

Focus on Multi-Month Dispensing of Antiretroviral Therapy among HIV-infected Patients in Kenya During the COVID-19 Lockdown Period

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Abstract

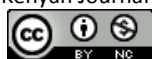
Introduction: Under WHO guidance, the U.S. President's Emergency Plan for AIDS Relief (PEPFAR) strongly encouraged countries to take prompt action to mitigate the potential negative consequences of COVID-19 on existing programs supported by PEPFAR grants. Multi-month dispensing (MMD) is a facility-based, individual-focused differentiated service delivery (DSD) model, in which recipients of care who are doing well on antiretroviral therapy (ART) receive larger amounts of ART at each visit, enabling their appointments to be spaced at longer intervals. The critical intervention for all programs and individuals was to accelerate and complete scale-up of 3 month dispensing of ART and decentralized distribution.

Methods: MMD was combined with appointment spacing and fast-track approaches to minimize the amount of time that PLWHIV needed to spend at health facilities. Continuity of treatment for PLHIV is the foundation of PEPFAR programs during the COVID-19 pandemic. Multi-month dispensing (MMD) and decentralized delivery of medication formed the basis of the PEPFAR strategy to maintain PLHIV on ART. PEPFAR recommended that ALL PLHIV who were starting ART receive at least 3 but preferably 6 months of drugs. Phone or electronic follow-up may be helpful to assess and support adherence and to assess and manage side effects.

Findings: Clients who were receiving medication from elsewhere regardless of their citizenship or immigration status, were provided medication. Every effort was made to trace individuals who had been lost to follow-up and provide them with the package of care and treatment that they required before COVID-19 disruptions worsened.

Conclusion: There was enough drug supply of ART in the country. All clients were sent SMS reminders to pick their MMD at various pick up points. Patients were also reminded basic COVID-19 prevention techniques like hand washing, observing social distancing and wearing face masks when picking their ART and the need to stay home and avoid unnecessary visits to the clinic. MMD was systematically introduced with good acceptance by patients since it reduced travel burden. MMD was feasible and decreased the number of patient encounters.

Key words: COVID-19, Lockdown, multi-month dispensing, ART



Introduction

Under WHO guidance, the U.S. President's Emergency Plan for AIDS Relief (PEPFAR) strongly encouraged countries to take prompt action to mitigate the potential negative consequences of Corona Virus Disease 2019 (COVID-19) on existing programs supported by PEPFAR grants. Particular attention was given to health worker protection, communication with affected communities, maintenance of essential services, supply chain coordination, early replenishment of stocks, disinfection of assets, and waste management. Differentiated care is a client-centered approach that simplifies and adapts HIV services across the cascade, in ways that both serve the needs of people living with HIV (PLHIV) better and reduce unnecessary burdens on the health system (PEPFAR, 2020). The health system implications of this client-centered approach are clear: when a health system adopts a more responsive model of care, tailored to the needs of various groups of PLHIV, it can allocate resources more effectively, provide better access for underserved populations and deliver care in ways to improve quality of care and life (Grimsrud et al., 2016).

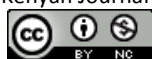
Multi-month dispensing (MMD) is a facility-based, individual-focused differentiated service delivery (DSD) model, in which recipients of care who are doing well on Anti-retroviral therapy (ART) receive larger amounts of ART at each visit, enabling their appointments to be spaced at longer intervals (Nascop, 2017). MMD was combined with appointment spacing and fast-track approaches to minimize the amount of time that PLWHIV needed to spend at health facilities. Continuity of treatment for PLHIV is the foundation of PEPFAR programs during the COVID-19 pandemic. Multi-month dispensing (MMD)

and decentralized delivery of medication formed the basis of the PEPFAR strategy to maintain PLHIV on ART. Minimizing patient contact with health facilities reduces risk to recipients of care and reduces the burden on these facilities. Health care facility visits were limited to those that are medically essential (PEPFAR, 2020).

The critical intervention for all programs and individuals was to accelerate and scale-up 3-6 multi-month dispensing of ART and decentralized distribution for all PLHIV including pregnant and breastfeeding women and children (CQUIN Learning Network, 2019). PEPFAR recommended that all PLHIV who were starting ART receive at least 3 but preferably 6 months of drugs. Phone or electronic follow-up may be helpful to assess and support adherence and to assess and manage side effects. Clients who were receiving medication from elsewhere regardless of their citizenship or immigration status, were provided medication. Every effort was made to trace individuals who had been lost to follow-up and provide them with the package of care and treatment that they required before COVID-19 disruptions worsened (Katureebe C, Ngugi C, 2020).

