Comparable Viral Suppression Outcomes With Single-Tablet and 1st Line Multi-Tablet HIV Regimens

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BACKGROUND

- Single-tablet regimens (STR) are widely used to treat HIV infection.
- Compared with once-daily multi-tablet regimens (MTRs), STRs generally cost more.
- Whether contemporary, once-daily STRs lead to higher levels of viral suppression than once-daily, two-tablet MTRs is uncertain.

METHODS

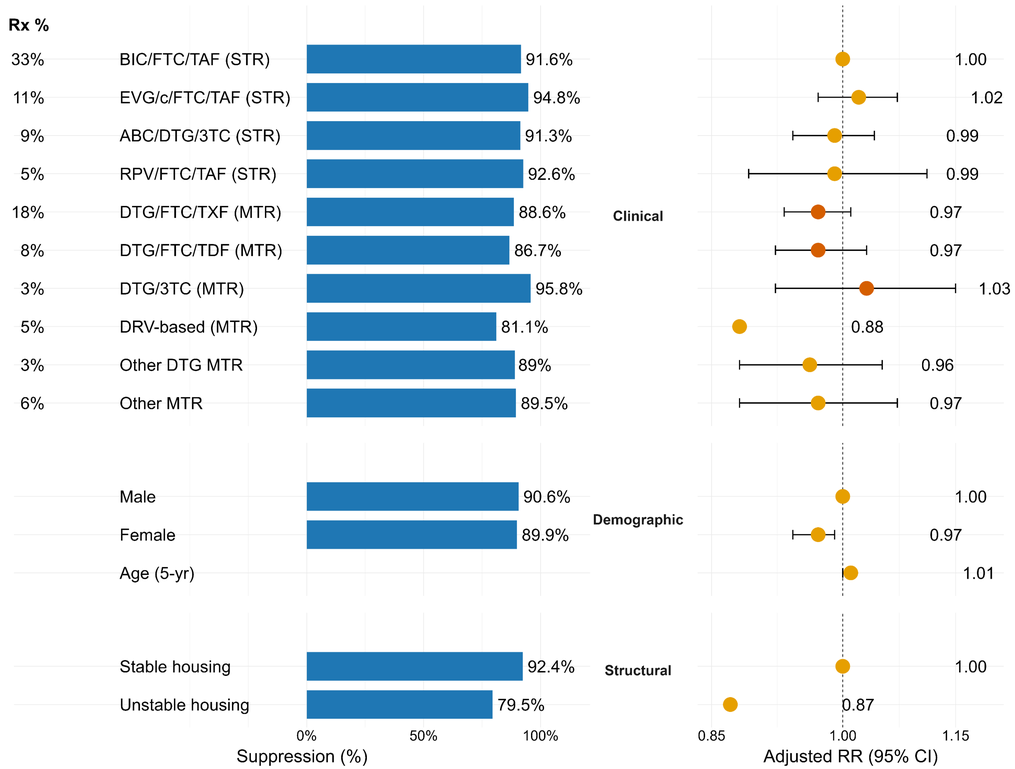
- Medicaid claims data were linked to HIV RNA laboratory results from Washington State's enhanced HIV/AIDS Reporting System (eHARS) using LinkPlus.
  - Laboratories in WA State are legally required to report HIV RNA results to Department of Health
- Participants' antiretroviral therapy regimen was classified based on the most recent prescription refilled prior to the HIV RNA measurement in 2023.
- Viral suppression was defined as HIV RNA < 200 copies/mL.
- 1st line ARV regimens based on US DHHS Guidelines:
  - STR – BIC/FTC/TAF
  - MTR – DTG/FTC/TDF, DTG/FTC/TAF, DTG/3TC.
- Relative risks estimated using Poisson regression with cluster-robust standard error, adjusting for sex assigned at birth, age, race, ethnicity, time since HIV diagnosis, housing status, clinic providing care, region of state, and receipt of any Ryan White service.

STUDY POPUATION

	N (%)
WA Medicaid enrollees	2874
Virally suppressed	2599 (90%)
Male	2221 (77%)
Female	658 (23%)
Stable Housing	2429 (85%)
Average age	47

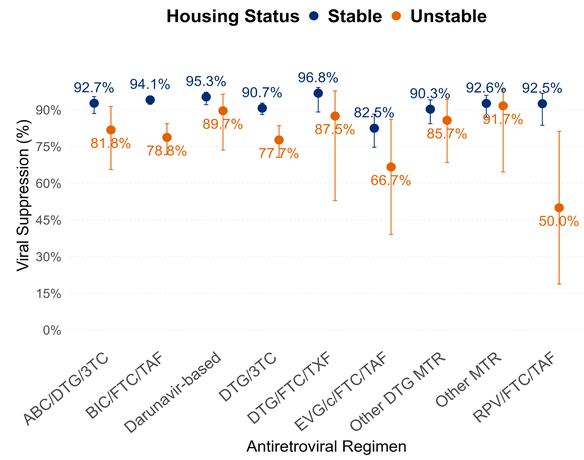
Among Washington State Medicaid enrollees, viral suppression was high and similar in persons receiving single-tablet and 1st line multi-tablet HIV regimens. Greater use of multi-tablet regimens could reduce costs without adversely affecting clinical outcomes.

Multivariate analysis of factors associated with viral suppression, Medicaid enrollees 2023



Rx % = Proportion of treated individuals on each regimen shown to the left of regimen labels. ● Represents 1st line MTR regimens. Adjusted for race, ethnicity, clinics providing care, region of state, time since HIV diagnosis, receipt of Ryan White services. BIC=Bictegravir. EVG/c=Elvitegravir/cobisistat. ABC= abacavir. RPV=Rilprivirine. DTG=Dolutegravir. FTC = emtricitabine. TAF=Tenofovir alafenamide fumarate. TDF = tenofovir disoproxil fumarate. TXF=TDF or TAF. DRV=Darunavir

Viral Suppression by ART Regimen and Housing Status



Viral suppression was consistently lower among unstably housed persons across regimens.

RESULTS

Multivariable results: Lower viral suppression was associated with female sex at birth, younger age, unstable housing, and darunavir-containing multi-tablet regimens.

Regimen comparison: Suppression was lower with 1st-line MTRs than BIC/FTC/TAF, but this difference was not statistically significant (88.7% vs. 91.6%, RRadj=0.98, 95% CI 0.94-1.01, p=0.13).

Key subgroup: Viral suppression was substantially lower among unstably housed individuals. Among unstably housed persons with HIV, suppression did not vary between 1st line MTRs and BIC/FTC/TAF (78.2% vs. 78.8%, RRadj=0.99, 95% CI 0.83 – 1.19, p=0.91).

CONCLUSIONS

- Differences in viral suppression, if any, between contemporary 1st line MTRs and STRs are likely small, most people on MTRs are suppressed, and STRs do not appear to improve viral suppression among unstably housed persons.
- Factors other than drug efficacy alone - including cost – should inform the clinical decision to use STRs vs. 1st-line MTRs.

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