Acknowledgements

Introduction

In recent years, there has been a concurrent increase in opioid use disorder (OUD) and hepatitis C virus (HCV) prevalence across the United States[1]

NY State Medicaid: 2010-2014 OUD Diagnoses
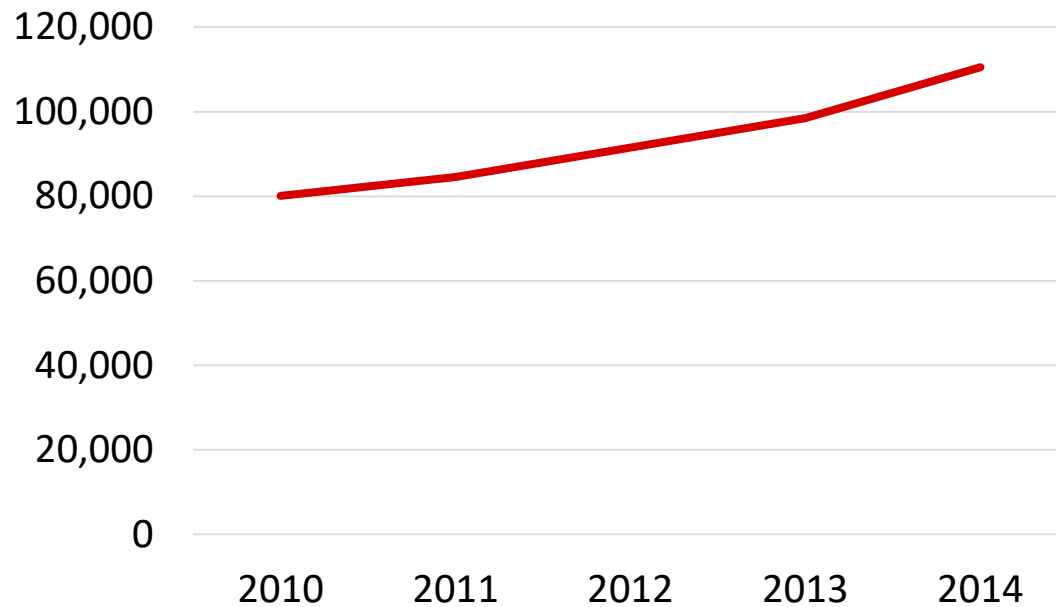
NY State Medicaid: 2010-2014 HCV Diagnoses*
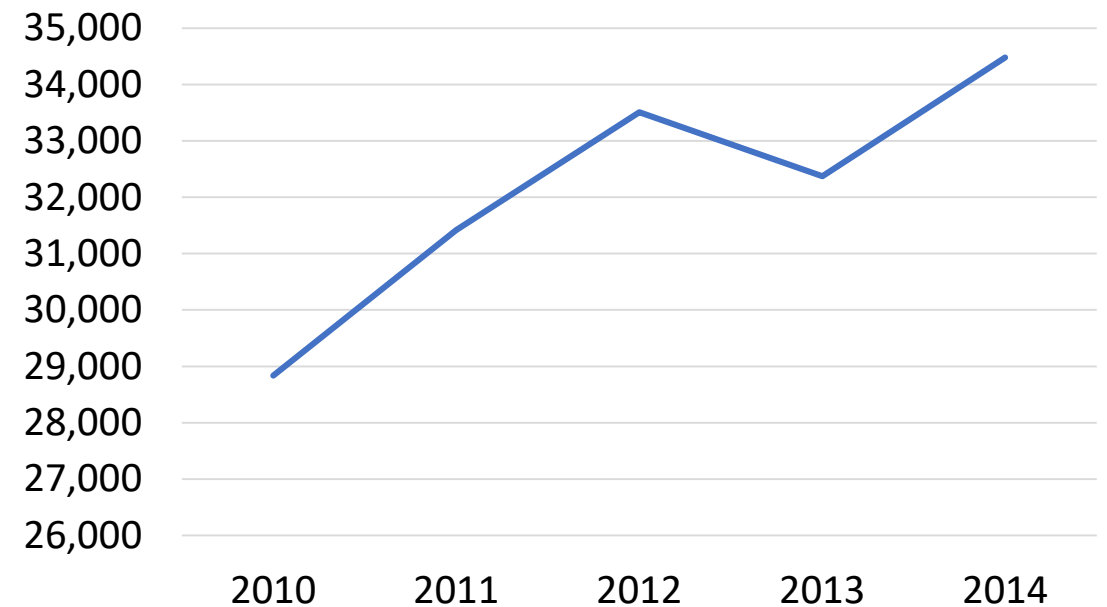
* Using an algorithm requiring 2 outpatient or 1 inpatient claims

