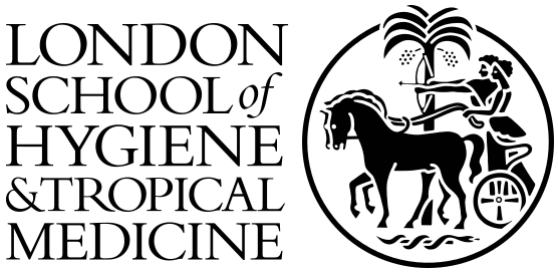


Methods: We pooled data from 2587 virologically suppressed participants on 3 randomized, active controlled trials that assessed switching to TAF versus continuing TDF. We measured fasting lipids and calculated 10-year ASCVD risk using the AHA/ACC Pooled Cohort Equations. We classified individuals by clinical risk categories: < 7.5%, 7.5% to < 10%, and ≥ 10% using the rank analysis of covariance method to compare the change from baseline in risk categories and Wilcoxon rank sum test to compare median values at Week 48.
Results: 1537 adults switched to TAF and 1050 continued TDF. Baseline characteristics included: 87% men, 21% Black, median CD count 654 cells/μL (IQR 500, 830), 25% hypertension and 5% diabetes, were balanced between groups. Median age was 44 years (IQR 35, 50) versus 45 years (IQR 36, 51) for TAF versus TDF respectively (p=0.021). At Week 48, there was a small difference in median change from baseline ASCVD scores, no difference in median risk score between TAF and TDF groups (see table) and no change from baseline in categorical ASCVD risk score classifications (p= 0.06). After switching to TAF, modest increases were observed in all fasting lipids and a small difference in TC:HDL ratio between groups.
Conclusions: Switching from TDF to TAF did not result in any significant change in ASCVD risk scores at Week 48 compared to continuing TDF and did not alter clinical classifications of ASCVD risk despite modest increases in both protective (HDL) and harmful (LDL) cholesterol. We used the AHA/ACC equation to compare calculated risk scores in TDF versus TAF takers within a relatively young, healthy, and mostly male cohort with low baseline cardiovascular risk. Long term cohort data is needed to characterize clinical cardiovascular event rates.

	TAF-containing regimen	TDF-containing regimen	
	Median (Q1, Q3)	Median (Q1, Q3)	p value
ACC/AHA 10-year risk score			
Baseline	2.7 (1.1, 5.6)	3.0 (1.3, 5.8)	0.092
Week 48	2.9 (1.3, 6.0)	2.9 (1.3, 5.7)	0.97
Change from baseline at Week 48	0.1 (-0.3, 0.7)	0.0 (-0.5, 0.5)	<0.001
Total Cholesterol (mg/dL)			
Change from baseline	17 (-2, 37)	3 (-12, 18)	<0.001
Direct LDL Cholesterol (mg/dL)			
Change from baseline	9 (-7, 26)	1 (-13, 13)	<0.001
Non-HDL Cholesterol (mg/dL)			
Change from baseline	15 (-3, 33)	3 (-12, 16)	<0.001
HDL Cholesterol (mg/dL)			
Change from baseline	2 (-3, 8)	0 (-4, 5)	<0.001
TC:HDL ratio			
Change from baseline	0.1 (-0.3, 0.6)	0.0 (-0.4, 0.4)	<0.001
Triglycerides (mg/dL)			
Change from baseline	8 (-22, 44)	0 (-29, 28)	<0.001

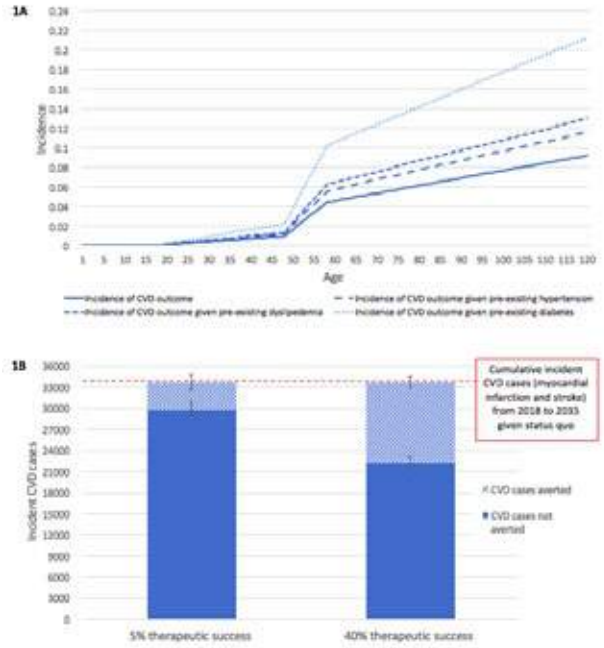
[Table.]

