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BACKGROUND

- HIV infection and housing instability are both associated with early onset of aging-related comorbidities, including frailty.
- However, few studies have examined the relationship between housing status and frailty among people with HIV (PWH).

METHODS

- Study Design:** Cross-sectional analysis
- Setting:** Centers for AIDS Research Network of Integrated Clinical Systems (CNICS) cohort of adult PWH in clinical care
- Participants:** PWH at 6 sites across the US with measured housing status and frailty
- Observation Period:** 06/2019-07/2024

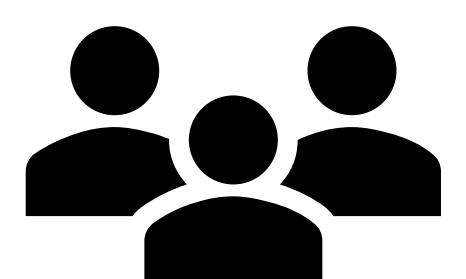
Exposure: Housing instability was based on self-reported living situation in the past month:

- “Stable” vs. “Unstable”/“Homeless”/“Don’t know”

Outcome: Frailty was captured using a validated frailty phenotype of four self-reported components (scored 0-4)

- Frailty status: robust (0), prefrail (1-2), frail (3-4)

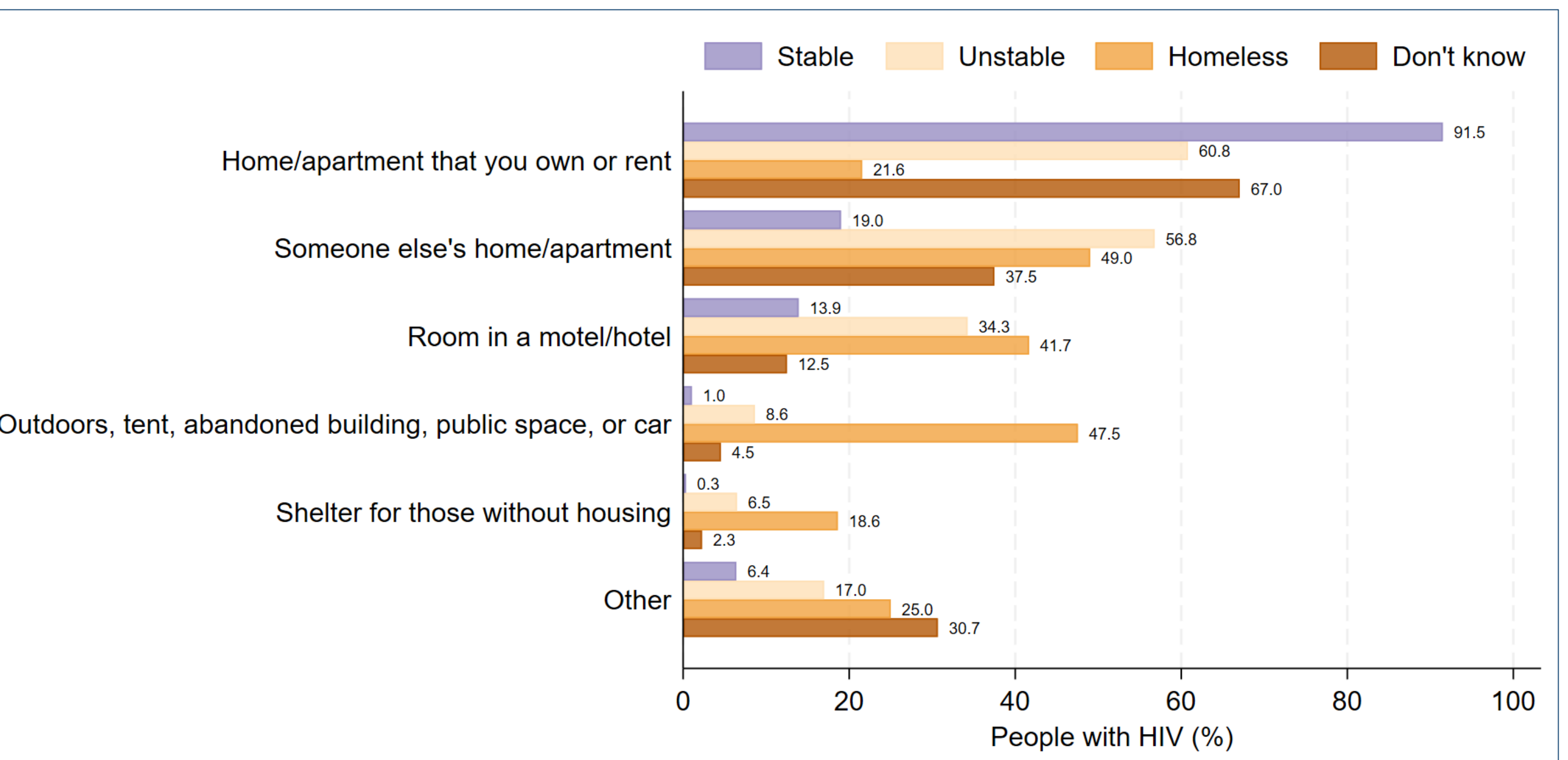
- Covariates:** Sociodemographic factors, substance use, HIV clinical indicators, and clinical comorbidities
- Analysis:** Modified Poisson risk regression models



