

Update: Improved Care Engagement and Viral Load Suppression among HIV Care Coordination Clients with Psychosocial Barriers at Baseline

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HORDS

Costs, Health Outcomes & Real-world Determinants of Success in HIV Care Coordination

BACKGROUND: CHORDS AND THE NYC RYAN WHITE PART A CCP

CHORDS: Costs, Health Outcomes and Real-world Determinants of Success in HIV Care Coordination

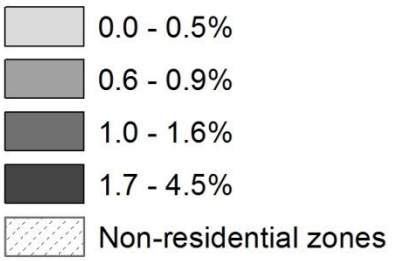
The **Care Coordination Program (CCP)** is designed to support engagement in HIV care and treatment among individuals at elevated risk of suboptimal HIV care outcomes:

- newly diagnosed
- previously lost to care/never in care
- irregularly in care
- initiating a new treatment regimen
- with incomplete medication adherence or response to treatment

CCP Lead and Partner Service Sites, 2015^a

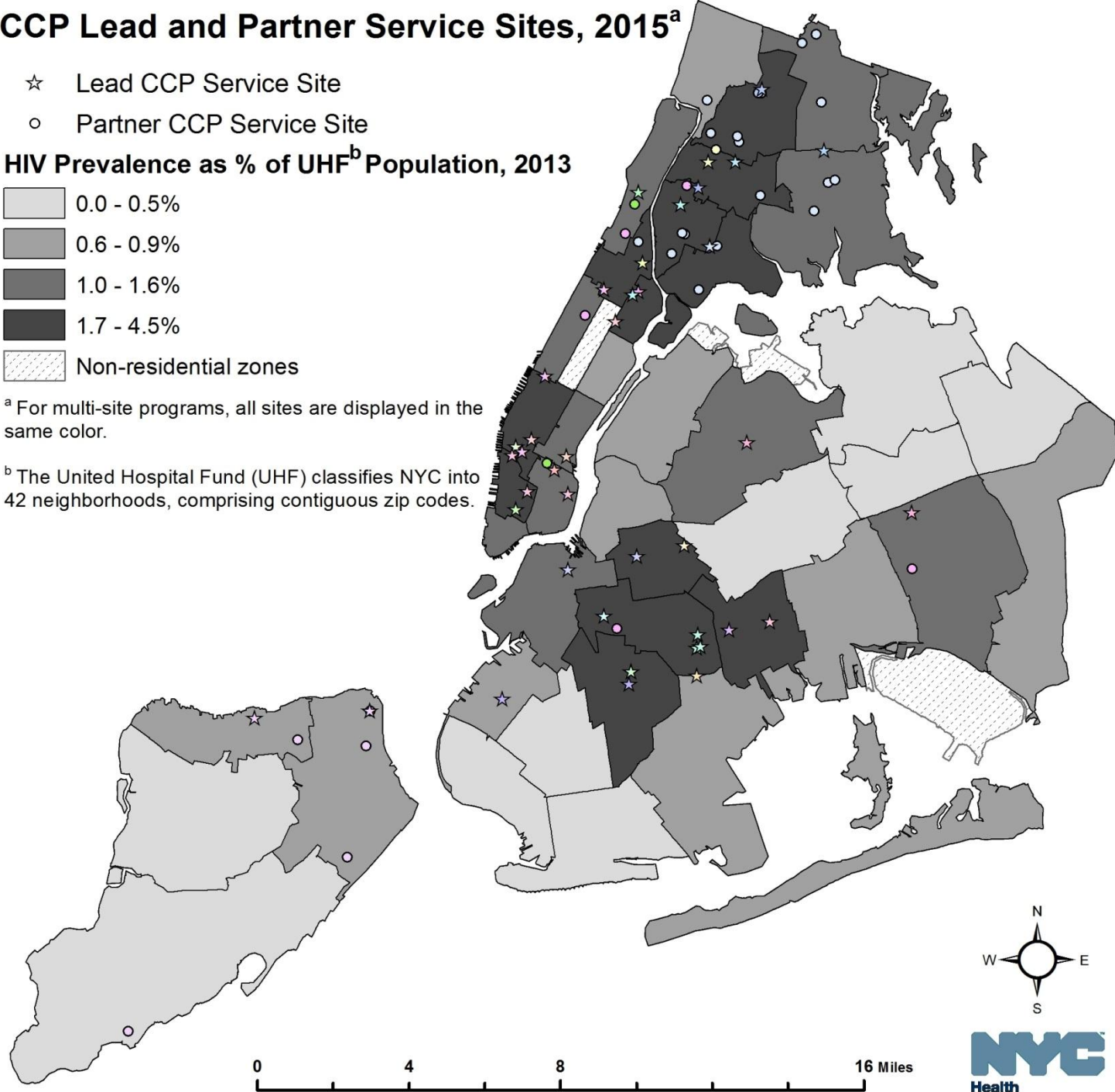
- ☆ Lead CCP Service Site
- Partner CCP Service Site

