WEPED1426

At what stage of disease progression are HIV infected patients initiated on antiretroviral therapy?

A retrospective cross-sectional analysis of patients Initiated on ART in Masvingo District, Zimbabwe

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BACKGROUND

- Late ART initiation has been reported to result in substantial early mortality, and mortality is strongly associated with low baseline CD4 count less than 50 cells/µl and WHO stage 4 disease at initiation.[1]
- The 2013 Zimbabwe National ART guidelines expanded ART eligibility from a CD4 count of 350 to ≤ 500 cells/µl.[2]
- Despite the development of more expansive guidelines for ART eligibility in sub-Saharan Africa, many patients still initiate ART late.[3]
- Limited evidence has documented the stage of disease severity at which ART naïve persons are initiated on treatment in Zimbabwe, 3 years post revision of the National ART guidelines.

OBJECTIVE

To describe the demographic, clinical and immunological characteristics of adult HIV positive patients newly initiating on ART.

METHODS

- A retrospective cross-sectional assessment was conducted using routine data in the health facility registers for 325 non-pregnant adults (≥15 years) initiated on ART from **January to June 2016** at 7 purposively selected high volume public health facilities in Masvingo District, Zimbabwe.
- The 7 health facilities (3 urban & 4 rural) are all supported by Families and Communities for Elimination of HIV (FACE HIV).
- Patients' Demographic, baseline CD4 count and WHO staging data at initiation were abstracted from the ART-registers.
- The Mann-Whitney U test and Kruskal-Wallis test were used to compare baseline CD4 cell counts between different age groups and sex.

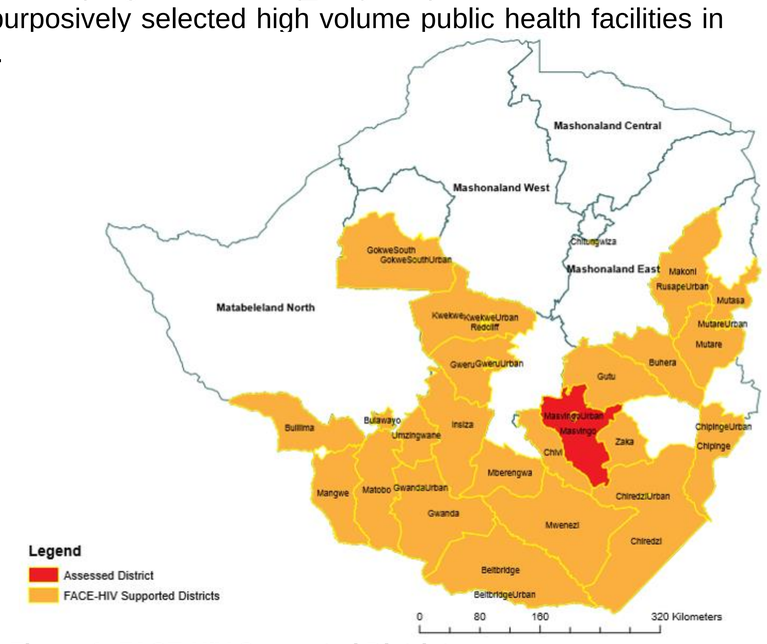

Figure 1: FACE-HIV Supported Districts

- Logistic regression was used to identify factors associated with initiating ART with advanced disease (CD4 cell count< 200 cells/µl).[4]
- Both descriptive and inferential statistical analysis were conducted using SPSS v23.

RESULTS

Demographic Characteristics and WHO Clinical Classification

- 325 patients initiated ART at the 7 Health Facilities, with a median age of 37 years (IQR:31-44.5), 50.8% (165) were females.
- 322 patients had a documented baseline WHO Clinical Classification.
- 41.6% of the patients were classified WHO Clinical stage 2 (fig 2).

