ALTERNATIVE MODELS OF ART DELIVERY: OPTIMIZING THE BENEFITS

# MULTI-MONTH DISPENSING OF ANTIRETROVIRAL MEDICATIONS

## Evidence from a literature review of differentiated models of service delivery for HIV treatment in sub-Saharan Africa 2016-2019

## Background

- In sub-Saharan Africa, many countries are scaling up new service delivery approaches, or differentiated service delivery models, for the treatment of HIV. Among these differentiated models is multi-month dispensing (MMD), in which patients are dispensed 3-6 months of antiretroviral medications at a time, rather than having to return to the clinic or an external pick-up point every 1 or 2 months.
- Several countries currently recommend or are adopting 6-month dispensing for all eligible patients. In these countries, 3-month dispensing is considered standard of care, though shorter dispensing intervals are still common in practice. In other countries, 1-3 month dispensing remains the norm.
- The goals of MMD are to maintain patients' clinical outcomes and reduce the burden and costs of service delivery to both providers and patients. In this brief we ask what recent evidence is available to assess whether these expectations are being met.

## Sources

- From a systematic review we conducted of the published literature and international conference abstracts on DSD models for HIV treatment in sub-Saharan Africa between Jan 1, 2016[1] and Sept 12, 2019, we extracted reports of the outcomes of multi-month dispensing.
- We found fewer than half a dozen studies about MMD. Most described progress in introducing or scaling up MMD and implementation challenges and lessons, with no quantitative data on outcomes. All the MMD models were limited to adult patients who met criteria for treatment stability, typically viral suppression, ≥6 months on ART, and no acute conditions or co-morbidities.

## Findings

- **Only one source reported quantitative estimates of patients' clinical outcomes**. In Khayelitsha, South Africa, a cluster-randomized trial of 6-month dispensing through adherence clubs resulted in very high (97-98%) rates of both retention in care and viral suppression at 12 months, exactly the same outcomes as those in adherence clubs with 2-month dispensing[2]. An important aspect of this study is that patients enrolled in it were very experienced on ART, with a median of 7 years since treatment initiation.
- Two other sources reported the **impact of MMD on provider and patient burden and costs**. In Nigeria, the introduction of 3-month dispensing produced a 32% reduction in the number of patient/visits per day, compared to conventional 1-month dispensing[3]. In Malawi, 3-month dispensing was estimated to reduce provider costs by 10%, compared to 1-month dispensing; patients' travel costs fell from an average of $7.00 to $2.30 per year and the time they spent seeking treatment fell from about 75 hours to 25 hours per year[4].
- **Results of three additional studies of 6-month dispensing are expected by the middle of 2020** (see table on following page). With the South Africa study described above, which has already reported results, these new trials should greatly improve understanding of the implications of MMD for patients' clinical outcomes. (All three trials were conducted with support from PEPFAR and USAID, under the EQUIP Health program.)

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## Table. Anticipated studies on 6-month dispensing

| Country | Intervention | Trial name (principal investigator) | Further information |
|---|---|---|---|
| Malawi and Zambia | 3- and 6-mo refills at facilities compared to 1-3 mo refills at facilities | Varying intervals of antiretroviral medication dispensing to improve outcomes for HIV patients (INTERVAL) (Hoffman, R) | https://trialsjournal.biomedcentral.com/articles/10.1186/s13063-017-2177-z |
| Zimbabwe[5] | 3- and 6-mo dispensing in community ART refill groups compared to 3-mo refills at facilities | The effectiveness and cost-effectiveness of 3- vs. 6-monthly dispensing of antiretroviral treatment (ART) for stable HIV patients in community ART-refill groups in Zimbabwe (Fatti, G) | https://trialsjournal.biomedcentral.com/articles/10.1186/s13063-018-2469-y |
| Lesotho | 3-mo refills through community ART groups (CAGs) and 6-mo refills at community ART distribution points compared to 3-mo refills at facilities | Community-based differentiated models of multi-month dispensing of antiretroviral medication among stable HIV-infected patients in Lesotho (Faturiyele, I) | https://bmcpublichealth.biomedcentral.com/articles/10.1186/s12889-018-5961-0 |

## Conclusions

Despite widespread adoption of the MMD model, data on its outcomes remain scarce and insufficient to draw reliable conclusions about the impact of MMD on clinical outcomes. Some reductions in provider burden and patient costs are likely, but the magnitude will vary widely. New studies expected later in 2020 will help fill in the gaps, but additional research on MMD in routine implementation is needed to support ongoing implementation and improve service delivery models.

## References


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Also of interest:


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