HIV Prevalence as % of UHF^b Population, 2013

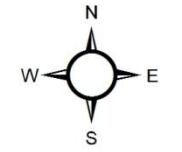


^a For multi-site programs, all sites are displayed in the same color.

^b The United Hospital Fund (UHF) classifies NYC into 42 neighborhoods, comprising contiguous zip codes.



28 CCP AGENCIES IN NYC



BACKGROUND: CCP INTERVENTION DESCRIPTION

- **CCP model provides:**
 - case management
 - patient navigation, including accompaniment
 - adherence support, including directly observed therapy (DOT)
 - health promotion in home visits
 - assistance with medical/social services
- See CDC Compendium of Evidence-based Interventions:
http://www.cdc.gov/hiv/pdf/prevention/research/compendium/cdc-hiv-HIVCCP_EI_Retention.pdf

BACKGROUND: KEY BARRIERS TO OPTIMAL HEALTH OUTCOMES

- Individuals with housing, mental health and/or substance use issues are at greater risk for sub-optimal HIV care outcomes.
- Interventions that demonstrate effectiveness in improving adherence to HIV care and treatment may have limited impact among those with key psychosocial barriers.
- The CCP has demonstrated effectiveness*, but more information is needed on the impact of CCP for those with key psychosocial barriers.

Higa, Marks, Crepaz, et al., *Curr HIV Rep.*, 2012

Thompson, Mugavero, Amico, et al., *Annals of Internal Med.*, 2012

Gardner, Giordano, Marks, et al., 2014

*M Irvine et al., *CID*, 2014

OBJECTIVES

- **Compare engagement in care (EiC) and viral load suppression (VLS) among those with key psychosocial barriers:**
 - Unstable housing
 - Poor mental health
 - Hard drug use
- **Further examine EiC and VLS among those with barrier resolution over time**

METHODS: DATA SOURCES

- Matched CCP programmatic data with NYC HIV Registry data

Programmatic Data:
Ryan White Service Provider
Reporting (eSHARE=Electronic
System for HIV/AIDS
Reporting and Evaluation)



