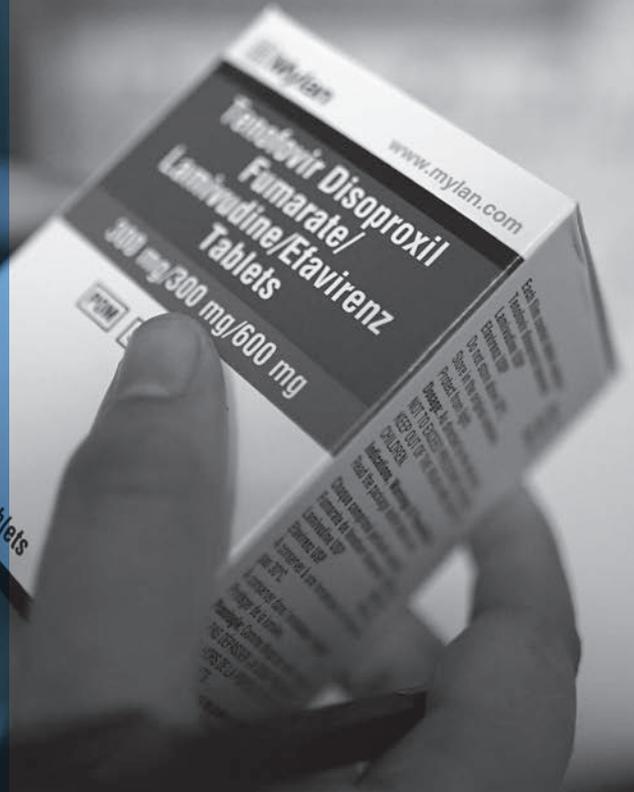


**USAID GLOBAL HEALTH
SUPPLY CHAIN PROGRAM**

Procurement and Supply Management

Supply Chain Considerations for Implementing Decentralized Drug Distribution

A Look at Common DDD
Models and the Supply
Chain Implications of Each



DIFFERENTIATED SERVICE DELIVERY
PRIVATE-SECTOR CONCEPTS

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Acknowledgements

The USAID Global Health Supply Chain Program-Procurement and Supply Management (GHSC-PSM) project is funded under USAID Contract No. AID-OAA-I-15-0004. GHSC-PSM connects technical solutions and proven commercial processes to promote efficient and cost-effective health supply chains worldwide. Our goal is to ensure uninterrupted supplies of health commodities to save lives and create a healthier future for all. The project purchases and delivers health commodities, offers comprehensive technical assistance to strengthen national supply chain systems, and provides global supply chain leadership.

GHSC-PSM is implemented by Chemonics International, in collaboration with Arbola Inc., Axios International Inc., IDA Foundation, IBM, IntraHealth International, Kuehne + Nagel Inc., McKinsey & Company, Panagora Group, Population Services International, SGS Nederland B.V., and University Research Co., LLC. To learn more, visit ghsupplychain.org

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Acronyms

| | |
|------------------|--|
| 3MMD | three-month multi-month dispensing |
| ART | antiretroviral therapy |
| ARVs | antiretroviral medicines |
| CAGs | community ART groups |
| CCMDD | Centralized Chronic Medicines Dispensing and Distribution |
| CDU | central dispensing unit |
| CMIS | client management information system |
| CMS | central medical store |
| DDD | decentralized drug distribution |
| eLMIS | electronic logistics management information system |
| e-lockers | electronic lockers |
| GHAIN | Global HIV/AIDS Initiative Nigeria |
| GHSC-PSM | USAID Global Health Supply Chain-Procurement and Supply Management |
| IP | implementing partner |
| LMIS | logistics management information system |
| MMD | multi-month dispensing |
| MOH | Ministry of Health |
| MOU | memorandum of understanding |
| MSL | Medical Stores Limited |
| NCD | non-communicable disease |
| NDoH | National Department of Health |
| PrEP | pre-exposure prophylaxis |
| RLO | regional logistics officer |
| SIDHAS | Strengthening Integrated Delivery of HIV/AIDS Services |
| SOPs | standard operating procedures |
| TPT | TB preventive therapy |
| USAID | United States Agency for International Development |

01.

DDD Summary



PHOTO CREDIT: GHSC-PSM

A Look at DDD Through the Supply Chain Lens

Decentralized drug distribution (DDD), in conjunction with multi-month dispensing (MMD), is helping public-sector health programs bring lifesaving medicines for HIV/AIDS and other illnesses closer to clients.

Decentralized drug distribution (DDD) relieves patients of much of the burden associated with retrieving medicine refills by bringing medicines for HIV/AIDS and other illnesses closer to clients.

This, in turn, reduces the risk of HIV/AIDS treatment interruption or discontinuation, which is critical to countries achieving epidemic control in line with the United Nations Sustainable Development Goals. DDD does, however, come with increased costs and responsibilities for health programs that deploy it.

However, essential supply chain elements must be functional before countries begin implementing. Key learnings are available from countries that have already implemented and scaled up their own DDD approaches, and several different models have emerged. With case studies from five countries, this handbook aims to document the supply chain implications of DDD for countries considering implementation. The annexes to this handbook provide sample tools that are used to implement and practice DDD.

02.

DDD Background



PHOTO CREDIT: Anthony Abu | GHSC-PSM

DDD Aims to Improve Client-Centered Care

With the introduction of universal coverage for HIV/AIDS and implementation of a test-and-treat approach, treatment of this lifelong condition requires clients to return regularly to a health facility to receive medicines.

PEPFAR-supported countries are scaling up multi-month dispensing for clinically stable clients to reduce the required number of client visits to health facilities. MMD provides convenience to clients, supports improved adherence to treatment regimens, and reduces congestion at health facilities.

The outbreak of the COVID-19 pandemic in early 2020 led PEPFAR to more rapidly scale up MMD to reduce the risk of exposing immunocompromised HIV/AIDS clients to those who are potentially ill with an infectious disease. PEPFAR, through its clinical partners, has been supporting countries to transition to and scale up MMD of antiretrovirals (ARVs) to all new and existing clients so that they receive a three-month or six-month supply of ARVs at a time.

In conjunction with MMD, PEPFAR and country governments have also been scaling up implementation of **decentralized drug distribution**, which provides more convenient locations where

clients can pick up their ARVs. Like MMD, DDD improves convenience for clients by reducing the costly travel and time burdens to retrieve medicines and helps minimize crowding and long waits at health clinics.

Together, MMD and DDD are part of a broader long-term strategy to improve client-centered care—in other words, to “differentiate” service delivery. Creating client-centered public health systems by bringing services and drugs closer to clients, rather than bringing clients closer to services and drugs, makes it far easier for clients to sustain uninterrupted HIV/AIDS treatment, ultimately helping countries achieve epidemic control.

Different Models of DDD: Private-Sector and Community-Based Approaches Serve Different Needs

PEPFAR and its country partners have studied and implemented different models of DDD (see [Decentralized Distribution of Antiretroviral Therapy through the Private Sector](#) by the USAID EpiC project).

Some models add **private-sector distribution points**, where public-sector clients can pick up their medication; other models deploy health care workers or community members to extend **distribution from a facility to the community level**. Many countries use a mix of models to meet the needs of different regions and different clients.

Clinically stable clients who are receiving three to six months of drugs at a time through MMD are ideal for DDD, whereas those who require increased monitoring because they are, for example, trying a new regimen, would likely continue monthly care and treatment at a health clinic.

Supply Chain Implications of DDD: Benefits and Risks To Be Considered When Planning Implementation

Much is known and documented about DDD implementation in many countries. However, the **supply chain implications** are not always understood nor considered, putting at risk the reliable supply of quality medicines to clients.

Both private-sector and community-based approaches to DDD offer benefits if conditions in the country can support



Essential supply chain elements must be functional before countries begin implementing DDD.
PHOTO CREDIT: GHSC-PSM

them, but they also introduce challenges and risks, particularly to the supply chain. The implications of the supply chain are far reaching in public health programs.

The supply chain encompasses many critical components of public health, such as governance, inventory control, data collection, transportation, storage,

and human resources. Because of the integral nature of the supply chain, risks in each of these areas must be thoroughly considered, and mitigation strategies developed, before DDD implementation to ensure its success.

This handbook aims to support supply chain professionals and clinicians to ensure that the public health supply chain is fully prepared to support DDD implementation. It provides a brief look at the supply chain elements critical to DDD's success and provides an overview of the most common DDD approaches, with the supply chain benefits and risks of each highlighted.

Case studies detailing the experiences of several countries in implementing these models are contained in each section to illustrate how DDD can function in different country contexts and how supply chain considerations were managed.

03.

Essential Elements



PHOTO CREDIT: GHSC-PSM

Essential Elements of the Supply Chain for Successful DDD Implementation

A well-functioning supply chain—whether that supply chain is adding decentralized distribution points or not—requires three critical elements to ensure the smooth flow of commodities to clients.

Before implementing or scaling up DDD, a country should analyze the current state of these supply chain elements and determine whether additional strengthening or modifications are needed to ensure these elements function well once DDD is implemented:

- **Clearly defined roles and responsibilities for tracking and reporting.** The roles and responsibilities should be clearly defined for each person moving and dispensing medicines along each point of distribution—from the central

medical store (CMS), to the facility, to either private-sector or community distribution points, and ultimately to the client. Importantly, these roles and responsibilities should establish supply chain accountability by designating who is responsible for reporting the movement and dispensing of medicines at each point, stock on hand, and any losses/adjustments.

- **A logistics management information system (LMIS).** Whether electronic or paper based, the LMIS should reliably and regularly

report essential data such as stock on hand, rate of consumption, and any losses/adjustments for each warehouse and service delivery point.

- **Proper storage for the medicines.** Storage spaces should be appropriate for pharmaceutical-grade storage, including protection from moisture and sunlight, temperature controls, pest control, appropriate access control and security, and management by expiration date (see [Guidelines for Warehousing Health Commodities](#) by USAID's Deliver Project and [Good Storage and Distribution Practices](#) by the World Health Organization for additional information).

04.

DDD Model: Community Pharmacies



PHOTO CREDIT: Tafadzwa Ufumei | GHSC-PSM

Community Pharmacies Serving as Distribution Points

Partnering with independent community pharmacies is one of the most common ways that countries supported by USAID and PEPFAR have implemented and scaled up DDD through the private sector.

How This Model Works

Community pharmacies can become ARV distribution points for public-sector clients in two different ways: either by partnering directly with the national or local government to dispense drugs, or by serving as pick-up points under a central dispensing unit (CDU) in what is sometimes called a “hub/spoke” or “parent/child” pharmacy model.

Partnering with community pharmacies generally requires that a memorandum of understanding (MOU) or other type of contract with the community pharmacy (and/or community pharmacist) and a national or local government entity (and/or an implementing partner working on behalf of the government).

It's also a best practice for the country's pharmacy licensing agency to be a signatory to the agreement, which strengthens the incentive for community pharmacies to abide by the DDD agreement and related standard operating procedures (SOPs) because it ties their performance as a public-sector distribution point to their licensing.

From a supply chain perspective, the MOU should lay out in detail how each aspect of logistics and reporting will be handled and who in the pharmacy or public sector is responsible. The agreement should specify, for example, how the drugs for public-sector clients will be packaged and delivered to the pharmacy, how they will be stored at the pharmacy, whether private space is needed to deliver client counseling or other services, and how the pharmacy will track drug distribution and report that data back to the public sector.

A benefit to clients of this model is that they may feel less stigma picking up their ARVs at a distribution point that is not associated uniquely with HIV care and treatment. Clients can also avoid crowded public health facilities, and facilities in turn become less crowded for clients who must attend them.

The **benefits** of this DDD model to clients and the supply chain are that:

- Community pharmacy locations tend to be already established and convenient for populations in more suburban and urban areas.

