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## Background

- Psychiatric disorders are highly prevalent among persons living with HIV (PLWH)<sup>1-3</sup> and are associated with non-adherence to antiretroviral therapy (ART) and lack of viral suppression<sup>4,5</sup>
- Antidepressant treatment among PLWH with depression is associated with higher ART adherence and greater likelihood of viral suppression,<sup>6,7</sup> yet gaps in antidepressant treatment have been observed<sup>8,9</sup>
- Little is known about the proportion of PLWH who receive pharmacologic treatment for other psychiatric disorders and its impact on HIV outcomes

## Objectives

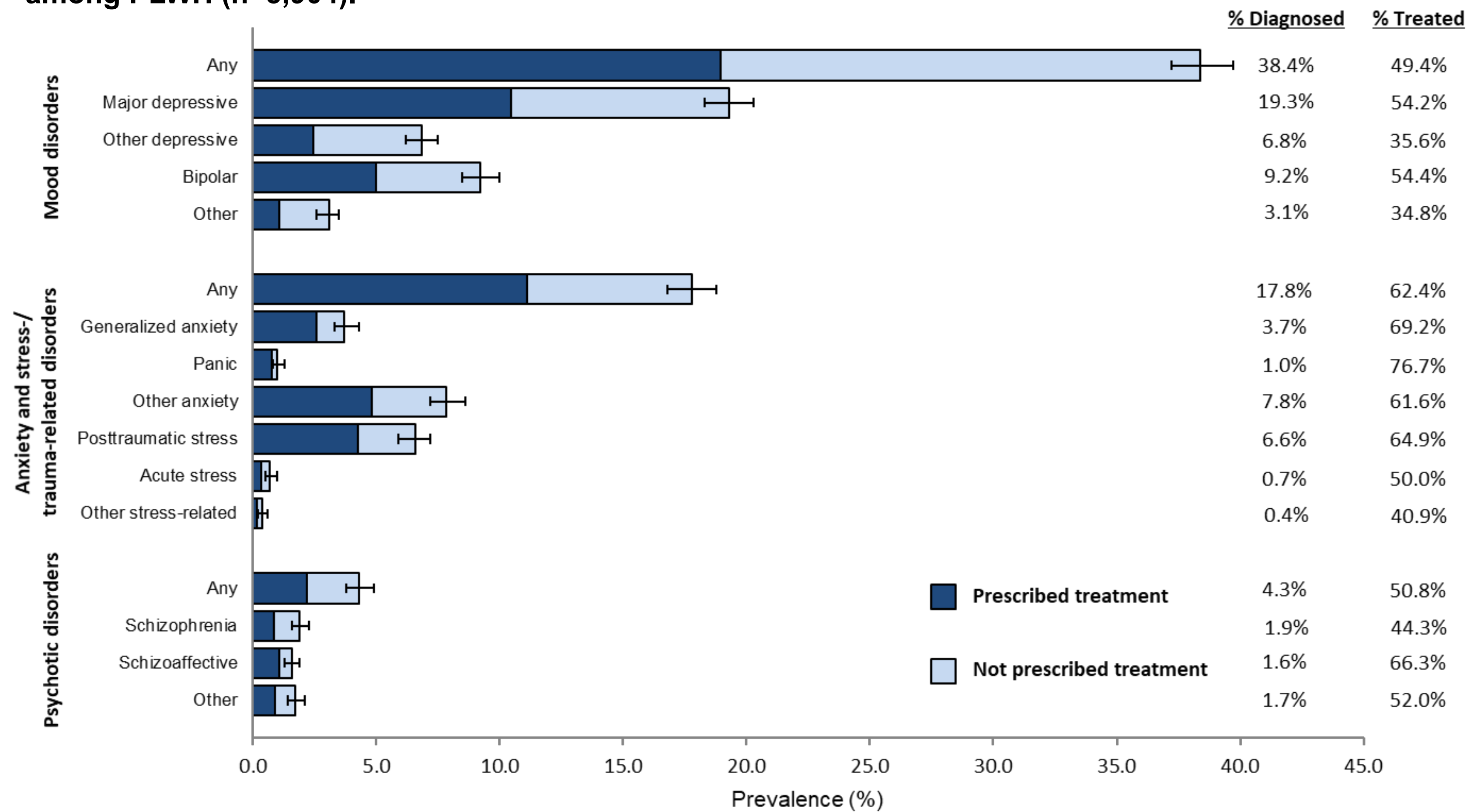
- To evaluate proportions of PLWH in care who were prescribed pharmacologic treatment for diagnosed mood, anxiety, stress-/trauma-related, and psychotic disorders
- To assess the associations between treated and untreated psychiatric disorders with duration of unsuppressed HIV viral load (VL)

