

DIFFERENTIATED SERVICE DELIVERY FOR HIV CARE: THE FAST TRACK EXPERIENCE FROM ZAMBIA #1020

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Background

- Differentiated service delivery (DSD) models are designed to lower barriers to HIV care for people living with HIV (PLWH)
- In 2017, we implemented a DSD model known as 'Fast Track' within Zambia's HIV program that provided PLWH stable on ART (defined as WHO stage I/II disease, on ART ≥ 6 months, and CD4+ >200 or viral load suppression [VLS]) with expedited clinical services. Expedited services included a dedicated clinician and pharmacy team situated in a separate part of the clinic to review the patient, screen for opportunistic infections, and dispense 3 months of ART.
- We report Fast Track outcomes for the first 2 years of implementation

Methods

- Objective:** To estimate the effect of the Fast track DSD model on outcomes of retention in HIV care and viral load suppression
- Design:** A retrospective cohort study
- Setting:** 14 high-volume (>3,000 patients on ART) clinics in Lusaka
- Population:**
 - Patients 15–59 years who started ART any time from January 1, 2010 at any of the 14 high-volume clinics
 - Fast Track group: All patients in Fast Track from the time of its inception on January 1, 2017 through September 30, 2018
 - Routine care group: All Fast Track eligible patients who did not join Fast Track
- Procedures:**
 - Records of eligible patients from Zambia's electronic health record, SmartCare, were reviewed and data abstracted
 - Period of review was January 1, 2017 through September 30, 2018
- Outcomes:**
 - 6- and 12-month retention in care (i.e. any visit within 90 days of their 6- and 12-month post-ART initiation anniversaries);
 - Viral load suppression defined as VL threshold of <1,000 copies/ml
- Analyses:**
 - Comparison of patient characteristics between groups (Table 1);
 - Random-effects log binomial regression modeling to estimate the relative risk of retention in care for Fast Track versus non-Fast Track patients (Table 2)
 - Ethics: The study protocol was approved by: Zambia National Health Research Authority, University of Zambia Biomedical Research Ethics Committee, CDC, and the University of North Carolina IRB

Retention in HIV care and viral load suppression were superior among patients receiving care through the 'Fast Track' DSD model than those who received routine care

Results

- During the review period, 3,671 patients participated in Fast Track and 83,764 patients did not.
- Compared to patients who did not receive Fast Track, Fast Track patients were more likely to be:
 - female (64.9% vs 62.3%)
 - ≥35 years (70.9% vs 60.2%)
 - on ART ≥24 months (77.6% vs 73.6%) (Table 1).
- There was no difference in the proportion with WHO I/II disease (72.6% vs 72.4%).
- Fast Track patients were more likely to be retained at 6- and 12-months and to achieve VLS at 6-months (p<0.001) (Figure 1).
- After adjusting for clinic, age, sex, WHO stage, and time on ART, Fast Track patients were 1.23 and 1.49 times as likely to be retained in care as non-Fast Track patients at 6- and 12-months, respectively (p<0.001).

Table 1. Characteristics of patients by group.

Characteristics	Routine Care ¹ n (%)	Fast Track n (%)	p-value
Sex			
Male	31,551 (37.7)	1,287 (35.1)	0.001
Female	52,213 (62.3)	2,384 (64.9)	
Time on ART (months)			
6-11	7,930 (9.5)	320 (8.7)	<0.001
12-23	14,216 (17.0)	502 (13.7)	
24+	61,618 (73.6)	2,849 (77.6)	
Age (years)			
15-24	6,526 (7.8)	134 (3.7)	<0.001
25-34	26,833 (32.0)	935 (25.5)	
35-44	33,699 (40.2)	1,593 (43.4)	
45-59	16,706 (19.9)	1,009 (27.5)	
WHO Stage			
1	45,803 (54.7)	1,928 (52.5)	0.001
2	14,812 (17.7)	738 (20.1)	
3	21,757 (26.0)	954 (26.0)	
4	1,392 (1.7)	51 (1.4)	
Total	83,764 (100)	3,671 (100)	

¹ NonFast Track patients who started ART on or after Jan 01, 2010 in the same facilities

Table 2. Effect of the Fast Track model on retention in HIV care.

Group	Total N (%)	³ Retained at 12 months		⁴ Viral Load Suppression	
		n (%)	RR; p-value	n with VLS/ n VL (%)	RR; p-value
Routine Care¹	83,764 (95.8)	50,679 (60.5)	ref	11,083/12,441 (89.1)	ref
Fast Track²	3,671 (4.2)	3,284 (89.5)	1.52; <0.001	1,754 (95.0)	1.07; <0.001

¹ Patients living with HIV who started ART on or after January 01, 2010

² Patients living with HIV who started ART on or after Jan 01, 2010 and received the Fast Track model between January 1, 2017 and September 30, 2018 in the same facilities

³ Assessed as having a documented encounter within 90 days of a scheduled appointment

⁴ Any viral load measurement from 6 months on ART and onward

* Estimates were adjusted for sex, time on ART, age, and WHO stage; Standard errors were adjusted for clustering of facilities using random effects Poisson regression

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Figure 1. Retention in care and viral load suppression.

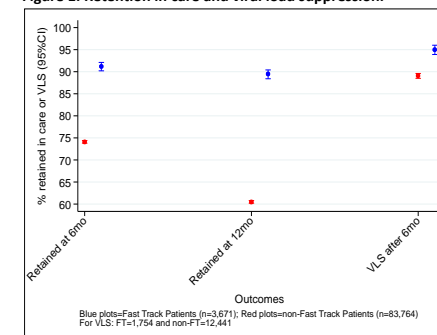
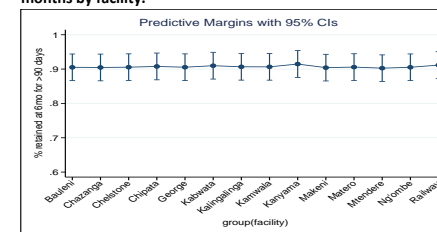


Figure 2. Percentage of Fast Track patients retained in care at 6 months by facility.



Conclusions

- New DSD models, such as Fast Track, hold promise for increasing care retention and VLS among stable ART patients in routine HIV treatment programs in Zambia.

Limitations

- Due to limitations with routine data, we could not control for CD4, months of ART dispensed, and other confounders.



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