- Pharmacists and other pharmacy staff are already trained in dispensing medicine, providing related services, and tracking and reporting stock data and may need additional training only in the specifics of dispensing HIV medicine.
- An MOU tied to pharmacy licensing provides a protective measure against mismanaging the public-sector drugs.
- The pharmacy license usually already requires much, if not all, of the criteria for proper supply chain management as a public-sector distribution point.

The **challenges** tend to center around tracking stock—often, the challenge does not lie in tracking from the pharmacy back to the public sector, but rather tracking within the public sector. These challenges are generally caused by systems at different levels of the government not being updated to accommodate tracking of the new DDD approach and/or government systems not being integrated with each other or not yet being on digital platforms.

Understanding how this model has been implemented in a few countries will help elucidate the supply chain benefits and challenges faced.

Community Pharmacy Partnerships in Nigeria

Nigeria has expanded service delivery and drug distribution in urban, peri-, and semi-rural areas by partnering with community pharmacies. These partnerships began about 15 years ago under the GHAIN (Global HIV/AIDS Initiative Nigeria) project and continue currently under the follow-on Strengthening Integrated Delivery of HIV/AIDS Services (SIDHAS) project.

Initially, the government partnered directly with private pharmacists to provide support to public health facilities, which did not have enough pharmacists for the client base. Private pharmacists helped to provide HIV testing and other support to clients. About five years ago, this collaboration expanded when SIDHAS began implementing DDD by partnering with community pharmacies.

The MOU

Before DDD implementation, the Government of Nigeria and community pharmacies established a broad MOU allowing them to partner on any public health program that needed support. When DDD implementation began under SIDHAS, a separate MOU clearly defined the roles and responsibilities of the government and community pharmacies, particularly in supply chain management. Four entities signed this MOU for each partnership with a community pharmacy:

- The community pharmacist
- The Minister of Health in the state where the pharmacy is located
- The Pharmacists Council of Nigeria, a parastatal organization that regulates pharmacists
- Howard University, one of the implementing partners (IPs) on SIDHAS

(See **Annex I** for copies of two example MOUs from Nigeria — one with

community pharmacists and one with the Pharmaceutical Society of Nigeria.)

“The benefit of having the Pharmacists Council as one of the signatories is that it ensures that the community pharmacies will abide by the requirements of the MOU because they risk losing their license if they do not,” says Olusola Sanwo, Director of Prevention, Care and Treatment for SIDHAS. “Additionally, the list of criteria that community pharmacies must meet to be licensed fulfills many of the requirements for becoming a distribution point for public-sector ARVs; for example, they are already required to have a private room or space where client counseling can be conducted.” (See the section below on South Africa for a discussion of how community pharmacy requirements differ.)

The Government of Nigeria will only partner with community pharmacies in which the pharmacist is always on site. For community pharmacies that have a few locations, each must have an on-site pharmacist rather than a supervising pharmacist who rotates between sites.

The Value Proposition for Community Pharmacies

SIDHAS also supports community pharmacies in achieving COPA (Community Pharmacists Action) accreditation, which requires pharmacies

to meet and maintain quality standards for pharmaceutical service, thus also ensuring requirements for distributing government- or donor-funded ARVs are met. “The pharmacies are motivated, for business purposes, to achieve this accreditation and to increase their score over time,” explains Kolawole Olatunbosun, State Director, Akwa Ibom State, FHI 360. “So it is a win-win for the public and private sector.”

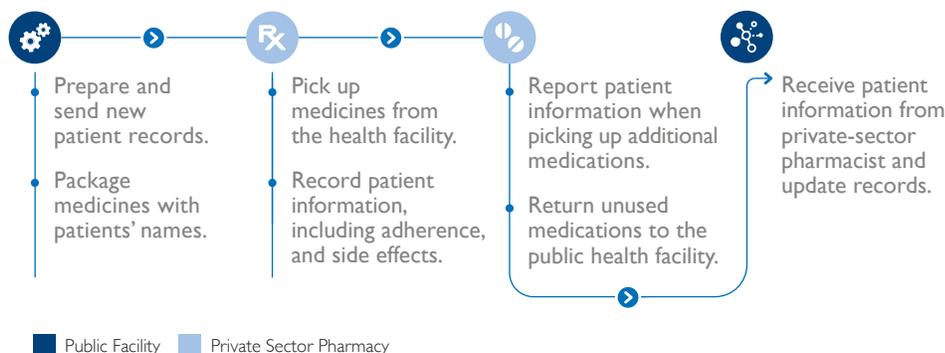
How This Model Works in Nigeria

Once the MOU is in place with a community pharmacy, stable clients who receive MMD are devolved from the public health facility associated with that pharmacy — the “home facility” — to the pharmacy, and those clients’ records are signed off by a facility doctor and sent to the pharmacy. The home facilities are generally high-volume public facilities, such as clinics and hospitals, which can be understaffed and have long wait times for clients, so moving clients to pharmacy distribution points helps alleviate these challenges.

Pharmacy staff then pick up pre-packaged ARVs from the home facility for those clients. The facility packages the drugs and labels each package with the client name. The pharmacist then tracks in clients’ records when the drugs are dispensed to them at the pharmacy and documents other relevant client information, such as adherence to treatment, side effects, or interactions with other drugs dispensed to

PARTNERING TO SUPPORT STABLE PATIENTS

Through Private Sector Pharmacies



them by the pharmacy. When pharmacy staff return to the home facility to pick up more ARV refills, they report on drugs dispensed to clients by filling out paper ticket sheets and update client records with the documented information, enabling a continuum of care when clients return to the home facility every six months for monitoring.

Community Pharmacy Distribution Through the CCMDD in South Africa

In 2014, South Africa's National Department of Health (NDoH)—supported by PEPFAR, USAID, and CDC, as well as their partners—funded and began implementing a program called Central Chronic Medicines Dispensing and Distribution (CCMDD)¹ to improve the availability of lifesaving medicines for chronic diseases by decentralizing dispensing and distribution.

At the time, public health facilities were overcrowded, resource constraints lowered the level of service, and the supply of medicines was not always reliable. For clients, the time to travel to facilities was often a significant economic burden, and operating hours were not convenient for clients who worked. These conditions resulted in a high number of clients lost to follow-up.

Through CCMDD, the country began to make it far easier for clients who are stable on treatment to obtain their refills by partnering with community pharmacies, mostly in suburban and some urban areas, and pharmacy chains (to be covered in the next section), mostly in urban areas.

When CCMDD launched in 2014, the program served 180,000 clients; today, 2.7 million clients pick up their chronic disease treatment from 2,700 private-sector distribution points. CCMDD provides medicines primarily for HIV/AIDS but also for other non-communicable diseases (NCDs).

To help draw in a higher percentage of participants, CCMDD was rebranded as

“Dablapmeds,” which translates to “the shortcut to your chronic medications.” The CCMDD program's communications (such as radio spots, posters and flyers) and medication packaging all reflect this branding change (see **Annex 2** for an introduction letter to the Dablapmeds rebranding).

Fee Paid to Pharmacies per Distribution

In 2016, Project Last Mile developed a business case to demonstrate to the Government of South Africa that it was more cost effective—in terms of overall economic costs to the country and its citizens—to pay pharmacies for this service rather than require clients to bear the burden of traveling to facilities for refills. The time saved for clients is significant; in some cases, it takes up to five hours for facility pick-up, versus as little as three or four minutes for pharmacy pick-up.

The NDoH agreed and pays pharmacies in the CCMDD program a relatively small fee per refill distributed.

Geospatial Studies Inform Pharmacy Partnerships

The NDoH, with the assistance of implementing partners, takes a strategic approach to deciding which pharmacies are the most fitting partners, conducting geospatial studies on population, the incidence of disease, and existing locations of pharmacies and facilities.

How Clients Are Devolved to Pharmacies for Refills

During an appointment at a facility, clients who meet the qualifying criteria of being stable on HIV treatment are advised that they are eligible for the CCMDD program. If they agree to participate, the facility sends a six-month repeatable prescription to a pharmaceutical courier company. The courier validates and dispenses the prescription, packages it, and couriers it to the appropriate pick-up point chosen by the client.

Two days before it arrives at the pick-up point, the courier company sends clients an SMS message that the medication is en route. When it arrives, clients receive another SMS that it is ready for pick-up. Two days later, they are reminded again if they have not yet picked up the drugs. After 14 days, the courier retrieves any uncollected parcels and sends a report to the clinic to notify them of the clients who have defaulted on collection, which mobilizes a community health worker to trace these clients. More than 94 percent of drugs are collected by CCMDD clients.

Validating Prescriptions and Maintaining Client Privacy

The pharmaceutical courier companies typically have many pharmacists on staff, and they follow rigorous procedures to ensure that public-sector clients receive the correct medicines.

The courier pharmacists check the prescription received from the facility to ensure compliance with the formulary and dosage are correct based on standards established by government. They also check that the registering authority or prescribing authority at the facility is in the courier's database and that this person signed the prescription. If any of these fall short, the prescription is rejected.

Medicines are then packaged at the courier company in plain packaging that only identifies the client's name and date of scheduled pick-up. The packaging does not indicate what type of medicine is in the parcel to protect the client's privacy and avoid stigma.

At the pharmacy pick-up point, pharmacists and pharmacy staff do not know what is contained in the client's parcel.

Clients simply retrieve their medicines from the pharmacy and do not receive any additional services, unless they request services already offered by the pharmacy and can pay for them or have them covered with private aid.

¹ For more information on CCMDD, [click here](#).

Stock Storage and Tracking

Pharmacy courier companies receive large stocks of government-funded medicine refills for public-sector clients and hold them in bond in their own warehouses. The stock supplied to the courier companies is determined by a well-established demand planning process.

The courier companies receive the prescriptions for public-sector clients digitally, and the courier's pharmacists dispense the drugs, which are then packaged into boxes according to scheduled pick-up dates. The courier ships these boxes to their pick-up points and scans them in, and then the product is stored in order by pick-up date, with client names on each parcel.

The pharmacy couriers have their own stock tracking and reconciliation system. The Government of South Africa uses an online system called SYNCH (Synchronized Chronic Health), which tracks client parcel activity at health facilities and pick-up points. The information in this system is consolidated daily. The government and its IPs can then track any trends, spikes or changes to the existing metrics and make decisions accordingly.

The Value Proposition for Community Pharmacies

Community pharmacies are incentivized from a financial perspective by the per-refill fee they receive to participate as distribution points for public-sector clients.

Also, many community pharmacies are joining cooperatives to achieve scale of buying power and to increase the range of projects offered to draw more traffic. Participating as a refill pick-up point for public-sector clients helps to increase traffic as well.

Challenges

The biggest supply chain challenge to DDD in South Africa, and across much of the continent, is that many platforms exist that collect data, yet they are often not integrated and synchronized with each other to allow



SOUTH AFRICA: ONE KEY DIFFERENCE FROM NIGERIA

South Africa's community pharmacy model differs from Nigeria's (see section on page 10) in one key way: **only anonymized medicine dispensing** takes place at community pharmacies in South Africa while both dispensing and counseling take place in Nigeria. This means that in Nigeria, more is required at the point of distribution; pharmacists must have the time and training to conduct client counseling and must report back to the home facility on that counseling, and pharmacies must have a private counseling room.

In South Africa, **more is required upstream at the point of medicine packaging** to ensure client privacy, which minimizes the time and expertise required of pharmacists and the infrastructure required at pharmacies.

national visibility and tracking. In South Africa, the government and IPs must manipulate data from different systems to obtain the decision-making information needed, a time-consuming process that also brings a higher risk of error.

Integrating data systems enables all stakeholders to directly update the system, creating significant efficiencies. It also provides stakeholder visibility into one set of data on all clients nationally.

Also, many systems in South Africa are still manual because electricity and Internet connectivity are unreliable, which lowers the efficiency of data tracking and analysis and raises the risk of data entry error.

