NYC RYAN WHITE PART A CARE COORDINATION & THE CHORDS STUDY*

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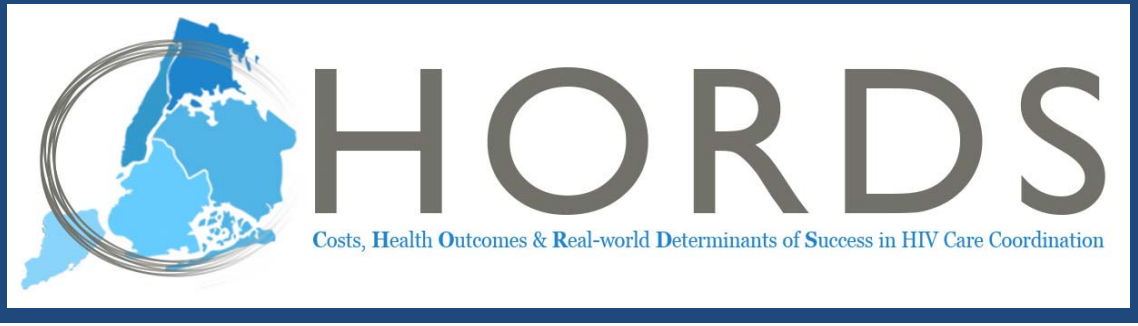


CHORDS is a research partnership of:

New York City Department of Health and Mental Hygiene, New York, NY

&

CUNY School of Public Health, New York, NY

BACKGROUND: NYC RYAN WHITE PART A CCP

CCP Goal:

Ensure that **HIV+ Ryan White clients** at risk for **suboptimal health outcomes** receive support to achieve full **engagement in care and treatment** through coordinated care strategies

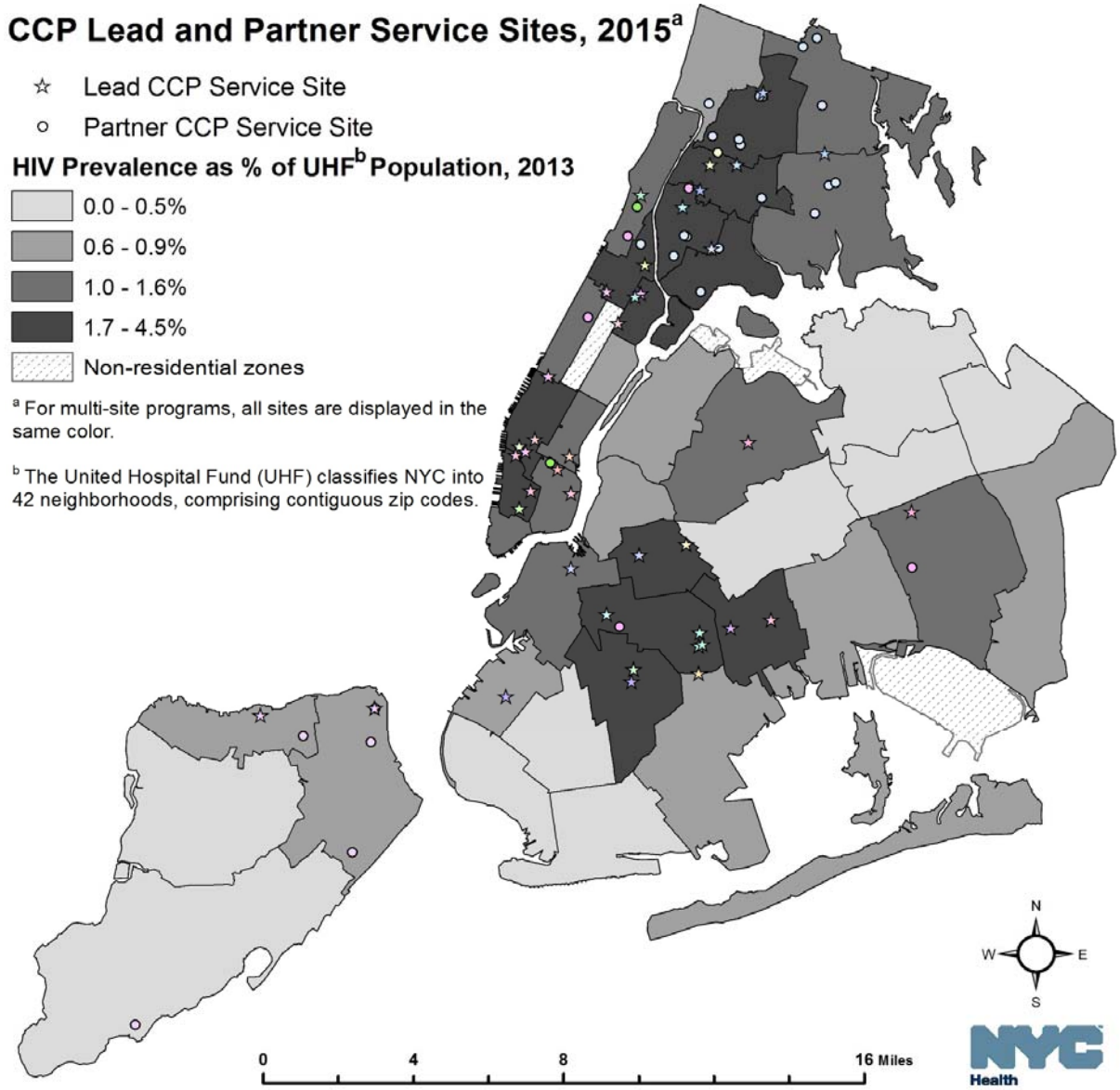
CCP INTERVENTION DESCRIPTION

- 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

CARE COORDINATION PROGRAM (CCP) POPULATION

- Eligibility based on indicators of need:
  - newly diagnosed;
  - previously lost to care/never in care;
  - irregularly in care;
  - initiating a new regimen; and/or
  - showing incomplete medication adherence or response to treatment.



28 CCP AGENCIES IN NYC

STUDY AIMS

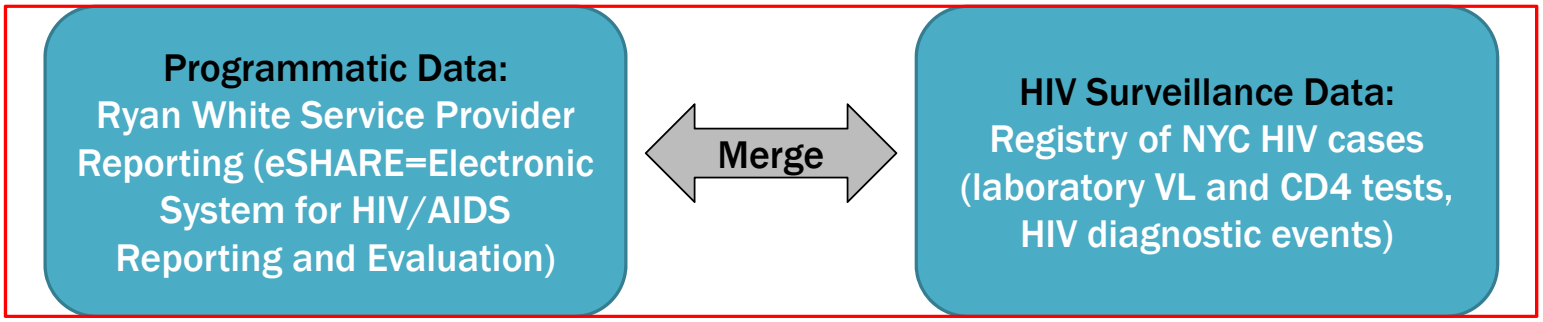
- Aim 1: *To assess short and long-term CCP effectiveness* by comparing care engagement and VL suppression among CCP participants with those of similar PLWH in HIV care who do not receive the CCP intervention.