NASCOP and Ministry of Health guidance on MMD

The Kenyan ministry of health and implementing partners moved to scale up DSD for HIV treatment, using the MMD. MMD is defined as dispensing ART to a person living with HIV that can last 90-180 days. Partners and stakeholders including CDC, USAID, PEPFAR, Global Fund, WHO, IAS, ITPC, ALSM, implementing



partners, civil society, individuals living with HIV. By 1st March 2020, there were 1.3M PLHIV; 139,000 children. Majority 1.2M were ART. First COVID-19 case reported on 9th March 2020. As at Saturday, 9 May 2020, 649 COVID-19 confirmed cases, 207 recoveries and 30 deaths (Ministry Of Health, 2020a). Urgent considerations for the government were: The need to decongest facilities; Risk of transmission to health care workers (HCWS) in congested facilities; Severity COVID-19 in PLHIV; Possible diversion of HCW force to COVID-19 response; Effect of social distancing on some of models like operation triple zero (OTZ) clubs for adolescents community ART groups (CAGS); and commodity security.

After Kenya reported her first COVID-19 case, the ministry of health (MOH) and NASCOP issued the 'COVID-19 guidance for comprehensive HIV service delivery'. Key recommendations for DSD during COVID-19 were: issue 3 MMD of ART for all PLHIV regardless of age and viral load status; Promoted community ART groups (reduce facility congestion); Reviewed client flow by staggering visits during day or Weekend/adolescent clinics; ongoing (advise to keep brief); HIV Testing Services: advocated for self-testing; Facilities were also advised to forecast and order extra 2 months of ART from Kenya Medical Supply Agency (KEMSA); management of other chronic illnesses like tuberculosis and diabetes (Ministry Of Health, 2020a; PEPFAR, 2020).

Why MMD during the COVID-19 lockdown?

Early data suggest that longer follow-up intervals lead to improved retention in HIV clinics across Africa which are normally overloaded. More efficient means of

delivering ART to the maximum number of patients are needed. To reduce clinic workload and travel burden for eligible patients, the means should be convenient, cost-saving and one that improves efficiency of health systems (Wilkinson & Grimsrud, 2020). The overarching goal was to minimize patient contact with health facilities and reduce the burden on these facilities. Health facilities optimized clinic spaces in order to minimize potential exposure to COVID-19. Individuals with proven or suspected COVID-19 were separated from where care is provided to other clients. Dedicated HIV clinic spaces where they do not already exist may be useful in accomplishing this goal. Through phone calls or short message service (SMS), facilities staff were proactively communicating with HIV clients using positive messaging about the need to stay healthy. Facilities maximized convenient three-month refills where stock is available in the country pipeline (Katureebe C, Ngugi C, 2020).

Health care worker preparation ahead of MMD in the setting of COVID-19

The Ministry used a multi-pronged approach to implement MMD, starting with the formation of an expert panel and technical working group, and engagement of associations of people living with HIV. The Ministry then used that foundation to create guidelines, training and education materials, and job aides to assist health facilities introduce the model. Orientation provided for all service providers countrywide. This was a tailored training targeting nurses, clinical officers, doctors, laboratory professionals and Pharmacy professionals implementing partner technical officers. Series of weekly virtual training conducted virtually via ECHO platform on



Zoom (Ministry Of Health, 2020b) Jan 1, 2003 to June 30, 2016 WHAT: Dispensing of multi-month Dispensing of ART in line with respective country policies

Staff working in shifts to reduce congestion. HCWs were prepared to deliver the essential HIV services using service delivery teams were to be rapidly and regularly reconfigured in response to staffing shortages. Staff were prepared for task-sharing of essential services where allowed, and work with MOH and policy makers to allow emergency task-shifting where formal task-shifting policies were not in place. PEPFAR staff whose regular services had been temporarily paused or delayed (e.g., Voluntary Medical Male Circumcision (VMMC), roving Treatment Advocates-TA) were repurposed and redeployed to support essential HIV services (e.g., treatment services). Refresher trainings or build capacity in the new role through rapid training as necessary. Every effort was made to retain the health workforce, including repurposing into new roles to support HIV services for the duration of the pandemic and redesigning how services are delivered to make it safe for PEPFAR-supported staff to continue to work (Katureebe C, Ngugi C, 2020; PEPFAR, 2020).

