Less Frequent Clinical and Viral Load Assessments During COVID Did Not Increase Virological Failure

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BACKGROUND

- Antiretroviral guidelines (WHO, DHHS, IAS-USA, EACS, BHIVA) suggest HIV viral load monitoring every 3-6 months.
- No trial has evaluated intervals >6 months.
- There are few recommendations regarding the interval between patient assessments.
- During the COVID lockdown, clinical assessments and viral load monitoring were less frequent in the Chelsea-Westminster HIV cohort (C-W; 3 London clinics, 5 regional clinics) and most clinical assessments were virtual.
- The primary aim of this analysis was to see if this less intensive HIV care during the COVID pandemic resulted in more virological failure than pre or post-pandemic.

METHODS

- We compared virological failure rates (viral load >200 cp/mL x 2, or >400 cp/mL once, after viral load<50 cp/mL) in three periods:
  - **Pre-COVID (Jan 2018-March 2020**, 26 months)
  - **COVID pandemic (April 2020-December 2021**, 21 months) and
  - **Post-pandemic (Jan 2022-October 2023**, 22 months)

  in the C-W cohort, which prospectively records patient assessments and viral loads.
- Survival analysis compared times to virological failure between periods, and Cox proportional hazards model to examine the impact of covariates (sex, age, born in UK, clinic area, ARV anchor class) on time to virological failure.

Main finding: Less frequent viral load monitoring (~every 9 months) and less clinical assessment (~every 7.5 months, mostly non face-to-face) during the COVID pandemic were not associated with more virological failure over 18+ months.

Implication: Less frequent viral load monitoring and clinical assessment may be possible for those with undetectable viral loads.

RESULTS

- 14,897 adults (mean 47.0 yrs, 14.2% female, 39.6% UK-born, 87% HIV RNA <50 cp/mL) were included.
- The most common ARVs were TDF, FTC and an integrase inhibitor (INSTI).
- **Rates of virological failure were similar over 18 months, then were slightly greater during the COVID period (Figure 1).**

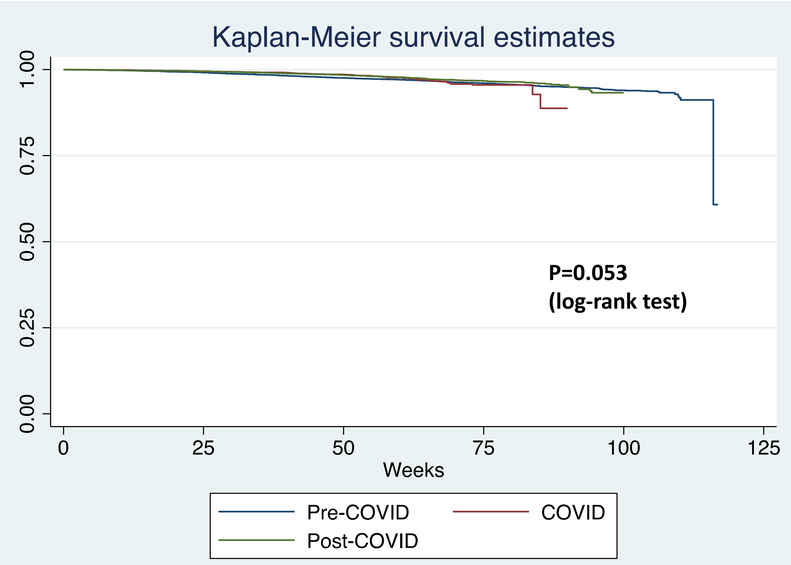
Table 1 Intervals between viral load and clinical assessments

Interval (weeks)	Pre-COVID 1/2018 – 03/2020	COVID pandemic 4/2020 – 12/2021	Post-pandemic 1/2022 – 12/2023
Patients (n)	11,262	10,513	12,113
Patients with RNA <50 at entry + ≥1 follow-up value (n)	9,746	7,615	10,521
Between viral loads	30.8	39.6	27.9
Between clinical assessments	25.4	32.5	23.8

Table 2 Independent risk factors for virological failure

Parameter	Pre-COVID	COVID pandemic	Post-pandemic
	OR (P value)	OR (P value)	OR (P value)
CD4 >600 (x 10^6/L)	0.54 (p<0.001)	0.52 (p=0.001)	0.34 (p<0.001)
UK-born	1.44 (p=0.041)	2.19 (p<0.001)	1.39 (ns)
Male	0.55 (p=0.014)	0.56 (p=0.018)	0.42 (p=0.029)
Age >45 yrs	0.71 (p=0.049)	0.99 (ns)	0.60 (ns)
Care in London	-	0.91 (ns)	0.30 (ns)
NNRTI anchor class	0.56 (p=0.04)	0.78 (ns)	1.34 (ns)
NRTI therapy	0.59 (p=0.03)	0.93 (ns)	1.17 (ns)

Figure 1 Time to virological failure



CONCLUSIONS

- **In this diverse population, less frequent viral load monitoring and clinical assessment in patients with undetectable viral loads during the COVID pandemic were not associated with more virological failure over 18 months.**
- **Less frequent viral load monitoring and less frequent, but still preferably, face-to-face clinical assessment may be possible for those with undetectable viral loads.**

ADDITIONAL KEY INFORMATION

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