NY State Medicaid: 2010-2014

HIV and HCV among OUD
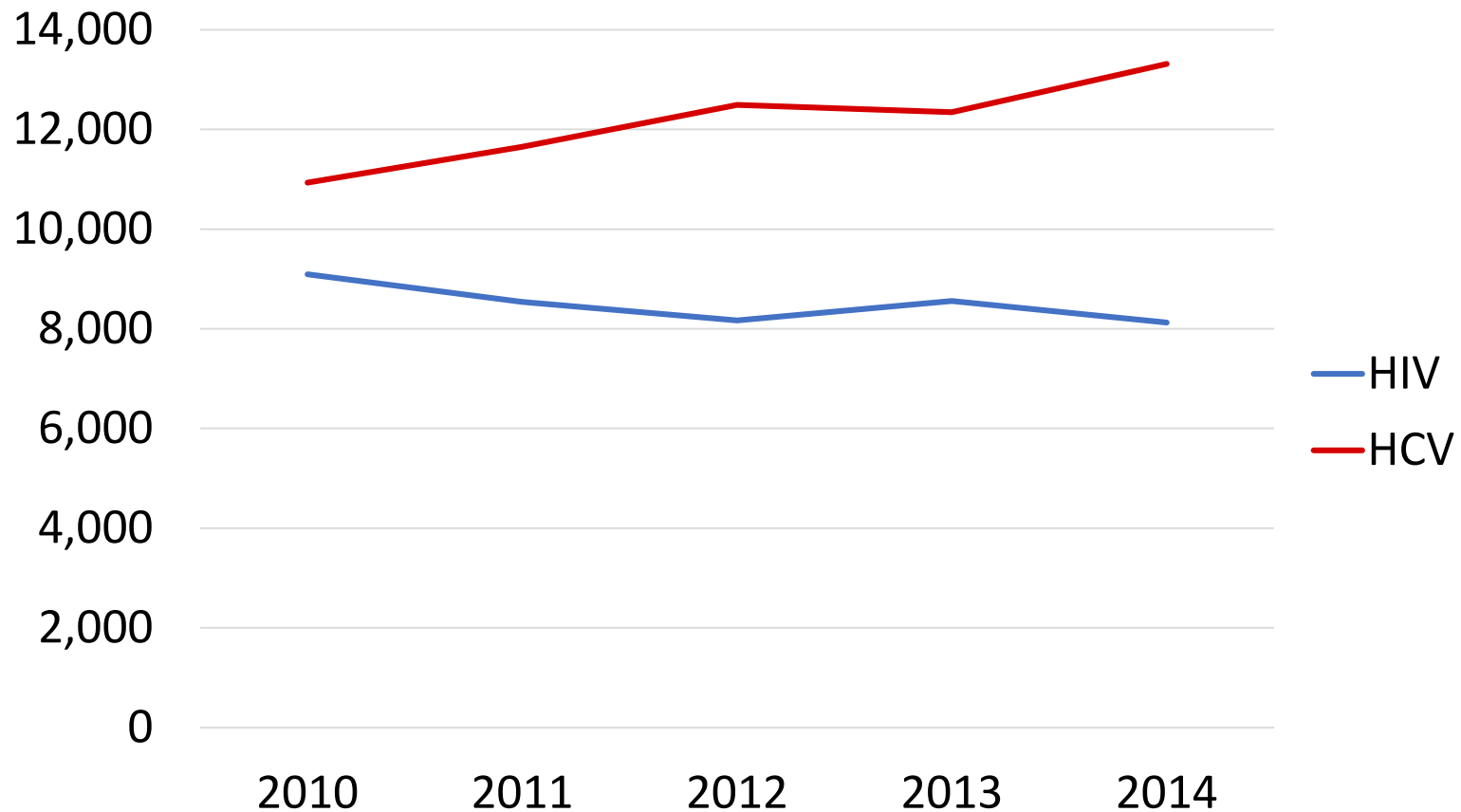
Hepatitis C Virus

- **Treatment**
  - High cure rates - ~70%-90% depending on type and individual characteristics[2]
  - Removal of Disease Severity Criteria in NYS Medicaid in 2016 has theoretically reduced barriers to treatment[3,4]
- **Screening**
  - CDC recommends one-time screening for Baby Boomers[5]
  - USPSTF recommends screening for people at high-risk – injection drug users[6]

Opioid Use Disorder

- **Treatment**
  - Medication-assisted treatment (MAT)
    - Increasingly robust evidence as effective OUD treatment[7]
    - 3 types – Methadone, Buprenorphine, Naltrexone
    - Improved health outcomes[8,9]
- **Policies**
  - Federal guidelines for OTPs recommend HCV screening[10]
  - NYS OASAS-certified OTPs require offering HCV testing[11]