Community Pharmacy Distribution Through the CDU in Zambia

Zambia is in its third year of implementing DDD in the district of Ndola in the Copperbelt province, an area chosen for its high-density population. The DDD program—which the USAID EQUIP project developed and pilot tested, and Right to Care implements—replicates the CCMDD model used in South Africa; in Zambia, EQUIP set up the central dispensing unit, which partners with community pharmacies to expand distribution points. This partnership is governed by a written agreement between the CDU and the pharmacy. Participating pharmacies are all members of the country's

Pharmacy Society, which ensures that they meet the minimum standards required to provide services to public-sector clients and conduct supply chain management duties for DDD.

About 12,000 clients who meet the requirement for HIV treatment stability are currently enrolled in the DDD program; the target is to enroll all 30,000 eligible clients in this region.

How This Model Works in Zambia

Clients who choose to enroll in the CDU program identify a participating pharmacy of their choice, from which they pick up refills.

Initially, CDU clients who were eligible to receive a three-month supply of drugs through MMD initially received a one-month supply at their health facility. This was intended to give time for the facility to send the associated client records to the pharmacy for processing. A month later, clients would then pick up the remaining two-month supply of the three-month multi-month dispensing (3MMD) at the pharmacy. Two months after that, when the initial three-month supply was finished, clients would pick up the next three-month supply from the pharmacy, which would then cover them until their six-month monitoring appointment at the health facility.

Subsequently, clients and providers gave feedback that receiving only a one-month supply initially and having to return for the remaining two-month supply was inefficient, so the approach has been adjusted so that clients now receive 3MMD initially.

Once clients are devolved from the facility to their chosen pharmacy, the CDU packages their drugs and labels them with the client name and phone number; then delivers the drugs to participating pharmacies. Clients receive text alerts when the drugs are packaged at the CDU, when they are dispatched to the pharmacy and when they are ready for pick-up at the pharmacy. The drugs are kept at the pharmacy for one week to allow clients time to pick them up; if they are not picked up in that time period, they are sent back to the CDU.

Tracking of Stock Dispensed at Pharmacies Through an App

Pharmacies use an app to track drugs dispensed to clients in the CDU program.

When clients are enrolled, they receive a CDU card with a member number. Pharmacy staff either manually enter this number into the app or scan it in when they dispense drugs to CDU clients. The tracking information from the app is then sent to the client’s home facility, and the facility reports these data to the CDU through a scanned paper form. At the CDU, these data are manually entered into the database.

The Main Benefit

The primary benefit of DDD in Zambia has been the decongesting of health facilities. Even though clients still return to their home facility every six months for monitoring, DDD has had a positive impact on facility crowding and wait times.

Challenges

A key challenge is tracking the drugs that are sent to the CDU for distribution to community pharmacies.

District pharmacies in Zambia are responsible for distributing drugs to health facilities, and they divert some of these drugs to the CDU so it can supply community pharmacies. However, the drugs that are diverted to the CDU currently cannot be tracked or even noted in the country’s electronic logistics management information system (eLMIS).

For tracking to occur, Zambia’s central medical store—Medical Stores Limited (MSL)—would have to reduce the total allocation of drugs by the number of clients being supplied through the CDU, and adjust the stock numbers in the eLMIS accordingly. A solution to this challenge would be for MSL to interface its system with CDU’s, which would add CDU as a hub in the eLMIS and enable electronic tracking. This upgrade is under discussion.

Delays in preparing and packaging drugs for CDU clients have also caused risk to the program. If the drugs are not available at the pharmacy when clients are in need of their refill, their treatment could be at risk for interruption, and/or they may choose to cancel their CDU membership and go back to their facility for refills, exacerbating the facility crowding that the CDU program is meant to alleviate.

The cost of DDD implementation is another disadvantage. The program currently costs PEPFAR about \$1 million per year to operate for 12,000 clients in the program.

USAID is currently conducting an economic evaluation of the DDD program to assess its cost-effectiveness, determine how to increase efficiency, and decide if scale-up is viable. Two other districts in Copperbelt province are under consideration for DDD expansion depending on assessment results.

Supply Chain Impact of the Community Pharmacy Model

The impact on the supply chain of different DDD models can be in any or all of six key areas. Partnering with community pharmacies impacts the supply chain in most of those areas, as presented in *Table I*.

| | |
|--------------------------|---|
| Governance | ✓ As noted, an MOU between the community pharmacy and the government and/or clinical partner (e.g., CDU/CCMMDD) is needed to ensure that stock is stored under appropriate conditions, that it is dispensed to designated patients only, that stock that is not dispensed is returned to the health facility, and that data are provided as required. |
| Inventory Control | ✓ Because each patient is associated with a regular health facility, and because the health facility supplies the community pharmacy, the quantity sent to the health facility from the level above does not increase or decrease. To ensure that stock does not remain too long at the community pharmacy, any stock not picked up at the time of reporting should be returned to the health facility. |
| Data Collection | ✓ Because community pharmacies receive stock for specific patients, they should not need to keep stock-keeping records such as bin cards or stock cards. They should record dispensing data using the same records as any health facility. It may be useful to create a new report for community pharmacies to submit to the health facility, or to ask the community pharmacy to submit the dispensing record. |
| Transportation | ✓ Either the health facility can deliver to the community pharmacy, or the community pharmacy can be asked to pick up the stock. |
| Human Resources | ✓ Health facilities may want to designate a member of the existing pharmacy staff to act as a supervisor for all community pharmacies served from the facility and have this staff member conduct supervision visits. Community pharmacies should not require additional staff to support distribution. |
| Storage | ✓ Pharmacies should have adequate storage to ensure appropriate temperature control and other factors in accordance with good pharmacy practices that can impact drug quality. ² |

²For more information on good storage practices, [click here](#).

05.

DDD Model: Pharmacy Chains



PHOTO CREDIT: FARRHOUSE | GHSC-PSM

Pharmacy Chains Serving as Distribution Points

Some countries have partnered with pharmacy chains³ to implement and scale up DDD. South Africa has one of the most established partnership programs with pharmacy chains among PEPFAR- and USAID-supported countries.

How This Model Works

As is true with community pharmacies, partnering with pharmacy chains requires an MOU between the chain and the government or its IPs. The pharmacy licensing agency should also be a signatory to enforce the strictest standards. This agreement should address each aspect of supply chain management.

The **benefits** of this DDD model to clients and the supply chain are that pharmacy chains:

- Tend to be well established in urban and suburban areas. They also tend to have space in shopping malls, where foot traffic is high.
- Have a consistent, consolidated system of administration and regulations that applies across all outlets, which lends itself to quick scale-up of supply chain

management procedures at all locations serving public-sector clients.

- Often do their own community-driven care programs and are well versed in running programs for public-sector clients.

South Africa's partnership with pharmacy chains is implemented in the same way as with community pharmacies, as described above, in terms of the way the medicine dispensing, distribution, and tracking are done. The difference lies in the value proposition, as discussed below.

Pharmacy Chain Partnerships in South Africa: How the Business Case Differs

As discussed in the section above on community pharmacies, the value proposition for community pharmacies to partner with the Government of South

Africa on DDD centers on the per-refill fee they receive and the increase in foot traffic.

For pharmacy chains, these are both incentives as well. Also, because of the higher increase in foot traffic in pharmacy chains than in community pharmacies, the chains can adjust their merchandizing to capitalize on this to a greater degree.

For example, pharmacy chains can study how increased traffic from public-sector clients picking up their medicines translates into additional purchases. They can also assess if a particular product category—for example, baby products—makes up a large percentage of these additional purchases. This information then allows the pharmacy to make more informed merchandizing decisions, for example, by moving baby products closer to the dispensary.

For pharmacy chains, an additional motivating factor is the desire to practice and promote corporate social responsibility. Providing drug distribution services for the public sector is a way for chains to meet their need for social responsibility initiatives.

³ Pharmacy chains differ from community pharmacies in that community pharmacies are independently owned, generally as a single pharmacy or a small number of outlets in a local region, whereas pharmacy chains are owned by a larger organization and have many more outlets across a wider geographical region. Pharmacy chain locations also tend to be bigger and feature more retail merchandise.

Supply Chain Impact of the Pharmacy Chain Model

The impact on the supply chain of partnering with pharmacy chains is similar to that of community pharmacies. See **Table 2**.

TABLE 2.0

Supply Chain Impact of the Pharmacy Chain Model

| | |
|--------------------------|---|
| Governance | <ul style="list-style-type: none"> ✓ As noted, an MOU between the pharmacy chain outlet and the government is needed to ensure that stock is stored under appropriate conditions, that it is dispensed only to designated patients, that stock that is not dispensed is returned to the health facility, and that data are provided as required. |
| Inventory Control | <ul style="list-style-type: none"> ✓ Because each patient is associated with a regular health facility, and because the health facility supplies the pharmacy chain outlet, the quantity sent to the health facility from the level above does not increase or decrease. To ensure that stock does not remain too long at the pharmacy, any stock not picked up at the time of reporting should be returned to the health facility. |
| Data Collection | <ul style="list-style-type: none"> ✓ Because pharmacy chain outlets receive stock for specific patients, they should not need to keep stock-keeping records such as bin cards or stock cards. They should record dispensing data using the same records as any health facility. It may be useful to create a new report for community pharmacies to submit to the health facility, or to ask the pharmacy to submit the dispensing record. |
| Transportation | <ul style="list-style-type: none"> ✓ Either the health facility can deliver to the pharmacy chain outlet, or the pharmacy can be asked to pick up the stock. Because these are typically located in urban or suburban areas, the cost of transportation would be minimal. |
| Human Resources | <ul style="list-style-type: none"> ✓ Health facilities may want to designate a member of the existing pharmacy staff to act as a supervisor for all pharmacy chain outlets served from the facility and have this staff member conduct supervision visits. Pharmacies should not require additional staff to support distribution. |
| Storage | <ul style="list-style-type: none"> ✓ Pharmacies should have adequate storage to ensure appropriate temperature control and other factors in accordance with good pharmacy practices that can impact drug quality. |

06.

DDD Model: Health Worker-Managed



PHOTO CREDIT: Salome Nzuma | GHSC-PSM

Health Worker-Managed Community Distribution

Health workers — often volunteers in their communities — provide a vital link to medicines, reproductive health supplies, and other health commodities for those who struggle to access them.

How This Model Works

Many countries have extended the reach of drug distribution farther into rural and remote communities through community-based ART distribution led by health care workers.

In one aspect of this approach, community groups meet with a health care worker or team at a scheduled time and location within the community to pick up their refills and sometimes receive other health care services and monitoring.

But this approach can reach even farther into the community when health facility teams also conduct home visits for clients who are not able or willing to participate in the community groups or are in locations where community groups do not exist.

The **benefits** of this approach to clients and the supply chain are that:

- It adds no additional burden to the supply chain in terms of permanent

distribution points where stock needs to be delivered, managed, and tracked.

- The visits with community groups and with clients one-on-one in their homes can significantly contribute to client retention on treatment and efforts toward epidemic control.
- Home visits provide additional privacy for clients and reduce feelings of stigma.
- Especially in remote, hard-to-reach regions, home visits by health care teams may be the only way to reach HIV/AIDS clients and retain them on treatment.

The main **challenge** of this approach is whether enough staff can be provided to conduct this time-intensive form of service delivery and drug distribution, and what the cost-benefit analysis is in a particular country context.

Experiences with this model in a few countries, as described below, will help

illustrate the considerations when implementing this DDD approach.

In particular, the Eswatini case study provides an overview of how USAID GHSC-PSM is supporting countries in implementing and scaling up this program.

Health Worker-Managed Community Distribution in Eswatini

In Eswatini, DDD has long been part of differentiated service delivery but not put into effect as much as other options. In 2020, the COVID-19 pandemic increased the urgency to further scale up DDD to help reduce the number of clients in health facilities and their use of public transportation. This push led to DDD becoming the preferred arm of differentiated service delivery.

