HIV CARE DURING THE SARS-COV-2 PANDEMIC IN BLACK PEOPLE WITH HIV IN THE UK

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Zoe V Ottaway [1], Lucy Campbell [1,2], Laura Cechin [1], Julie Fox [2,3], Fiona Burns [4], Lisa Hamzah [5], Stephen Kegg [6], Melanie Rosenvinge [6], Sarah Schoeman [7], David Price [8], Rachael Jones [9], Denis Onyango [10], Rob Miller [11], Shema Tariq [11], **Frank Post [1,2]**

1. King's College Hospital NHS Foundation Trust, London, UK; 2. King's College London, London, UK; 3. Guys and St Thomas's NHS Foundation Trust, London, UK; 4. Royal Free London NHS Foundation Trust, London, UK; 5. St Georges University Hospital NHS Foundation Trust, London, UK; 6. Lewisham and Greenwich NHS Trust, London, UK; 7. Leeds Teaching Hospitals NHS Trust, Leeds, UK; 8. Newcastle Hospitals NHS Foundation Trust, Newcastle, UK; 9. Chelsea and Westminster NHS Foundation Trust, London, UK; 10. Africa Advocacy Foundation, London, UK; 11. University College London, London, UK.

BACKGROUND

- The COVID-19 pandemic disproportionally affected Black communities[1]
- The impact on HIV care in this group remains poorly understood
- We evaluated measures of HIV care during the COVID-19 pandemic in the GEN-AFRICA cohort of black people with HIV living in the UK

METHODS

- We evaluated interruptions to HIV care during the COVID-19 pandemic (01/2020-11/2022) in the GEN-AFRICA cohort at nine UK clinics who provided HIV outcomes for ≥80% of their participants
- We ascertained death, loss to follow up for ≥12 months, the highest HIV virus load, and interruptions to antiretroviral therapy (ART) by direct questioning and/or medical records review
- Pre-pandemic immune-virological and comorbidity status were used to evaluate factors associated with the composite outcome of reported ART interruption and/or HIV viraemia (virus load ≥200 cp/mL) using logistic regression analysis; those who became lost to follow up were considered to have discontinued ART and to have developed HIV viraemia
- Factors associated (P<0.1) in univariable analysis were included in the multivariable model
- Reasons for ART interruptions (where provided) were summarized

RESULTS

- In January 2020, 2317 GEN-AFRICA study participants remained under active HIV follow up (Table 1)
- By November 2022:
  - 30 (1.3%) had died
  - 48 (2.1%) had become lost to follow up
  - 24 (1.0%) had transferred their care to another clinic

TABLE 1: PRE-PANDEMIC CHARACTERISTICS		All (N=2317)
Age, years	Mean (SD)	50.9 (10.3)
Sex, female	N (%)	1293 (55.8)
Region of ancestry	N (%)	
West Africa		754 (33.1)
Southern/ Central Africa		612 (26.9)
East Africa		447 (19.6)
Caribbean		310 (13.6)
UK/other		155 (6.8)
Time since HIV diagnosis, years	Mean (SD)	13.8 (6.5)
Nadir CD4 cell count, cells/mm³	Median (IQR)	204 (80-336)
HIV RNA <200 copies/mL	N (%)	2134 (92.3)
Prior AIDS diagnosis	N (%)	496 (22.1)
Diabetes	N (%)	217 (9.5)
Hypertension	N (%)	744 (32.3)
Chronic kidney disease	N (%)	812 (35.2)
Cardiovascular disease	N (%)	99 (4.3)
Obesity	N (%)	919 (40.9)

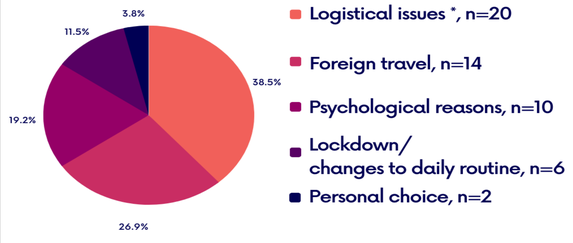
Chronic kidney disease = estimated Glomerular Filtration Rate <60 mL/min/1.73m²;
Cardiovascular disease = ischaemic heart disease, congestive cardiac failure, stroke;
Obesity = Body Mass Index ≥30 kg/m²

During the SARS-CoV-2 pandemic, 18% of Black people with HIV previously enrolled in the GEN-AFRICA cohort reported interrupting their antiretroviral therapy and/or experiencing HIV viraemia