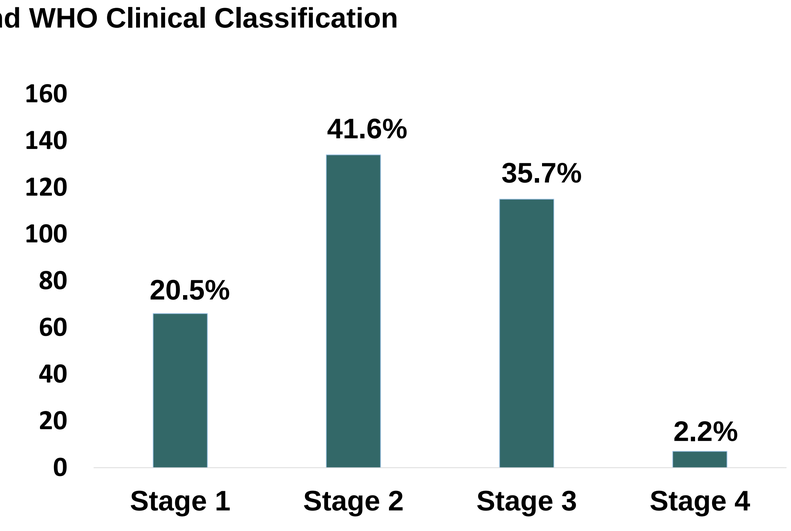

Figure 2: WHO Clinical Staging at Initiation

Baseline CD4 Cell Counts of Patients at Initiation

- 289 Patients had results for base line CD4 cell count prior to being initiated on ART.
- The median CD4 cell count at initiation was 237 cells/µl IQR (107 – 402).

RESULTS continued

- 41.5% (120) of patients initiated ART with severe immuno-suppression (CD4 cell count <200 cells/µl) Fig 3.
- 30% (36) of patients initiated with severe immuno-suppression, were initiated with CD4 cell counts < 50 cells/µl.
- There was **no** significant difference in median CD4 cell counts between males 222 cells/µl (IQR:91-359) and females 245 cells/µl (IQR:110-445), (p=0.081) at ART initiation.
- Younger patients (15-24 years) initiated ART at significantly higher CD4 cell counts compared to older patients (25-49 year) p=0.005 (Table 1).
- Elderly patients (≥50 years), initiated ART at significantly lower CD4 cell counts compared to younger patients (15-24 years) p=0.003 (Table 1).

Figure 3: Baseline CD4 Cell Count by Age Group

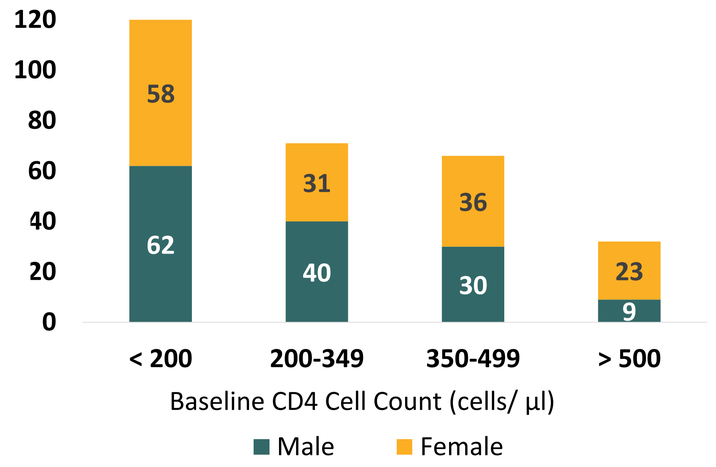

Table 1. Baseline CD4 Cell Count by Age Group

Age groups (years)	CD4 Cell Count (cells/ µl)		
	N	Median	IQR
15-24	18	372	311-505
25-49	237	238	107-401
50+	34	161	87-357
Total	289	237	107-401

Factors Associated with Initiating ART with Severe Immuno-Suppression

- Patients initiated on ART at an urban health facility were more likely to have severe immuno-suppression compared to those initiating at rural health facilities, AOR(95% CI) 1.9 (1.1-3.2), p=0.02.
- Elderly patients (≥50 years) were more likely to initiate ART with severe immuno-suppression compared to younger patients (15-24 years), AOR(95% CI) 7.9 (1.9-32.9), p=0.005.
- Sex was not associated with initiating ART with severe immuno-suppression.

CONCLUSIONS

- We observed that 3 years following the expansion of the ART eligibility criteria to 500cells/µl, the majority of adult patients initiated ART at very low CD4 cell counts below the previous threshold.
- Younger adults started ART at higher CD4 cell counts compared to older patients.
- We observed no baseline differences on the level of immunosuppression between men and non-pregnant women at ART initiation.
- Elderly people and urban dwellers were at increased odds of starting ART with advanced disease.
- Our findings, particularly relevant in the Treat All era, underscore the importance of increasing demand for timely uptake of HIV testing and treatment services to optimise treatment outcomes.
- Our assessment was however limited to the explanatory variables provided in routine health information sources.

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