METHODS

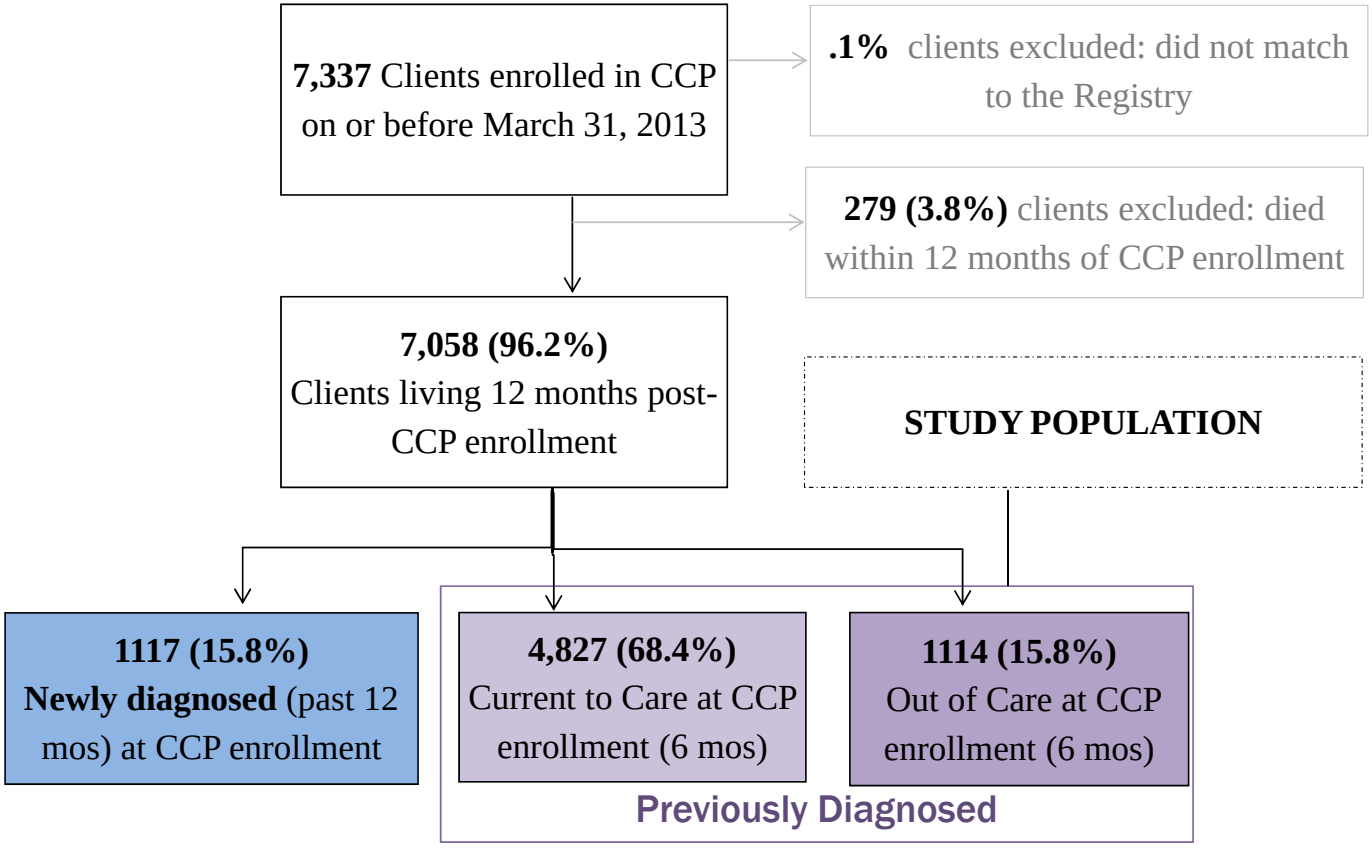
Aim 1: Pre-Post Study

DATA SOURCES

- **Matched CCP programmatic data with NYC HIV Registry data**



STUDY ELIGIBILITY



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≤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.

PSYCHOSOCIAL BARRIERS

Psychosocial Barriers (Definitions)*

- **Unstable housing:** Homelessness or residence in temporary/transitional housing
- **Lower mental health functioning:** Mental component summary (MCS) score ≤37.0 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

PSYCHOSOCIAL BARRIER REDUCTION

Reduction of Psychosocial Barriers (Definitions)*

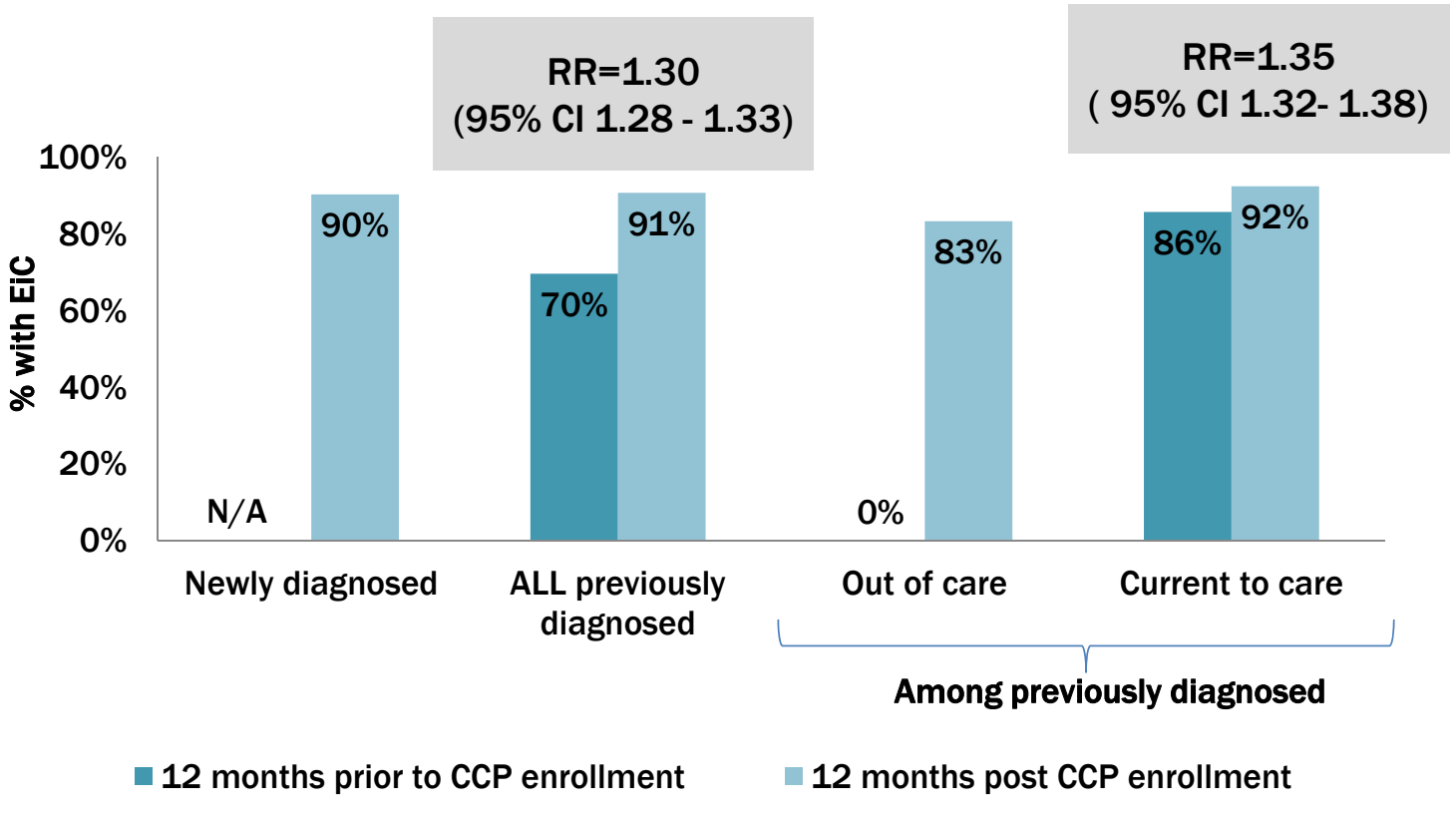
- **Housing barrier reduction:** If unstable housing present at baseline, evidence of stable housing post-baseline
- **Mental health barrier reduction:** If MCS ≤37.0 at baseline, a post-baseline MCS score increase ≥3.5 points
- **Drug-related barrier reduction:** If recent hard drug use present at baseline, no use of these drugs post-baseline