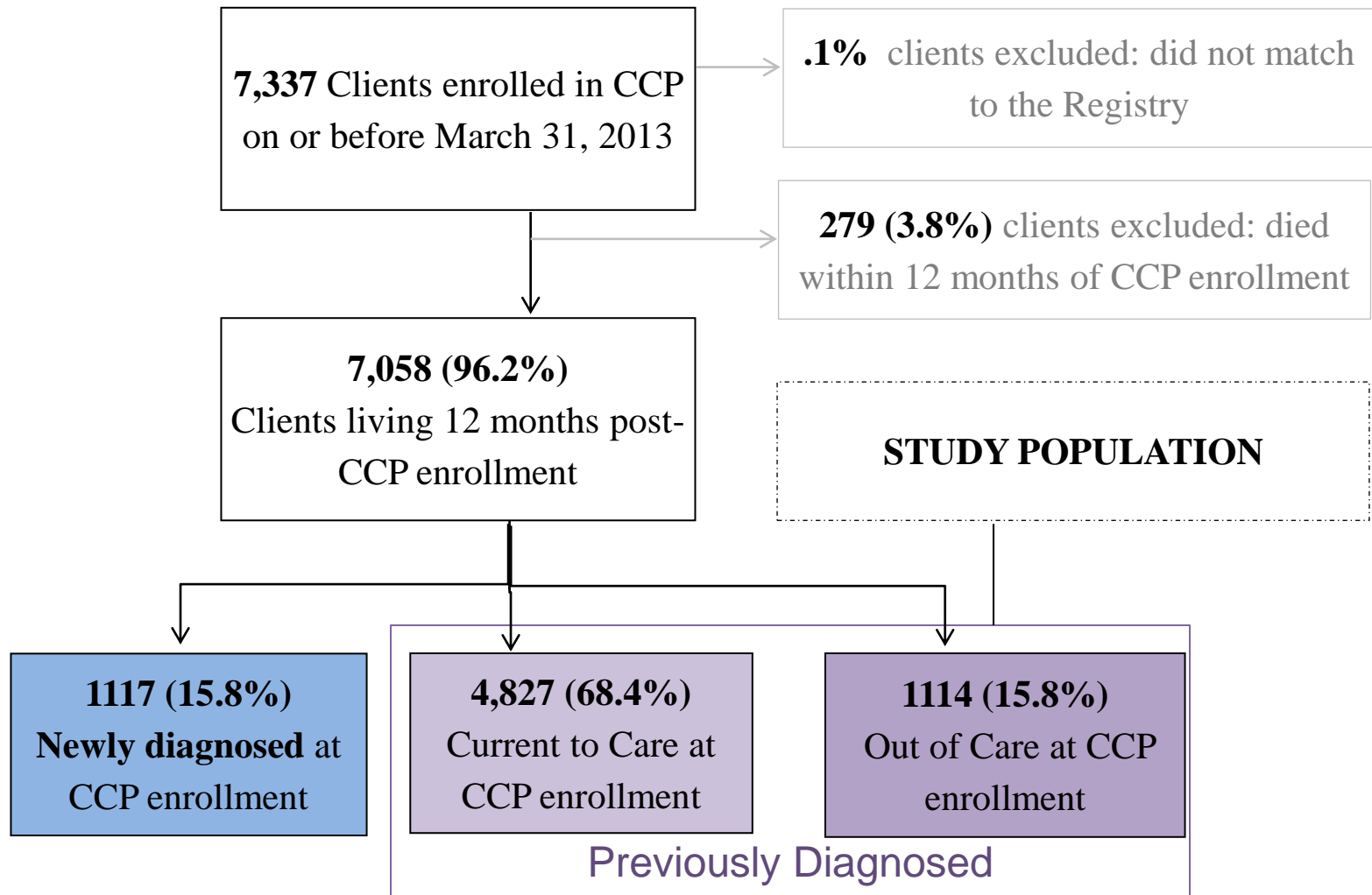
HIV Surveillance Data:
Registry of NYC HIV cases
(laboratory VL and CD4 tests,
HIV diagnostic events)

METHODS: ELIGIBLE SAMPLE AND CARE STATUS GROUPS

- **Clients Eligible for Analysis:** enrolled by March 2013, matched to Registry, and alive for ≥ 1 year of follow-up.
- **Key Terms:**
 - Newly Diagnosed: HIV diagnosis date in 12 months before enrollment
 - Current to Care (Baseline): Any CD4 or VL test date in 6 months before enrollment*
 - Out of Care (Baseline): No CD4 or VL test date in 6 months before enrollment*

*Among the previously diagnosed

METHODS: STUDY ELIGIBILITY



METHODS: STATISTICAL MEASURES

■ Outcome Measures:

- Engagement in Care (EiC): ≥ 2 CD4 or VL tests ≥ 90 days apart, with ≥ 1 in each half of 12-month period
- Viral Load Suppression (VLS): $VL \leq 200$ copies/mL on most recent test in second half of 12-month period*

■ Estimated post- vs. pre- CCP enrollment relative risks (RRs) for EiC and VLS using GEE

*Missing VL in 2nd half of 12-month period considered equivalent to unsuppressed VL.

METHODS: PSYCHOSOCIAL BARRIERS

Psychosocial Barriers Definitions*

- **Unstable housing:** Homelessness or residence in temporary/transitional housing
- **Lower mental health functioning:** Mental component summary (MCS) score below sample median (42.14) on the SF-12(v2) functional health assessment
- **Recent hard drug use:** Self-report of using heroin, cocaine, methamphetamines, or Rx drugs to get high (past 3 months)

* Based on CCP Assessment: Baseline= Intake Assessment;
Post-baseline=Reassessment