ART supply chain management

PEPFAR prioritized continuity of therapy for recipients of care. Counties were to carefully evaluate stock on hand and projected availability to determine the best options for all PLHIV, either transitioning to newer regimens or maintaining on current regimens. If an individual is stable on the current regimen and stock is available, irrespective of bottle size, it may be reasonable to continue the current regimen. Counties were encouraged to submit orders well in advance, adjust supply plans for

longer leads times, distribute stock to clinics rather than holding it centrally and transparently communicate stock levels by regimen at the national and county levels to support planning. All ART patients not yet clinically stable were to receive a six-month prescription at their next scheduled appointment and a minimum 3-month treatment supply to ensure the most vulnerable PLHIV reduce health facility visits unless unwell (Katureebe C, Ngugi C, 2020).

Longer prescriptions were to allow for flexibility should it not be appropriate for patients to return to a health facility after three months. Where the DSD model was to take place in a facility, such as through fast track and facility adherence clubs, infection control and physical distancing measures were to be urgently put in place (e.g. triaging PLHIV with COVID-19 symptoms and providing their refills in separate area to other PLHIV), relocating refill collection to outside the facility buildings, advising and managing PLHIV queuing at least a meter and a half apart while waiting, and collecting treatment individually with no facilitated group interactions). A core priority was to ensure that PLHIV can leave the facility or community venue after the shortest possible time, ideally with a single point of contact (PEPFAR, 2020).

To avoid country level ART shortages facilities were to consider the following interventions:

Substituting products/formulations where necessary; Ongoing supply plan and inventory data (PPM/R) review to identify and respond to urgent need; Decentralized distribution approaches that include: Home deliveries, community or private pharmacies, pharmacy in a box and automated lockers. Order staggering to prevent delivery delays;



Prioritization exercises across Task Order and as feasible across procurers to ensure that the most urgent need is met and Reallocation of urgently needed orders to less impacted suppliers, as warranted and feasible (Wilkinson & Grimsrud, 2020).

Lessons learnt and changes in clinic flow to protect HCWs and patients during the pandemic

Waiting rooms can be a source of transmission for respiratory illness. Despite measures to maximally reduce the number of PLHIV coming for in-person facility visits, some visits will still be necessary.



Figure 1: Waiting room with sitting areas marked for physical distancing

Clinical appointments were staggered to avoid crowding and streamlining clinic flow so PLHIV do not interact with multiple HCW (e.g. avoiding multiple points of contact between PLHIV and HCW). Optimizing space to reduce close contact by marking sitting areas to enhance physical distancing (*Fig 1*). HIV patients were seen in clinics with dedicated spaces for HIV treatment services. Individuals with advanced disease represent a subset of PLHIV who require more intensive care, but they minimized health facility visits during COVID-19. All efforts were made to

maintain phone contact and to ensure that this group of individuals was seen when required. PLHIV with advanced disease were given MMD. Extra effort was taken to ensure that these fragile patients had enough medications to avoid unnecessary trips to the health facility. In addition, they were provided with all of the other medicines that they may need, such as cotrimoxazole and TPT (Barker et al., 2017; Ministry Of Health, 2016; Wilkinson & Grimsrud, 2020).



Pediatric and adolescent MMD in the setting of COVID-19

Programs made every effort to supply children and adolescents living with HIV (CLHIV/ALHIV) initiating and refilling ART with a 3-month supply of ART. Caregivers were allowed to pick up the child's medication without bringing the child, unless the child needed a clinical visit. For children requiring Cotrimoxazole, a 3-month supply was also provided at the same time as ART pickup. For children that were starting a new medication, administration of the first dose was demonstrated and administered in the clinic, particularly LPV/r-based formulations (liquids, pellets, granules, and 100/25mg tablets). Phone or electronic follow-up for pediatric clients (within 3-4 weeks) was emphasized and included assessment of medication dosing and administration, monitor adherence, and report adverse reactions. Adjustments for children under 6 months with rapidly changing weight requiring frequent dosage modification – those on lopinavir/ritonavir syrup- received maximum two month supply (syrup formulation because lopinavir/ritonavir requires refrigeration) (PEPFAR, 2020).