A Joint IP Approach

All PEPFAR IPs developed a joint approach to scaling up DDD in early 2020, and the Ministry of Health (MOH) approved the plan in April 2020.

PEPFAR IPs then began to contact clients who were eligible for MMD and DDD and set up appointments to dispense refills. Drugs are prepackaged at facility

pharmacies for these clients, and then IP staff dispense them during client appointments at community distribution points. Facility staff sometimes accompany IP staff on distribution appointments.

The IPs also began meeting with each other regularly to report indicators of progress in scaling up DDD—such as the number of community distribution points that were functional, the number of refills that had been provided, and the number of appointments that had been adhered to or missed.

Expanding Distribution and Services to Reduce Stigma

Initially, DDD covered only ART, but some clients wanted to avoid the stigma of a program uniquely identified with ART. So IPs began to integrate other services into DDD—such as distribution of HIV self-tests, family planning (FP), treatment for non-communicable diseases (NCDs), pre-exposure prophylaxis (PrEP), and TB preventive therapy (TPT)—to help reduce stigma.

Integrating other medicines and diagnostics into DDD does not increase work for the facility, since the facility would be requisitioning all of these products from the CMS for its clients anyway based on pre-arranged appointments. The only difference is

Beyond reducing stigma, having a larger range of available products can prevent the client from having to go to the facility for some drugs and a community distribution point for ART.

where the clients receive the products—at the facility or in the community.

However, the benefit to the client—in addition to reducing the stigma of community-based ART distribution—is that a larger range of products is available in the community, which can prevent the client from having to go to the facility for some drugs and a community distribution point for ART. Although many clients still prefer to continue services at facilities, adding these services has drawn more clients into DDD.

GHSC-PSM's Support

GHSC-PSM has been supporting the supply chain aspects of DDD in Eswatini in several ways:

The project has helped develop manual reporting tools to record dispensing in the community (see **Annex 3** for example ordering and reporting tools.) A pared-down version of the country's client management information system (CMIS)—the electronic system that

captures drug dispensing and client data at facilities—is in development and will eventually be used on tablets at community distribution points to enter dispensing data.

GHSC-PSM has also helped strengthen reporting to USAID and monitoring of stock at risk for stockout. The project reports monthly to USAID on stock status for all ARVs and other HIV-related products at the central medical stores, through the Procurement Planning and Monitoring Report. The project has also rolled this reporting tool out to facilities to report stock levels there as well. Also, GHSC-PSM developed a Google form for stock monitoring that is particularly focused on products that are at very low stock levels at the central medical stores, so that during supervisory visits to facilities, these products can be monitored and reported as well.

Regional logistics officers (RLOs) supplied by GHSC-PSM work closely with the regional pharmacist and regional laboratory focal point to monitor and build supply chain capacity as an integral part of RLOs' supportive supervision. (See **Annex 3** for an example DDD job aid.)

The project has also developed guidance on a standardized process for prepackaging drugs at facility pharmacies before visits in the communities.

GHSC-PSM has also been working with the MOH to determine how many MMD clients its supply of drugs will allow it to take on to ensure that stock is not depleted by MMD clients, putting non-MMD clients at risk for treatment interruption.



Whether electronic or paper based, the LMIS should reliably and regularly report essential data such as stock on hand, rate of consumption, and any losses/adjustments for each warehouse and service delivery point.

TABLE 3.0
Supply Chain Impact of Health Worker-Managed Community Distribution

| | |
|--------------------------|--|
| Governance | <ul style="list-style-type: none"> • None, if the stock is issued by health facility staff members. If the stock is given to partners for distributing, an MOU between the partner and the government is needed to ensure that stock is stored under appropriate conditions, that it is dispensed to designated patients only, that stock that is not dispensed is returned to the health facility, and that data are provided as required. |
| Inventory Control | <ul style="list-style-type: none"> • None. Because each patient is associated with a health facility, and because the health facility already dispenses to clients, the quantity sent to the health facility from the level above does not increase or decrease. At the end of each day, any stock not dispensed by community-based distributors (CBDs) should be returned to the health facility, so there is no impact on inventory control. |
| Data Collection | <ul style="list-style-type: none"> ✓ Because health workers conducting community distribution receive stock for specific patients, they should not need to keep stock-keeping records like bin cards or stock cards. They should record dispensing data using the same records as any health facility. It may be useful to create a new report for the health worker to submit to the health facility. |
| Transportation | <ul style="list-style-type: none"> ✓ Transportation of stock to and from the community is needed. These quantities should be small, adding little or no cost to the system, given that the health worker will need transport as well. |
| Human Resources | <ul style="list-style-type: none"> ✓ Health facilities or partners will need to designate one or more staff members to conduct community distribution. |
| Storage | <ul style="list-style-type: none"> • None. No additional storage of medicines is needed. |

Also, GHSC-PSM has supported the MOH in monitoring stock levels for other treatments—such as diabetes, hypertension, FP, NCDs, and TPT—to enable future MMD initiatives.

Challenges

In Eswatini, **DDD is heavily dependent on the funding support of PEPFAR implementing partners.** Partners also support direct distribution to the nearly 600 community distribution points, which the MOH currently does not have the capacity to manage on its own. The four RLOs provided by GHSC-PSM are not enough to cover all the supply chain needs for DDD, so clinical partners will continue to become more involved in the supply chain aspects of DDD.

Also, until the “lite” version of CMIS is available at community distribution points, manual data entry and transcription is required, which increases the risk for error or lost data elements. More vigilance is required.

In 2020, logistics channel disruptions due to COVID-19 delayed the arrival of some imported products. Also, as government

funding levels declined during the pandemic or were redirected to COVID-related procurements, the ability to sufficiently fund ARVs also declined.

Next Steps

Some next steps for DDD in Eswatini include implementation and scale-up of CMIS Lite to improve client and supply chain reporting, and strengthened regional capacity to coordinate, monitor, and resolve issues in the supply chain related to DDD. Currently, the central medical store (CMS) delivers directly to all 250 facilities, and it is difficult for the CMS to monitor all those facilities. As distribution decentralizes further, the capacity to coordinate and monitor that distribution also needs to decentralize to the region level.

Health Worker-Managed Community Distribution in Nigeria

Although this example does not speak directly to supply chain implications, it is useful to understanding how DDD serves as an important component in a country’s larger strategy of achieving HIV epidemic control.

Nigeria has been working to achieve epidemic control by retaining at least 98 percent of clients on treatment, with Cross River and Akwa Ibom States making the most progress toward this goal. “It’s no longer enough to provide testing and initial treatment, or to implement DDD, without strategic planning about how to keep clients on treatment long term to achieve epidemic control,” says Philip Imohi, Associate Director of Prevention, Care and Treatment for SIDHAS. Bringing services and drugs closer to clients, especially in hard-to-reach populations, is essential to reaching this percentage.

Therefore, community art groups (CAGs) led by pharmacists or health care workers, as well as home visits conducted by health care teams, have been scaled up significantly with the goal of retaining clients in more remote locations. These health workers provide other services, such as collection of viral load samples and adherence counseling, in addition to drug distribution. State and national regulations that presented a barrier to being able to conduct health services outside a facility or take drugs outside a facility to other distribution points were modified to allow this scale-up.

Health facility staff also constantly monitor data to identify clients who may be LTFU (lost to follow-up), determine the reason why—whether due to geographical challenges or interstate migration—and strategize how to trace and reach them. “The outreach activities in states have increased 10 to 15 times over what was previously possible,” explains FHI 360’s Olatunbosun. “We have done far more to extend service delivery and DDD in the past 18 months than in the past 18 years.”

Supply Chain Impact of Health Worker-Managed Community Distribution

The impact to the supply chain of health worker-managed community distribution is in fewer areas than both pharmacy models above. See **Table 3**.

07.

DDD Model: Client-Led Distribution



PHOTO CREDIT: Berhan Teklehaimanot | GHSC-PSM

Client-Led Community Distribution

In rural and very remote areas—where pharmacies may not be available or convenient, automatic dispensing units are not installed, and health facilities can be difficult to reach—countries have widely implemented community ART groups, often referred to as “CAG clubs.”⁴

How This Model Works

These groups are made up of clients on HIV treatment in a local community, with one of the members designated to pick up refills for the whole group each month. This consolidated pick-up approach provides much-improved convenience for the group’s members.

When CAGs meet for distribution of medicines, they often also share with the other members their experiences on treatment and provide peer support, which can contribute to improved adherence and lessened feelings of stigma.

The **benefits** of this approach to clients and the supply chain are that:

- It adds no additional burden to the supply chain in terms of permanent distribution points where stock needs to be delivered, managed, and tracked, or additional staff are needed to conduct distribution.

- It is the fastest to roll out because no supply chain adjustments are needed.
- The cost is relatively low.
- Travel and time burdens on clients are greatly reduced.

The main **challenge** can revolve around developing robust procedures to track and report the stock that is distributed this way.

Two country case studies below provide a more in-depth look at the supply chain realities of this model.

Client-Led Community Distribution in South Africa

In South Africa, road conditions are generally good, so travel and accessibility are not significant challenges. But the motivation, economic means, and mobility of clients, especially in rural communities, still impact access to and retention on treatment.

For this reason, a community-based approach to DDD was needed to

complement the already established private-sector models. One approach was to establish “adherence clubs.”

How the Adherence Clubs Operate

To extend distribution of medicines into the community in more rural regions of South Africa, the country established adherence clubs, made up of groups of clients from the same community. About 260,000 clients in South Africa belong to adherence clubs.

Medicines are dispensed and packaged for adherence club members at the local facility a day or two before pickup and distribution to the community by Community Health Care Workers or volunteers. The medicines are documented before leaving the facility. Adherence club supervisors also bring CCMDD-dispensed parcels to the community.

The adherence club supervisor takes the medicines to a designated meeting spot in the community to distribute to adherence club members. The adherence club supervisor also conducts a meeting with the club at that time to do team-building exercises and to allow members to share any ideas or challenges.

⁴ In countries with French-speaking populations, these groups are also referred to as poste de distribution communautaire, or PODIs.

Lesotho began forming community ART clubs in 2016. Now, fifty percent of clients on treatment receive ARV refills this way.

Once adherence club supervisors distribute the medicines to adherence club members, they return to the facility with any uncollected medicines and document what was distributed and what was not.

Client-Led Community Distribution in Lesotho

In 2016, Lesotho began forming CAG clubs to bring distribution of ARVs closer to clients by allowing one representative of the community group to pick up and distribute drugs to the other members. Since then, the country has scaled up this approach significantly.

How the CAG clubs operate. The CAG club meets the day before drug pick-up, during which the member designated as the group representative collects the client booklets that track their drug refills.

The next day, the CAG representative travels to the local health facility and picks up 3MMD for each group member. The client booklets are updated during this

visit to the facility, and the group's test results are updated in their client cards. The CAG representative then takes the drugs back to the community and meets with the CAG members for distribution.

For the following two months, the CAG club meets only once a month for peer support.

Benefits

The biggest benefit of the CAG clubs has been its broad reach: "Fifty percent of clients on treatment in Lesotho now receive their ARV refills this way," explains Justine Mirembe, USAID Senior Care and Treatment Advisor.

Challenges

The main challenge seen in Lesotho is that CAG members can become comfortable delaying facility visits, thereby delaying viral load testing and requiring follow-up.

Another challenge is the cross-border migration for work. A medicine companion can be designated to pick up ARVs from CAGs for such clients.

Supply Chain Impact of Client-Led Community Distribution

The impact to the supply chain of client-led community distribution is potentially the lowest of all models discussed in this handbook. See **Table 4**.