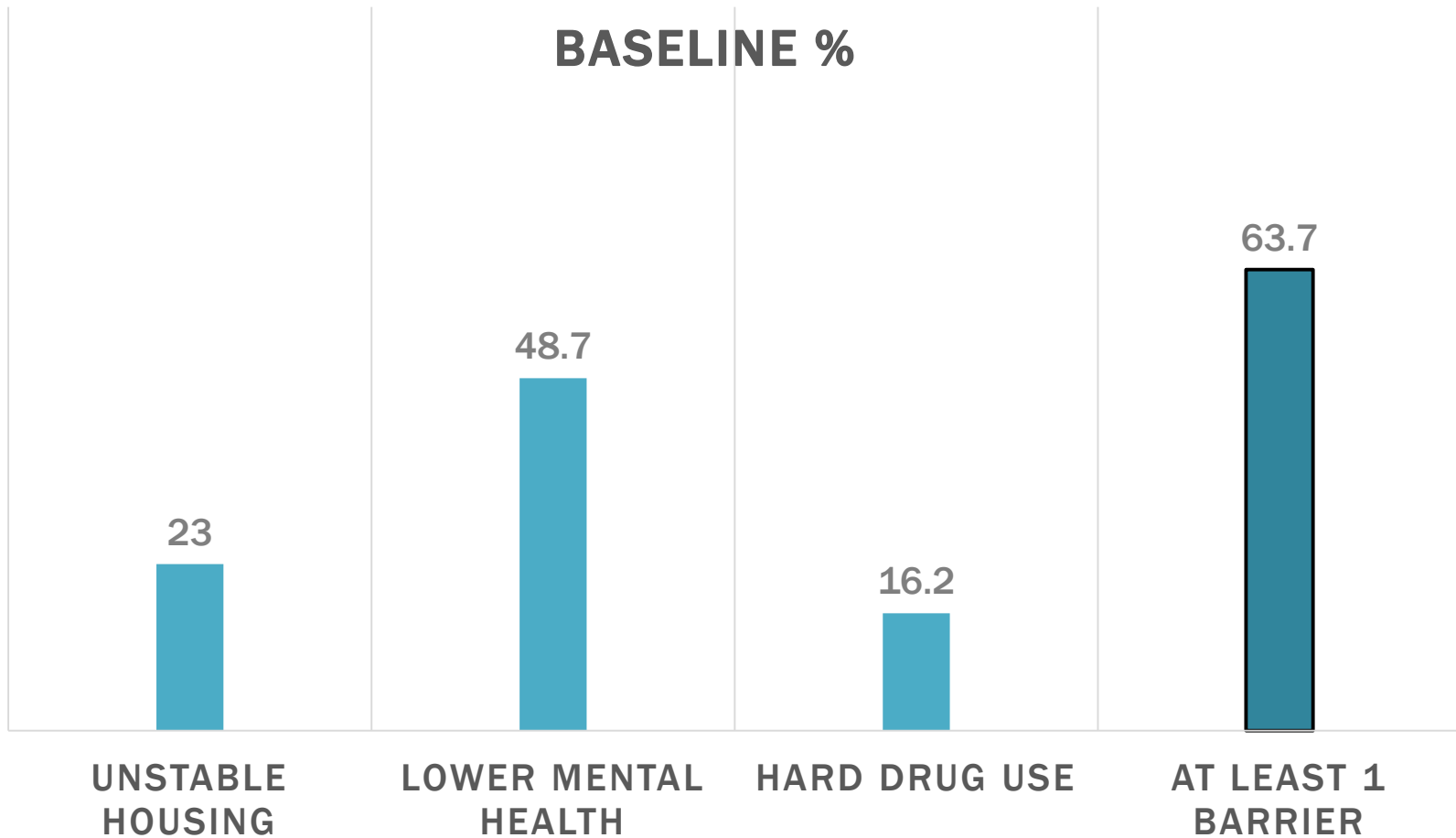
METHODS: PSYCHOSOCIAL BARRIER RESOLUTION

Resolution of Psychosocial Barriers Definitions*

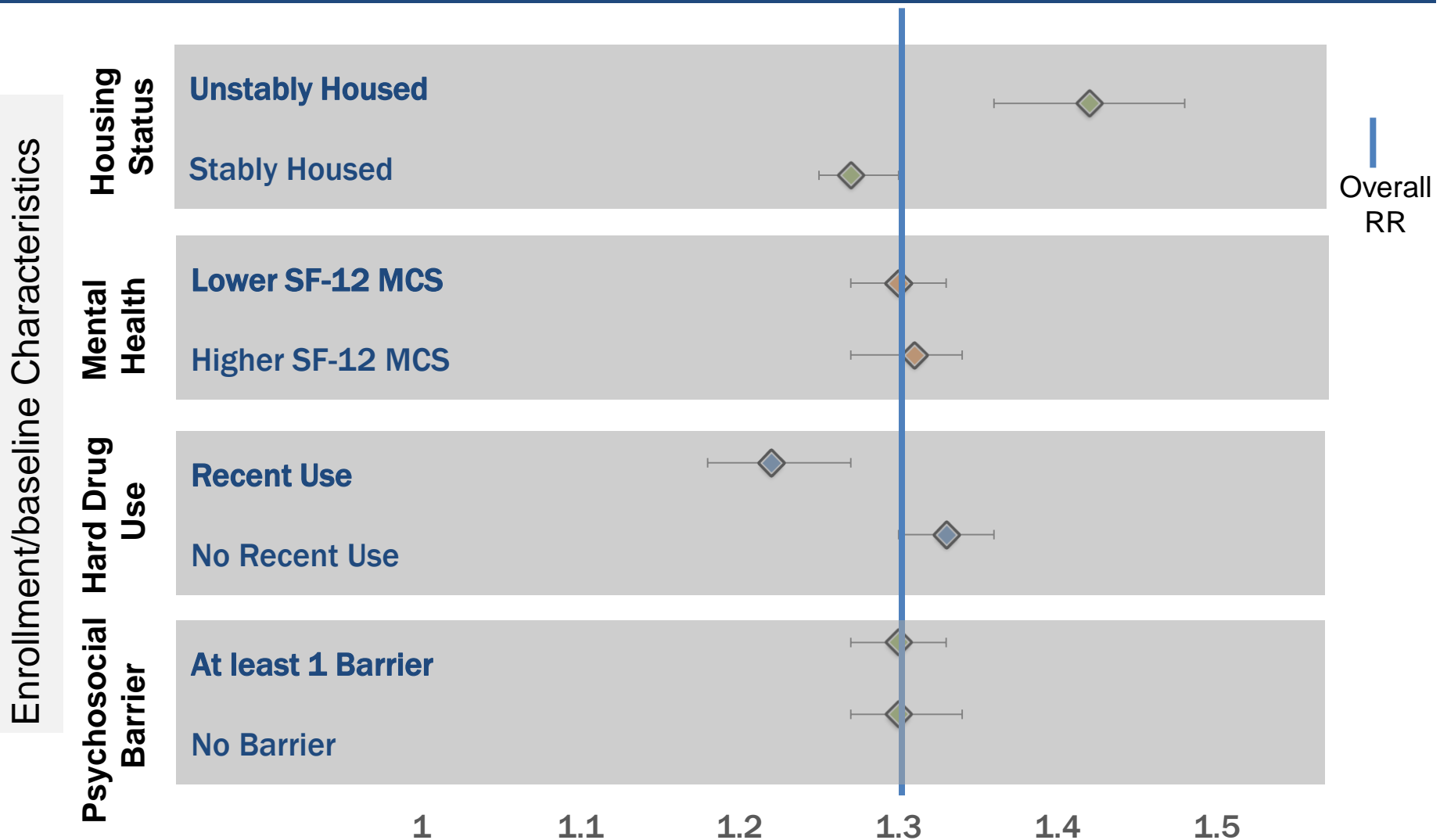
- **Housing resolution:** If unstable housing present at baseline, evidence of stable housing post-baseline
- **Mental health resolution:** If lower mental health functioning present at baseline, a post-baseline MCS score \geq than the median (42.14)
- **Hard drug use resolution:** If recent hard drug use present at baseline, no use of these drugs post-baseline