Objective

We examine patterns of HCV screening across OUD treatment types for individuals with OUD alone and with HIV-coinfection in New York State Medicaid

Study Data

- NY State Medicaid Claims Data for 2,776,473 clients age 18-64 in calendar year 2014
    - Excludes Dual-eligible Medicare beneficiaries

- Defining Populations
    - OUD identified through ICD-9-CM Diagnosis Codes
    - HIV identified through algorithm developed in partnership with NY State AIDS Institute
    - HCV screening is identified through CPT codes 86803, 86804[14]

Populations of Interest

2014 NYS Medicaid beneficiaries with OUD
N=110,562
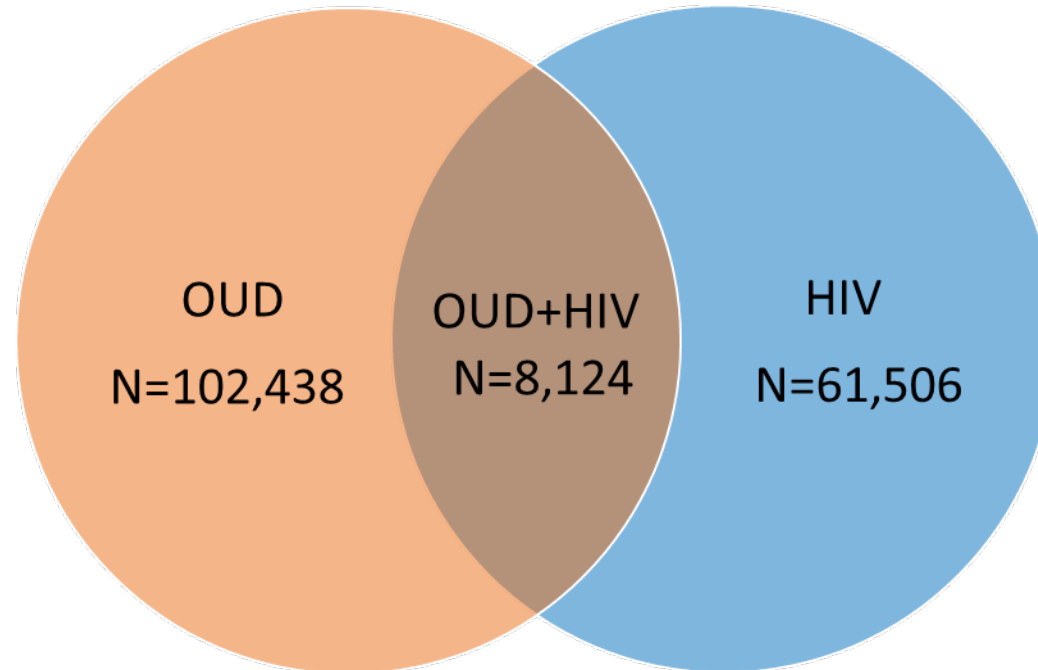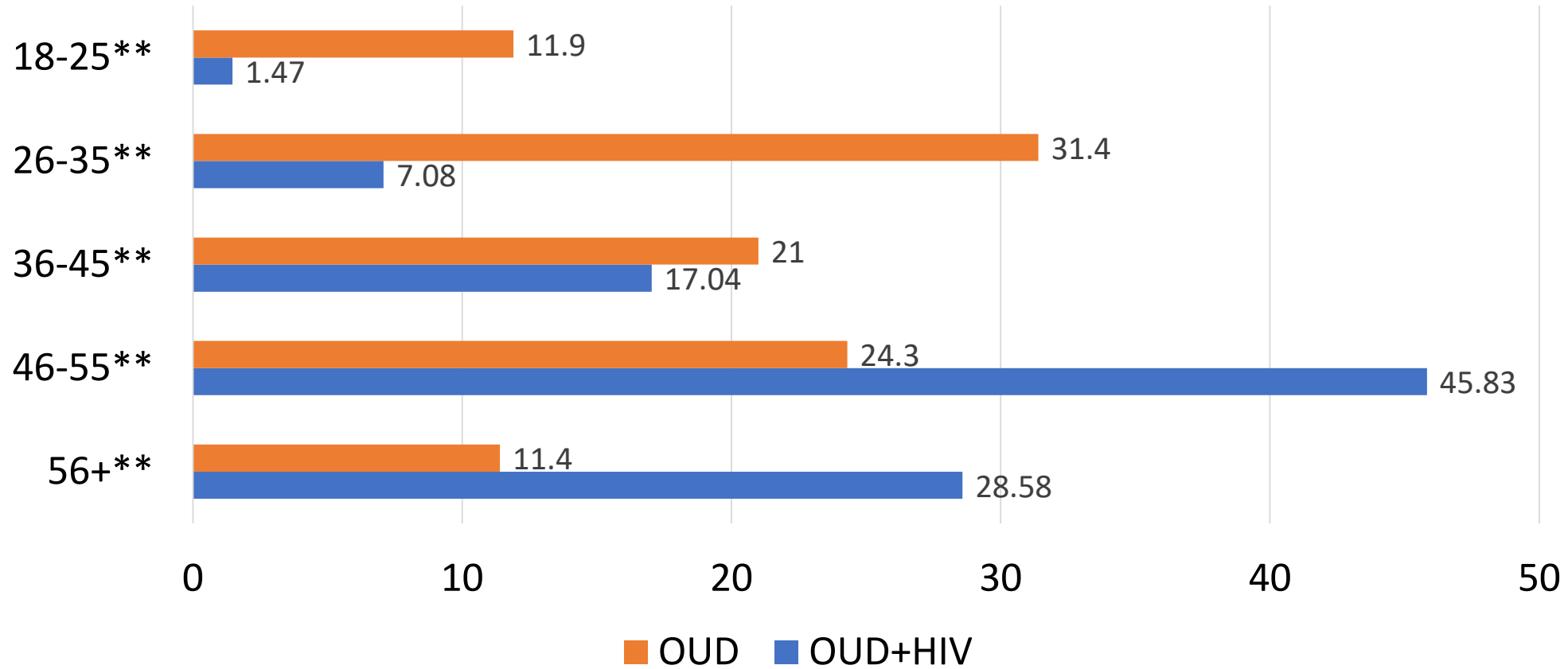
OUD
N=102,438

