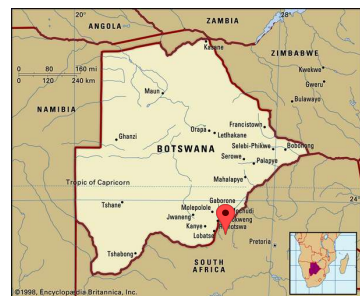


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Background

- Botswana was the first African country to implement a 'treat all' dolutegravir (DTG)-based national HIV treatment program for all adults.
- This study evaluated the impact that the transition to 'treat all' with DTG had on inpatient mortality among people living with HIV (PLWHIV) in the short term.



Methods

STUDY POPULATION:

- From Dec 2015 to Nov 2017, data were collected prospectively of all adult general medical ward admissions at Scottish Livingstone Hospital in Molepolole, Botswana
- Before May 2016 TDF/FTC/EFV was the first-line regimen for ART-naïve adults with CD4 <350. After May 2016 it was replaced by TDF/FTC/DTG without CD4 restriction ('treat all')

STATISTICAL ANALYSIS:

- Exposure to DTG and EFV was defined as active use of ART at the time of admission
- The primary outcome was vital status at discharge from the hospital. For those transferred to another hospital, the final vital status at discharge from the transfer hospital was used.
- Mortality by ART regimen was compared using multivariable logistic regression (covariates chosen a priori) using SAS 9.4

Results

- 1969 total patients admitted
 - 41.5% PLWHIV
 - 63% were on ART prior to admission
- Prior to admission ART coverage increased after policy implementation
 - Pre- "treat all": 58%
 - Post- "treat all": 65.4%

Demographics, clinical characteristics, and outcomes of people living with HIV (PLWHIV) admitted to Scottish Livingstone Hospital, stratified by ART regimen prior to admission.

	EFV-based regimen (N=315)	DTG-based regimen (N=85)	Any ART (N=514)	No ART (N=222)
Demographics				
Age (median [IQR])	43 [35,55]	42 [33,54]	43 [35,54]	39 [32,50]
Female gender (N, %)	174 (55.2)	49 (57.7)	300 (58.4)	97 (43.7)
Molep. resident (N, %)	206 (66.2)	53 (62.4)	329 (65.2)	148 (67.6)
HTN (N, %)	48 (15.2)	12 (14.1)	77 (15.0)	16 (7.2)
T2DM (N, %)	15 (4.8)	3 (3.5)	23 (4.5)	4 (1.8)
Clinical Characteristics				
CD4 count (median [IQR])	339.5 [166, 518]	256 [106, 458]	358 [157, 533]	163.5 [60, 309]
Timing of ART initiation (N, %)				
<3 months	41 (13.0)	38 (44.7)	84 (16.3)	
>3 months	162 (51.4)	23 (27.1)	202 (39.4)	N/A
Unknown	112 (35.6)	24 (28.2)	228 (44.4)	
Primary Diagnosis (N, %)				
TB	70 (22.2)	27 (31.8)	122 (23.7)	89 (40.1)
CAP	39 (12.4)	10 (11.8)	60 (11.7)	16 (7.2)
DVT/PE	1 (0.3)	5 (5.9)	11 (2.1)	0
Suicide attempt	14 (4.4)	6 (7.1)	25 (4.9)	4 (1.8)
Kidney disease	18 (5.7)	1 (1.2)	22 (4.3)	6 (2.7)
Severe anemia	22 (7.0)	4 (4.7)	40 (7.8)	4 (1.8)
HIV Complications				
PCP	9 (2.9)	11 (12.9)	22 (4.3)	27 (12.2)
Kaposi sarcoma	4 (1.3)	4 (4.7)	10 (2.0)	5 (2.3)
HIV encephalopathy	5 (1.6)	3 (3.5)	11 (2.1)	9 (4.1)

Results cont.

- Death occurred in 21.8% of PLWHIV
 - Leading cause of death was TB
- Controlling for CD4 count and timing of ART initiation, there was no significant difference in mortality rates between ART regimens

	EFV-based regimen (N=315)	DTG-based regimen (N=85)	Any ART (N=514)	No ART (N=222)
Outcomes				
Death (N, %)	56 (17.8)	23 (27.1)	97 (18.9)	64 (28.8)
Unadjusted RR	Ref	1.52 (1.0, 2.32)	N/A	N/A
Adjusted RR*	Ref	1.08 (0.62, 1.87)	N/A	N/A

*Adjusted for CD4 count and ART initiation within 3 months

Conclusion

- There was no statistically significant difference in inpatient adjusted mortality rates between EFV and DTG with the shift to 'treat all' in Botswana.
- Decreasing high inpatient mortality among PLWHIV will require increased testing in the community to detect and treat PLWHIV prior to disease progression, and improved screening for OIs.

