

Interventions to improve treatment adherence in migrant people living with HIV in the Netherlands: feasibility and efficacy

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Background

Non-adherence to combination Antiretroviral Therapy (cART) is more common in non-Western migrants living with HIV (MLWH) than in Dutch people living with HIV (DPLWH). This was shown to be secondary to psychosocial factors like more depressive symptoms, feelings of HIV-related stigma, low social support, quality of life and disclosure concerns. Non-adherence has been associated with more virological failure and missed clinical appointments. The objective of this study was to evaluate the feasibility and efficacy of 4 different interventions to improve adherence among MLWH.

Methods

All MLWH visiting the HIV-treatment centers in Rotterdam were asked to participate and fill out questionnaires before and after the interventions to collect information about, among others, demographics, social support, HIV-related stigma, treatment adherence, treatment adherence self-efficacy and quality of life. Additionally, clinical characteristics were collected. The 4 interventions were: Directly Administered Antiretroviral Therapy (DAART), medical group consultation, early detection and treatment of depression, and peer support. Uni- and multivariable analyses were conducted on baseline data from patients who used cART >6 months. The Wilcoxon matched-pairs test, paired samples T-test, McNemar test, and McNemar-Bowker test were used to compare data of the 2 questionnaires.

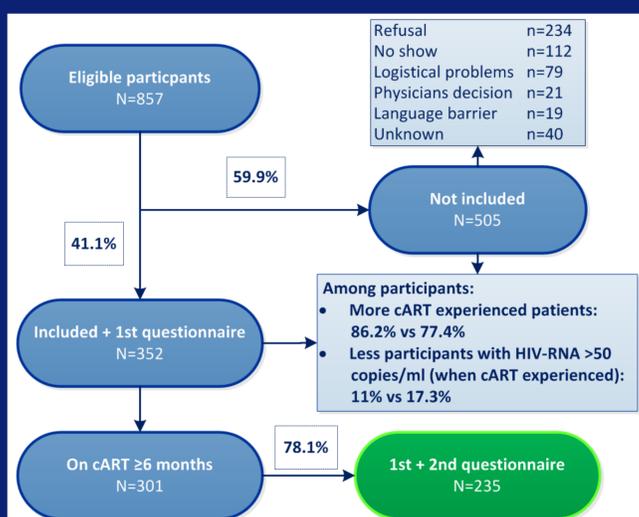
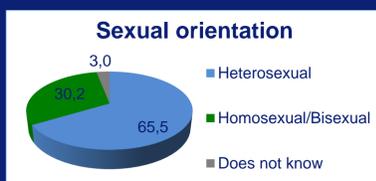
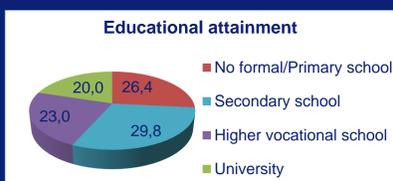
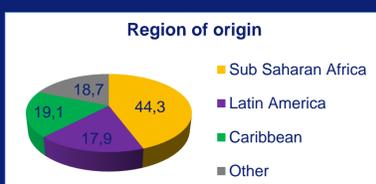


Figure 1. Flow diagram of patient inclusion



Results

352 patients were included (41% of the eligible MLWH) of whom 301 used cART >6 months (figure 1). 49.4% of the patients was self-reported adherent and HIV-RNA was detectable in 11%. Non-adherent patients experienced less social support, treatment adherence self-efficacy and had a lower educational attainment. The second questionnaire was filled out by 235 (78%) patients. Self-reported adherence increased significantly from 49.4% to 57.0% ($p < 0.05$) (Table 1). A marginally significant decrease was shown of 10.2% to 6.8% of patients with a detectable HIV-RNA ($p = 0.12$).

Interventions tested between July 2013 – July 2015

Peer Support Project	Medical group consult
 <ul style="list-style-type: none"> • Trained peers: 20 • Matches with migrant PLWH: 41 	 <ul style="list-style-type: none"> • Participants: 28 in 5 groups consults • ROAD participants and non-participants • Mean grade for the group consult: 8.2 out of 10!
Early screening and treatment of depression	Directly Administered Antiretroviral Therapy (DAART)
 <ul style="list-style-type: none"> • Hospital Anxiety and Depression Scale: 307 • At risk for a depression based on HADS: 106 • Referred to a psychologist: 23 	 <ul style="list-style-type: none"> • Participants: 3 • Most eligible participants refused this intervention

Table 1: Socio-demographic characteristics and psychosocial variables

N=235	Q1	Q2	P - value	
HIV-RNA >50 copies/ml (%)	24 (10.2)	16 (6.8)	0.12 ^d	
Living situation (%)			0.23 ^e	
With family	90 (38.3)	81 (34.5)		
Alone	85 (36.2)	96 (40.9)		
Single parent	45 (19.1)	44 (18.7)		
Other	15 (6.4)	14 (6.0)		
Employment status (%)			0.23 ^e	
Paid employment	93 (39.6)	89 (37.9)		
Unemployed	67 (28.5)	62 (26.4)		
On sick leave	26 (11.1)	25 (10.6)		
Other	49 (20.9)	59 (25.1)		
Alcohol in the past 30 days (%) ^a	131 (55.7)	122 (51.9)	0.37 ^d	
Alcohol use ≥3 days/week (%) ^a	41 (17.4)	35 (14.9)	0.42 ^d	
Drugs in the past 30 days (%) ^a	39 (16.6)	36 (15.3)	0.72 ^d	
Drugs use ≥3 days/week (%)	24 (10.2)	23 (9.8)		
Psychosocial variables (median, IQR)				
Social support ^a	75 (40.6-90.6)	68.8 (43.8-87.5)	0.89 ^b	0.97 ^c
Internalized HIV-related stigma ^a	15 (12-19)	14 (11-18)	<0.01 ^b	<0.01 ^c
Treatment adherence self-efficacy ^a	105.5 (91.8-116.0)	106 (89.8-115)	0.91 ^b	0.93 ^c
Quality of life (physical) ^a	51.3 (40.7-56.2)	50.4 (41.7-55.6)	0.29 ^b	0.36 ^c
Quality of life (mental) ^a	49.0 (38.9-57.3)	48.8 (37.8-56.3)	0.83 ^b	0.84 ^c
Self-reported adherence (%) ^a				
I – Adherent	81 (34.5)	96 (40.9)	<0.10 ^d	
I – Non-adherent	152 (64.7)	135 (57.4)		
II – Adherent	108 (46.0)	121 (51.5)	0.15 ^d	
II – Non-adherent	125 (53.2)	110 (46.8)		
III – Adherent	116 (49.4)	134 (57.0)	<0.05 ^d	
III – Non-adherent	117 (49.8)	97 (41.3)		

IQR, Interquartile Range.

^a Missing values: alcohol or drugs in the past 30 days (1), alcohol use ≥3 days/week (1), social support (5), internalized HIV related stigma (9), treatment adherence self-efficacy (33), physical quality of life (9), mental quality of life (9), self-reported adherence (2) ^bWilcoxon matched-pairs test; ^cPaired samples T-test; ^dMcNemar; ^eMcNemar-Bowker

Conclusion

In MLWH, DAART and medical group consultation were not feasible interventions. Despite the fact that only a minority of patients had a referral for depression or peer support, self-reported adherence and undetectable HIV-RNA in the total group increased. Although the 'Hawthorne effect' cannot be excluded, our data suggest that attention for depressive symptoms and low social support increases treatment adherence in MLWH.