

CCMDD IN SOUTH AFRICA: CLIENT COSTS OF SEEKING HIV TREATMENT

Background

- ❖ Many countries in sub-Saharan Africa and elsewhere are scaling up differentiated service delivery (DSD) models for HIV treatment, in order to improve health outcomes, achieve patient-centred care, and increase healthcare system efficiency.
- ❖ South Africa introduced its decentralized Central Chronic Medicine Dispensing and Distribution (CCMDD) programme in 2014. CCMDD offers three main DSD models for established ART patients, facility-based medication pickup points, external (community-based) medication pickup points, and adherence clubs.
- ❖ The impact of CCMDD on costs faced by ART patients for transportation and time has not been well documented. This brief presents data from the AMBIT Project's SENTINAL 1.0 survey of ART clients' costs in CCMDD and in conventional care.

Methods

- ❖ From September 2021-February 2022, AMBIT conducted the first round of the SENTINEL survey of ART clients at 6 public sector clinics in King Cetshwayo District (KZN, n=239), 6 in Ehlanzeni District (MP, n=245), 6 in West Rand District (GP, n=234), and 3 in Ekurhuleni District (GP, n=132). (Table 1)
- ❖ Survey respondents were asked about the costs they incurred per clinic visit and per external healthcare system interaction (e.g. per medication collection from a CCMDD external pickup point) and the number of facility and off-site (external) interactions conducted per year in care.
- ❖ Self-reported costs for transport and time were estimated per 12-month period enrolled in CCMDD models and conventional care. (All clients not in conventional care were assumed to be in CCMDD.) Time was valued at R19/hour, equivalent to 75% of the minimum wage.
- ❖ The clinic charts (TIER.Net records) of a subset of ART clients surveyed were also reviewed to estimate numbers of clinic visits in the one-year period preceding study enrollment.

Results

Table 1. Respondent characteristics

Variable	Value
N	850
Sex (female)	70%
Age (median, IQR)	39 (33-47)
Employed (formally, informally, or self)	47%
How easily could you access R100 for treatment or medications?	
Very difficult	23%
Difficult	40%
Easy	30%
Very easy	7%
Number of years on ART (median, IQR)	5 (3-8)
Other conditions treated at this facility (yes)	19%
Model of care (proportion of sample)	
Conventional care, not eligible for CCMDD	25%
Conventional care, eligible for CCMDD	25%
Facility-based pickup points	21%
External pickup points	21%
Adherence clubs	2%
Pele boxes or lockers	6%

Table 2. Self-reported numbers of facility visits and off-site interactions per year

Model of care	N	Mean (SD) self-reported health system interactions/client/year		
		Number of facility visits*	% reporting ≥1 out-of-facility interactions	Number of out-of-facility interactions if ≥1†
All facility conventional care				
Ineligible for CCMDD	216	8.0 (3.3)	n.a.	n.a.
Eligible for CCMDD	209	7.4 (3.4)	n.a.	n.a.
DMOC models				
Facility pickup point	180	6.7 (2.1)	**	**
External pickup point	179	5.3 (2.8)	63.1%	4.3 (1.3)
Adherence club	16	7.8 (2.6)	37.5%	4.3 (0.8)
Pele box or locker	50	6.9 (2.1)	8.0%	4.3 (0.5)

*Includes clinical consult visits and medication pick up visits at the facility. †Among those who reported ≥1 out-of-facility interaction.

**5.6% of clients enrolled in facility pickup points also reported out-of-facility interactions (average of 3.0/year for those reporting >0). This may be a data error or reflect transfers between models.

Table 3. Self-reported time and transport costs per year (median, IQR)

Model of care	N	Time spent (hours)/year			Transport costs (ZAR)/year		
		Transport	Receiving services (at clinic or pickup point)	Total hours/year	Time value/year (ZAR 75% min wage)	% incurring any transport costs	Transport costs per client incurring any transport costs/year
All facility conventional care							
Ineligible for CCMDD	216	6.0 [3.0, 12.0]	24.0 [14.0, 36.0]	30.0 [20.0, 47.0]	570	38.4%	208 [120, 288]
Eligible for CCMDD	209	6.0 [3.0, 10.5]	21.0 [12.0, 30.0]	28.5 [18.0, 42.0]	541	45.0%	180 [131, 297]
DMOC models							
Facility pickup point	180	6.0 [4.0, 9.3]	12.5 [8.9, 21.5]	19.3 [14.1, 27.5]	366	41.7%	168 [131, 213]
External pickup point	179	6.0 [4.0, 12.0]	10.2 [8.0, 13.4]	18.1 [12.9, 24.6]	344	48.0%	165 [104, 230]
Adherence club	16	5.2 [2.2, 13.0]	20.2 [10.6, 22.8]	22.9 [18.1, 31.0]	435	18.8%	226 [183, 425]
Pele box or locker	50	5.0 [3.3, 8.0]	9.8 [8.9, 12.5]	14.9 [11.9, 21.8]	283	50.0%	210 [154, 256]

Table 4. TIER.Net v. self-report: facility visits and off-site interactions per year for linked records*†

Model of care	N	Mean (SD) health system interactions/client/year			
		Facility visits as reported in TIER.Net**	Number of self-reported facility visits	Number of self-reported out-of-facility interactions	Total self-reported visits + interactions per year
All facility conventional care					
Ineligible for CCMDD	79	7.2 (2.5)	8.2 (3.3)	n.a.	8.2 (3.3)
Eligible for CCMDD	74	7.0 (2.4)	7.8 (2.8)	n.a.	7.8 (2.8)
DMOC models					
Facility pickup point	67	5.6 (2.8)	7.1 (2.4)	††	7.1 (2.4)
External pickup point	61	4.0 (1.5)	5.1 (2.8)	3.0 (2.2)	8.0 (3.4)
Pele box or locker	24	3.7 (1.5)	6.7 (1.9)	n.a.	7.2 (2.2)

*Only 312 of the 850 surveyed clients could be linked to TIER.Net records. †No adherence club participants could be linked to TIER.Net.

**Interval captured in TIER.Net is 14 months, not 12 months in self-reported data (so may overestimate visits reported in TIER.Net).

††Clients enrolled in facility pickup points also reported an average of 0.15 out-of-facility interactions/year. This may be a data error or reflect transfers between models.

Discussion and conclusions

- ❖ Compared to clients eligible for CCMDD but remaining in conventional care, facility and external pickup point users reported an average of 1-2 fewer facility visits per year; numbers of out-of-facility interactions varied by model.
- ❖ CCMDD clients spent substantially fewer hours seeking care per year, generally saving at least one full day; transport costs did not vary widely between CCMDD and conventional care.
- ❖ TIER.Net generally records fewer facility visits than clients report. The discrepancy is large only for external pickup points and lockers, for which medication pickups are not captured in TIER.
- ❖ Based on these limited data, CCMDD appears to reduce facility visits modestly and reduce client time use substantially.