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

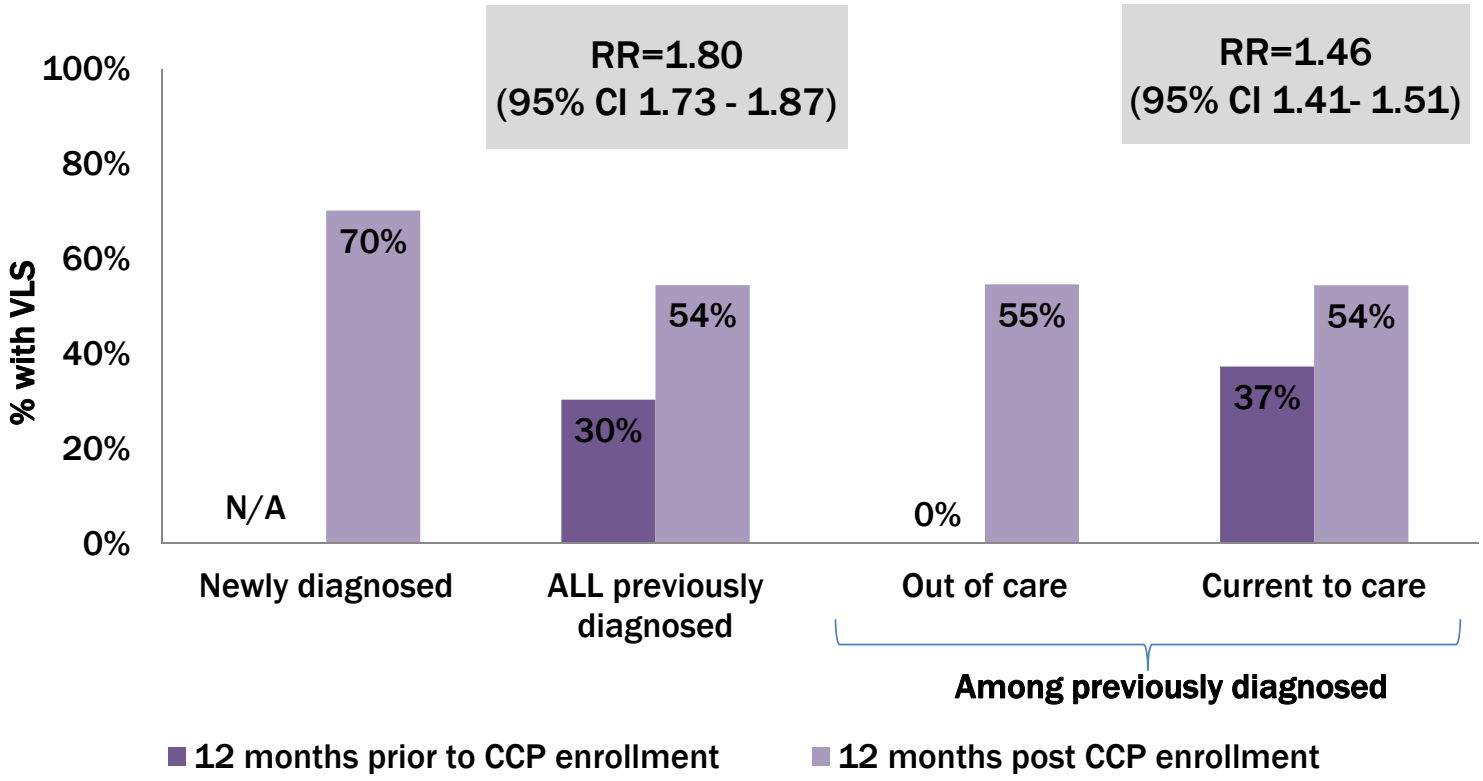
RESULTS

Aim 1: Pre-Post Study

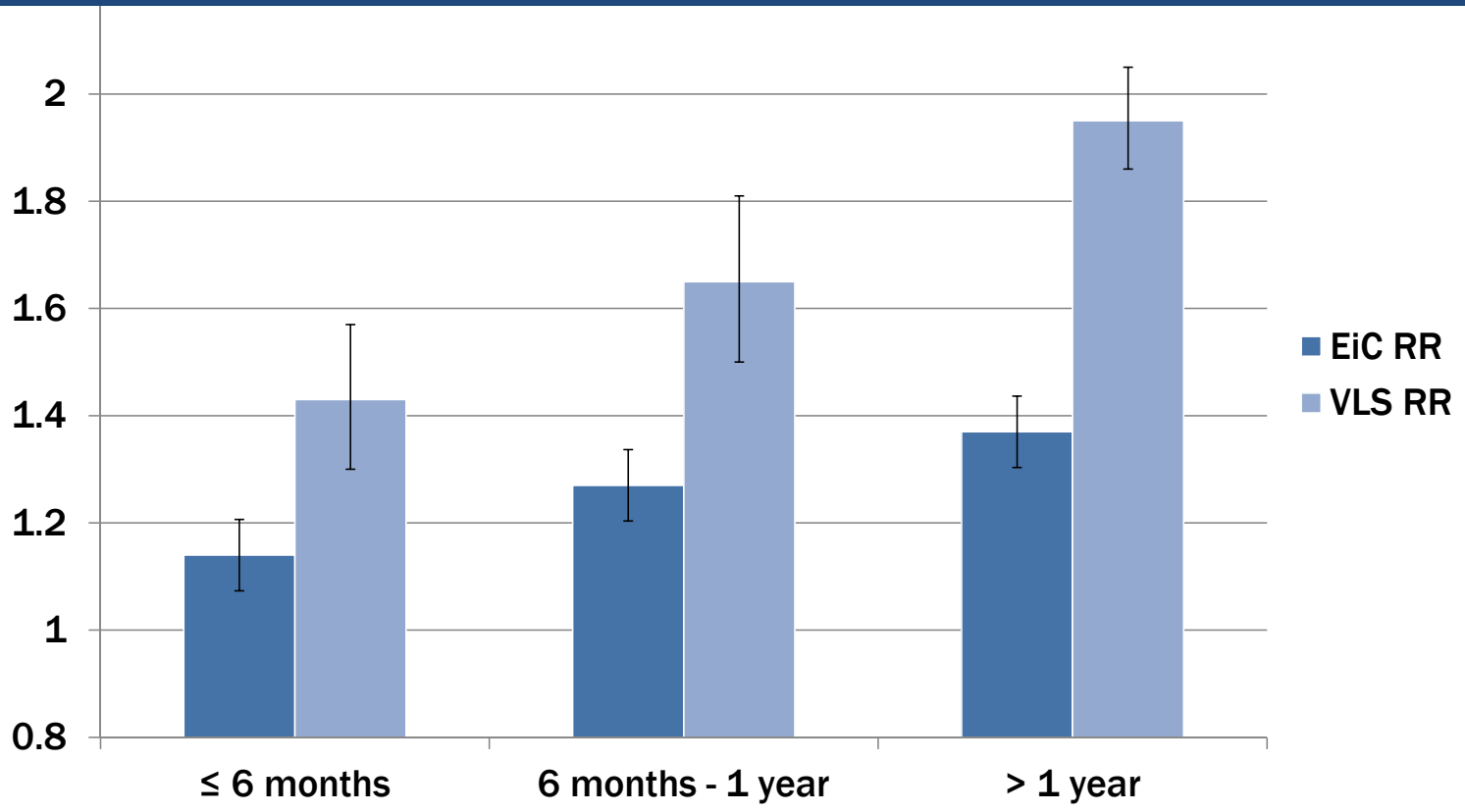
ENGAGEMENT IN CARE, PRE & POST