HIV OUTCOMES

- The composite outcome of ART interruption and/or HIV viraemia could be evaluated in 2285 (98.6%) of GEN-AFRICA participants.
  - 399 (17.5%) reported an ART interruption or experienced HIV viraemia
  - In univariable analysis, older age, East African and Mixed/Other ancestry, having been diagnosed with HIV for longer, higher current CD4 count, and a pre-pandemic HIV RNA <200 cp/mL were associated with reduced odds of ART interruption/HIV viraemia (Table 2)
  - In multivariable analysis, older age and a pre-pandemic HIV RNA <200 cp/mL remained associated with reduced odds of ART interruption/HIV viraemia (Table 2)
  - Sex, ancestry, time since HIV diagnosis, CD4 (current/nadir) and comorbid status were not or no longer associated
- Reported reasons for ART interruption were available for 52 participants and are shown in Figure 1

Figure 1: Reasons for ART interruption



*Logistical issues including changes to booked appointments, pharmacy provisions, delivery service disruption

COVID-19 AND VACCINATION STATUS

COVID-19 status was available for 2303 and SARS-CoV-2 vaccination status for 2033 participants

- 523 (22.7%) reported an episode COVID-19
- 1771 (87.1%) reported having been vaccinated (≥ 1 dose) against SARS-CoV-2

- Those who remained unvaccinated against SARS-CoV-2 were at increased odds of ART interruption/HIV viraemia (OR 2.63 [1.96-3.57], p<0.001)
- COVID-19 status was not associated with ART interruption/HIV viraemia (OR 0.84 (0.64-1.10], p=0.20)

TABLE 2: FACTORS ASSOCIATED WITH ART INTERRUPTION/HIV VIRAEMIA		Univariable		Multivariable	
		OR	p value	OR	p value
Age	20-29 years	1		1	
	30-39 years	0.61 (0.34-1.08)	0.09	0.69 (0.38-1.29)	0.25
	40-49 years	0.40 (0.24-0.68)	0.001	0.54 (0.30-0.95)	0.03
	50-59 years	0.40 (0.24-0.68)	0.001	0.55 (0.31-0.96)	0.04
	≥60 years	0.34 (0.19-0.59)	<0.001	0.51 (0.28-0.93)	0.03
Sex	Female	0.70 (0.14-3.40)	0.66		
Region of ancestry	West Africa	1		1	
	East Africa	0.68 (0.49-0.95)	0.03	0.72 (0.51-1.03)	0.07
	Southern/ Central Africa	1.00 (0.76-1.34)	0.97	1.01 (0.75-1.36)	0.93
	Caribbean	0.97 (0.68-1.37)	0.85	1.01 (0.70-1.44)	0.98
	Mixed/Other	1.65 (1.10-2.47)	0.02	1.49 (0.97-2.28)	0.07
Time since HIV diagnosis	Per year	0.98 (0.96-1.00)	0.02	1.00 (0.98-1.01)	0.58
CD4 Nadir (≥350 cells/mm³)	Yes (vs. no)	0.96 (0.74-1.25)	0.77		
CD4 Current (≥350 cells/mm³)	Yes (vs. no)	0.71 (0.56-0.90)	0.01	0.82 (0.64-1.05)	0.12
HIV RNA pre-pandemic (<200 copies/mL)	Yes (vs. no)	0.19 (0.14-0.26)	<0.001	0.22 (0.16-0.30)	<0.001
AIDS	Yes (vs. no)	0.67 (0.21-2.12)	0.50		
Diabetes	Yes (vs. no)	1.00 (0.69-1.46)	0.98		
Hypertension	Yes (vs. no)	0.93 (0.74-1.18)	0.56		
Chronic kidney disease	Yes (vs. no)	0.81 (0.65-1.03)	0.08	0.90 (0.70-1.16)	0.42
Cardiovascular disease	Yes (vs. no)	1.03 (0.60-1.76)	0.91		
Obesity	Yes (vs. no)	1.00 (0.69-1.46)	0.98		

CONCLUSIONS

- During the COVID-19 pandemic, one in six Black people with HIV in our cohort experienced an ART interruption and/or HIV viraemia
- Age, pre-pandemic measures of suboptimal engagement in care, pandemic restrictions, and wider health beliefs as reflected by SARS-CoV-2 vaccination status, were associated with these undesirable HIV outcomes
- It is important to ascertain those most at risk of treatment interruption/ HIV viraemia to minimise resultant poor health outcomes and reduce the possibility of onward HIV transmission.

REFERENCES

1. Public Health England. Review of the disparities in the risk and outcomes of COVID-19 [Internet]. 2020 [cited 07/02/2023]. Available from: https://www.gov.uk/government/publications/covid-19-review-of-disparities-in-risks-and-outcomes.

ADDITIONAL KEY INFORMATION

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Correspondence to zoe.ottaway@nhs.net