OUD+HIV
N=8,124

HIV
N=61,506

Demographics- Age* %

Age	OUD	OUD+HIV
18-25**	11.9	1.47
26-35**	31.4	7.08
36-45**	21	17.04
46-55**	24.3	45.83
56+**	11.4	28.58

■ OUD ■ OUD+HIV

*   Chi- Squared Test of Overall Significance is significant at the .05 level
** T-tests for between group comparison is significant at .05 level

Demographics- Gender* %

Male** — OUD: 62.41, OUD+HIV: 63.71

Female** — OUD: 37.59, OUD+HIV: 36.29

Legend: OUD (orange), OUD+HIV (blue)

*   Chi- Squared Test of Overall Significance is significant at the .05 level
** T-tests for between group comparison is significant at .05 level

Type of OUD Treatment*- %

MAT**
- OUD: 51.13
- OUD+HIV: 64.67

Psychosocial Treatment**
- OUD: 20.97
- OUD+HIV: 7.94

No Treatment
- OUD: 27.91
- OUD+HIV: 27.39

Legend: OUD, OUD+HIV

*   Chi- Squared Test of Overall Significance is significant at the .05 level
** T-tests for between group comparison is significant at .05 level

Type of OUD Treatment*-MAT %

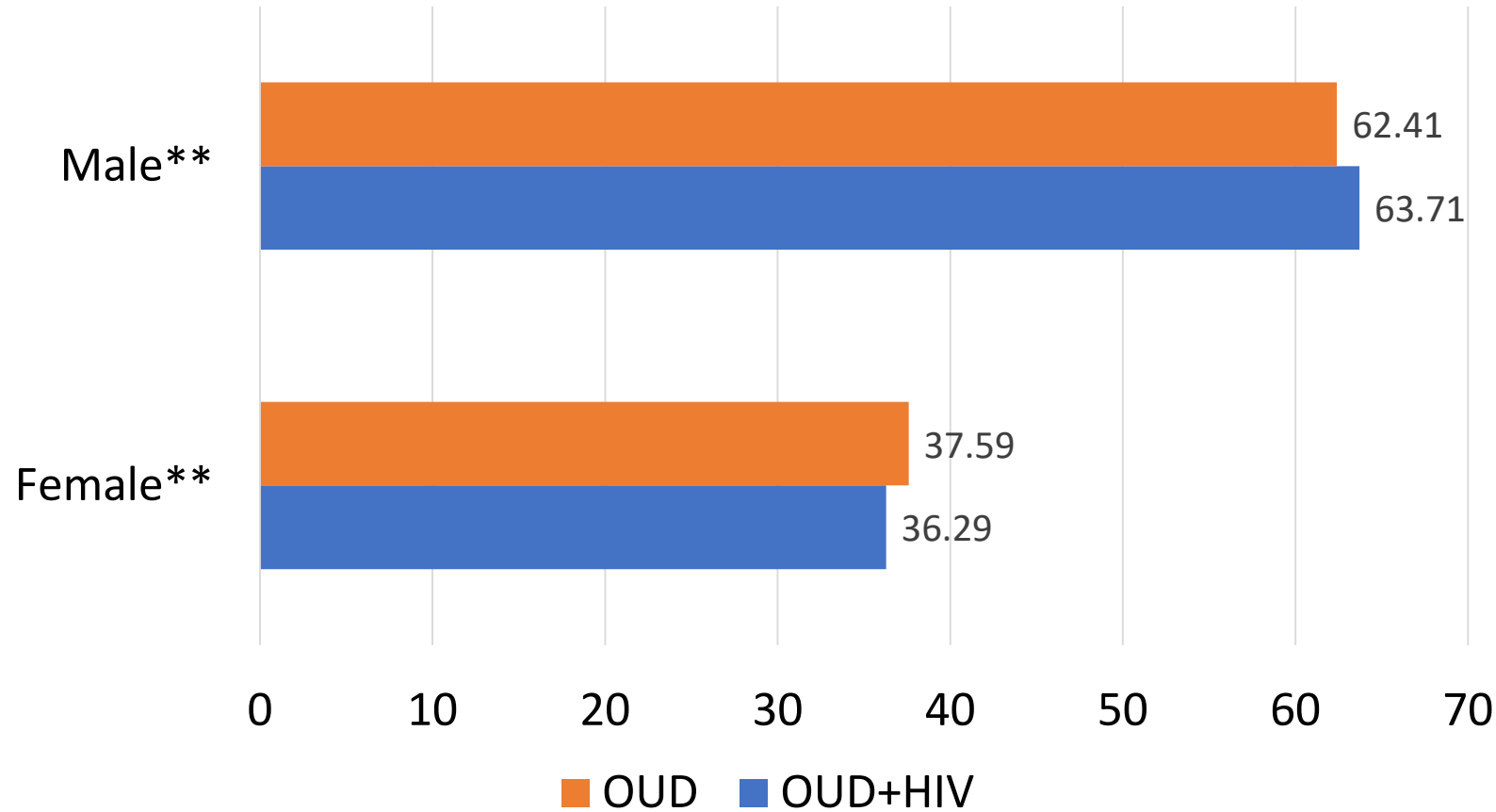| Treatment	OUD	OUD+HIV
Naltrexone**	1.39	0.36
Methadone**	29.38	56.78
Buprenorphine**	20.36	7.53

*   Chi- Squared Test of Overall Significance is significant at the .05 level
** T-tests for between group comparison is significant at .05 level

HCV Screening-By OUD Txt* %

Methadone** — OUD: 31.03, OUD+HIV: 36.76
Buprenorphine** — OUD: 17.61, OUD+HIV: 36.1
Naltrexone — OUD: 24.17, OUD+HIV: 40
Psychosocial Txt** — OUD: 14.43, OUD+HIV: 43.41
No Txt** — OUD: 18.45, OUD+HIV: 39.94