* Based on latest CCP Assessment during the year of follow-up

PSYCHOSOCIAL BARRIER PREVALENCE: PREVIOUSLY DX'D

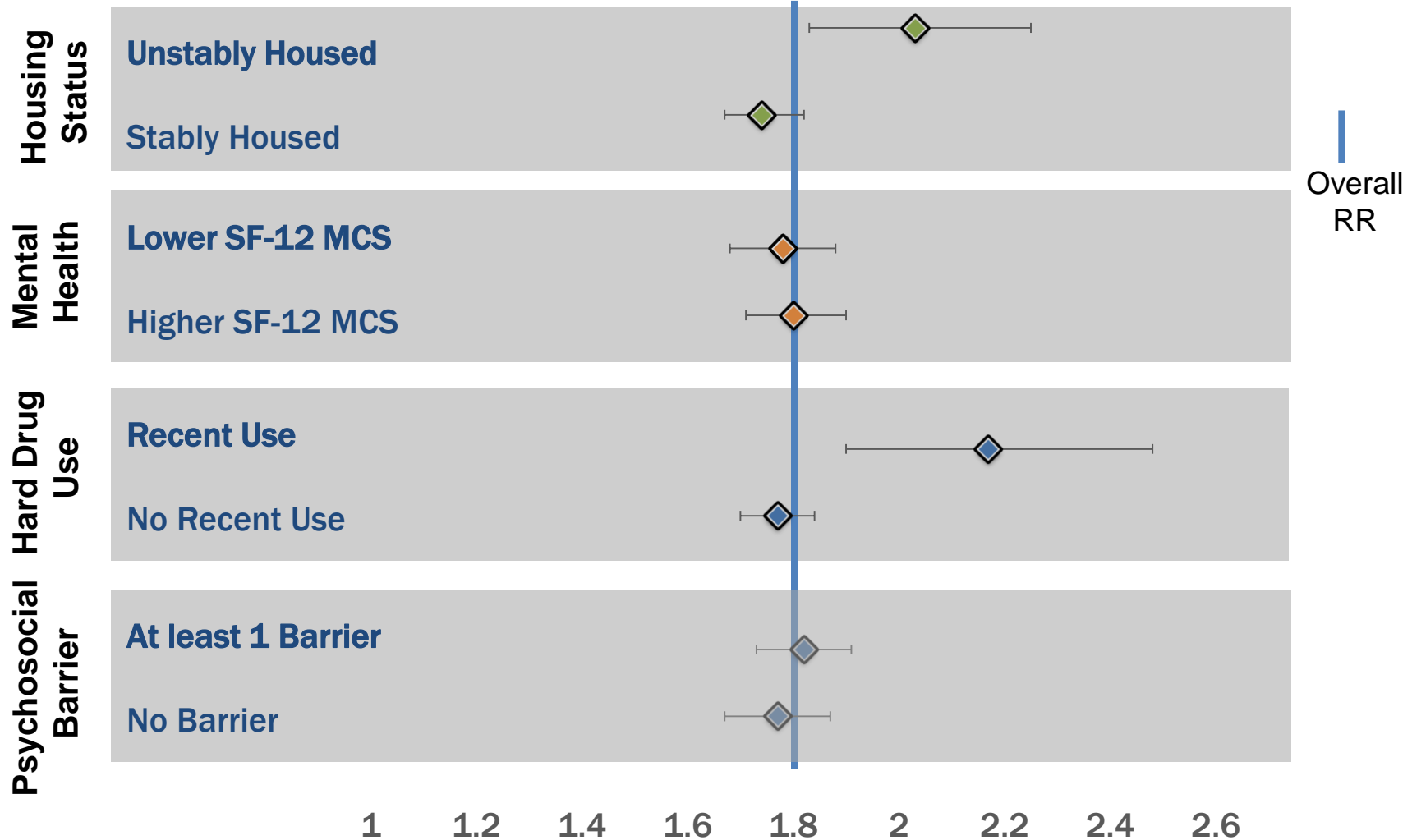


RESULTS-ENGAGEMENT IN CARE: POST- VS. PRE-ENROLLMENT (RR, 95% CI)



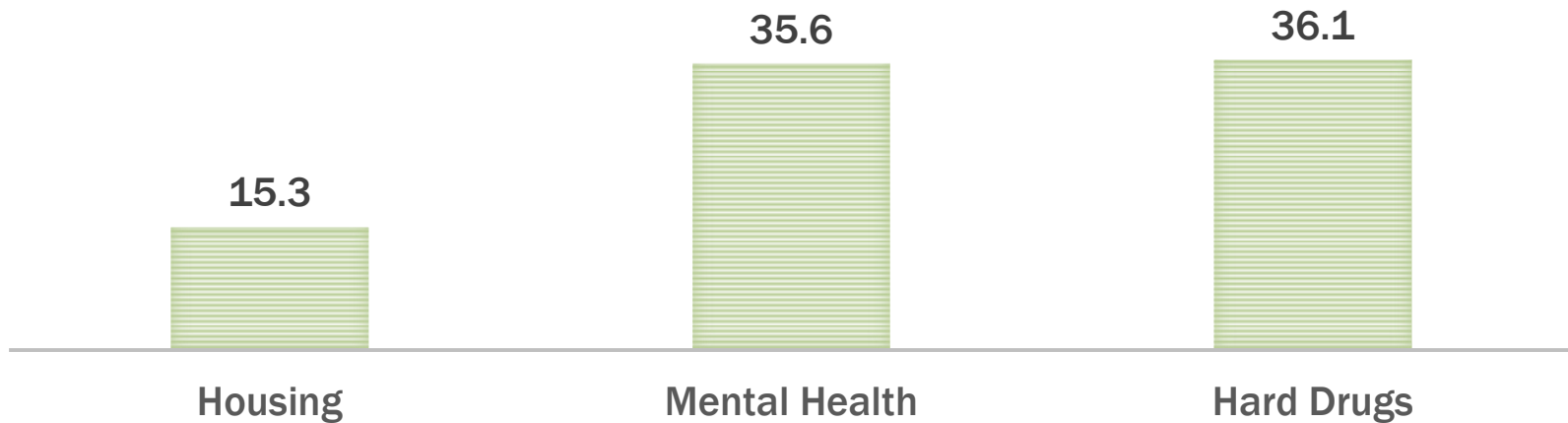
RESULTS-VIRAL LOAD SUPPRESSION: POST- VS. PRE-ENROLLMENT(RR, 95% CI)

