The impact of co-pay cards for ART on persons with HIV followed at a Montreal outpatient clinic (Canada): Results from the McGill University Health Centre

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Introduction

Background: Many Quebec residents must pay a portion of the costs of prescription drugs up to a maximum of 1,000 CAD annually. Several pharmaceutical companies have created co-payment programs to assist persons with HIV who have financial difficulties. Assistance is provided to either cover the monthly contribution for antiretroviral therapy (ART) or to supply ART free of charge in the absence of insurance coverage. However, little is known regarding the impact of co-payment support programs on persons with HIV in Canada.

Hypothesis: Co-payment assistance programs help to improve HIV biomedical parameters for persons with HIV who receive them. We also hypothesize that the use of co-payment support programs improve retention in care for persons with HIV.

Aim: To investigate the impact of co-pay programs on biomedical markers of HIV, and to identify the main reasons for requiring such financial support to access ART.

Methods

1. Persons with HIV receiving care at the McGill University Health Centre (MUHC), Montreal, Quebec who registered to a co-payment support program in 2017, were selected for this study. Subject-level data were extracted from the MUHC database.
2. Two observation periods were considered for each participant: six months prior to and after the registration in a co-payment support program.
3. To assess the short-term effect of the co-payment program on HIV biomarkers (i.e., CD4 cell count and log10 HIV RNA viral load (VL)), we used a mixed-effects linear regression model with a random intercept for each person and a binary indicator identifying the observation period (i.e., before vs. after registration to the co-payment support program. Secondary analyses were undertaken to document use of on-site pharmacy services, again before and after, registration in co-payment support program.

Results

Overall, 63 persons with HIV were included, 24 of whom were female.

1. Reasons for seeking co-payment support include financial difficulties (46%), no health insurance coverage (43%), and unstable coverage (11%).
2. Financial support was mostly provided for FTC/TAF (20), followed closely by EVG/COBI/FTC/TAF (16). Financial support was also provided for DTG/ABC/3TC (10), DTG based regimen (6), and EVG/COBI/TDF/FTC (9).
3. The six-month follow-up period was associated with an increase of 15 CD4 cells (95% CI: -42, 71) and a decrease of 0.7 log10 copies of HIV RNA (95% CI: -1.1, -0.4).
4. The number of persons with undetectable HIV RNA (≤50 copies) remained relatively stable over time as did the number of on-site pharmacy visits.

Result

Table 1: Patient characteristics

	n (%)	Median (Q1 ; Q3)	Min	Max	Missing
Total number of patients enrolled	63	-	-	-	-
Age	-	51.9 (43.4 ; 59.0)	21	75.4	0
Female	24 (38%)	-	-	-	-
Comorbidities					
History of AIDS	6 (10%)	-	-	-	-
Hepatitis C co-infection	6 (10%)	-	-	-	-
Type of insurance					
Public plan	22 (35%)	-	-	-	-
Private plan	19 (30%)	-	-	-	-
Other	4 (6%)	-	-	-	-
Not insured	19 (30%)	-	-	-	-
Reason for receiving copayment financial support					
No insurance coverage	27 (43%)	-	-	-	-
Unsuitable insurance coverage	8(11%)	-	-	-	-
Financial reasons	29 (46%)	-	-	-	-
Unknown reason	0 (0%)	-	-	-	-
Drug company issuing the support					
Gilead	48 (76%)	-	-	-	-
ViiV	16 (25%)	-	-	-	-
Merck	3 (5%)	-	-	-	-
Treatment at the time the financial support was received					
EVG/COBI/FTC/TAF	16 (25%)	-	-	-	-
FTC/TAF	20 (32%)	-	-	-	-
DTG/ABC/3TC	10 (16%)	-	-	-	-
EVG/COBI/TDF/FTC	9 (14%)	-	-	-	-
DTG	6 (10%)	-	-	-	-
Raltegravir	2(3%)	-	-	-	-
Changed treatment to access financial supp	5 (8%)	-	-	-	-
CD4 count when joined clinic	-	266 (128 ; 563)	67	864	3
CD4 count when financial suport was receiv	-	496 (296 ; 721)	41	1 460	7
> 350	37 (59%)	-	-	-	-
≤ 350	19 (30%)	-	-	-	-
Unknown	7 (11%)	-	-	-	-
HIV VL when financial support was receive	-	10.0 (0.00 ; 40.0)	0	74 700	7
Detectable (> 50 copies)	13 (21%)	-	-	-	-
Undetectable (≤ 50 copies)	43 (68%)	-	-	-	-
Unknown	7 (11%)	-	-	-	-
CD4 count at end of follow-up	-	464 (264 ; 743)	48	2 000	15
> 350	32 (51%)	-	-	-	-
≤ 350	16 (25%)	-	-	-	-
Unknown	15 (24%)	-	-	-	-
HIV viral load at end of follow-up	-	0.00 (0.00 ; 20.0)	0	42 500	14
Detectable (> 50 copies)	4 (6%)	-	-	-	-
Undetectable (≤ 50 copies)	45 (71%)	-	-	-	-
Unknown	14 (22%)	-	-	-	-

Conclusion

The provision of co-payment financial support to facilitate access to ART was associated with beneficial short-term (six-months) effects on HIV biomarkers.

Expected outcomes of the study

1. Reducing financial barriers to access ART for persons with HIV who are unlikely to remain adherent to the treatment.
2. Improve retention in the care of persons with HIV who are unable to access ART.

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