Legend: ■ OUD ■ OUD+HIV

* Chi- Squared Test of Overall Significance is significant at the .05 level
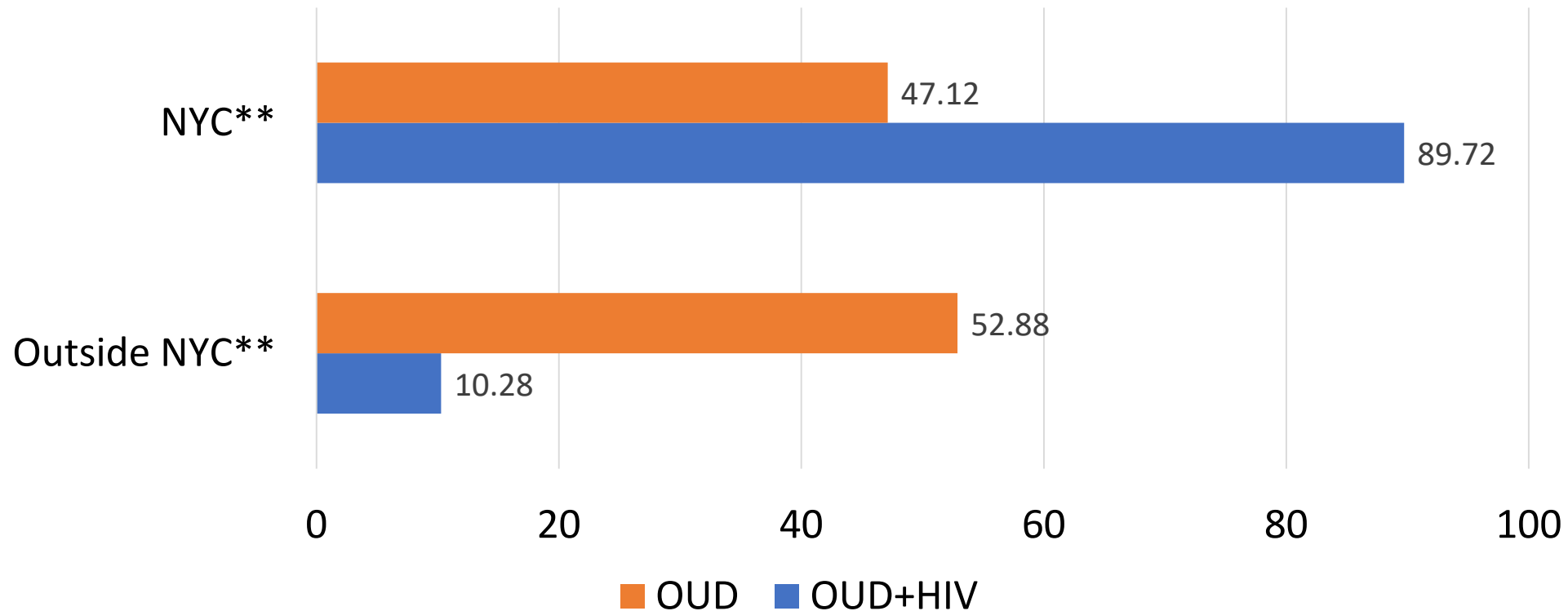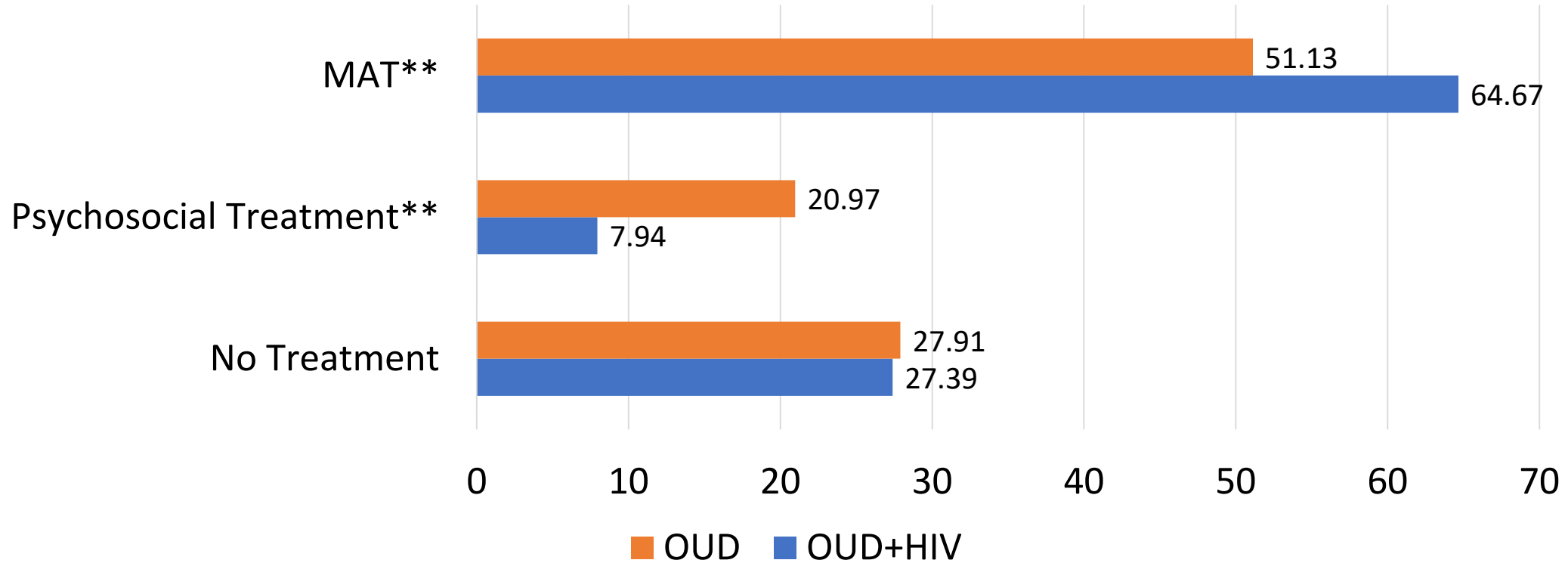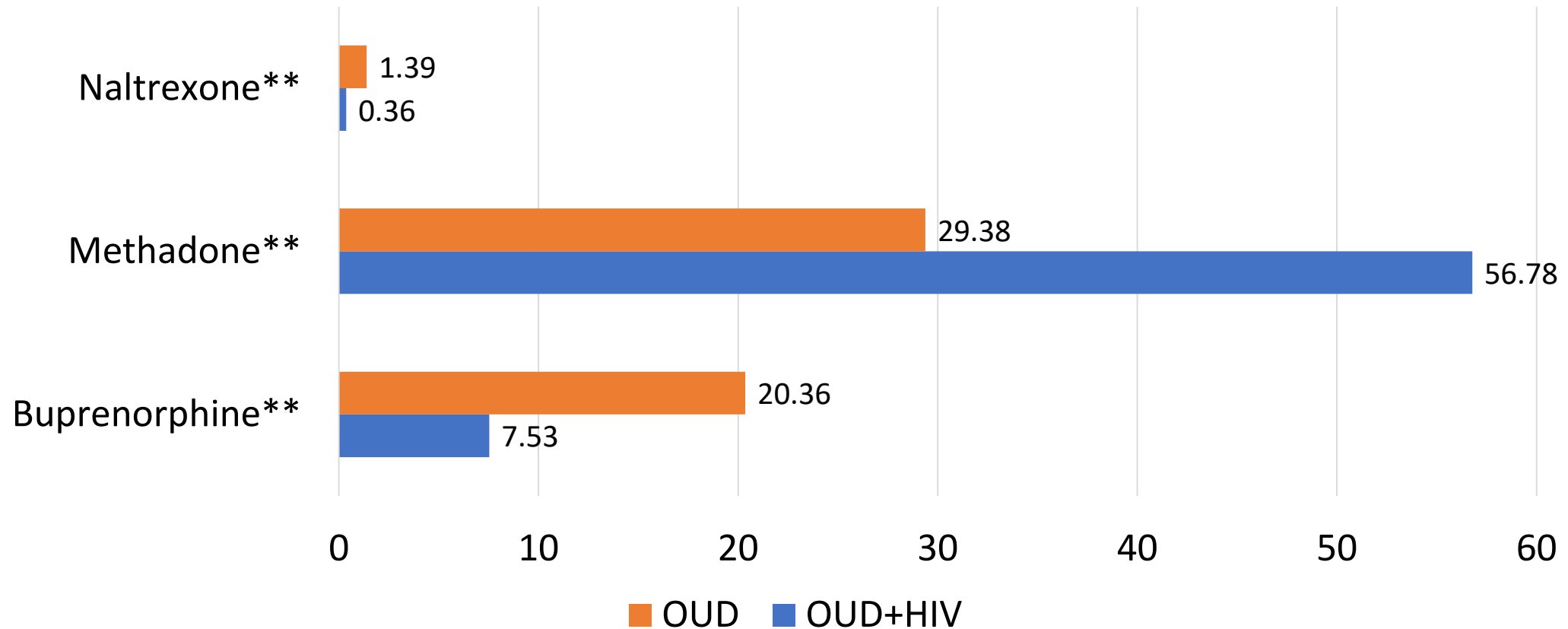