TABLE 4.0
Supply Chain Impact of Client-Led Community Distribution

| | |
|--------------------------|---|
| Governance | <ul style="list-style-type: none"> ✓ Rules for CAGs should be clear in instructing health facility pharmacy staff about the appropriate quantities that can be distributed and what documentation (e.g., identification of the CAG member picking up, proof of CAG membership, names and identification of additional members) may be required to dispense stock intended for one patient by giving it to another. |
| Inventory Control | <ul style="list-style-type: none"> • None. Because each patient is associated with a regular health facility, and because the health facility already dispenses to clients, the quantity sent to the health facility from the level above does not increase or decrease. There is no impact on inventory control. |
| Data Collection | <ul style="list-style-type: none"> • None. Health facility staff will need to record the quantity dispensed on the facility's dispensing record as normal, with no impact. Data will likely be reported as if it were dispensed from the facility pharmacy directly to patients. |
| Transportation | <ul style="list-style-type: none"> • None. No additional transportation is needed unless stock is delivered to CAGs. |
| Human Resources | <ul style="list-style-type: none"> ✓ Health facilities may need to designate one or more staff members to monitor CAG group membership. |
| Storage | <ul style="list-style-type: none"> • None. No additional storage of medicines is needed. |

08.

DDD Model:
E-Lockers



PHOTO CREDIT: Right ePharmacy | GHSC-PSM

E-Lockers Serving as Distribution Points

Installing automated dispensing units—electronic lockers (e-lockers) and pharmacy dispensing units—is another way that countries are implementing DDD.

How This Model Works

These units can be set up in health facilities, pharmacies, shopping malls, or other suitable and convenient public locations.

Clients receive a notification, usually by SMS, when their medicines are available and are given a PIN number for access.

Many clients feel less stigma picking up refills this way since these distribution points are commonly used to distribute other medicines as well.

The **benefits** that these units offer to clients and the supply chain are that they are:

- Placed in convenient locations for clients.
- Always available for pick-up, not just during hours of operation.
- Equipped with an electronic stock-tracking system that provides real-time updates on distribution.
- Secure—pilferage and contamination are unlikely. They often have fail-safe systems to keep the units running if power or Internet connectivity is lost.

The **challenges** can be that:

- The cost to the public sector to purchase and install the units can be high. Depending on the country context and the cost-benefit analysis, this cost can be either a prohibitive factor or one that provides an acceptable tradeoff.
- Sufficient staff must be available to manage stock distribution and retrieval for the units, which can increase cost as well.
- The electronic tracking system of these units ideally should be linked to the government's stock management system, which can be difficult to do if a country has not yet upgraded or integrated its systems.

E-Lockers in Lesotho

A unique aspect of Lesotho's context is the cross-border migration of its population. Because of the country's small geographical size and proximity to South Africa, many citizens routinely travel to South Africa for work. This makes retaining HIV/AIDS clients on treatment a greater challenge than in

other countries without high levels of cross-border migration.

The Government of Lesotho works with USAID IPs to support increased retention efforts, primarily through cross-border tracking of clients and distribution of three months of medication (3MMD).

Putting resources into retention of current clients brings a "bigger bang for our buck," notes Ian Member, Senior Strategic Information Advisor for USAID and Activity Manager for the USAID EQUIP project. "Bringing one or two new people onto treatment while losing 10 current clients puts viral suppression and epidemic control at risk. But focusing more on retention while still bringing clients onto treatment has been very effective," he adds. Currently, more than 93 percent of Lesotho's HIV/AIDS clients are virally suppressed.

During the COVID pandemic, scaling up retention efforts became an even more urgent need. Scaling up aspects of DDD has been a key part of increased retention efforts.

E-Locker Implementation

One way that the country is implementing DDD is through e-lockers. The Government of Lesotho, through the

TABLE 5.0
Supply Chain Impact of E-Lockers

| | |
|--------------------------|---|
| Governance | <ul style="list-style-type: none"> • None. |
| Inventory Control | <ul style="list-style-type: none"> ✓ Because each patient is associated with a regular health facility, and because the health facility supplies the e-locker, the quantity sent to the health facility from the level above does not increase or decrease. Because these units can hold a limited amount of stock for a specific patient, they must be visited frequently to replenish them for the next group of patients. |
| Data Collection | <ul style="list-style-type: none"> ✓ Health facility staff will need to record the quantity dispensed on the facility's dispensing record once stock is picked up. Data will likely be reported as if it were dispensed from the facility pharmacy directly to patients. |
| Transportation | <ul style="list-style-type: none"> ✓ Frequent replenishment of the e-locker will incur transportation costs unless the units are located at the health facility. The volumes to transport would be expected to be small; therefore, transportation costs will be minimal. |
| Human Resources | <ul style="list-style-type: none"> ✓ Health facilities may need to designate one or more staff members to replenish the e-lockers and record the dispensing data. |
| Storage | <ul style="list-style-type: none"> ✓ E-lockers should be monitored for security and temperature. Since unattended units may be made of thick metal to prevent tampering, heat build-up is a risk depending on the placement of the unit. |

USAID EQUIP project, installed five e-lockers in 2020—four of them at health facilities and one at a shopping mall—and is working to install a sixth at another mall location.

The e-lockers store and dispense medication refills and are accessible to stable, virally suppressed clients at any time. This increases convenience for clients who have limited time due to work hours and cross-border travel and therefore have difficulty visiting health facilities during operating hours. The mall locations in particular are accessible to a larger population and have the potential to reach more clients.

Each e-locker is managed by the health facility at which it is installed, or by a local health facility in the case of e-lockers located at a mall. The facilities and shopping mall must ensure security for the e-lockers; for malls, this is done through existing security systems and does not add any expense for the public sector. The units have a battery-powered electronic system that keeps track of stock distribution and can continue to function if power fails.

How Stock Is Managed

Lesotho's central dispensing unit—located in the country's biggest city, Maseru—packages the ARVs designated for the e-lockers. An organization called Riders4Health delivers the drugs to the e-lockers and contacts clients to alert them they are ready for pick-up, providing them with a PIN number for access. Riders4Health also monitors the electronic stock-recording system in the e-lockers and retrieves drugs that are not picked up by clients. These drugs are returned to the CDU, then Riders4Health follows up with the clients or registers them with a treatment partner to do follow-up. Riders4Health is funded through a contract with the BonoloMeds program.

Each facility that manages an e-locker monitors the unit's stock electronically and updates its own stock management system accordingly.

Looking Ahead

"Implementation of these first five, soon to be six, e-lockers is a test for the country on how the program works in the national context," explains Membe. "The Lesotho

Ministry of Health is still considering how to formalize implementation and launch of this model." Among other considerations, the MOH is determining which department will oversee this effort and how to accredit the CDU to dispense medication if licensed health care professionals are not on staff (e.g., doctors, nurses, pharmacists).

But given the urgency to extend DDD during the COVID-19 pandemic in 2020, the MOH gave EQUIP interim permission to move equipment and staff as needed to continue implementation. EQUIP is also moving forward with training staff and determining which clients are appropriate for this model and getting those clients registered.

"The enthusiasm for e-lockers has been very high among clients," says Membe, "not only because of convenience and accessibility, but also because the lockers help avoid stigma by distributing other drugs as well, such as those for diabetes and hypertension."

The Government of Lesotho and the EQUIP project are looking at how the e-lockers can be optimized long term, especially once epidemic control is achieved. "One option being considered is including PrEP drugs for key populations," adds Membe.

Challenges

Challenges seen so far in e-locker implementation center around maintaining enough staff at the CDU to manage the e-lockers and connecting the facility stock management systems to the national system. An e-register system is currently being rolled out across the country and will link facilities to the national system.

Supply Chain Impact of E-Lockers

The impact to the supply chain of e-lockers reaches most of the key areas. See **Table 5**.

09.

In Conclusion



PHOTO CREDIT: Bobby Neptune | GHSC-PSM

Well-Functioning Supply Chains Are Essential to DDD's Success

At the core of public health programs are supply chains that bring medicines and other medical supplies to the people who need them.

These supply chains must function efficiently and affordably to provide a reliable supply of health commodities to as many clients as possible.

As governments continue work to improve public health and achieve epidemic control of the most prevalent infectious diseases, they are increasingly taking a client-centered approach through initiatives like DDD. In implementing DDD, it is critical to consider supply chain implications and reduce the risk of inefficiencies, cost increases, lack of human resources, or supply disruptions.

By understanding how different DDD approaches have operated in different countries, and what the supply chain implications are, countries considering DDD implementation and scale-up can determine what model or mix of models best fits their context.

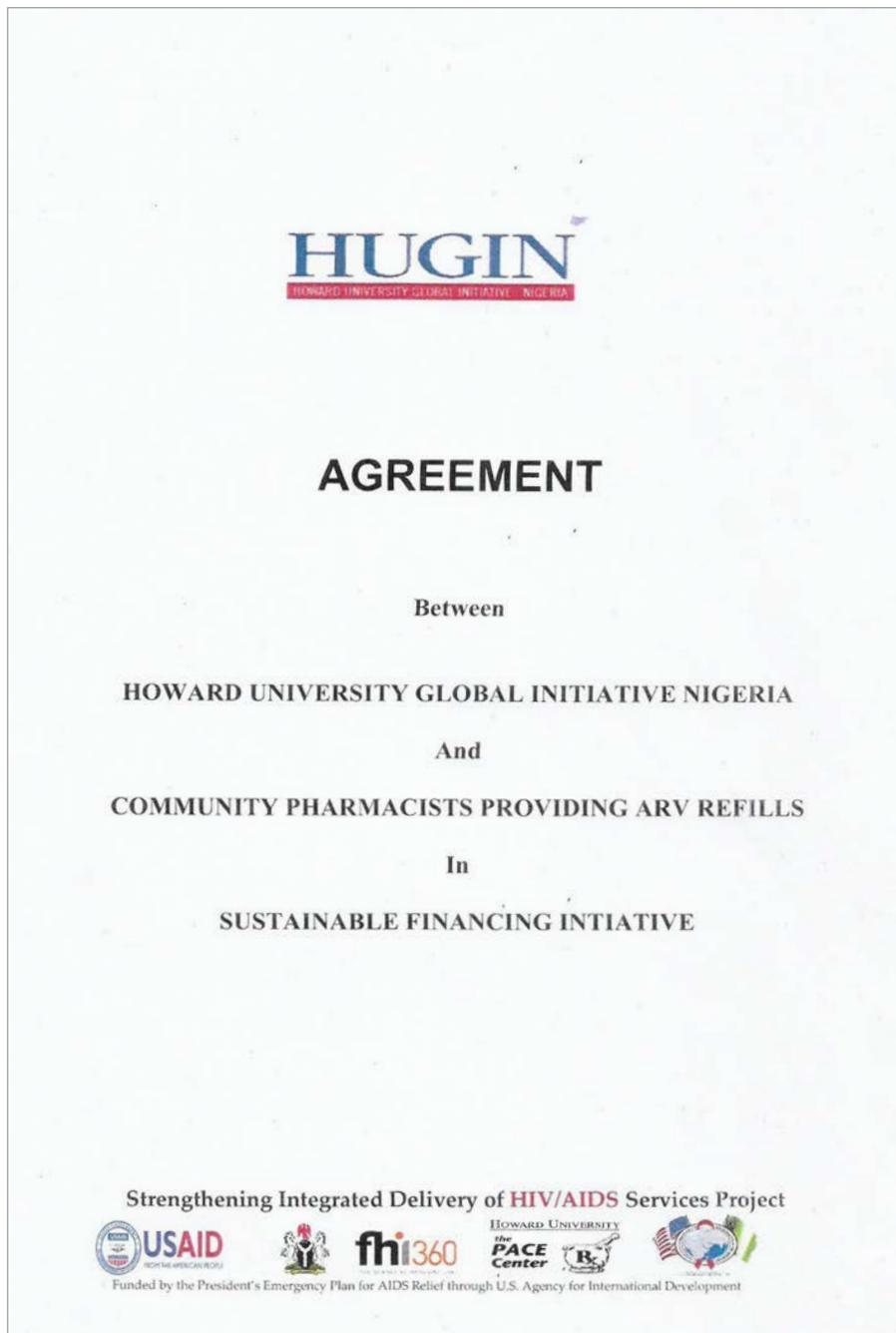


Appendices

Section 10.

