# HIV-related stigma and its relationship to quality of life among people living with HIV enrolled in the Swiss HIV Cohort Study 

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# 'Stigma is a mark or attribute that is discrediting to the person in the eyes of society' - Erving Goffman Methods 

We examined associations between HIV-related stigma and quality of life based on pooled data from 374 people living with HIV (PLWH) followed-up at the Lausanne University Hospital in Lausanne, Switzerland. These 374 PLWH were enrolled in both the SHCS stigma study and the Medications, Alcohol and Substance use in HIV (MASH) (see below).

## The SHCS

The SHCS is a multicentre, prospective cohort study enrolling adult PLWH in Switzerland within seven participating centres.
Between 1st July until 31st January 2021, PLWH enrolled in the SHCS answered a validated HIV-stigma questionnaire. PLWH from the Lausanne centre were included in the current study.

## MASH 来

In the MASH study, patients were enrolled from four different cohorts and centres: United States (Veterans Affair Healthcare System; and Kaiser Permanente); United Kingdom (Antiretroviral Therapy Cohort Collaboration, ART-CC), and Switzerland (Lausanne University Hospital, SHCS).

Our main outcome was HIV-related stigma, measured using a validated 12-item HIV-stigma questionnaire composed of four stigma sub-scales (1. concerns regarding public attitudes, 2. disclosure concerns, 3. personalised stigma, 4. negative self-image) plus two questions regarding health-care related stigma. The possible score range for each item was 1 to 4, higher scores indicating higher stigma. We sought associations between stigma and: smoking and substance use, alcohol consumption (Alcohol Use Disorders Identification Test-Consumption, AUDIT-C), depression (Patient Health Questionnaire-9, PHQ-9), anxiety (Generalised Anxiety Disorder 2-item, GAD-2), and quality of life (12-item Short Form Survey, SF-12). Significance was considered $<0.002$ after Bonferroni adjustment.

## Results

## We analyzed 374 participants

31.6\% female, 24.1\% Black; median age 50.5, IQR (41, 59); all had at least mandatory schooling; $5.4 \%$ had $\geq 50$ HIV-1 RNA copies/ml; 98.9\% were on ART; 15.8\% were on polypharmacy; $18.2 \%$ in anxiety or depression treatment; $32.9 \%$ were current smokers; $47.9 \%$ had moderate to severe alcohol consumption (AUDIT-C); 16.9\% had moderate to severe depression symptoms (PHQ-9); 13.4\% had anxiety symptoms (GAD-2). Median t-score for general health (SF-12) was 46.7, IQR (46, 56). Factors associated with HIV-stigma are shown in Fig 1.


Overall Cronbach's alpha was $\mathbf{0 . 8 0}$. However, for each subscale was 0.69 for concerns regarding public attitudes, 0.78 for disclosure concerns, 0.84 for personalised stigma, and 0.58 for negative selfimage. Moreover, Cronbach's alpha for healthcare associated stigma was 0.16 . HIV-stigma prevalence by subscale is shown in Fig 2.

Average stigma score was 2.4.
Fig 2. Burden of stigma by subscale


## Conclusions

In this sample of well-treated PLWH, being Black was the main factor associated with higher HIV-stigma scores, suggesting intersectional stigma related to race. We observed a trend of mild depression and higher stigma scores, and of higher education and lower stigma scores. Associations between stigma and depression may have been masked by antidepressant treatment. The associations we observed are now the focus of qualitative studies.