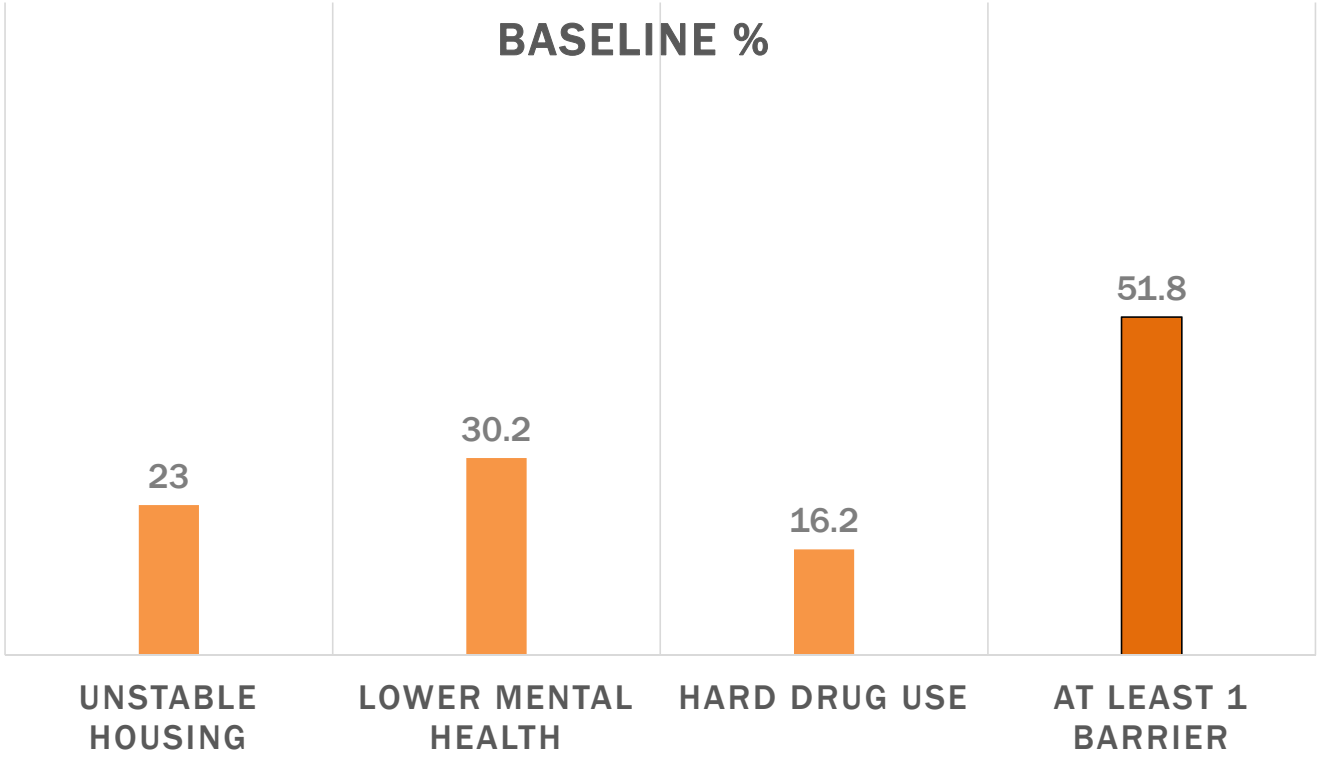
VL SUPPRESSION, PRE & POST



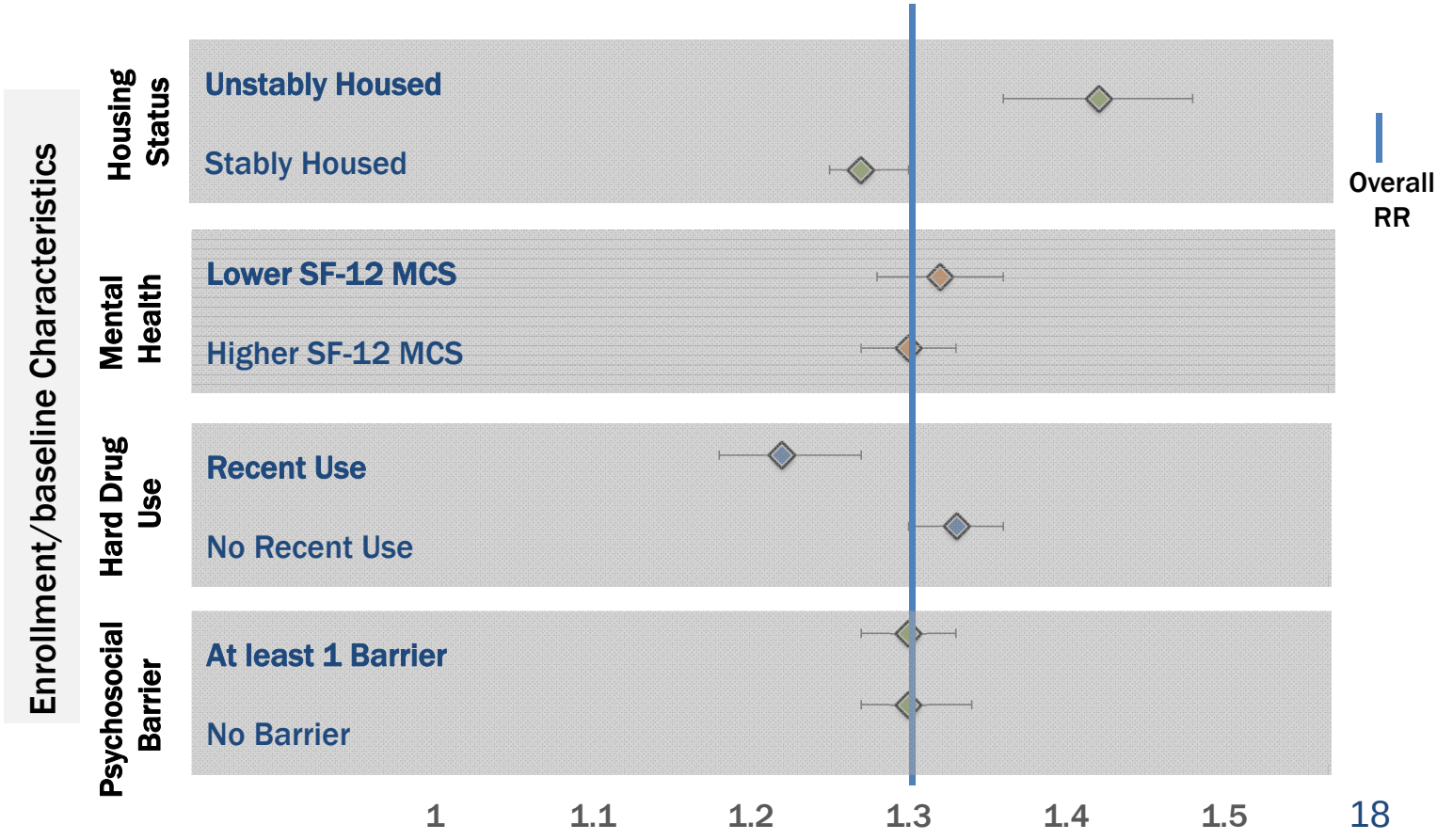
POST- VS. PRE- ENROLLMENT CHANGE, RELATIVE RISK BY LENGTH OF CCP ENROLLMENT (PREVIOUSLY DX'D)



