

How do nurses spend their time? A time and motion analysis in the context of differentiated service delivery at primary public healthcare facilities in South Africa

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Background

- Differentiated service delivery (DSD) models are expected to reduce the time that clinicians spend with established ART clients and thus increase available provider time for non-DSD ART and non-ART clients.
- The actual use of provider time after DSD model implementation has not been reported.
- We measured healthcare provider time utilization in the context of DSD model implementation in South Africa.

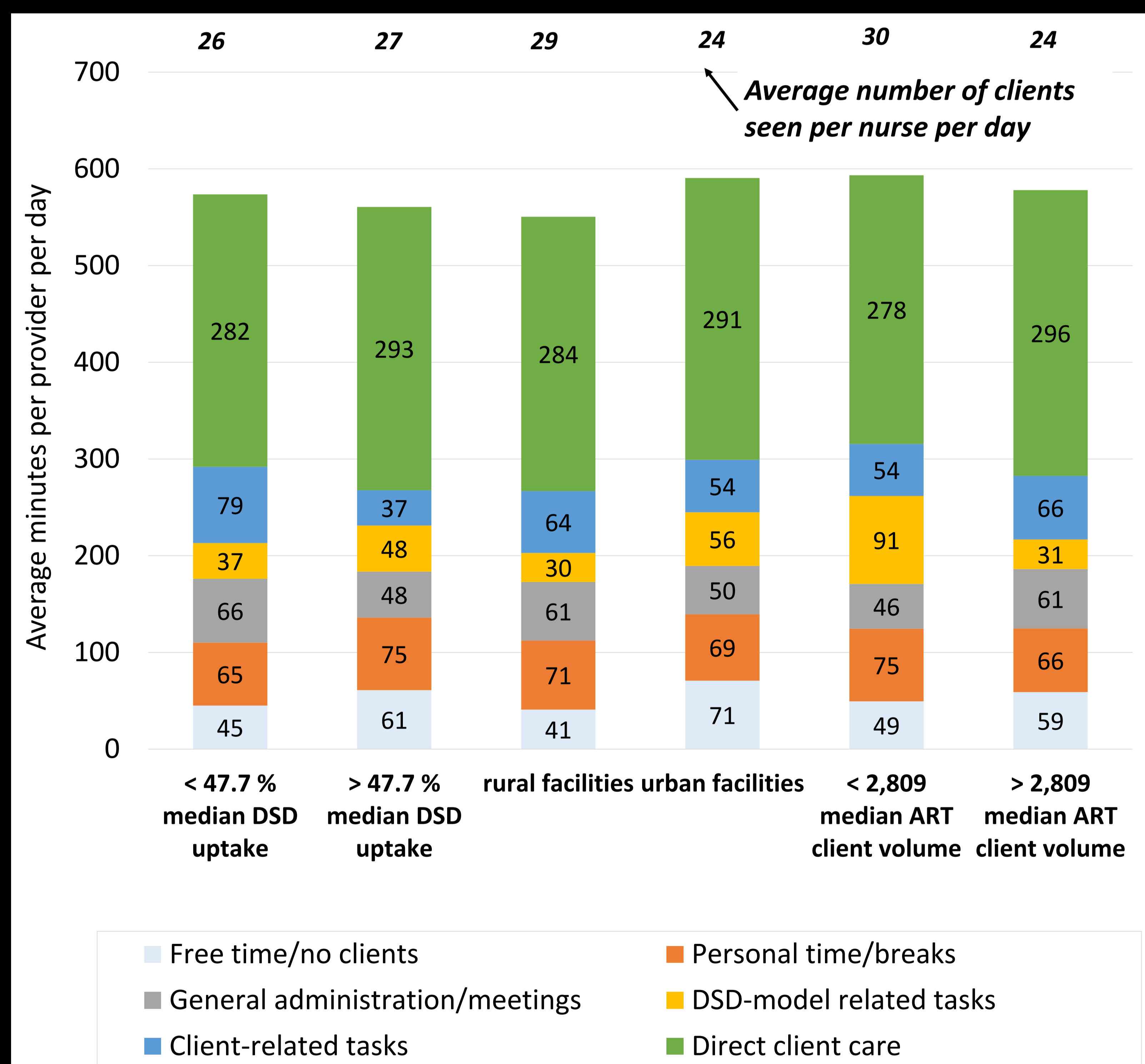
Nurses in facilities with high DSD uptake spent slightly less time on direct client care and more on related activities. They did not see more clients per day.

Methods

- Time and motion study at 10 primary clinics (5 rural and 5 urban) in 3 districts in South Africa.
- Nurses involved in ART delivery (n=34) were observed for a total of 61 working days between August and November 2021.
- Type and duration of activities were recorded.
- Estimated the average minutes spent per nurse per day on each activity and the average number of clients seen per nurse per day.
- Stratified by the proportion of a facility's ART clients enrolled in DSD models, facility setting, and facility size.

Activity/interaction type	Description
Direct client care	Consultation with clients or procedures such as laboratory testing or medication refills
Client-related tasks	Task such as delegation or retrieving clients information
DSD-model related tasks	Performing a DSD-model related task such as pre-packing medications or completing DSD records
General administration/ meetings	Performing administrative duties or attending staff meetings
Personal time/breaks	Personal time such as personal calls or work breaks including lunch
Free time/no clients	No interaction between provider or clients

Average minutes spent per activity day by nurses in South African clinics



Results

- Compared to facilities with low DSD model uptake, **nurses in facilities with high DSD model uptake:**
 - Worked slightly shorter days (-13 minutes)
 - Spent slightly more time on direct client care (+11 minutes).
 - Had more free time/breaks (+26 minutes)
 - Spent substantially less time on client-related tasks (-42 minutes) and general administration/meetings (-18 minutes)
- Low or high DSD model uptake did not meaningfully affect the average number of clients seen per nurse per day (26 and 27 clients, respectively).
- Nurses at facilities with below-median client volumes and in rural areas saw more clients per day.
- Nurses at rural facilities spent less time on DSD-related tasks and had less free time.

Limitations

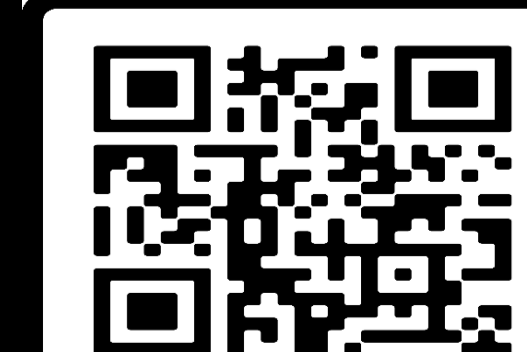
- Small number of study sites and participants.
- No perspectives from the participants who were observed.

Conclusions

- Nurses in facilities with high uptake of DSD models for HIV treatment spent less time on direct client care but more on related activities and did not see more clients per day.
- As DSD model implementation expands, effective reallocation of providers' time may enhance facility performance, reduce the amount of unproductive time each day, and diminish stress on frontline providers.
- Facility managers should be trained and supported to assess and reallocate staff time to improve facility performance as DSD model uptake increases.



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