

Impact of social determinants of health on adherence rate to antiretroviral therapy in the clinical setting

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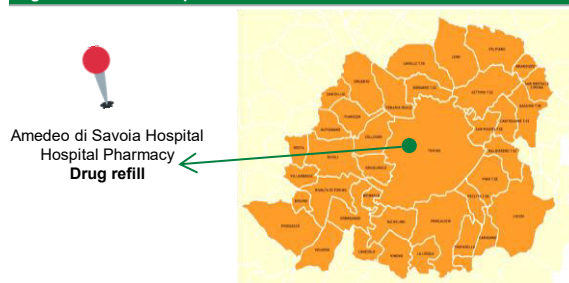
Introduction/Summary

- Medication adherence plays an important role for people living with HIV (PLWH) to achieve and maintain the treatment goal of viral suppression.
- In this study we evaluated the rate of adherence with PDC (Proportional of Days Covered) to antiretroviral (ARV) single tablet regimens (STR) to determine if demographic factors as ethnicity, gender, habits, hospital pharmacy proximity and drug refills impact the odds of achieving viral suppression.

Methods

- Experienced participants administered with triple regimens as Bictegravir (BIC/F/TAF), Darunavir (DRV/c/F/TAF) and Rilpivirine (RPV/F/TAF) and dual as Dolutegravir/Lamivudine (DTG/3TC) and Dolutegravir/Rilpivirine (DTG/RPV) were included in this retrospective observational study.
- Drugs were dispensed by hospital pharmacy
- Drug refills were used to calculate PDC as cumulative adherence during all the period of follow-up and periodic adherence defined as a mean of the adherence calculated between two ARVs refills from 2018 to 2023.
- All demographic factors were collected at baseline.
- Participants characteristics were compared by Mann-Whitney and Chi-square test as appropriate.
- Descriptive analyses were expressed as geometric mean (CI95%).

Figure 1 – Turin Metropolitan Area and its first urban belt



Results

- 540 participants were included in the study with a mean FU time of 1166 (1136,5 - 1195,4) days.
- 18,3% on BIC/F/TAF, 19,4% DRV/c/F/TAF, 20,9% RPV/F/TAF, 20,9% DTG/3TC, 20,4% DTG/RPV.

CLINICAL SETTING

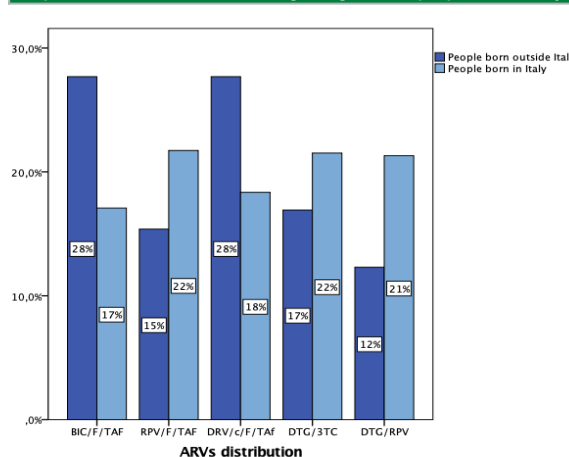
A significant lower cumulative and periodic adherence was observed among participants:

- living outside the Turin metropolitan area (first urban belt) ($p=0.044$ and $p=0.034$);
- foreigners ($p=0.035$);
- intravenous drug users (IVDU) ($p=0.001$ and $p=0.005$);
- dyslipidemic people ($p=0.006$).

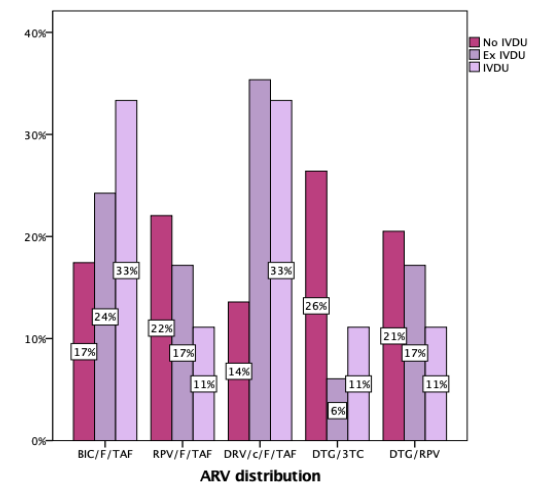
Table 1 - Demographic and clinical characteristics of study population (n=540)

N = Total	540
3DR, n (%)	317 (58,7)
2DR, n (%)	223 (41,3)
Sex male, n (%)	419 (77,6)
Age, median (IQR)	50 (42-56)
VL < 200 cp/mL, n (%)	500 (92,6)
Italian nationality, n (%)	474 (87,9)
Any other country, n (%)	66 (12,1)
People living in the first urban belt, n (%)	78 (15,2)
Comorbidity	
Current drug addiction, n (%)	9 (1,8)
History of IVDU, n (%)	99 (18,3)
Dyslipidemia, n (%)	151 (30,3)
Ex drug addiction, n (%)	99 (19,9)

Graphic 1 – ARVs distribution among foreigners and people born in Italy



Graphic 2 – ARVs distribution among IVDU, No IVDU and Ex IVDU



Similar results were also obtained by calculating the periodic and cumulative adherence values, in the same clinical setting, for population with a viral load (VL) < 200 cp/mL. In particular, we found that among previous and current intravenous drug users (IVDU) triple ARV regimen TAF-including, as BIC/F/TAF and DRV/c/F/TAF, were the most prescribed.

Conclusions

- In our study we observed a **lower rate of adherence** in a subset of **fragile people** with socio-demographic factors impactful on **access to drug refill**.
- People **living outside metropolitan area, foreigners and current IVDU** resulted have a negative impact on adherence and consequently on viro-suppression.
- The higher prescription of triple ARV regimens BIC and DRV/c-including showed a clinicians' choice of a more forgiving regimen.
- Our hospital pharmacy is evaluating the implementation of new patient care models, such as **home delivery projects** or facilitated access to therapy including **decentralization of drug refill** in distribution points near PLWH residence.

Affiliations

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