## Methods

- Study population:** DC Cohort, an observational clinical cohort of PLWH followed from Jan 2011-Mar 2018 at 14 sites in Washington, DC
- Inclusion criteria:**  $\geq 18$  years old;  $\geq 6$  months total follow-up in the DC Cohort; and received non-HIV-related primary care at HIV care site
- Psychiatric disorders:** mood, anxiety, stress-/trauma-related, and psychotic disorders defined using ICD-9 and ICD-10 diagnosis codes
- Pharmacologic psychiatric treatment:** defined as drug prescriptions for antidepressants, antipsychotics, anticonvulsants, anxiolytics, and beta blockers that are known to treat underlying psychiatric disorders or associated symptoms
- Time with unsuppressed HIV VL:** estimated proportion of total days spent with VL  $\geq 200$  copies/mL based on log<sub>10</sub>-transformed values of all available consecutive VL pairs
- Statistical analysis:** assessed associations between time-updated psychiatric diagnoses/prescriptions and time with VL  $\geq 200$  copies/mL
  - Treated and untreated PLWH within each disorder type were compared to PLWH without the respective disorder
  - Multivariable Poisson regression with generalized estimating equations

## Results

**Figure 1. Prevalence of diagnosed psychiatric disorders and pharmacologic treatment prescriptions among PLWH (n=5,904).**



### Study Cohort Characteristics (n=5,904)\*:

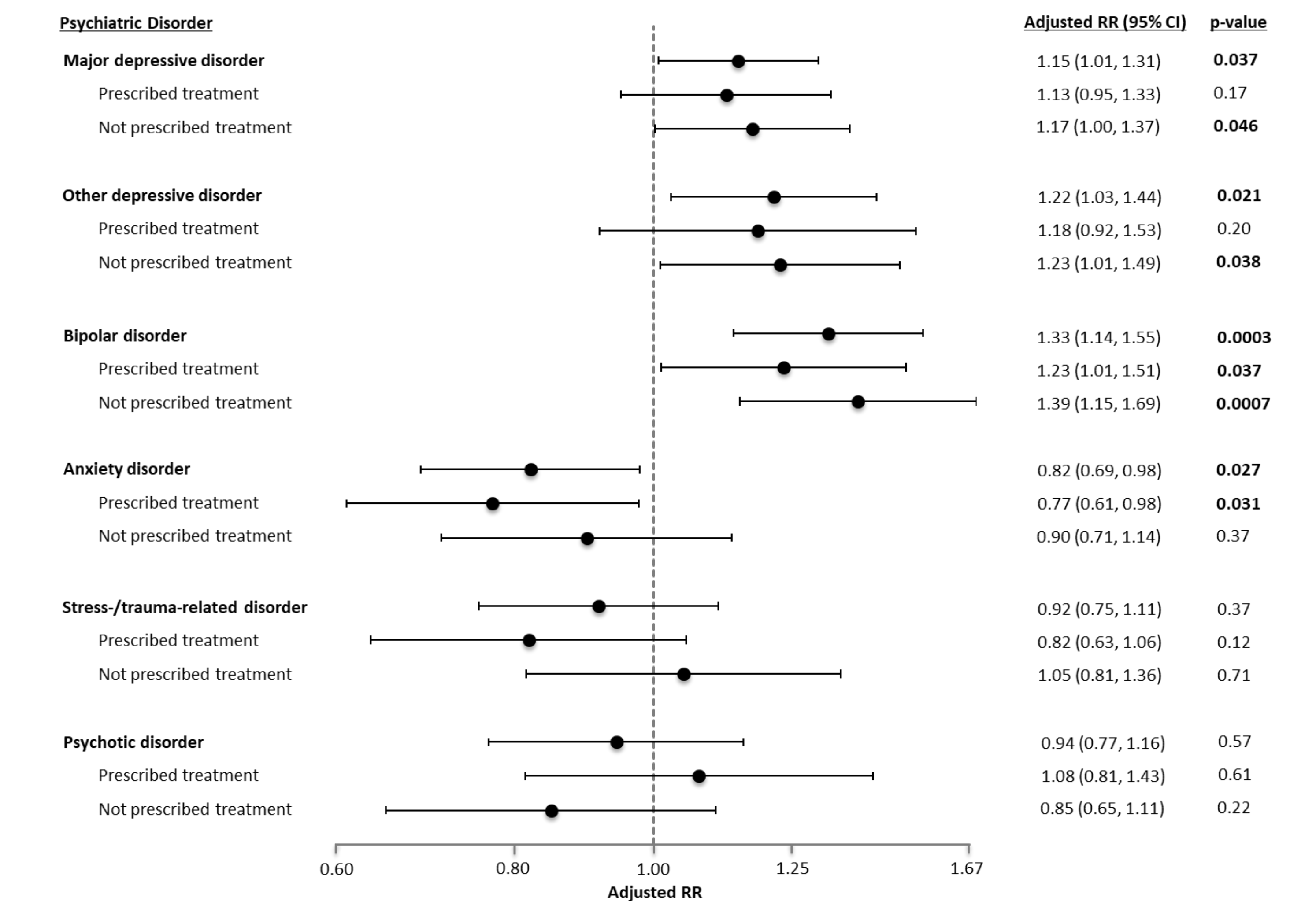
- Median age 51 (IQR: 40-59)
- 70% cisgender male; 27% cisgender female; 3% transgender
- 82% non-Hispanic Black; 10% non-Hispanic white; 6% Hispanic; 2% other race/ethnicity
- 11% with unstable housing; 2% homeless
- 81% public insurance; 16% private insurance; 3% no known insurance
- 36% with alcohol use disorder
- 17% with other substance use disorders
- 16% HIV VL  $\geq 200$  copies/mL
- 92% prescribed combination ART