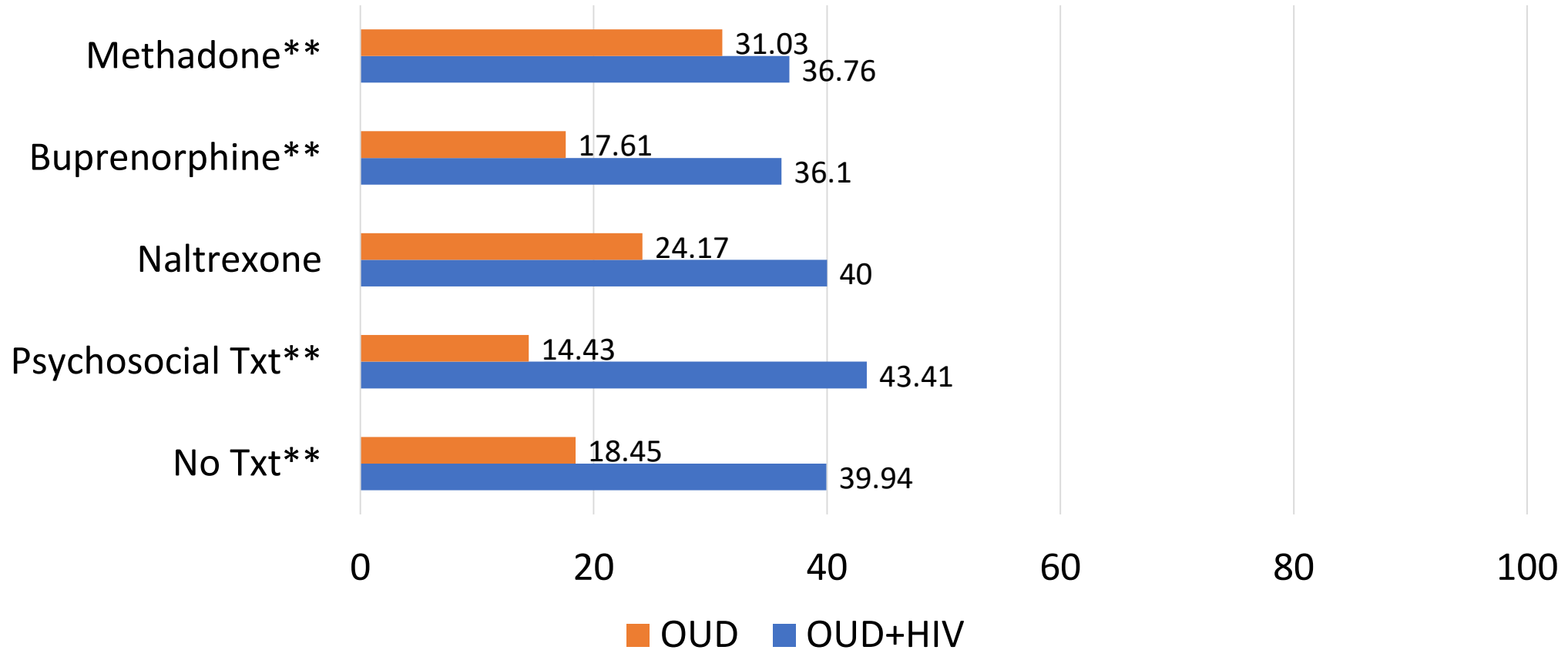** T-tests for between group comparison is significant at .05 level