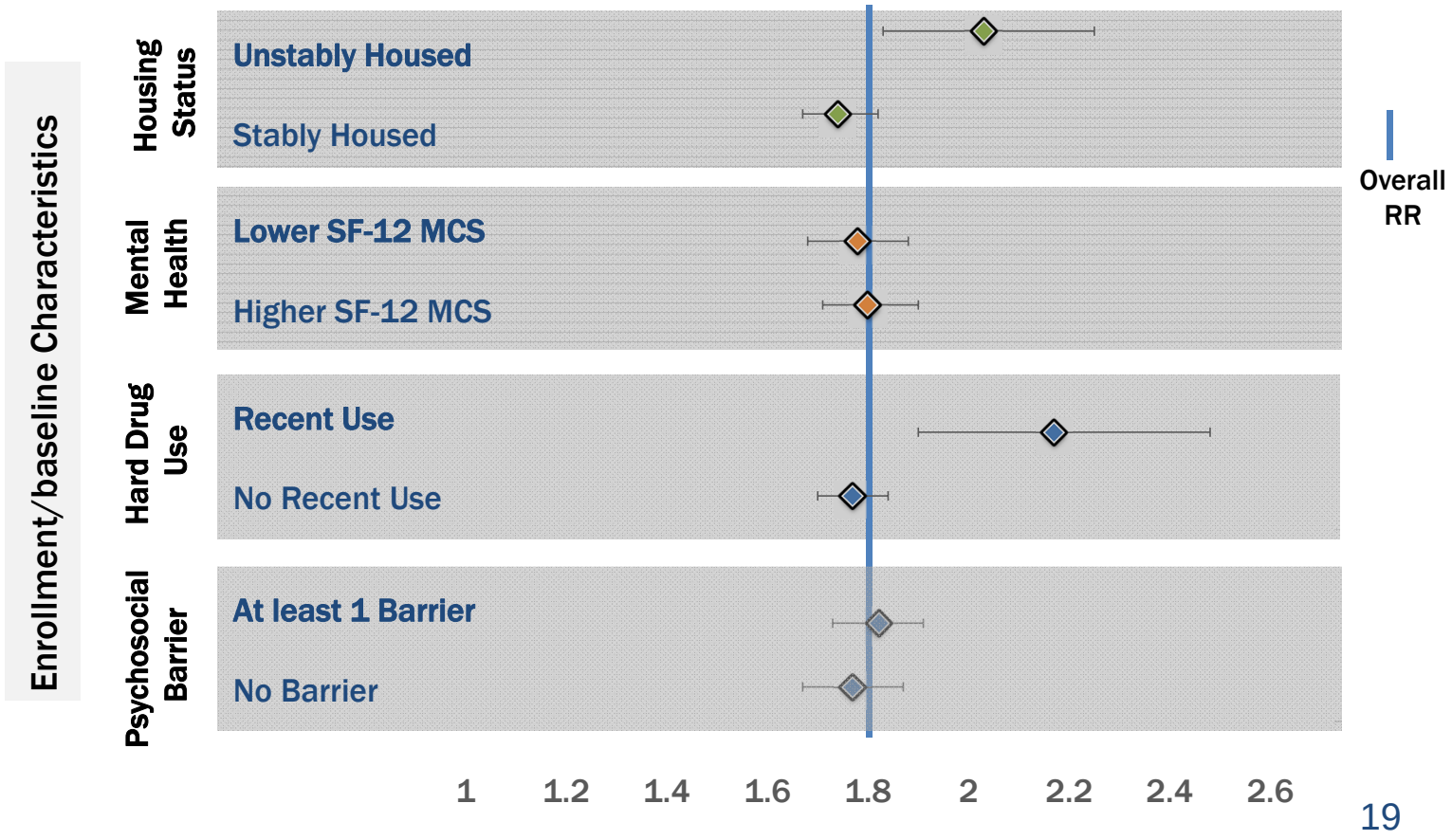
PSYCHOSOCIAL BARRIER PREVALENCE: PREVIOUSLY DX'D



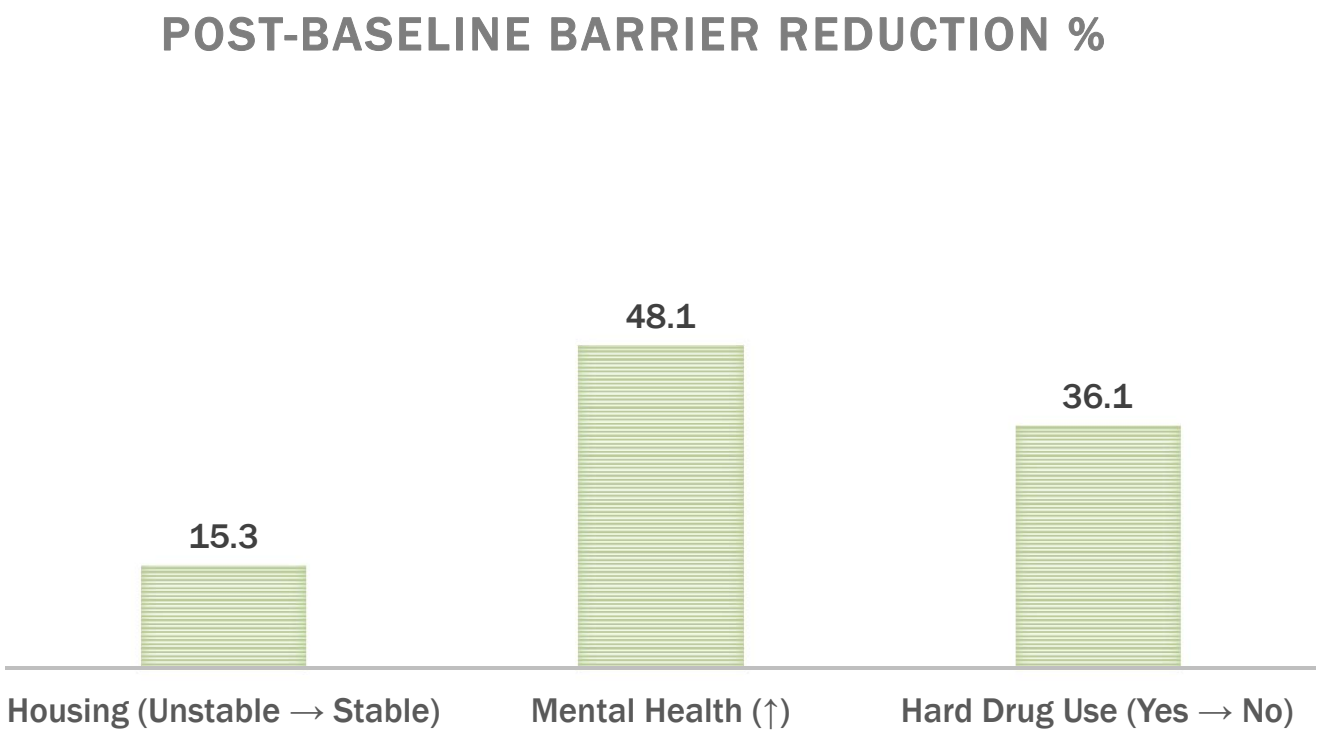
ENGAGEMENT IN CARE: POST- VS. PRE-ENROLLMENT (RR, 95% CI)



