Evolving Trends in early ART Initiation in South Africa: An Analysis of Integrated HIV Program Data

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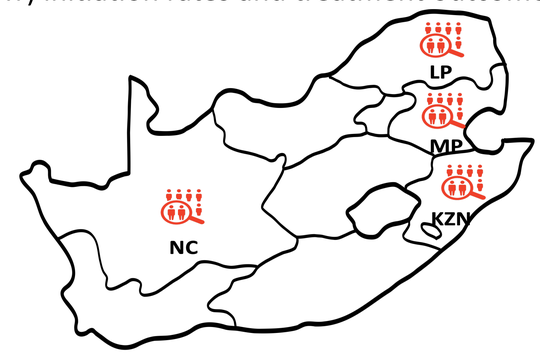
Background and Objective

- South Africa (SA) faces a significant burden of HIV infection, and the country has progressively improved HIV treatment guidelines to ensure rapid and sustained viral suppression.
- However, despite the implementation of the Universal Test and Treat (UTT) policy, challenges persist in achieving optimal antiretroviral therapy (ART) initiation rates and treatment outcomes.



KZN: Kwazulu-Natal; **LP**: Limpopo;
MP : Mpumalanga; **NC:** Northern Cape

- We describe the trends of the time between HIV diagnosis and the initiation of antiretroviral therapy (ART) for patients entering HIV care between 2010 and 2017.

Methods

Study design

We conducted a retrospective cohort study, utilizing integrated data from the clinic-based Three Integrated Electronic Registers (TIER.net) and the National Health Laboratory Service (NHLS) databases across four SA provinces (KwaZulu Natal, Mpumalanga, Limpopo and Northern cape).

OUR ANALYSIS OF 1,319,239 INDIVIDUALS ENTERING HIV CARE REVEALED A HIGH UPTAKE OF ART INITIATION, WITH IMPROVEMENTS OBSERVED IN RAPID INITIATION OVER TIME, INCLUDING A NOTABLE INCREASE IN SAME-DAY INITIATIONS. THIS UNDERSCORE ONGOING EFFORTS TO ENHANCE EARLY HIV DIAGNOSIS AND TIMELY ART INITIATION IN SOUTH AFRICA

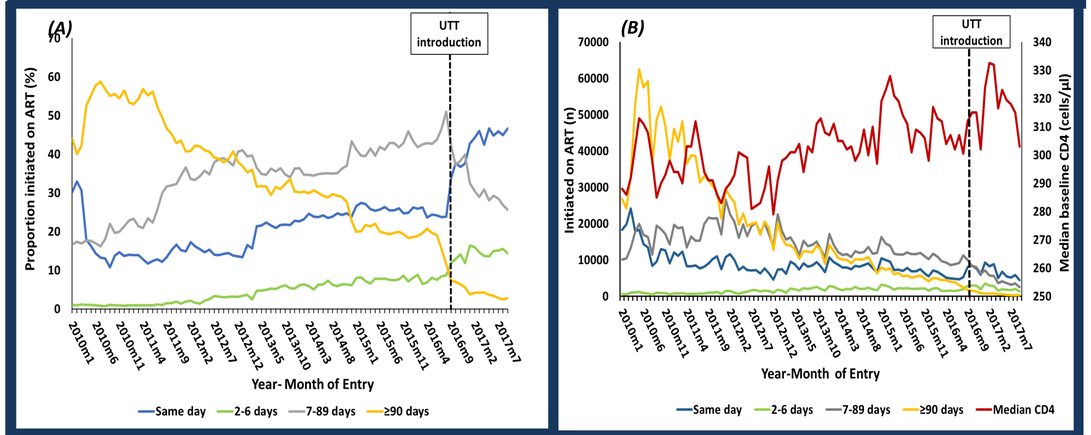


Figure 1. Proportion (A) and number (B) of patients initiated, Days to ART start by year/month of entry into care.

Study population

Individuals diagnosed with HIV between January 2010 and September 2017. Entry into care date was defined as a first CD4 date (from bloods collected at HIV diagnosis) from the NHLS data or an HIV diagnosis date from the TIER data.

Outcome

Timing of ART initiation was classified into two broad categories: 1) early initiation: same-day (HIV diagnosis), 2-6 days, 7-89 days and; 2) late initiation: ≥90 days after entry into care.

Statistical analysis

A trend analysis of the number of patients and proportions initiated by these subgroups was compared over six months after entry into care (HIV diagnosis).

Results

- Among the 1,319,239 individuals with linked NHLS and TIER data entering care within the study period, 1,316,410 had started ART (female (69.5%), with a median age of 31 years (IQR: 24-39).
- Numbers starting ART decreased over time but the median CD4 at entry increased from 298 cells/µl (IQR: 171-463) in 2010 to 321 cells/ml (IQR: 173-500) in 2017.
- Proportion of patients starting ART ≥90 days after diagnosis decreased from 57.3% for 2010-2011 to 11.4% in 2016-2017.
- The percentage of same-day ART initiations significantly increased from 17.4% for 2010-2011 patients to 36.00% in 2016-2017.
- Additionally, the percentage of patients initiated within 7 to 89 days varied across the years, from 24.1% in 2010-2011 to 42.6% in 2012-2013 but then decreased to 12% in 2016- 2017.
- Similar trends were observed across provinces.

Conclusion

Our results reveal improvements in rapid ART initiation in South Africa, highlighting the ongoing efforts to promote early HIV diagnosis and timely ART initiation for individuals living with HIV.

PRESENTED AT :
The 31st Conference on Retroviruses and Opportunistic Infections (CROI)
3-6 March, 2024, Colorado, USA

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Research reported in this publication was supported by the National Institute for Allergy And Infectious Diseases of the National Institute of Health under Award number R01AI152149. The content is solely the responsibility of the authors and does not