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Multinomial Regression**: Predictors of HCV Screening

Reference Category is No SUD Treatment	OUD Only	OUD +HIV
	aOR	aOR
Treatment Type (reference= no treatment)		
Methadone	1.61*** (1.55-1.67)	0.96 (0.86-1.07)
Buprenorphine	1.52 *** (1.45-1.59)	1.00 (0.83-1.19)
Naltrexone	1.96*** (1.76-2.19)	1.43 (0.70-2.94)
Psychosocial Treatment	1.21*** (1.17-1.25)	1.32*** (1.18-1.47)
Comorbidities		
Chronic Physical Conditions	1.26*** (1.21-1.31)	1.19*** (1.07-1.33)
Serious Mental Illness	1.44*** (1.35-1.54)	1.40*** (1.21-1.62)

** Adjusted for age, sex, geographic location, and race/ethnicity
*** Significant at 0.01 level

Implications

- Prevalence of HCV screening is low overall despite recent national and state-wide guidelines recommending increased screening in certain high-risk populations

- Medication-assisted treatment for OUD, in particular, is associated with increased likelihood of HCV screening

- Improving access to HCV screening across OUD treatment types has important implications for identification and management of HCV for at-risk populations

Implications

- MAT was not associated with increased HCV screening among those living with HIV and OUD

- Although HCV screening is more prevalent among PLWHA, there is still opportunity for increased screening

- Integration of HIV treatment + HCV screening may serve as a model to increase HCV screening + treatment for those with OUD generally

Limitations

- Methodological
  - Cross-sectional
  - No differentiation between standard lab testing and rapid testing
  - Not considering adherence

- Data Source
  - No information on contemporary drug use
  - No results for screening tests

Next Steps

- Examine association between OUD Treatment across the HCV care continuum, diagnosis, treatment, retention, etc.

Thank you

Q&A

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Appendix: References

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8 Conner, H. S. (2015). Review for clinicians on medication assisted treatment options. *Harvard Review of Psychiatry, 23*(2).

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Appendix: Codes

- OUD:
  - ICD-9-CM: 3040, 30400, 30401, 30402, 30403, 3055, 30550, 30551, 30552, 30553, 3047, 30470, 30471, 30472, 30473

- HIV:
  - 12 stand-alone + 4 combination "flags" comprising state-specific rate codes, procedure codes, diagnosis codes, APR-DRG codes which indicate probable HIV
  - Manuscript describing validation of algorithm against HIV- registry forthcoming

- HCV Diagnosis + Testing:
  - Testing: Current Procedural Technology Codes: 86803, 86804
  - Diagnoses: ICD-9-CM- 07041, 07044, 07051, 07054, 07070, 07071, V0262