Difficult-to-Treat HIV in Sweden: Describing the Current Landscape

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BACKGROUND

Our aim was to examine the prevalence and characteristics of difficult-to-treat HIV in the current Swedish HIV cohort and to compare treatment outcomes between people with difficult and non-difficult-to-treat HIV.

METHODS

In this cross-sectional analysis of the Swedish HIV cohort, we identified all people with HIV currently in active care in 2023 from the national register InfCareHIV. We defined five mutually non-exclusive categories of difficult-to-treat HIV*:

1) advanced resistance
2) four-drug regimen
3) salvage therapy
4) virologic failure within the past 12 months
5) ≥ 2 regimen switches following virologic failure since 2008.

We compared people classified as having difficult-to-treat HIV with non-difficult to treat for background characteristics as well as treatment outcomes (viral suppression and self-reported physical and psychological health).

RESULTS

In 2023 the Swedish HIV cohort consisted of 8531 individuals. Nine percent of the Swedish HIV cohort in 2023 met at least one criterion for difficult-to-treat HIV. Six percent had ≥ 2 regimen switches, and the other categories of difficult-to-treat HIV were rare (1–2%). Compared with non-difficult, people with difficult-to-treat HIV were older, had an earlier first year of positive HIV test and lower CD4 counts, and were more often female. The viral suppression rate among people with difficult-to-treat HIV was 84% compared with 95% for non-difficult (p = 0.001). People with difficult-to-treat HIV reported worse physical (but not psychological) health, and this remained statistically significant after adjustment for age, sex, and route of transmission.

Nine percent of the current Swedish HIV cohort was classified as having difficult-to-treat HIV.

Issues with recent failure, advanced resistance, and need for salvage therapies were rare compared with other cohorts.

Currently few patients are in need of new therapies for heavily treatment experienced individuals in the Swedish HIV cohort.

Table. Treatment outcomes among people with difficult-to-treat HIV compared with non-difficult.

	Difficult-to-treat HIV	Non-difficult-to-treat HIV	Odds ratio (95% CI)	Adjusted odds ratio* (95% CI)
Viral suppression < 50 copies/mL (n = 8136)	653 (84%)	6991 (95%)	0.29 (0.23–0.36)	0.28 (0.22–0.35)
Satisfied with physical health (n = 4121)	212 (55%)	2367 (63%)	0.70 (0.56–0.86)	0.74 (0.60–0.92)
Satisfied with psychological health (n = 4116)	247 (64%)	2473 (66%)	0.89 (0.72–1.1)	0.88 (0.71–1.1)

*Adjusted for sex, age, and risk group.

*** The five categories of difficult-to treat HIV:**

1. *Advanced resistance.* High/intermediate level resistance to ≥ 2 antiretrovirals within ≥ 2 drug classes.
2. *4-drug regimen (4DR).* Currently on a 4DR (boosters not counted), having had 2-drug or 3-drug regimen in the past.
3. *Salvage therapy.* Currently on ibalizumab, fostemsavir, enfuvirtide, maraviroc, etravirine, dolutegravir BID, or boosted darunavir BID.
4. *Recent virologic failure.* Viral load ≥ 200 copies/mL on 2 measurements (at least 3 months apart) within the past 12 months in a patient on ART for ≥ 5 years.
5. *≥ 2 switches following failure.* Failed virologically ≥ 2 consecutive regimens (≥ 50 copies/mL followed by regimen switch within 6 months) on or after January 1, 2008.

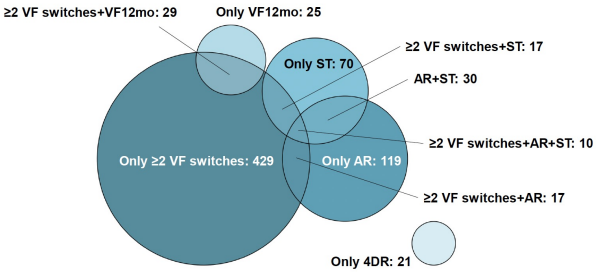

Figure. Venn diagram of the number of individuals in the 5 categories of difficult-to-treat HIV. Sets with less than 10 individuals are not shown. "≥ 2 VF switches" denotes people who switched therapy ≥ 2 times in relation to virologic failure, "VF12mo" people with virologic failure within the past 12 months, AR: advanced resistance; ST: salvage therapy, and "4DR" people with 4-drug regimens.

CONCLUSIONS

Although 9% of the HIV cohort in Sweden in 2023 were classified as having difficult-to-treat HIV, a large proportion of these were virally suppressed, and challenges such as advanced resistance and need for salvage therapy are rare in the current Swedish cohort.

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ADDITIONAL KEY INFORMATION

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