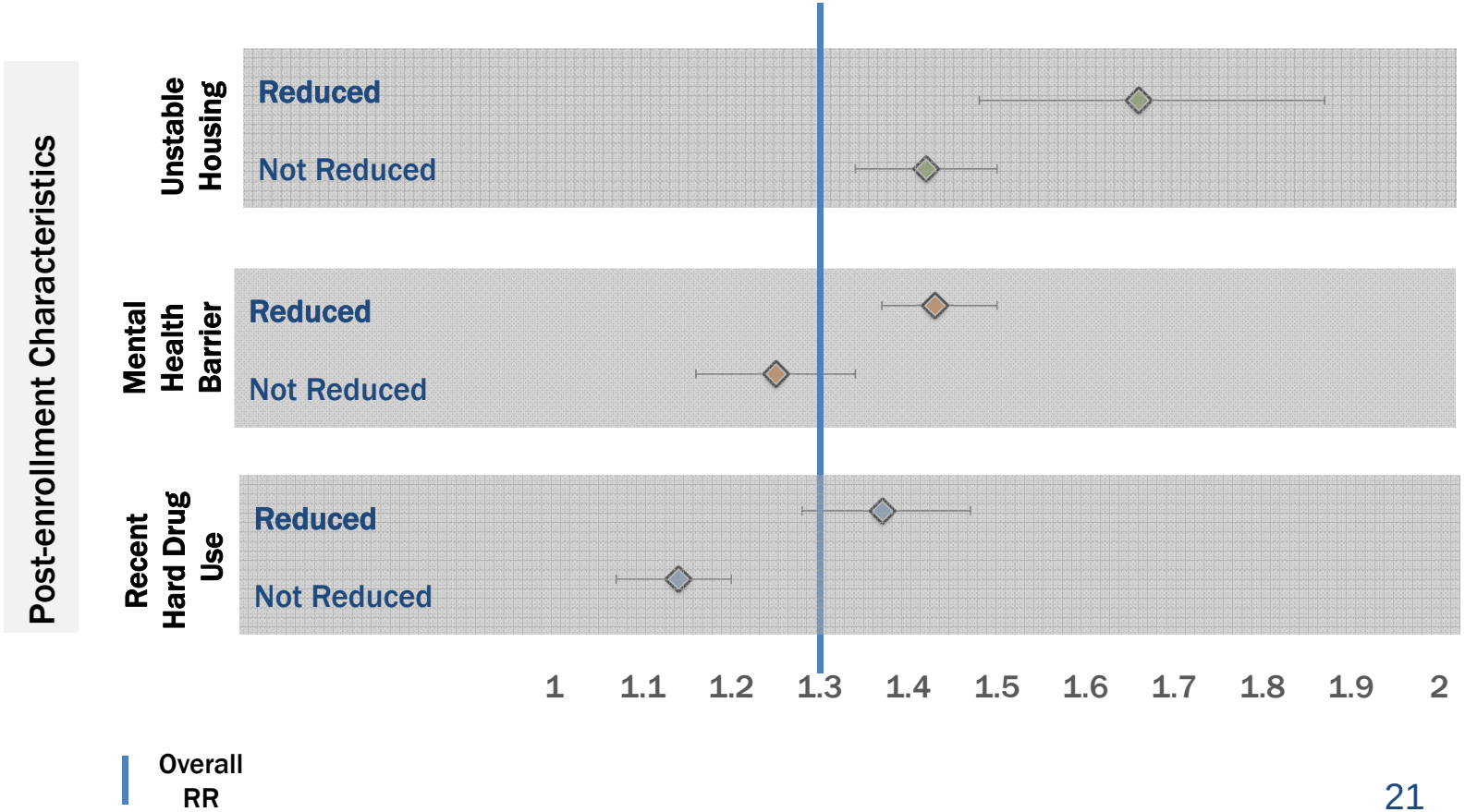
VIRAL LOAD SUPPRESSION: POST- VS. PRE-ENROLLMENT (RR, 95% CI)



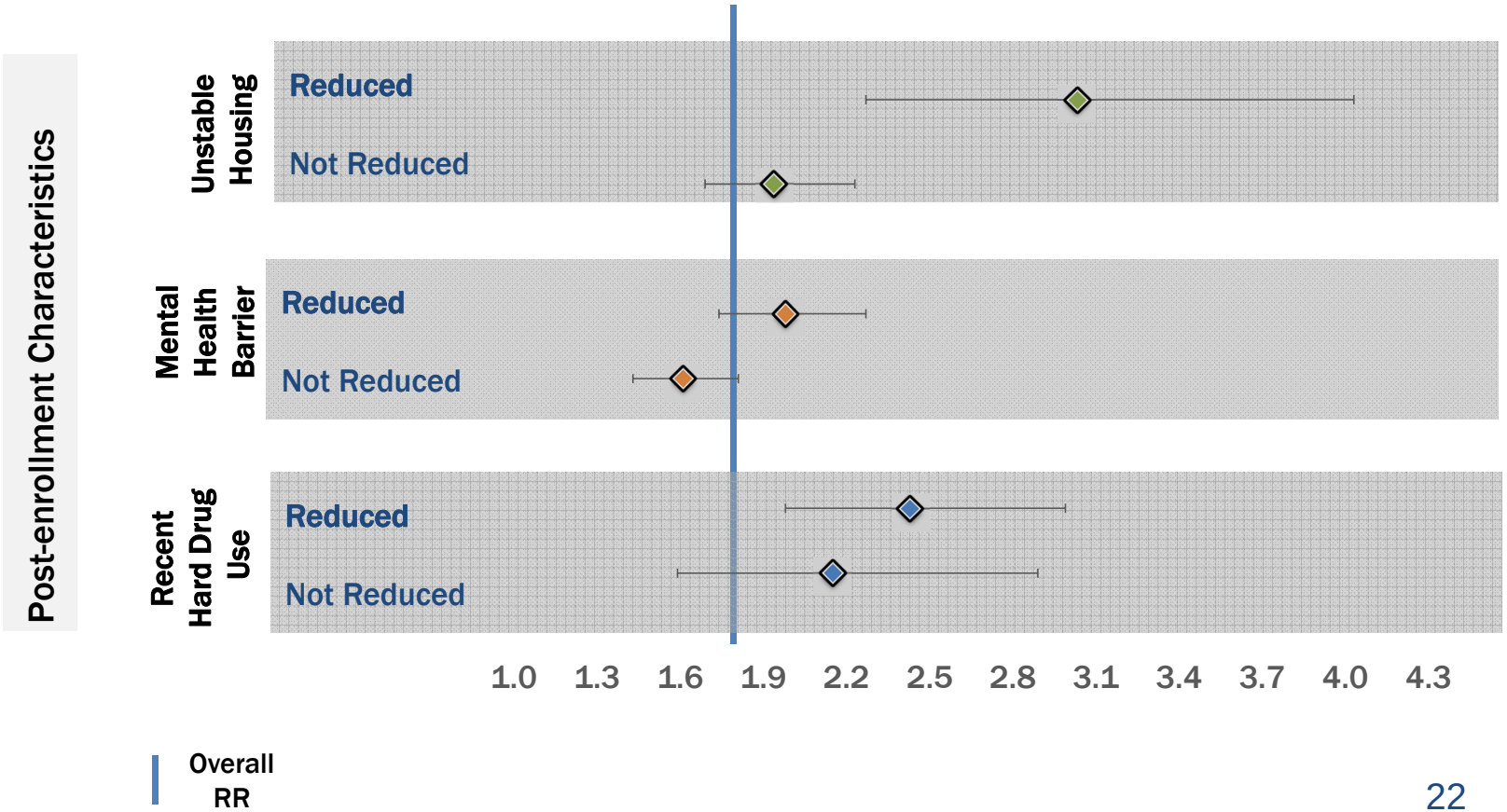
PROPORTION OF THOSE WITH BARRIER AT BASELINE WHO SUBSEQUENTLY EXPERIENCED BARRIER REDUCTION



EIC BY BARRIER REDUCTION: POST- VS. PRE-ENROLLMENT (RR, 95% CI)



VLS BY BARRIER REDUCTION: POST- VS. PRE-ENROLLMENT (RR, 95% CI)



PRELIMINARY COMPARISON GROUP WORK

Aim 1: Comparison Group

CHORDS COMPARISON GROUP ANALYSIS: CCP EFFECTIVENESS

- **Comparison Group Aim:**
  - To compare care engagement and VL suppression among CCP participants with those of similar PLWH in HIV care who do not receive the CCP intervention.

