance, and authorization certificate provided by the Ministry of Health) and were contracted for program implementation. Two shopping malls and three health facilities (Baylor COE, Senkatana H/C, and St. Joseph's Hospital) were selected as appropriate areas for the installation of five eLockers. Lastly, one building at Masowe 4 was selected from the three potential building options for the establishment of the CDU based on its superior internet connectivity, backup generator for electricity, and enhanced security measures.

BUSINESS CASE DEVELOPMENT

A memorandum of understanding (MOU) between Right to Care and the MOH was established for the implementation of DDD in Lesotho. This MOU:

- Enabled enrollment of clients from both government and Christian Health Association of Lesotho health facilities
- Facilitated CDU accreditation as a dispensing unit
- Established access to a system for requesting and reporting commodities to the MOH through the national reporting and requesting software (informed push system), which uses a DHIS2 platform
- Provided access to health commodities from NDSO, the country's central medical store, through monthly reporting and requesting to Maseru District Health Management Team (DHMT) as well as the MOH Supply Chain Unit

The selected CDU building was leased from a privately owned company registered in Lesotho. To set up the CDU, Right to Care worked with various departments at the MOH, including the Pharmacy Department, Supply Unit, Disease Control, and the Maseru City Council, to ensure that the CDU met set public health conditions required for a dispensing unit. Electronic dispensing equipment (computers and scanning devises), branding materials and signage, storage partitioning, dispatch and dispensing areas, security systems, system for access by authorized personnel, and a call center for facilities were installed. Lastly, appropriate staff for CDU operations (pharmacy personnel, data capturers, call center nurses) were employed and trained on CDU operations and the systems used.

All selected private pharmacies were legally registered in Lesotho to dispense ART with no additional fees to clients. A small commission fee was paid by Right to Care to the pharmacies where eLockers were installed, based on the number of parcels distributed. A small fee was paid to the shopping malls for amenities (electricity, shelter, and safeguarding of the eLockers). This fee was negotiated with the pharmacies and shopping malls based on similar rates in South Africa where the program was already being implemented. Clients were not charged for the ART or services they received.

Service-level agreements were signed between Right to Care and the management teams of both shopping malls for the installment of the eLockers. The eLocker locations were decided by Right to Care and the management teams of the shopping malls and health facilities, who took into account convenience for client.

STAFF TRAINING AND INSTALLATION OF CDUS AND ELOCKERS

The EpiC team transported eLocker and e-scanning equipment from South Africa for installation at the CDU, five health facilities, and 16 PUPs. The CDU dispensing software was adapted to the national scripting template and aligned with the systems used by service delivery partners. This involved meeting with the service delivery partners and testing and activating the eRx software developed by Right ePharmacy. The system is used for client enrollment, medicine dispensing from the CDU, and the tracking of parcel deliveries to manual PUPs and eLockers. Prior to implementation, 173 health facility staff (doctors, nurses, data collectors, counselors, and pharmacy personnel) from the five selected health facilities were trained on the data collection tools, eRx solution, and the BonoloMeds program approach (Photo 3). Following the training, the EpiC team installed the physical CDU infrastructure to support centralized dispensing and the five eLockers.

Photo credit: Reabetsoe Motloi and Relebohile Mokone, Right to Care, Demand Creation Officers

Photo 3. Health care workers were trained on the BonoloMeds program.

Scanning devices (smartphones) were placed at the 16 private pharmacies for the scanning of medicine parcels for client pick-up.

DEMAND CREATION

Acceptability among the target group and their engagement in demand creation are critical to the success of client-centered programs. EpiC worked with a graphics design consultant to develop branding material that was nonstigmatizing and appropriate for the Lesotho context. The name "BonoloMeds" was chosen through consultative engagements between the local Right to Care team and Right to Care South Africa counterparts. The pictures below (Photo 4) demonstrate the publicity garnered by the program as a result of a media release conducted by EpiC and the MOH for the BonoloMeds program. BonoloMeds provided materials for demand creation, branding, and direct advertisement via its

Photo 4. BonoloMeds branded the demand-creation materials and eLocker.