ANNEX I | EXAMPLE MOUS FROM NIGERIA

I. MOU With Community Pharmacists



Agreement between Howard University Global Initiative Nigeria (HUGIN) and Community Pharmacists providing ARV Refills in the SFI-SIDHAS Project

The objective of the SFI is to deliver an AIDS-free generation with shared financial responsibility with host country governments. The provision of ART through private sector stakeholders in health has the potential of increasing access to care, improving service coverage and providing a sustainable and viable option for ART services. The PEPFAR funded project – Strengthening Integrated Delivery of HIV/AIDS Services (SIDHAS) supports private hospitals and community pharmacies to provide HIV/AIDS services. Through Howard University, the SIDHAS project has been progressively collaborating with community pharmacists resulting in the provision of HIV testing services, Community ART outreach services and ARV refills in selected Community Pharmacies.

The newly introduced Sustainable Finance Initiative (SFI) to be implemented by SIDHAS will reinforce existing and stimulate new private sector contributions to HIV/AIDS programming in Lagos and Rivers States. The focus of SFI activities include private sector health delivery organizations and collaboration with Nigerian business, civil society organizations and appropriate state level Ministries, Departments and Agencies. With the private sector contributing about 60% of total health service provision and with over 50% of all Nigerians accessing health care from private sector providers, private sector engagement in the provision of HIV/AIDS services is expected to lead to a more comprehensive and sustainable response.

In March 2016, Howard University, through its Pharmaceutical Care and Continuing Education (HU-PACE) signed a memorandum of understanding with the Pharmaceutical Society of Nigeria (PSN) to ratify the ongoing collaborations with pharmacists in Nigeria for the provision of public health services. HU-PACE, the partner responsible for strengthening pharmacy services within the consortium implementing the Strengthening Integrated Delivery of HIV/AIDS (SIDHAS) project, leads the implementation of the ARV refill in the community through community pharmacists providing ARV refill service to clients in their pharmacies using free drugs received from the program which they account for in the nationally approved tools.

The Community Pharmacist whose signature appears below has been assessed based on preset criteria and is found to be competent, willing to provide ARV refill services and to adhere strictly to the conditions listed below.

Thus, the Community Pharmacist agrees to the following:

- Make available his/her registered community pharmacy premises as a drug refill point for Antiretroviral Drugs for stable clients devolved for ARV drug refills.
- Make himself/herself available to provide individualized pharmaceutical care services to all clients devolved to the premises
- Provide services and related procedures as specified in the standard operating procedures and guidelines provided by HUGIN
- Take all necessary measures to protect patient's confidentiality and ensure the protection of the privacy of patient records.

- Uphold the rights and dignity of all clients
- Ensure the drugs provided for the clients are properly stored, secured, dispensed for clients as specified by prescription and adequately accounted for.
- Ensure all drugs and tools provided for the clients are used strictly and solely for the specified clients
- Provide pharmaceutical care and all relevant support including medication adherence counselling, chronic care screening, assessment and management of drug therapy problems, appointment scheduling and defaulter tracking and follow up for retention of all clients on treatment
- Ensure prompt, complete and correct documentation and reporting of all services provided including client information, medicines, financial records relating to SFI as specified and demanded by the project
- To request for and receive only the agreed service charge of N1000.00 per bimonthly ARV refill. **Note that the antiretroviral medicines (ARVs) provided by the project are free and are not to be sold to any of these clients.**
- Make all necessary investments for the provision of high quality ARV refill services in his/her community pharmacy
- Be monitored and supervised by HUGIN staff, ACPN, PSN and relevant GoN supervisors in the execution of this assignment
- Uphold the ethics of the pharmacy profession
- Be removed from this program if he/she does not adhere to the above guidelines or if the performance is found to be unacceptable.

Signed by:

Community Pharmacist

Name of Community Pharmacist _____

Pharmacist Registration Number _____

Name of Community Pharmacy Premises _____

Address of Community Pharmacy Premises _____

Home Address of Community Pharmacist _____

Contact Phone number of Community Pharmacist _____

Email Address of Community Pharmacist _____

Signature _____

Date _____

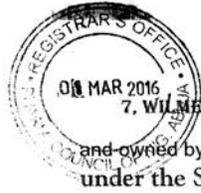
| | |
|---|---|
| | LAGOS ZONAL OFFICE PHARM. COUNCIL OF NIG. YABA |
| Pharmacists Council of Nigeria (PCN) | 27 MAR 2017 |
| Name of State PCN Officer _____ | PHARM. A. C. EZEUGWU FRCP |
| Signature _____ | Sign.  |
| Date _____ | |
| Association of Community Pharmacists in Nigeria (ACPN) | |
| Name of State ACPN Chairman _____ | |
| Signature _____ | |
| Date _____ | |
| Pharmaceutical Society of Nigeria (PSN) | |
| Name of State PSN Chairman _____ | |
| Signature _____ | |
| Date _____ | |
| Howard University Global Initiative Nigeria (HUGIN) | |
| Name of Country Director _____ | |
| Signature _____ | |
| Date _____ | |

The Pharmacists Council of Nigeria



FEDERAL REPUBLIC OF NIGERIA No. LAG/2016/0045

CERTIFICATE OF REGISTRATION/RETENTION OF RETAILING PREMISES



The premises situated at:

7, WILMER CRESCENT, OLODI-APAPA, LAGOS STATE.

and owned by, **KAODAF PHARMACY & STORES**
under the Superintendent Pharmacist:

PHARM.(MRS) AMEH-OKWAH, S.K.

was on Tuesday, March 1, 2016 duly registered for the purpose of mixing, compounding, preparing, counselling and selling of drugs, medicines and poisons to patients in accordance with the provisions of the Pharmacists Council of Nigeria Act, Cap P17, LFN, 2004.

Issued at Abuja on Tuesday, March 1, 2016

This Certificate expires on 31st December, 2016.

FEE FOR REGISTRATION: -N=5,000.00



Abdullahi Mohammed
REGISTRAR

The Pharmacists Council of Nigeria



FEDERAL REPUBLIC OF NIGERIA

No. LA/2016/0454E

ANNUAL LICENCE TO PRACTICE AS A PHARMACIST

PHARM.(MRS) AMEH-OKWAH KATE STEVEN

Registration No: 004306

9, WILMER CRESCENT, OLODI-APAPA, LAGOS STATE.

having duly paid the prescribed fee is hereby licenced to practice as a Pharmacist under the Pharmacists Council of Nigeria Act CAP P17 LFN, 2004 in Nigeria and is authorized to import, export, mix, compound, prepare, dispense, counsel, sell and distribute drugs and poisons.

Issued at Abuja on Tuesday, March 1, 2016

This Certificate expires on 31st December, 2016

FEE FOR REGISTRATION: =N=3,000.00



Handwritten signature
REGISTRAR

ANNEX I | EXAMPLE MOUS FROM NIGERIA

II. MOU with the Pharmaceutical Society of Nigeria

HOWARD UNIVERSITY

Office of the General Counsel

MEMORANDUM TO DANA HECTOR
Executive Director, RAS

THROUGH:

FROM:

DATE: May 25, 2016

SUBJECT: Pharmaceutical Society of Nigeria
Memorandum of Understanding
PI: Anthony Wutoh
Matter # _____
(TBD)

This memorandum is an internal communication. Do NOT send it externally without the expressed permission of the writer.

Do not invite outside persons to call the writer of this memorandum without prior permission.

This Office has reviewed the subject Agreement. We have found the Agreement legally sufficient. Once this is clarified, you may present this memorandum and the attached contract, as is, to an appropriate person with contract signing authority. Please be sure that all contracts are signed only by those with proper signature authority from the President.

Competitive Bidding Advisory

Please note that the University requires that all

2400 6th Street, NW, Suite 321
Washington, DC 20059



Telephone 202 806 2650
Facsimile 202 806 6357
www.howard.edu

contracts for the procurement of goods and/or services result from a competitive bidding process. Always alert this Office on the rare occasions when seeking a waiver of this requirement.

Contracting Authority Advisory

Also please note that all contracts with a value over one million dollars (\$1,000,000) must be reported to the Executive Committee of the Board of Trustees within ninety (90) days of signature. All contracts with a value over five million dollars (\$5,000,000) must have prior approval from the Executive Committee of the Board of Trustees before they are executed.

Agreements involving real estate have stricter requirements set forth in the Howard University bylaws. Please contact this Office for further advice when a contract involves the sale or lease of real estate.

Sometimes it is not clear at the onset of a contract that it will exceed any of the thresholds above; or contracts may be amended or renewed, causing the overall value of the contract to exceed a threshold. It is your responsibility to monitor this, and alert the Board of Trustees accordingly once a contract is likely to exceed a threshold.

Amendments

Amendments to contracts should be reviewed by this Office before execution.

Contract Signer: Upon signing the documents, please have a member of your staff contact the contract requestor to arrange for pickup.

Unless specifically requested to do so, please do not return signed originals or copies to the Office of General Counsel. The requesting department should maintain an original fully signed contract in its files.

At your convenience, we are prepared to discuss these matters with you more fully. If you should have any questions regarding this memo, please call me at 6-2650.

Strengthening Integrated Delivery of HIV/AIDS Services



2016 MAR 29 AH11:46
OFFICE OF THE
GENERAL COUNSEL

**MEMORANDUM OF UNDERSTANDING
BETWEEN
PHARMACEUTICAL SOCIETY OF NIGERIA
AND
HOWARD UNIVERSITY**

MEMORANDUM OF UNDERSTANDING

between

Pharmaceutical Society of Nigeria

and

Howard University

This Memorandum of Understanding ("Memorandum") is hereby made as of *2nd March 2016* ("Effective Date") by and between Howard University ("Howard"), a corporation chartered by the Congress of the United States, located at 2400 6th Street, N.W., Washington D.C. 20059; and Pharmaceutical Society of Nigeria ("PSN"), a body of individual members registered under Nigerian law as one entity, located at No 32, Faramobi Ajike Street, Anthony village, Mushin, Lagos, Nigeria. Howard and PSN each is a "Party" to this Memorandum; collectively they are "Parties".

1. INTRODUCTION

- A. Howard University Pharmacists and Continuing Education Center, working with and through its wholly controlled Nigerian affiliate entity Howard University Global Initiative Nigeria—Ltd/Gte ("HUGIN"), is dedicated to reducing the burden of HIV/AIDS in targeted areas of Nigeria through strengthened delivery of high quality comprehensive HIV/AIDS services that are sustainable for the long-term; and
- B. PSN is a professional association comprising all registered pharmacists in Nigeria. It was set up to provide good quality pharmaceutical services and to cater to the interest and welfare of her members. PSN is made up of technical groups — Association of Community Pharmacists of Nigeria (ACPN), Association of Hospital and Administrative Pharmacists of Nigeria (AHAPN), Association of Industrial Pharmacists of Nigeria (NAIP), National Association of Pharmacists in the Academia (NAPA), and Association of Lady Pharmacists, an interest group of PSN; and
- C. Howard participates in a USAID-funded project in Nigeria titled "Strengthening Integrated Delivery of HIV/AIDS Services" ("SIDHAS"), which involves strengthening the role of pharmacies and pharmacists in the public and private sectors of Nigeria to deliver quality healthcare solutions, which is closely related to PSN's mission and work; and
- D. PSN wishes to support the SIDHAS project by making available its member community pharmacists to work in collaboration with Howard to meet the SIDHAS strategic objectives.