- **Why?:**
  - To control for patterns (e.g. upward trends) in care engagement and VL suppression that may occur independently of the CCP intervention.
  - EiC and VLS have been steadily improving in NYC overall, so some amount of improvement in any one program should not surprise us.

METHODS: COMPARISON GROUP

Step 1: Select base comparison group of similar non-CCP enrollees from all PLWH in NYC, to include those PLWH who:

- Had at least 1 CD4/VL reported to surveillance December 2007 – March 2013
- Met CCP eligibility anytime between December 2009 and March 2013
- Were not enrolled in the CCP before March 2014

Step 2: Assign each non-CCP PLWH a 'pseudo enrollment date' (aka 'anchor date') that:

- Results in a set of anchor dates fitting the CCP enrollment date distribution (by enrollment month)

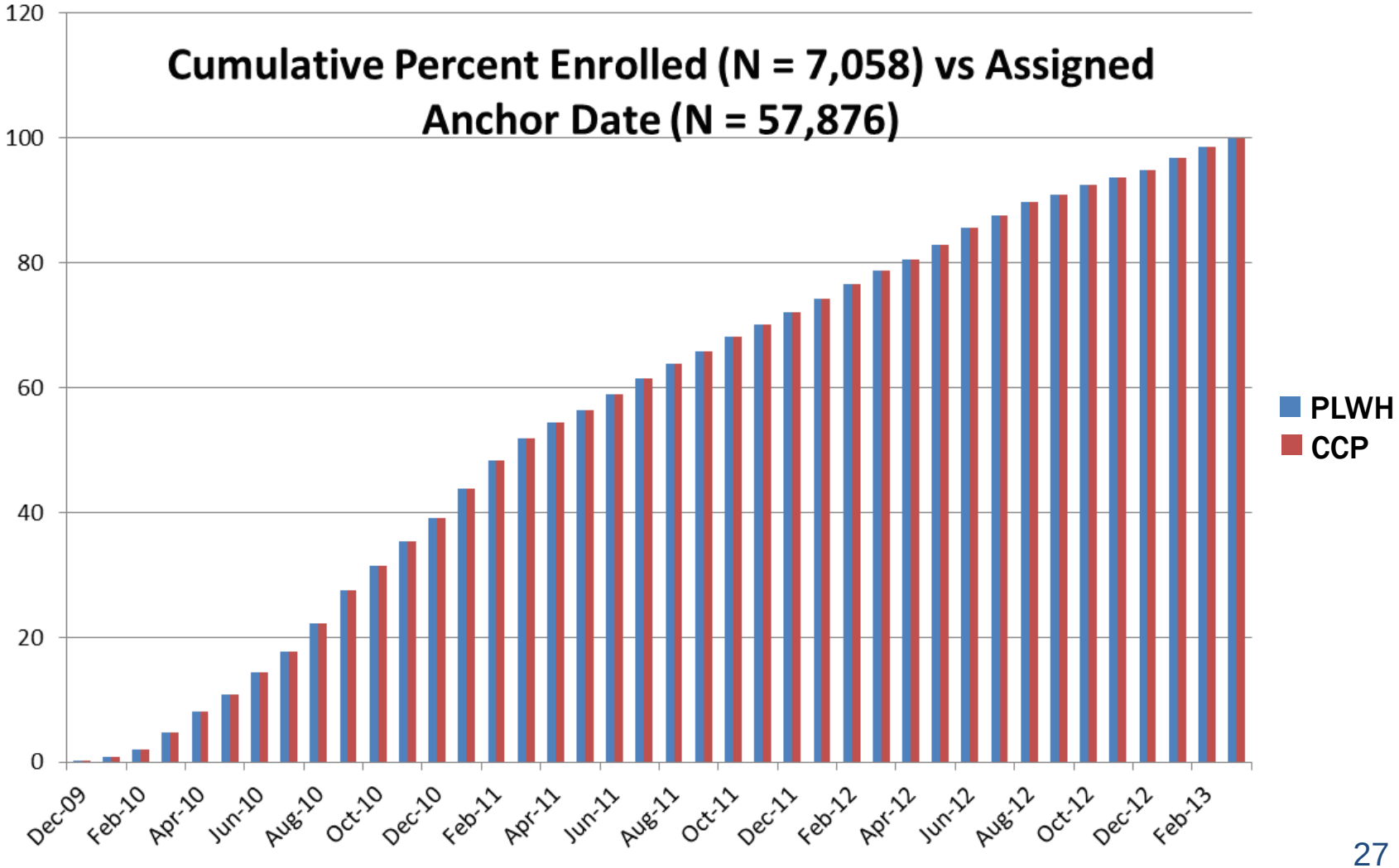
Step 3: Perform propensity score matching to identify those PLWH were:

- Most similar to CCP participants with regard to many measured factors

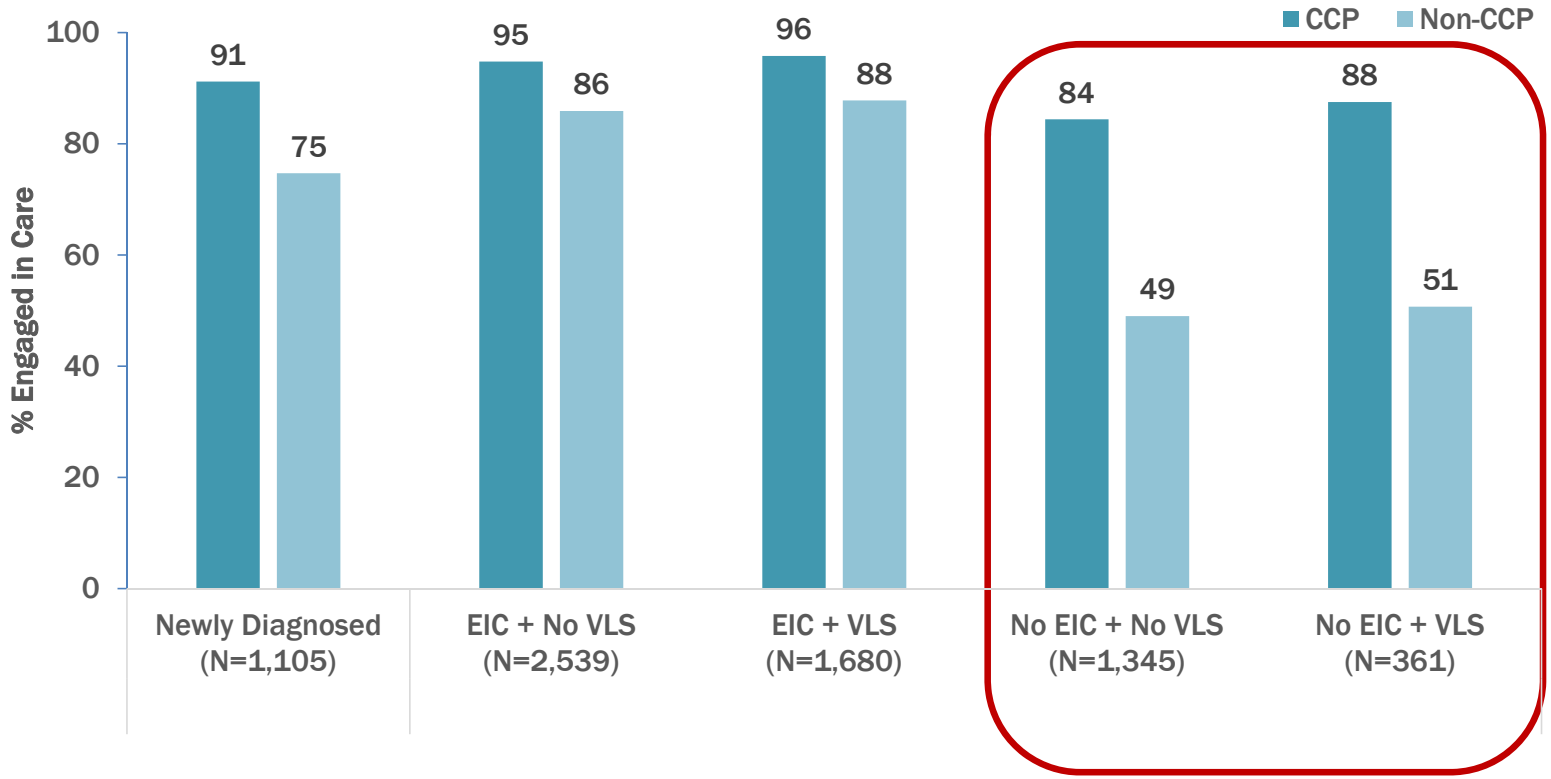
REVISED STATISTICAL MEASURES

- **Outcome Measures:**
  - Engagement in Care (EiC): ≥2 CD4 or VL tests ≥90 days apart *in the 12-month period*
  - Viral Load Suppression (VLS): VL≤200 copies/mL on most recent test *in the 12-month period**
- **Estimated CCP vs. non-CCP relative risks (RRs) for EiC/VLS (at 12-month follow-up) using GEE**
- **Stratified outcomes to compare groups with same baseline EiC/VLS (or newly Dx'd) status**

*Missing VL *in the 12-month period* considered equivalent to unsuppressed VL.

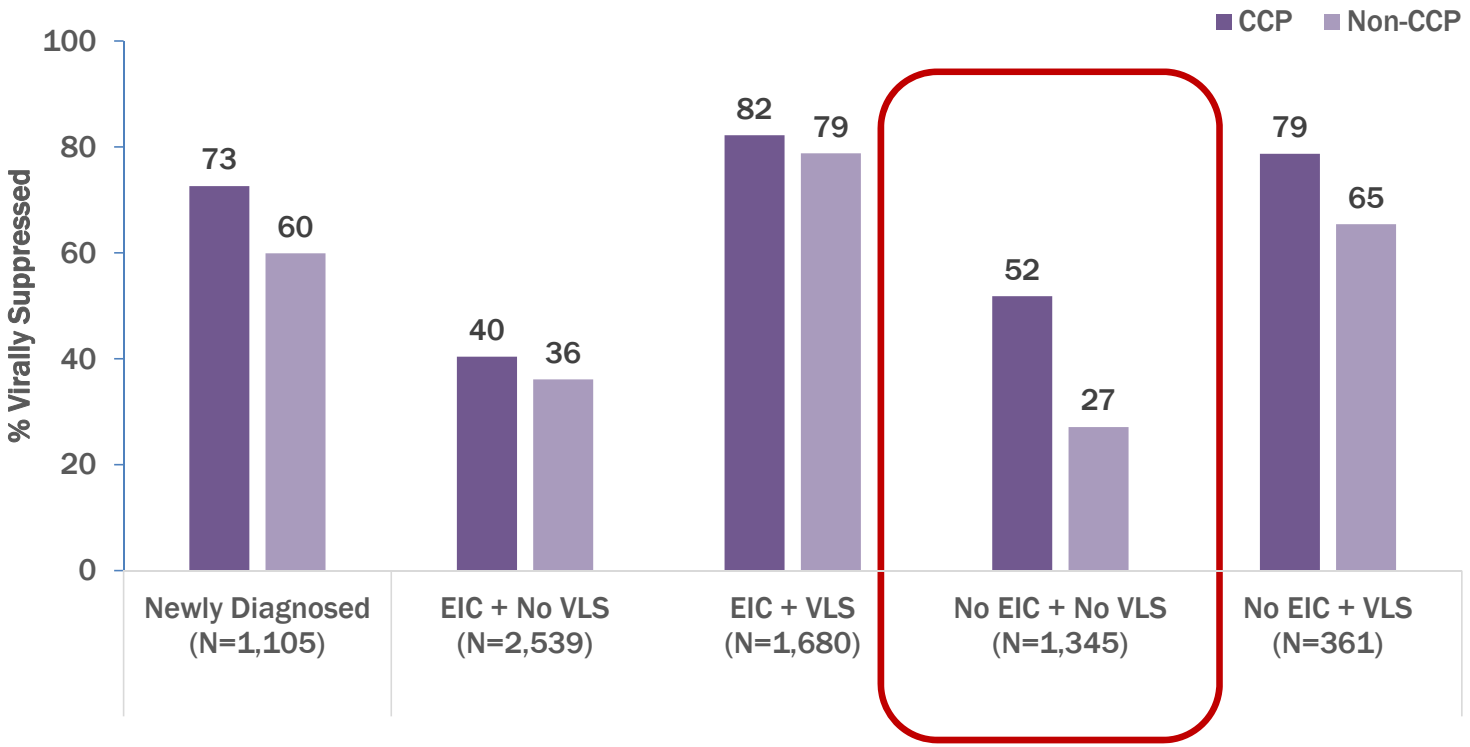

Cumulative Percent Enrolled (N = 7,058) vs Assigned Anchor Date (N = 57,876)
120
100
80
60
40
20
0
Dec-09
Feb-10
Apr-10
Jun-10
Aug-10
Oct-10
Dec-10
Feb-11
Apr-11
Jun-11
Aug-11
Oct-11
Dec-11
Feb-12
Apr-12
Jun-12
Aug-12
Oct-12
Dec-12
Feb-13
PLWH
CCP

PRELIMINARY DATA: CARE ENGAGEMENT AT 12-MONTH FOLLOW-UP (%) - CCP VERSUS NON-CCP, BY BASELINE STATUS



EIC – Engagement in Care status at baseline
VLS – Viral Load Suppression status at baseline

PRELIMINARY DATA: VIRAL SUPPRESSION AT 12-MONTH FOLLOW-UP (%) - CCP VERSUS NON-CCP, BY BASELINE STATUS



EIC – Engagement in Care status at baseline
VLS – Viral Load Suppression status at baseline

DISCUSSION

CONCLUSIONS (PRE-POST ANALYSES)

- Significant EiC/VLS increases occurred in all subgroups examined, including those with key barriers to HIV care and treatment adherence
- Findings suggest a link between support to reduce psychosocial barriers and greater improvement on 12-month EiC/VLS outcomes
- CCP shows promise for increasing health/survival opportunities among those at highest risk for suboptimal HIV health outcomes

CONCLUSIONS (COMPARISON GROUP ANALYSES)

- In short-term (12-mo.) comparisons of CCP clients' post-enrollment EiC and VLS to the EiC and VLS achieved among other, similar PLWH:
  - The CCP demonstrates effectiveness at increasing EiC and VLS overall (above and beyond the increases among similar PLWH in 'usual care' over the same period)
  - Benefits of the CCP appear less substantial for individuals who were already engaged in care at the time of CCP enrollment.

- Evidence of CCP effectiveness over usual care suggests the public health value of intervention scale-up, focusing on PLWH with the greatest need, lowest engagement in care

STUDY AIMS

- Aim 1: *To assess short and long-term CCP effectiveness* by comparing care engagement and VL suppression among CCP participants with those of similar PLWH in HIV care who do not receive the CCP intervention.
- Aim 2: Among those who enroll in the CCP, *identify individual and CCP site-level determinants of care engagement and VL suppression* up to 36 months following CCP enrollment.
- Aim 3: *To assess the cost-effectiveness* (cost per quality-adjusted life year [QALY]) of the CCP relative to usual care outside the CCP, considering downstream cost-savings and individual and public health benefits due to improved VL suppression and HIV infections averted.