N=6,961

- Median age: 52 (IQR: 40-60)
- 84% male; 16% female
- 8% unstably housed (5% unstable; 3% homeless; 1% don’t know)

Figure 1. Locations where PWH stayed for ≥ 1 night during the past month by self-reported housing status



Housing instability was associated with a 2.3 times greater risk of frailty
Risk was elevated *across ages*

RESULTS

Figure 2. Frailty status by age and housing status during the past month

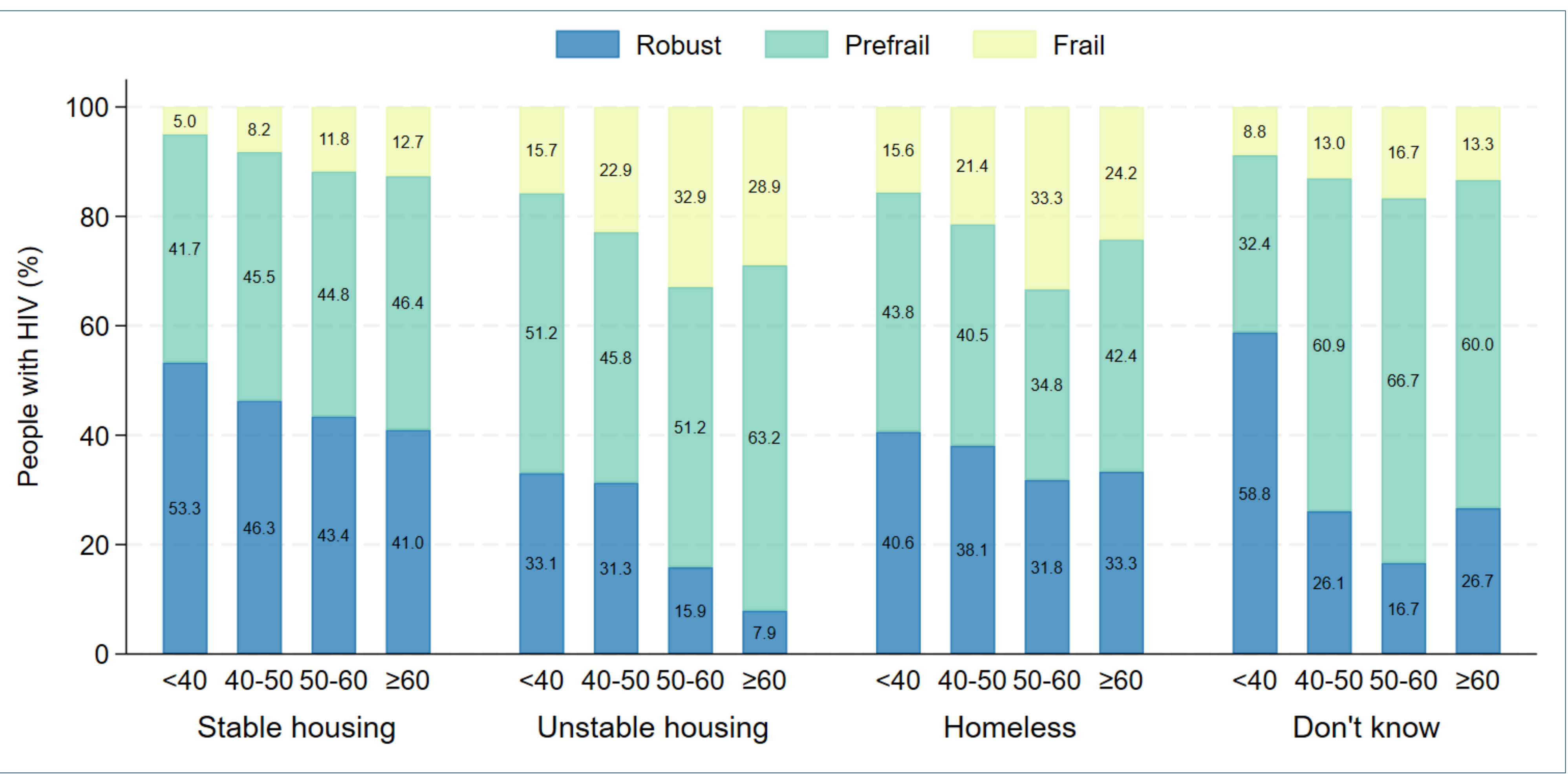
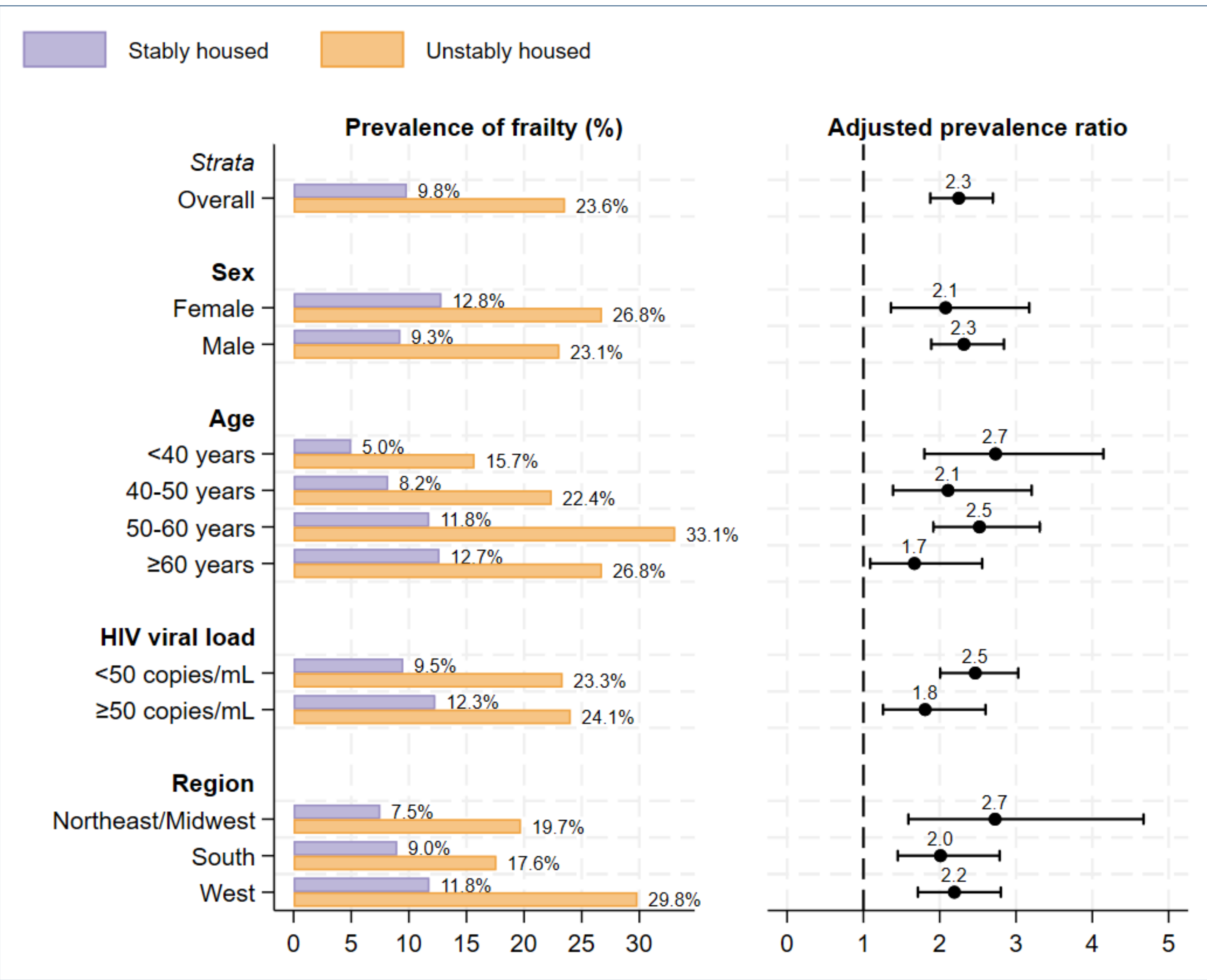