Photo credits: Reabetsoe Motloi and Relebohile Mokone, Right to Care, Demand Creation Officers

7

Results

Client enrollment in BonoloMeds launched in May 2021, with the first client pick-up in July 2021. By September 30, 2021, a total of 1,117 clients (327 [29%] males, 790 [71%] females) were enrolled in the program. More females than males enrolled in the model at every health facility (Figure 2), and more than half of enrolled clients were ages 30–49 (Figure 3). The two PUPs with the highest number of enrollees were eLockers (213 and 188 clients) (Figure 4). A total of 582 clients enrolled in the eLocker model and the remaining 535 enrolled in the pharmacy model.

Figure 2. Cumulative enrollment by facility and sex
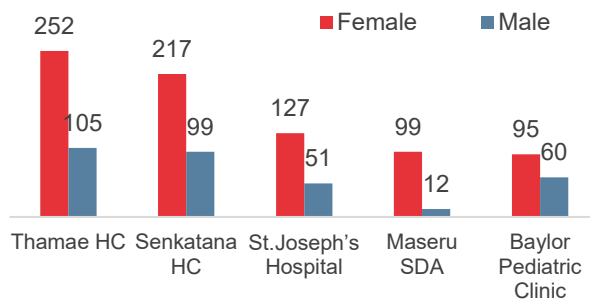
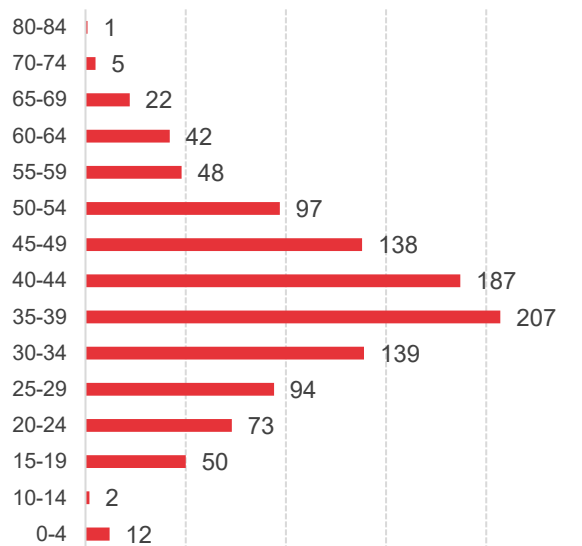### Figure 3. Disaggregation of enrollees by age
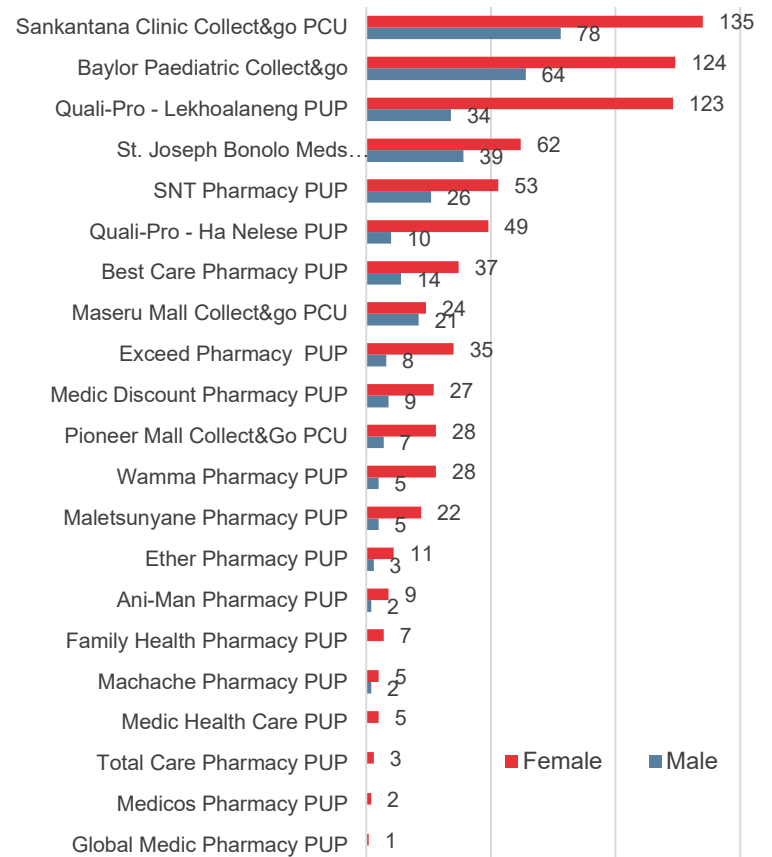

