Background

The ANRS 12249 Treatment as Prevention (TasP) cluster-randomized trial aimed at evaluating the impact of a Universal Test-and-Treat (UTT) approach on population-based HIV incidence in rural KwaZulu-Natal, South Africa. Trial arm allocation showed low rates of early linkage to HIV care and antiretroviral treatment (ART), and no significant reduction in initial HIV incidence by arm (immediate vs deferred ART) [1].

UFT strategies require that individuals follow care pathways without interruption, under center care and start ART as soon as possible after diagnosis. Little is known yet about the care continuum in UTT contexts. We aimed to describe the timing and sequencing of individual HIV care trajectories from clinic referral to viral suppression by identifying groups of individuals with similar care trajectories and identifying factors associated with each group.

Methods

TasP trial procedures

In a rural area where HIV prevalence reaches 30%, resident members aged ≥16 years were offered rapid HIV testing at home, every six months between March 2012 and June 2016. Those testing HIV-positive or that self-reported their positive status were referred to local clinics for ART initiation, regardless of their CD4 count (interim ART arm) or according to national guidelines. They had also the opportunity to seek care in local governmental clinics where treatment was offered according to national guidelines.

Study population

The analysis was restricted to individuals ever referred to HIV care in a clinical trial, not already in HIV care in a local governmental clinic at time of their first referral to a trial clinic, and that were observed at least 18 months after the date of referral (death and default being considered as right census events).

HIV care trajectories

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Fig. 1. Chart of timelines of the study population (ANRS 12249 Trial, rural South Africa, 2012-2016) [1].

Results

1,837 HIV+ participants were included (Fig. 1). Median age was 34 years (interquartile range 27-49), 74% were female.

Description of care trajectories groups

The exploratory comparison of participants' care trajectories allowed us to identify four homogeneous care trajectories groups (Fig. 2): (i) participants mostly did not receive care (30%), (ii) participants who started ART but did not visit a clinic occasionally but left care thereafter (14%), (iii) participants who took substantial time to get back on the care continuum (21%), and (iv) participants that rapidly progressed towards continuous care (25%).

Fig. 2. Individual care trajectories by care trajectories group, participants to the ANRS 12249 TasP trial, rural South Africa, 2012-2016 (n=1,837). aOR: adjusted odd ratio, 95CI%: confidence interval, ART: antiretroviral treatment

Analysis of factors associated with care trajectories groups

Participants from the care trajectories group “abstainers of care” were more likely to be newly diagnosed than those of the “rapid and continuous care” group (never in care and already diagnosed: aOR = 0.25, 95% confidence interval [CI] = 0.14-0.43; previously in care but lost to follow up: aOR = 0.67 [0.34-1.32]). They were also more likely to have been allocated to the control arm of the trial (aOR = 0.61, CI = 0.47-0.82). Similar results were found for participants in the “noncontinuous care” group (never in care and already diagnosed: aOR = 0.31, CI = 0.16-0.60; previously in care but lost to follow up: aOR = 0.36, CI = 0.14-0.91). On the contrary, participants from the care trajectories group “slow and continuous care” did not present significant differences in terms of HIV care history when compared to those of the “rapid and continuous care” group. They were not significantly more likely to have been allocated to the control arm of the trial. Moreover, they were more likely to live in an area where the HIV prevalence was lower than the median (35.3%) (HIV prevalence <35.3%: CI = 0.82 [0.44-1.53]).

Discussion and conclusion

Complex entry into care in the era of UTT

Our study shows that the most important factor associated with successful care trajectories is the ability to seek care in local governmental clinics where treatment was offered according to national guidelines.

Our study also brings evidence of people’s difficulty to be successfully retained on ART. Even the “TasP” participants have blood drawn for a CD4 count at each clinic visit, many of them never return to the clinic to initiate ART (and therefore contribute to the care trajectory “participants who never initiated ART”). Such results participate in questioning the potential of eliminating CD4 thresholds to increase retention and achieve the full prevention benefits of ART.

Potential of repeat referral to HIV care to improve care trajectories

This work shows that an increase in care trajectories is needed to reach the maximal care potential of the pre-ART period and the delivery of ART regardless of immunological or clinical staging (interim arm), suggesting that structural changes, including the health system such as the availability of health services, are more likely to drive people towards successful care trajectories than individual initiatives. Interventions to increase demand for immediate ART as well as improved retention on ART are needed [8].

The longitudinal approach of our work highlighted the heterogeneity of individual care trajectories characterized by significantly different patterns in the trajectories. By performing a person-centred approach, it complements the traditional population-based analysis in providing a meaningful and useful perspective on the features of the risky HIV care cascade. The present study highlights that, to maximise the impact of UTT strategies, differentiated care and support should be scaled-up.

References


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References