2. PURPOSE OF MEMORANDUM

This Memorandum memorializes a mutually beneficial relationship through which PSN will support SIDHAS objectives by (a) encouraging community pharmacist involvement, capacity, and participation in services including early tuberculosis (TB) detection and referral, HIV testing and counseling (HTC) services, HIV/AIDS care and support services, sexually transmitted infections (STI) screening, and sexual and medical prevention; (b) providing pharmacy services in the community ART program; (c) strengthening anti-retroviral (ARV) refills at community pharmacies; and (d) encouraging community pharmacists to act as preceptors and supervisors to provide an integrated service delivery model that appropriately links clinical and pharmaceutical services in the health facility and care services in the

health facility and care services in the community. PSN will make available and encourage its member community pharmacists to participate in SIDHAS objectives and identify lead community pharmacists in each Nigerian state of operation.

3. TERM

This Memorandum will remain in effect for the duration of Howard's participation in the SIDHAS project, beginning on the Effective Date; provided, however, that either Party may terminate this Memorandum at any time upon 30 days advance written notice, and the Parties may modify the term of this Memorandum by written agreement.

4. NO PAYMENTS TO PSN

PSN acknowledges and understands that (a) no direct, indirect, or in-kind payments or reimbursements whatsoever will be made to PSN under this Memorandum; and (b) Howard will not pay fees, salary, or stipends to any PSN member community pharmacist. Howard may, in its discretion, individually reimburse PSN member community pharmacists for documented and pre-approved out-of-pocket travel expenses incurred in furtherance of the SIDHAS project, in accordance with a separate agreement or other arrangement that Howard may establish directly with PSN member community pharmacists. Such travel reimbursements to PSN member community pharmacists will be made directly to the member pharmacist, and not through PSN.

5. INTELLECTUAL PROPERTY

Title to intellectual property created, developed, conceived, or reduced to practice under this Memorandum will vest in accordance with applicable intellectual property law, consistent with the intellectual property rights and obligations set forth in applicable USAID regulations and policies. Intellectual property of Howard that is provided to PSN in connection with this Memorandum is the sole and exclusive property of Howard, is provided solely for purposes of this Memorandum, and does not constitute or imply a license or any other rights of PSN to use such intellectual property. PSN may not use Howard's intellectual property in any manner (i) other than as expressly provided for in this Memorandum, (ii) likely to diminish the commercial value of such intellectual property, or (iii) likely to cause marketplace confusion about such intellectual property, including confusion about intellectual property ownership.

6. INDEPENDENT CONTRACTOR RELATIONSHIP

Both Parties agree that PSN is an independent contractor for purposes of this Memorandum and nothing in this Memorandum is intended to or should be construed to create a federal subawardee or federal subcontractor relationship, partnership, joint venture, employment relationship, or establish a relationship of agency between Howard and PSN. PSN also agrees that it will not hold itself out as, or claim to be, an agent, employee, affiliate, partner, joint venturer, co-principal or co-employer with Howard or any of its affiliates by reason of this Memorandum and that PSN will not knowingly permit any of its employees, agents, or representatives to hold themselves out as, or claim to be, officers, employees, or agents of Howard or any of its affiliates by reason of this Memorandum. PSN will not enter into any contract or agreement with a third party that purports to obligate or bind Howard. PSN and Howard acknowledge that this is not an exclusive relationship. PSN acknowledges and agrees that neither it nor its members have an appointment, title, or position with Howard.

7. ASSIGNMENT

PSN will not assign any right or interest under this Memorandum or delegate or subcontract any obligation to be performed or owed under this Memorandum without the prior written consent of Howard. Howard may assign or transfer any of its rights or obligations to an affiliate of Howard and nothing in this Section will detract from Howard's ability to subcontract or delegate any of its rights or obligations to an affiliate of Howard or to a qualified third party.

8. CONFIDENTIALITY

This Memorandum will be carried out without the disclosure of either Party's confidential or proprietary information to the other Party or to third parties. However, should it become necessary for the Parties to disclose to each other's confidential or proprietary information, the providing Party will notify the receiving Party in advance and in writing, and the Parties will agree on reasonable terms for the protection of such information. All confidential information will be clearly marked as such, or promptly disclosed as such in writing.

9. PUBLICITY AND IDENTIFICATION

PSN will not, without Howard's prior written consent, engage in advertising, promotion, or publicity related to Howard, HUGIN, or this Memorandum, or make public use of any "Identification" in any circumstances related to Howard or this Memorandum. "Identification" means any copy or semblance of any trade name, trademark, service mark, insignia, symbol, logo, or any other product, service or organization designation, or any specification or drawing, of Howard or its affiliates. Written materials that PSN prepares pursuant to Section 2 of this Memorandum must be approved in advance by Howard.

10. GOVERNING LAW

This Memorandum will be construed in accordance with its terms, and the law of the District of Columbia, without regard to choice or conflict of laws principles that would cause the application of any other law.

11. DISPUTE RESOLUTION

The Parties will use their best efforts to negotiate in good faith and resolve any dispute that may arise out of or relate to this Memorandum or any breach of this Memorandum. If such dispute is not so resolved, the dispute will be finally settled by arbitration in accordance with the UNCITRAL Arbitration Rules ("Arbitration Rules") then in effect, by one arbitrator, who shall be appointed in accordance with the Arbitration Rules, with the seat of arbitration to be the District of Columbia. The arbitrator will be empowered to award equitable remedies as well as damages, but will not be empowered to award punitive or exemplary damages. The final arbitration award will be binding on the Parties and enforceable in accordance with the New York Convention on the Recognition and Enforcement of Foreign Arbitral Awards. To the extent that PSN may in any jurisdiction claim for itself or its assets immunity from legal process, PSN hereby agrees not to claim and fully waives such immunity for purposes of arbitration and the arbitration award.

12. COMPLIANCE WITH LAW AND POLICY

PSN agrees to comply with all applicable law and regulations in connection with this Memorandum, including, but not limited to, applicable law and regulations of the United States and Nigeria. PSN acknowledges that SIDHAS is sponsored by USAID; accordingly, by executing this Memorandum, PSN agrees to comply with applicable USAID requirements, including those requirements listed in Appendix A or later issued by USAID. PSN agrees to take no action, or omit to take action, that would cause either Party to be in violation of applicable law and regulations, including, but not limited to, U.S. anti-boycott laws, U.S. export control laws, U.S. Foreign Corrupt Practices Act, data protection and privacy law, or other applicable law. Consistent with applicable anti-corruption law, PSN will comply with the anti-corruption provisions set forth in Appendix B to this Memorandum.

13. LIABILITY AND INDEMNIFICATION

- a) Neither Howard, nor any of Howard's divisions, affiliates, or subsidiaries, nor any officer, director, trustee, employee, or agent of any of the foregoing, will have liability to PSN, or to any other entity or person, for any claim, loss, damage, or injury incurred in the course of the performance of this Memorandum or otherwise in connection therewith, other than the obligations of Howard stated in this Memorandum.
- b) To the fullest extent permitted by law, PSN agrees to indemnify, hold harmless and defend Howard and each of Howard's divisions, affiliates, or subsidiaries, and each or any officer, director, trustee, employee, or agent of any of the foregoing, and their respective successors and assigns, from and against third party claims, demands, actions, liabilities, damages, and expenses (including reasonable attorneys' fees and litigation costs) resulting therefrom, arising out of, or related to, the acts or omissions of PSN in connection with this Memorandum, breach of this Memorandum by PSN, or the representations or certifications made by PSN herein.

14. AMENDMENTS

This Memorandum may be supplemented, amended, or revised only in writing by agreement of an authorized representative of each Party; provided, however, that Howard may modify, change, or alter this Memorandum unilaterally in order to comply with its legal obligation to flow down and apply to PSN applicable USAID terms, conditions, policies, or requirements, and to ensure PSN's compliance with the same.

15. ENTIRE AGREEMENT & EXECUTION

This Memorandum and all appendices annexed hereto constitute the complete understanding of the Parties and supersede any other prior agreements. This Memorandum may be executed through signatures to any number of counterparts, each of which will be deemed an original, which together will constitute one Memorandum, but no Party will be bound until both parties have duly executed a counterpart of this Memorandum.

[signature block on next page]

IN WITNESS WHEREOF, the Parties have caused this Memorandum to be executed in their names and on their behalf by and through their duly authorized representatives as of the Effective Date.

HOWARD UNIVERSITY

By: _____

PHARMACEUTICAL SOCIETY OF NIG

By: _____

Name:

Title:

**APPENDIX A
SPONSOR TERMS**

Debarment and Suspension

PSN certifies that it and its principals (as defined in 2 CFR Part 180) are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded by any U.S. Federal department or agency, or any other governmental entity. PSN certifies that it will comply with OMB guidance in 2 CFR Part 180, *OMB Guidelines To Agencies On Governmentwide Debarment And Suspension (Nonprocurement)*.

Lobbying Certification

PSN certifies, to the best of its knowledge and belief, that:

- (1) No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of an agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.
- (2) If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the undersigned will complete and submit Standard Form-LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions.
- (3) PSN will require that the language of this certification be included in the award documents for all subawards at all tiers (including subcontracts, subgrants, and contracts under grants, loans, and cooperative agreements) and that all subrecipients will certify and disclose accordingly.

This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by 31 USC 1352. Any person who fails to file the required certification may be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such failure.

Audit

Howard, the U.S. government, the Comptroller General of the United States, the USAID prime awardee, or any of their duly authorized representatives, will have access to any books, documents, papers and records of PSN which are directly pertinent to this Memorandum for the purpose of making audits, examinations, excerpts, and transcriptions.

Funding

PSN acknowledges that funding for this Memorandum may be pursuant to funding provided to Howard by governmental and non-governmental sponsors, and Howard's obligations to make payments (if any) under this Memorandum are contingent on continued funding and approval of this Memorandum by such sponsors.

Conflict of Interest

PSN certifies that it is not aware of any related past, present, or planned interest, financial or otherwise, that may impair its objectivity in performing its services. PSN will identify actual and potential conflicts of interest and promptly report the same to Howard in writing.

USAID - Prohibition on the Promotion or Advocacy of the Legalization or Practice of Prostitution or Sex Trafficking

(a) The U.S. Government is opposed to prostitution and related activities, which are inherently harmful and dehumanizing, and contribute to the phenomenon of trafficking in persons. None of the funds (if any) made available under this Memorandum may be used to promote or advocate the legalization or practice of prostitution or sex trafficking. Nothing in the preceding sentence shall be construed to preclude the provision to individuals of palliative care, treatment, or post exposure pharmaceutical prophylaxis, and necessary pharmaceuticals and commodities, including test kits, condoms, and, when proven effective, microbicides.

(b)(1) Except as provided in (b)(2) and (b)(3), by accepting this award or any subaward, a nongovernmental organization or public international organization awardee/subawardee agrees that it is opposed to the practices of prostitution and sex trafficking because of the psychological and physical risks they pose for women, men, and children.

(b)(2) The following organizations are exempt from (b)(1):

- (i) the Global Fund to Fight AIDS, Tuberculosis and Malaria; the World Health Organization; the International AIDS Vaccine Initiative; and any United Nations agency.
- (ii) U.S. non-governmental organization recipients/subrecipients and contractors/subcontractors.
- (iii) Non-U.S. contractors and subcontractors if the contract or subcontract is for commercial items and services as defined in FAR 2.101, such as pharmaceuticals, medical supplies, logistics support, data management, and freight forwarding.

(b)(3) Notwithstanding section (b)(2)(iii), not exempt from (b)(1) are non-U.S. recipients, subrecipients, contractors, and subcontractors that implement HIV/AIDS programs under this assistance award, any subaward, or procurement contract or subcontract by:

- (i) providing supplies or services directly to the final populations receiving such supplies or services in host countries;
- (ii) providing technical assistance and training directly to host country individuals or entities on the provision of supplies or services to the final populations receiving such supplies and services; or
- (iii) Providing the types of services listed in FAR 37.203(b)(1)-(6) that involve giving advice about substantive policies of a recipient, giving advice regarding the activities referenced in (i) and (ii), or making decisions or functioning in a recipient's chain of command (e.g., providing managerial or supervisory services approving financial transactions, personnel actions).