Figure 4. Pick-up point preferences by sex

Figure 5 shows the cumulative trend of client enrollment into BonoloMeds since the program started in May 2021. Over time, various demand-creation activities such as loud hailing, radio and television broadcasting, and Facebook ads helped the wider population of Basotho become aware of the program, which could further contribute to increased enrollment rates in the future.

Figure 5. Cummulative monthly enrollment
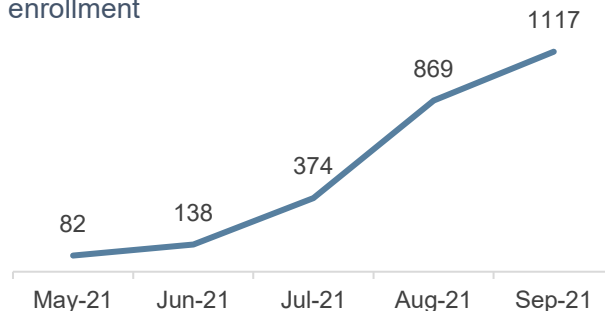
Lessons Learned

Though the program has made significant progress, it has also faced many challenges, particularly related to governance, site-specific programmatic challenges, and COVID-19. Notably, the MOH had three personnel changes in the Director General position, all of which required reintroducing the program and delayed the signing of the MOU between the MOH and Right to Care, as well as delayed implementation of the program. At the site level, delays in the availability of viral load test results delayed client enrollment. The COVID-19 pandemic also caused delays in travel, training, and demand-creation activities, among other activities.

Despite the delays, the eventual rollout of the BonoloMeds program was successful owing to the establishment of a strong partnership between EpiC, the government, and service delivery partners. By engaging relevant MOH programs (i.e., Supply Chain, Pharmacy Department, Disease Control, Maseru DHMT) and supply chain partners, the program was able to get the MOU signed, register for access to medicines for BonoloMeds clients, and obtain Pharmacy Department accreditation for the CDU.

Following initiation of the BonoloMeds, EpiC drafted a document outlining the scope of the collaboration to prevent the program partners from conducting conflicting activities that could hinder client enrollment into the program. Based on EpiC Lesotho's experience with BonoloMeds, similar programs in other contexts should clearly define the roles and responsibilities of the various partners prior to implementation.

Next Steps

During the next fiscal year, Right to Care will scale up the program throughout Maseru and additional districts as well as maintain existing program operations. Right to Care will partner with the USAID Global Health Supply Chain Program-Procurement and Supply Management (GHSC-PSM) and National Drug Service Organization (NDSO) for full supply chain integration, which is critical for the long-term sustainability and efficiency of BonoloMeds. Integrating these

systems with BonoloMeds will support end-to-end or "Port2Patient" tracking of medicines. This level of data is important for efficient supply chain operations. In addition, integration of these data with service delivery data would make it possible to know how much medicine each client has and the location and timing of their next refill pick-up. In the changing context of MMD scale-up and COVID-19, it is ever more critical for program managers to access these data for the purposes of stock management. This would make Lesotho the first country in Africa able to track commodities from the warehouse to clients.

Further, through the DDD TWG, Right to Care will advocate to explore and pilot the distribution of medications for PrEP and other chronic conditions by leveraging the BonoloMeds infrastructure. Right to Care will also advocate to co-locate the CDUs with the new NDSO distribution center to support client-centered, sustainable, and efficient programs. Right to Care, under EpiC, will continue to run and manage the BonoloMeds program in FY22.