HIV prevention services that were kept operational within the physical distancing parameters of COVID-19

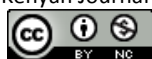
The following examples were considered based on populations at risk and budget availability: As facility teams prepared supply chain forecasts early, they ensured that condom and lubricant supplies were also increased both to account for the increased need, and because bulk packaging/delivery was necessary once shipments arrived (i.e. clients will no longer be able to take 1 or 2 condoms at a time

during a clinic visit or from a volunteer health care worker at a community gathering);

Packaging of condoms and lubricants were to be made in larger than normal quantities (akin to multi-month dispensing of ART) so that clients can obtain necessary supplies in sufficient quantities that allow them to minimize the number of collection visits they might need to make to a collection point. Distribution points or displays were modified in order to allow clients to pick up these products without touching or handling products for other clients (e.g. avoid bowls). Clients were also encouraged to clean anything they picked up from collection points (PEPFAR, 2020).

Enhanced adherence counselling combined with MMD

Enhanced adherence counselling sessions were offered on phone to all PLWHIV on phone. Booster adherence was also done to encourage PLWHIV disclose to their family members and arrange at least one treatment supporter for each client (among their own family members). Couple counselling was also done to sequence their follow-up visits so that each goes to the health facility every three months. Generally, clients were given health messages on medication storage techniques. Peer adherence support was done virtually via WhatsApp groups consisting of homogeneous members like adolescents (Ministry Of Health, 2020a).



Conclusion

There was enough drug supply of ART in the country. All clients were sent SMS reminders to pick their MMD at various pick up points. Patients were also reminded basic COVID-19 prevention techniques like hand washing, observing social distancing and wearing face masks when picking their ART and the need to stay home and avoid unnecessary visits to the clinic. MMD was systematically introduced with good acceptance by patients since it reduced travel burden. MMD was feasible and decreased the number of patient encounters.

References

- Barker, C., Dutta, A., & Klein, K. (2017). Can differentiated care models solve the crisis in HIV treatment financing? Analysis of prospects for 38 countries in sub-Saharan Africa. *Journal of the International AIDS Society*, 20 (Suppl 4). <https://doi.org/10.7448/IAS.20.5.21648>
- CQUIN Learning Network. (2019). Innovations in Differentiated Service Delivery Lessons from Ethiopia , Malawi , and Zambia Six-month Multi-month Scripting.
- Guidance in Context of COVID-19 Pandemic (Issue May, pp. 1–8).
- Wilkinson, L., & Grimsrud, A. (2020). The time is now: Expedited HIV differentiated service
- Grimsrud, A., Bygrave, H., Doherty, M., Ehrenkranz, P., Ellman, T., Ferris, R., Ford, N., Killingo, B., Mabote, L., Mansell, T., Reinisch, A., Zulu, I., & Bekker, L. G. (2016). Reimagining HIV service delivery: The role of differentiated care from prevention to suppression: The. *Journal of the International AIDS Society*, 19(1), 10–12. <https://doi.org/10.7448/IAS.19.1.21484>
- Katureebe C, Ngugi C, G. C. & G. C. (2020). Differentiated service delivery models. <http://programme.aids2018.org/Programme/Session/134>
- Ministry Of Health. (2016). Improving The Quality and Efficiency Og Health services in Kenya. <http://www.differentiatedcare.org/Portals/0/adam/Content/6ExZQGTZikegfDfhw5FSwg/File/Kenya-A-Practical-Handbook-for-HIV-Managers-and-Service-Providers-on-Differentiated-Care.pdf>
- Ministry Of Health. (2020a). Kenya_COVID - 19 GUIDANCE_3.24.2020 (1).pdf. NASCOP.
- Ministry Of Health. (2020b). MoH Letter-Digital COVID-19 Training for HCWs in Kenya.pdf (p. 2).
- Nascop. (2017). Differentiated Care: (Issue January).www.nascop.or.ke.
- PEPFAR. (2020). PEPFAR Technical delivery during the COVID-19 pandemic. *Journal of the International AIDS Society*, 2019–2021. <https://doi.org/10.1002/jia2.25503>