Table 1. Prevalence Ratio (PR) and 95% CI for the association between housing instability and frailty among people with HIV (N=6,961)

	Model 1	Model 2	Model 3	Model 4: Primary
Adjustment set:	Socio-demographics	Model 1 factors + substance use	Model 2 factors + HIV indicators	Model 3 factors + comorbidities
Housing status				
Stable (ref.)				
Unstable	2.83 (2.30, 3.48)	2.57 (2.08, 3.18)	2.50 (2.02, 3.09)	2.41 (1.95, 2.97)
Homeless	2.59 (2.01, 3.34)	2.22 (1.70, 2.90)	2.09 (1.59, 2.75)	2.05 (1.56, 2.69)
Don't know	1.41 (0.80, 2.50)	1.39 (0.78, 2.46)	1.34 (0.76, 2.38)	1.36 (0.78, 2.38)

RESULTS

Figure 3. Stratified prevalence and adjusted prevalence ratios of frailty associated with housing instability



Unstably housed includes PWH who responded “unstable” or “homeless”; 90 PWH who responded “don’t know” were excluded from this figure. Adjusted for age, sex, race/eth, site, year, alcohol/nicotine/illicit drug use, viral suppression, CD4 count, BMI, hypertension, diabetes, HBV, and HCV.

CONCLUSIONS

- Housing instability and frailty were both prevalent and strongly associated among PWH in care.
 - Including among younger and virally suppressed groups
- Findings highlight the potential importance of social determinants of health, such as housing status, for clinical outcomes among all people with HIV.

ADDITIONAL INFORMATION

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