TUPEB105

The potential impact of integrating services for the secondary prevention of cardiovascular outcomes into HIV care in Kenya: A mathematical modelling study

R. Cassidy, P. Perez-Guzman, T. Hallett, M. Smit
Imperial College London, Department of Infectious Disease Epidemiology, London, United Kingdom

Background: Cardiovascular disease (CVD) is estimated to contribute more than 13% of deaths in Kenya. National guidelines now recommend integration of secondary preventative services for CVD risk factors into care for people living with HIV (PLHIV). However, coverage remains very low. Our aim is to quantify the impact of comprehensive provision of antihypertensive and lipid lowering medication as per national guidelines on CVD incidence amongst PLHIV in care.
Methods: We developed an individual-based multi-disease model for Kenya, simulating HIV infection, progression and treatment, and incidence of major non-communicable diseases (NCDs). The model was parameterized using national and regional surveillance and epidemiological data and accounts for the impact of pre-existing NCDs (diabetes, hypertension and dyslipidaemia) on risk of CVD outcome (myocardial infarction (MI) and stroke) (Figure 1A). We evaluated the impact of integrating a screen-and-treat intervention for hypertension and dyslipidaemia into HIV care on CVD outcomes, using recommended screening intervals (every three years) and treatment guidelines, from 2018 to 2035. Therapeutic Success (TS) was assumed to range from 5-40% and to decease CVD risk to that of age-matched controls without hypertension or dyslipidaemia.
Results: Our model predicts a baseline of 33,700 (32,619-34,781) cases of CVD outcomes between 2018 and 2035 amongst PLHIV in care, MI incidence of 102.7 (98.8-106.6) and stroke incidence of 104.7 (100.4-108.9) per 100,000 person-years. Prevalence of related NCDs is predicted to increase over the same period (hypertension: 40.2% to 54.9%, dyslipidaemia: 26.4% to 39.3% and diabetes: 1.8% to 4.0%). A screen-and-treat intervention could avert 12%-34% of MI cases and 11%-33% of stroke cases among PLHIV between 2018 and 2035 (Figure 1B), depending on assumed probability of TS. This equates to 1 case averted for every 87-261 screening tests administered, depending on TS assumed. MI incidence could decrease to between 94.0 (89.5-98.6) and 68.5 (64.1-72.9) and stroke incidence to between 93.1 (89.7-96.5) and 68.8 (64.1-73.5) per 100,000 person-years.
Conclusions: Screening and treatment of high blood pressure and cholesterol in PLHIV in care could avert a large burden of CVD outcomes in this population, with the impact strongly modulated by the probability of achieving treatment success.



[Fig 1A Incidence of CVD by age given pre-existing NCD. 1B Cumulative incident number of CVD cases between 2018-2035 at baseline and with intervention.]

TUPEB106

Improvement in the prediction of cardiovascular events by adding HIV-viral load to a cardiovascular risk scale

H. Albendín Iglesias[1], C.S. Caro Martinez[2], A. Perez Salvador[1], C.E. Galera Peñaranda[1], E. Bernal Morell[3]
[1]HCUVA, Internal Medicine, Murcia, Spain, [2]Hospital Vega Baja, Cardiology, Alicante, Spain, [3]Hospital General Reina Sofia, Infectious Diseases, Murcia, Spain

Background: The immunovirological variables in HIV infected patients can be predictors of cardiovascular events. The aim of our study was to analyze the discriminative improvement of the COMVIH-COR scale by adding variables such as HIV viral load.