Enrollment/baseline Characteristics

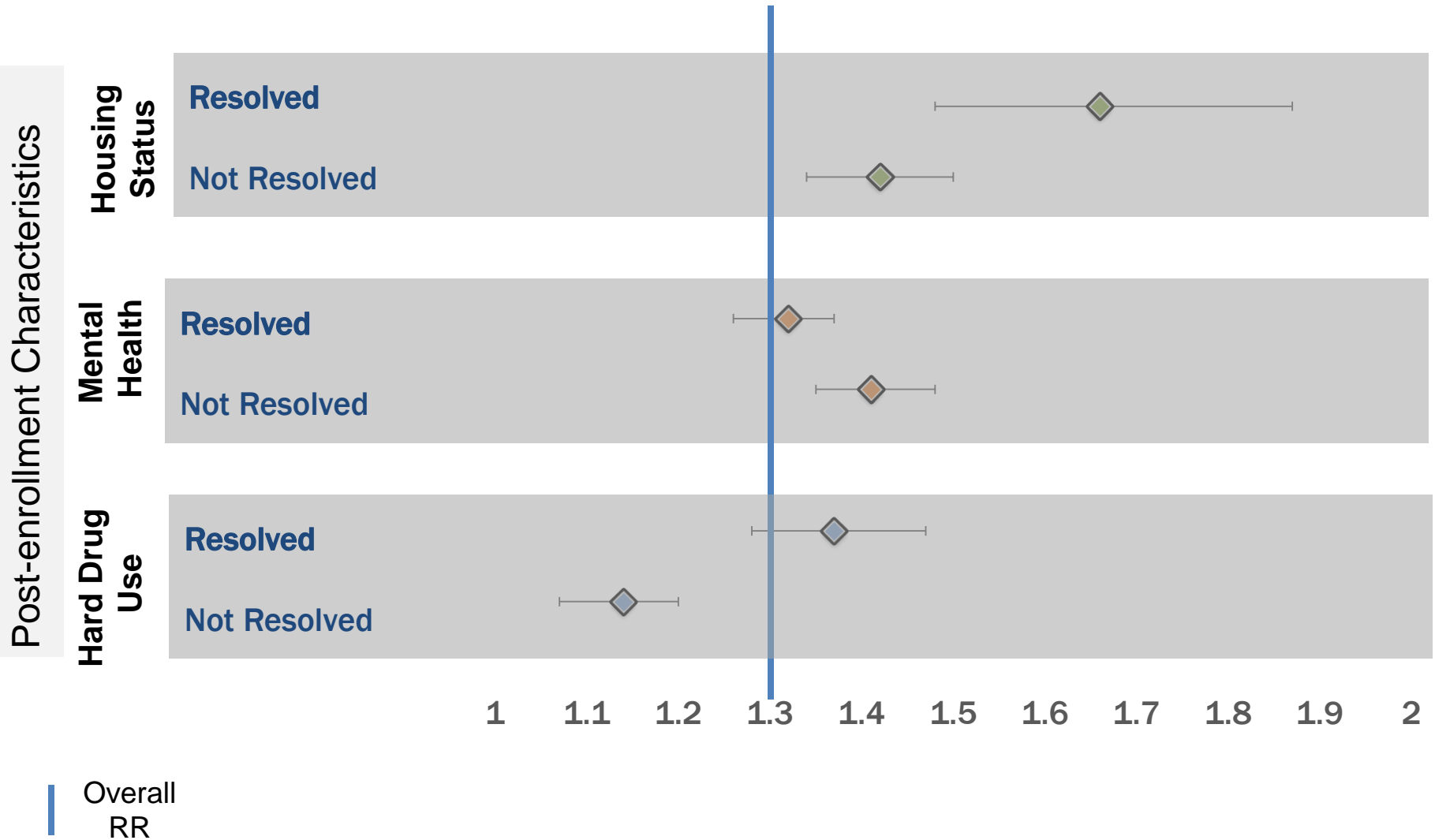


PROPORTION OF THOSE WITH BARRIER AT BASELINE WHO SUBSEQUENTLY EXPERIENCED RESOLUTION

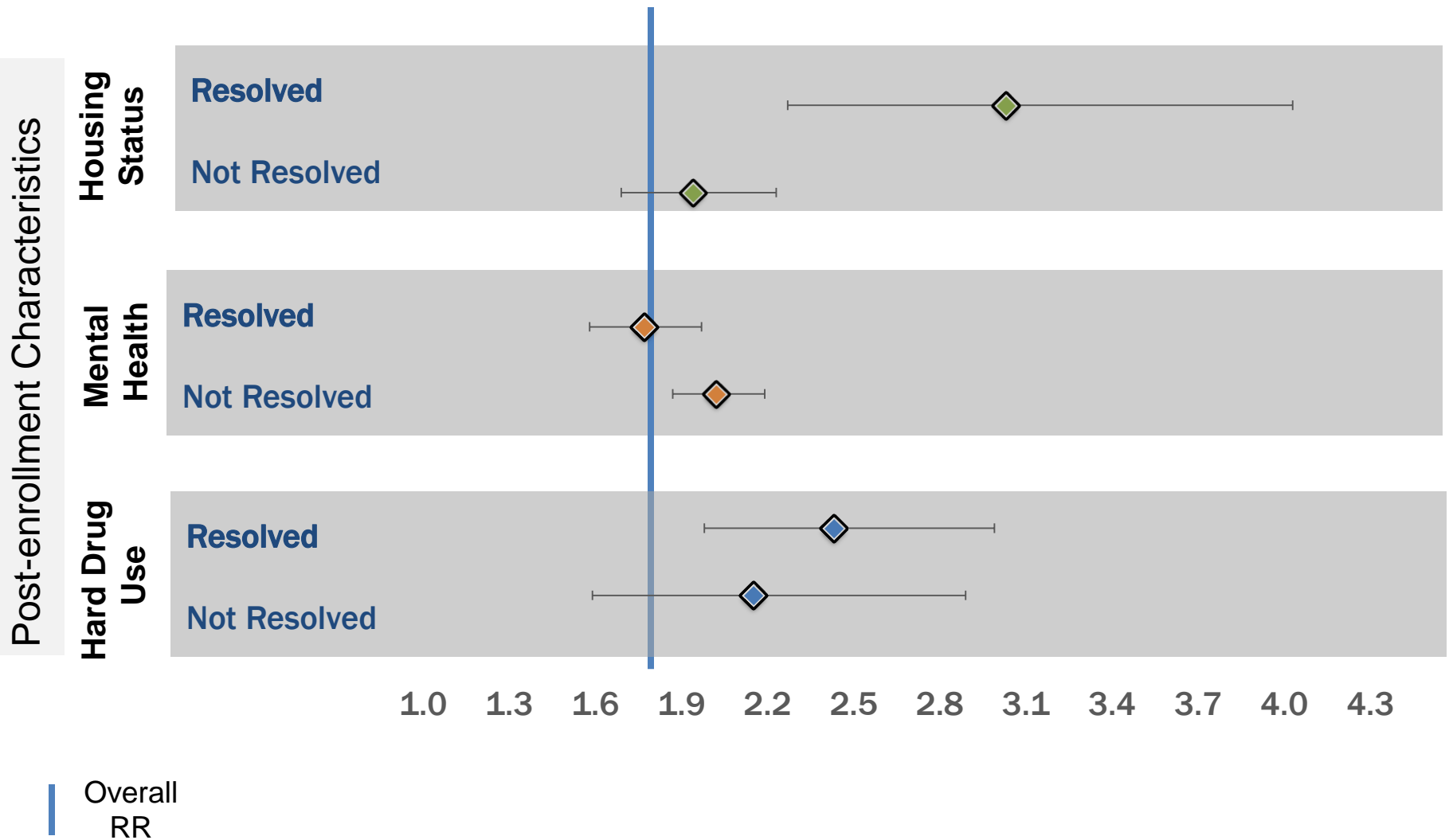
POST-BASELINE RESOLUTION %



ENGAGEMENT IN CARE: POST- VS. PRE-ENROLLMENT (RR, 95% CI)



VIRAL LOAD SUPPRESSION: POST- VS. PRE-ENROLLMENT (RR, 95% CI)



CONSIDERATIONS

- **Observational study without comparison groups**
 - Subjects as own controls in pre-post comparison
 - Observed improvements in CCP are occurring against backdrop of citywide improvements in EiC and VLS
- **Lab-based measures used as a proxy for primary care visits (EiC)**
 - Provide comparability across sites, pre-post enrollment
 - Could lead to over or under estimation of EiC
- **More information needed on timing and mechanism of improvement**

CONCLUSIONS

- **Short-term EiC and VLS increases occurred among clients with key barriers to HIV care and treatment adherence**
 - **Greater room for improvement at baseline is reflected in higher RRs**
- **CCP may improve outcomes by addressing key psychosocial barriers**
- **Analyses on longer term outcomes needed**

ACKNOWLEDGEMENTS

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