(c) The following definitions apply for purposes of this provision:

"Commercial sex act" means any sex act on account of which anything of value is given to or received by any person.

"Prostitution" means procuring or providing any commercial sex act and the "practice of prostitution" has the same meaning.

"Sex trafficking" means the recruitment, harboring, transportation, provision, or obtaining of a person for the purpose of a commercial sex act. 22 U.S.C. 7102(9).

(d) PSN shall insert this provision, which is a standard provision, in all procurement contracts or subcontracts.

(e) This provision includes express terms and conditions of the award and any violation of it shall be grounds for unilateral termination of the award by USAID prior to the end of its term.

Executive Order 13224 on Terrorist Financing

U.S. Executive Orders and U.S. law prohibits transactions with, and the provision of resources and support to, individuals and organizations associated with terrorism. It is the legal responsibility of PSN to ensure compliance with these Executive Orders and laws. PSN confirms that it will take reasonable steps to ensure that none of the funds under this Memorandum will be used in support of or to promote violence, terrorist activity or related training, whether directly through PSN's own activities and programs, or indirectly through support of, or cooperation with, other persons or organizations known to support terrorism or that are involved in money laundering activity.

FHI 360 and AHNI Standards of Ethics and Business Conduct

PSN agrees to operate in accordance with applicable law and those ethical practices that may be stipulated by FHI 360 (the prime awardee) from time to time. PSN will not make any payment, either directly or indirectly, of money or other assets to government or political party officials, candidates for public office, or representatives of other businesses or person acting on behalf of any of the foregoing (referred to collectively as "Officials") where such payment would constitute a violation of any law.

**APPENDIX B
ANTI-CORRUPTION PROVISIONS**

I. Representations and Warranties Concerning Anti-corruption and Improper Payments

PSN is familiar with the U.S. Foreign Corrupt Practices Act of 1977, as amended ("FCPA"), the U.K. Bribery Act, and other applicable anti-corruption law, and understands that Howard is committed to strict compliance with these laws. PSN therefore makes the following representations and warranties in connection with this Memorandum:

Familiarity and Compliance with Anti-corruption Laws. PSN represents and warrants that it is familiar with the FCPA and the U.K. Bribery Act and other law applicable to it, including the law of those countries where it operates, including all anti-bribery or anti-corruption law; that it is now in compliance with the FCPA and the U.K. Bribery Act, and other law applicable to it, and will remain in compliance with such law; that it will not, directly or indirectly, authorize, offer, promise, or make payments of anything of value, including but not limited to cash, checks, wire transfers, tangible and intangible gifts, favors, services, and entertainment and travel expenses to: (i) an executive, official, employee or agent of a governmental department, agency or instrumentality, (ii) a director, officer, employee or agent of a wholly or partially government-owned or -controlled company or business, (iii) a political party or official thereof, or candidate for political office, (iv) an executive, official, employee or agent of a public international organization (e.g., the International Monetary Fund or the World Bank) ("Government Official"); while knowing or having a reasonable belief that all or some portion will be used for the purpose of: (a) influencing any act, decision or failure to act by a Government Official in his or her official capacity, (b) inducing a Government Official to use his or her influence with a government or instrumentality to affect any act or decision of such government or entity, or (c) securing an improper advantage; in order to obtain, retain, or direct business. PSN further represents and warrants that no part of the payments (if any) received by it from Howard will be used for any purpose that could constitute a violation of any applicable law, including the U.K. Bribery Act, or the FCPA.

II. Representations and Warranties Concerning Government Officials

No Government Officials. PSN represents that it is not a Government Official, and, if applicable, none of its officers, directors, senior managers, partners, owners, or principals are Government Officials or immediate family members of a Government Official. PSN agrees that if it or any its partners or principals becomes a Government Official, then PSN will promptly notify Howard in writing. On receipt of a written notice, the Parties will consult together to address concerns under the FCPA and determine whether those concerns can be satisfactorily resolved. If, after consultation, any such concerns cannot be resolved in the good faith and reasonable judgment of Howard, then Howard, on written notice to PSN, may terminate this Memorandum.

III. Additional Items

PSN further agrees to undertake the following additional steps in order to ensure compliance with Howard's policies and all applicable anti-corruption laws:

A. PSN will undergo, at Howard's request, annual anti-corruption training.

B. PSN will certify annually that it has complied with all the provisions of this Memorandum, has not made any improper payments as described herein, and has otherwise complied with all applicable anti-corruption law. See attached Exhibit to Appendix B (Annual Anti-corruption Compliance Certification).

IV. Notification and Disclosure

A. Subsequently Identified FCPA Concerns. PSN agrees that should it learn or have reason to know of any payment or transfer (or any offer or promise to pay or transfer) that would violate the FCPA, the U.K. Bribery Act, other laws of the United States, or the law of the countries in which this Memorandum is made or applies, it shall immediately disclose it to Howard. The Parties will meet promptly, as appropriate, in light of a potential FCPA concern being identified, discovered, or disclosed. If, after consultation by both Parties, any such FCPA concern cannot be resolved in the good faith and reasonable judgment of Howard, then Howard, on written notice to PSN, terminate this Memorandum.

B. The terms of this Memorandum and information about PSN's performance thereunder may be disclosed to the United States government, and any other relevant government agencies, if deemed appropriate by Howard.

V. Termination

A. Termination for Cause. Notwithstanding any other provisions to the contrary, Howard may withhold payments (if any) under this Memorandum and/or suspend or terminate this Memorandum, without limiting any other right, without liability and without notice or at any time, upon learning information giving it a reasonable belief that PSN may have violated, or may have caused Howard to violate, any applicable anti-corruption law.

EXHIBIT TO APPENDIX B
Annual Anti-corruption Compliance Certification

I, _____ [PSN], certify that:

1. I am familiar with the requirements of the U.S. Foreign Corrupt Practices Act ("FCPA") the U.K. Bribery Act, and other applicable anti-corruption laws ("Anti-Corruption Laws").
2. I represent and certify that I have not offered, or caused to be offered, any money or other thing of value to (i) an executive, official, employee or agent of a governmental department, agency or instrumentality, (ii) a director, officer, employee or agent of a wholly or partially government-owned or -controlled company or business, (iii) a political party or official thereof, or candidate for political office, (iv) an executive, official, employee or agent of a public international organization (including, for example, the International Monetary Fund or the World Bank) ("Government Official") or (v) any private person, to obtain an improper business advantage or to improperly direct business to any person.
3. I represent and certify that I have not offered, or caused to be offered, any money or other thing of value to any other person, while knowing or having reason to know that such person has offered or caused to be offered any money or other thing of value to a Government Official or any private person, to obtain an improper business advantage or to improperly direct business to any person.
4. I represent and certify that I have not otherwise violated, nor caused Howard to violate, any Anti-Corruption Laws in connection with my work.
5. I represent and certify that I do not know and have no reason to believe that any consultant, agent, intermediary or other person retained by me in connection with my work has violated, nor caused Howard to violate, any Anti-Corruption Laws.
6. I certify that I will continue to abide by Anti-Corruption Laws.
7. I confirm that should I learn of, or have reason to know of, any violations of the Anti-Corruption Laws in connection with Howard, I shall immediately advise Howard.
8. I understand and agree that any false certification is grounds for Howard to withhold payment (if any) and immediately terminate existing agreements between myself and Howard.
9. I further agree to promptly notify Howard if any of these certifications become false during the course of the business relationship between myself and Howard.
10. I understand that Howard may share with the U.S. Department of Justice or other government enforcement agencies any evidence that this certification is false or that I have otherwise breached my agreement with Howard.

 [PSN Signature]

 Date

ANNEX 2 | INTRODUCTION OF REBRANDING OF SOUTH AFRICA'S DDD PROGRAM (CCMDD) AS "DABLAPMEDS"

CCMDD: NHI initiative

dablapmeds

CCMDD has a new look. Introducing **dablapmeds**.

dablapmeds

Dear Task Team Member

CCMDD has been operational since 2014, and has grown exceptionally under its own strength to reach over 3.5 million registered patients. To take CCMDD to new heights, we have initiated a marketing campaign for the programme.

It is a great pleasure to introduce you to **dablapmeds**, the new brand for CCMDD. The rebranding is intended to create an amplified awareness of the CCMDD programme, make it more relatable to a larger audience and ultimately increase the number of patients that access the services provided by CCMDD.

We have collaborated with a large group of stakeholders and are eager to get the brand to market. The brand will be introduced in phases and various collateral will be shared with you and your team as we work through the phases. We are in a position to start the pilot as early as June 2020.

This project has been fast tracked in light of COVID-19, as we try to decant as many patients out of facility as we can, increasing the importance of patients' awareness of CCMDD, sorry **dablapmeds**. We would appreciate your support in this endeavour and look forward to a successful implementation together.



Ms M Munsamy
NHI Technical Specialist
Head: CCMDD

The shortcut to your chronic medication



Health
Department
Health
REPUBLIC OF SOUTH AFRICA



ANNEX 3 | EXAMPLE TOOLS FROM ESWATINI

I. Client Registration and Prescription Form

Facility _____ Date Capture in CMIS _____

CLIENT REGISTRATION & PRESCRIPTION



DOWN TIME FORM

Signature _____

| | | | |
|--------------|------------|---------------|---|
| Visit Date* | DD/MM/YYYY | Sex (tick)* | Male <input type="radio"/> Female <input type="radio"/> |
| Patient ID* | | First Name * | |
| Last Name* | | PIN # | |
| Birth Date * | | Cell Number * | |
| ART # | | | |

Patient Contact Details

Other Phone:

(which type?): Work Home

City/Town:

Box Number:

Postal Code (Example H123):

Country of origin:

(Residential address):

Inkhundla:

Chiefdom:

City/Town:

Nearest Clinic:

Nearest School:

Email:

Parent (if a child) or Relative/Next of Kin

Parent/Relative:

Full Name:

Mobile:

Contact Phone: Work Home Other

National ID (if known):

Date of Birth: / / /

Marital Status: single / married

Area:

(Village/Chiefdom):

City/Town:

Country:

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ANNEX 3 | EXAMPLE TOOLS FROM ESWATINI

III. DDD Job Aid

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|  The Kingdom of Eswatini Ministry of Health |
| JOB AID FOR DECENTRALIZED DRUG DISTRIBUTION |
| This guide is to be followed by all personnel who shall retrieve stock from the facility storeroom for Decentralized Drug Distribution. |
| ITEMS REQUIRED |
| 1. CMIS Patient list 2. Requisition Form 3. Stock Cards 4. DDD Requisition and Reconciliation Form 5. Prescription Form 6. Tally Sheet |
| BEFORE GOING OUT TO THE FIELD |
| 1. Determine the number of patients from the list of patients from CMIS. 2. Determine the treatment regimen that the patients are taking. 3. Calculate the total quantities per regimen in line with the patient numbers. 4. Add a provisional amount to cater for clients who might request for medication in the field (10% of the quantities taken per regimen). 5. Complete a DDD Requisition and Reconciliation Form (Column A to E) for the items required for retrieval from the storeroom. Columns A to E: Product name, Strength, Pack Size, Quantity received. 6. Update the stock card(s) for each item retrieved . |
| IN THE FIELD |
| 7. Ensure that stock is stored under suitable conditions and is secure. 8. Record all quantities of stocks dispensed to each client in the provided prescription form and tally the quantities as you dispense. 9. Calculate the total quantities dispensed in line with the patient numbers. 10. Record the Total Quantity Dispensed in Column F in the DDD Requisition and Reconciliation form. 11. Record the remaining stock quantities in the stock balances returned in Column G in the DDD Requisition and Reconciliation Form. |
| UPON RETURN FROM THE FIELD |
| 12. Once back at the facility, return all stock to the storeroom as indicated in the form. 13. Update the Stock Cards for the relevant items using balances from the DDD Requisition and Reconciliation Form 14. Make remarks and sign on Column H of the DDD Requisition and Reconciliation Form. |