\*Characteristics are provided as of patients' most recent point of active study participation through Mar 2018.

### Summary of Results:

- Among 5,904 PLWH, 45% had a diagnosed psychiatric disorder, including 38% with a mood disorder, 18% with an anxiety or stress-/trauma-related disorder, and 4% with a psychotic disorder
- The proportion of PLWH with each condition who were prescribed pharmacologic treatment was 49% for mood disorders, 62% for anxiety and stress-/trauma-related disorders, and 51% for psychotic disorders
- PLWH with untreated major depressive disorder, untreated other/unspecified depressive disorder, untreated bipolar disorder, and treated bipolar disorder spent more time with VL  $\geq 200$  copies/mL compared with PLWH without a mood disorder
- PLWH with a treated anxiety disorder spent less time with VL  $\geq 200$  copies/mL than PLWH without an anxiety disorder
- Associations were attenuated and non-significant for treated depressive disorders and untreated anxiety disorders

**Figure 2. Associations between psychiatric disorders and pharmacologic treatment with proportion of time with HIV VL  $\geq 200$  copies/mL (15,944 person-years among 4,935 PLWH).**



\*Adjusted for all psychiatric disorders, age, gender, race/ethnicity, mode of HIV transmission, insurance status, housing status, smoking history, alcohol use disorder, substance use disorder, length of time since HIV diagnosis, history of AIDS, nadir CD4 count, and recent CD4 count.

\*\*Missing data were multiply imputed for race/ethnicity (1%), mode of HIV transmission (18%), housing status (6%), insurance status (2%), and smoking history (13%).

## Conclusions

- Many PLWH with psychiatric disorders lacked documented evidence of pharmacologic psychiatric treatment
- PLWH with mood disorders spent more time, while PLWH with anxiety disorders spent less time, with VL  $\geq 200$  copies/mL, but likelihood of viral suppression was greater when pharmacologic treatment was prescribed
- Limitations: validity of data points depends on accuracy of information in medical records; disorders defined using diagnosis codes; treatment defined using medication prescriptions; did not distinguish between classes of medications; and statistical power varied by psychiatric disorder
- The appropriate diagnosis and treatment of psychiatric disorders, particularly for depressive and bipolar disorders, may be important for promoting sustained viral suppression among PLWH