

Time motion analysis for differentiated models of multi-month dispensing of antiretroviral treatment among stable HIV-infected adults in Lesotho

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Background

- Differentiated models of ART delivery play a crucial role in differentiated care, particularly in achieving the second and third 95 targets.
- The primary focus is to provide ART to stable PWH achieving viral load suppression – through community-based adherence groups, decentralized ART pick-up points, leading to reduced frequency of ART refills.
- Lesotho currently implements many of such DSD models including multi-month dispensing, teen clubs, community dispensing of ART using ATMs and lockers, etc.

Baseline

30 facilities
(clusters)
randomized

Districts

- Maseru,
- Mafeteng and
- Mohale's Hoek

(10 clusters, ~192 participants)

3-monthly
ART dispensing
at Facility

3MF: Control

3-monthly
ART dispensing
at CAGs

3MC

6-monthly
ART dispensing
at community
PuPs

6MCD

12 months follow-up

Adapted from Faturiyele *et al.*
BMC Public Health (2018)

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Study Design and Aim

- Pre-post non-participant observation approach
- Part of a larger cluster randomized trial (ClinicalTrials.gov: NCT03438370) *Faturiyele et al. BMC Public Health (2018)*

Time Motion Analysis

- The total time spent at the clinic
- Average time spent waiting for consultation
- Average time for consultation, prescription and dispensing
- Staff activity time per patient per visit

Results

Table 1: Average time spent at facility

Arm	Baseline	12 Months	% Reduction
3MF	02:39	01:50	30.8%
3MC	02:50	01:48	31.5%
6MCD	02:10	01:22	36.9%

Table 2: Average waiting time for consultation

Arm	Baseline	12 Months
3MF	02:00	01:18
3MC	02:00	01:21
6MCD	01:30	00:52

Results...

Table 3: Average time (minutes) for consultation and dispensing

Activity	Arm	Baseline	12 Months
Consultation	3MF	37	19
	3MC	36	18
	6MCD	33	23
Dispensing	3MF	3	12
	3MC	14	8
	6MCD	6	6

- Dispensing times were generally shorter than consultation waiting times across all models.
- The 3MC model had the longest dispensing time at baseline but showed improvement at 12 months.
- The 6MCD model maintained consistent dispensing times from baseline to 12 month

Table 4: Mean staff activity time per patient

Activity	3MF	3MC	6MCD
Adherence counselling	2.7	8.1	10.0
Patient consultation	4.3	9.0	4.7
Dispensing	1.5	8.7	2.0
Blood draw	3.0	5.3	5.9

- The community-based models, particularly the 6-month community drug distribution (6MCD) model, provided more time for adherence counselling compared to the facility-based model.
- The mean time spent on adherence counselling was 10.0 minutes for 6MCD, compared to only 2.7 minutes for the facility-based 3MF mode

Conclusion

- Community-based differentiated models of care
 - ✓ reduced waiting times at clinics,
 - ✓ provided more time for patient-provider interactions, and
 - ✓ allowed for increased time spent on critical activities like adherence counselling
- Overall, the 6MCD demonstrated the most significant reductions in waiting times for consultation and maintained efficient dispensing times, suggesting it may be the most time-effective model for patients

Implications for HIV care delivery

- **Reduced facility congestion:** community-based models (3MC and 6MCD) decongest health facilities and improve overall efficiency
- **Improved time management:** The study showed substantial reductions in waiting times, especially for the 6MCD model, indicating better time management and patient flow
- **Enhanced adherence counseling:** community-based models allowed for more time spent on adherence counseling compared to facility-based care. This could lead to reduced treatment interruption and better treatment outcomes

Implications for HIV care delivery...

- **Increased patient-provider interaction:** the community models provided more time for patient-provider interactions, which may have led to more efficient consultations and reduced overall waiting times
- **Task-shifting opportunities:** the study demonstrates the potential for task-shifting certain aspects of HIV care to community-based settings, allowing for more efficient use of healthcare worker time

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