Health-Related Quality-of-Life of People Living with HIV in Zambia and South Africa: A Comparison with HIV-negative People in the Cross-Sectional Baseline Survey of the HPTN 071 (PopART) Trial


HPTN 071 (PopART) study participant, Zambia

BACKGROUNDS

- Life expectancy of people living with HIV (PLWH) on antiretroviral therapy (ART) is approaching that of HIV-negative persons.
- But how do they compare in terms of health-related quality-of-life (HRQoL)?

AIM OF THIS STUDY

- Compare HRQoL amongst PLWHs and HIV-negative individuals in a large sample of the general population in Sub-Saharan Africa.

METHODS AND DATA

STUDY POPULATION

- The HPTN071 trial evaluates impact of a combination prevention package including home-based testing and counselling and immediate ART on HIV incidence.
- This study uses data from the baseline survey of the trial, before any study intervention.
- Two stage sampling procedure:
  - Randomly selected households
  - One randomly selected member within each household.
- 38,349 adults aged 18 - 44 years.
- 8 communities in Western Cape, South Africa.
- 12 communities across 4 provinces, Zambia.

STUDY DESIGN

- Analysis of HRQoL with multivariate beta regression models with linear link functions.
- Compared separately against HIV-negative controls.
- Countries were analyzed separately.
- Regression analysis was adjusted for socio-demographic factors.

DATA

- HRQoL ranges between 0 (worst health) and 1 (best health).
- HRQoL measured with EuroQol 5 dimensions 5 levels questionnaire (EQ-5D-5L): Mobility, self-care, ability to do daily activities, pain, anxiety and depression.
- Men under-represented (Zam: 28%; SA: 31%).

CONCLUSIONS

- We do not have objective measures of disease stage or CD4 count.
- We need to rely on self-reported ART initiation.
- There may be unobserved confounders.
- Men are under-represented.

DISCUSSION

- There are no differences in HRQoL between PLWH and HIV-negatives.
- It is unique in being based on a general population sample with representation of PLWHs across all disease stages.
- Estimates of HRQoL can be used in future economic evaluations.
- Results demonstrate the success of ART in eliminating the inequalities in population health caused by untreated HIV disease.

ACKNOWLEDGMENTS

HPTN 071 is sponsored by the National Institute of Allergy and Infectious Diseases (NIAID) under Cooperative Agreements UM1-AI068619, UM1-AI068617, and UM1-AI068613 with RTI International (RTI) from the U.S. President’s Emergency Plan for AIDS Relief (PEPFAR). Additional funding is provided by the International Initiative for Impact Evaluation (3ie) with support from the Bill & Melinda Gates Foundation, as well as by NIAID, the National Institute on Drug Abuse (NIDA) and the National Institute of Mental Health (NIMH), all part of NIH.

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BACKGROUND

- PLWHs on ART for at least 5 years have the same HRQoL as HIV-negative persons.
- ART seems to restore health of PLWHs to the level of HIV-negative persons.
- In South Africa, 53% of PLWHs are not aware of their status, and in Zambia, these are 44% of PLWHs.
- PLWHs unaware of their status have the same HRQoL as HIV-negative persons.
- Possibly, they have not yet experienced the reductions in HRQoL associated with untreated HIV progression.
- In South Africa, PLWHs aware of their status but not in care and not on ART have lower HRQoL than HIV-negative persons, but differences are very small: this affects 14% of all PLWHs.
- In Zambia, PLWHs aware of their status but not in care and not on ART have the same HRQoL as HIV-negative persons; this affects 16% of all PLWHs.
- At the time, treatment guidelines did not recommend universal treatment therefore these PLWHs are likely asymptomatic.
- In Zambia, PLWHs on ART for less than five years have lower HRQoL than HIV-negative persons, but again differences are very small.
- Results for South Africa and Zambia differ slightly.

METHODS AND DATA

STATISTICAL ANALYSIS

- Analysis of HRQoL score with multivariate beta regressions and complementary log-log link functions.
- Explanatory variable of interest is HIV status.
  - HIV-status, laboratory confirmed retrospectively from blood samples.
  - Compared against self-reported HIV-status.
- PLWHs split in 5 categories (unaware of status, aware but not reported, not in care, self-reported in care but not on ART, self-reported on ART > 5 years, or on ART > 5 years).
- Compared separately against HIV-negative controls.
- Countries were analyzed separately.
- Regression analysis was adjusted for socio-demographic factors.

DATA

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