

Robust short-term effectiveness of a comprehensive Care Coordination Program (CCP) in New York City (NYC)

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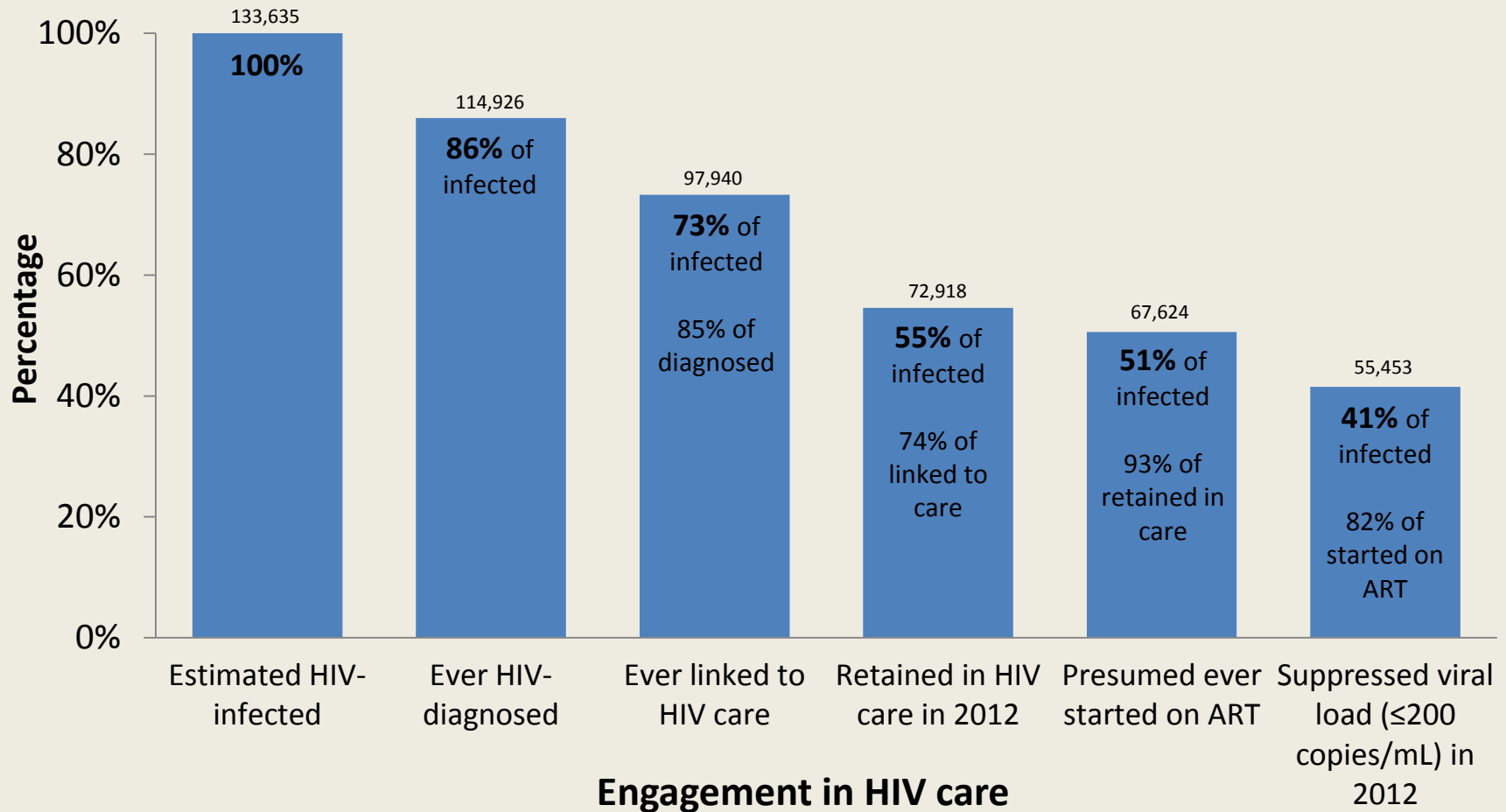
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Number and proportion of persons with HIV in New York City engaged in selected stages of the continuum of care at the end of 2012



Of all persons estimated to be infected with HIV in NYC, 41% have a suppressed viral load.

BACKGROUND: PREDICTORS OF SUBOPTIMAL CARE OUTCOMES

- Black or latino race/ethnicity
- Younger age
- Lower income
- Non-AIDS status
- Mental health issues
- Substance use issues
- Stigma
- Low levels of social support
- Non-U.S. country of birth
- Unstable housing

Torian LV, et. al., *AIDS Patient Care STDS* 2011.

Hsu LC, *AIDS Care* 2011.

Wohl AR, *AIDS Behav* 2011.

Aidala AA, *AIDS Behav* 2007.

Israelski D, *Prev Med* 2001.

CUNY SCHOOL OF PUBLIC HEALTH



BACKGROUND: NYC RYAN WHITE PART A CCP

CCP Goal:

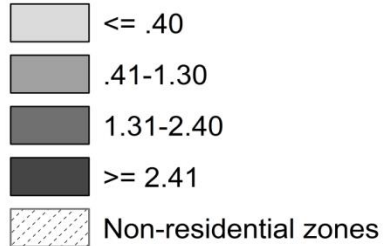
Ensure that **HIV+ Ryan White clients** at risk for **suboptimal health outcomes** receive support to achieve full **engagement in care and treatment** through coordinated care strategies

CCP Lead and Satellite Service Sites^a

- ☆ Lead CCP Service Site
- Satellite CCP Service Site

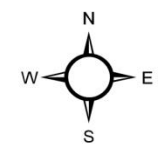
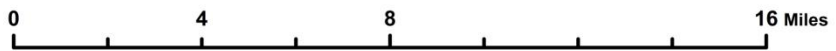
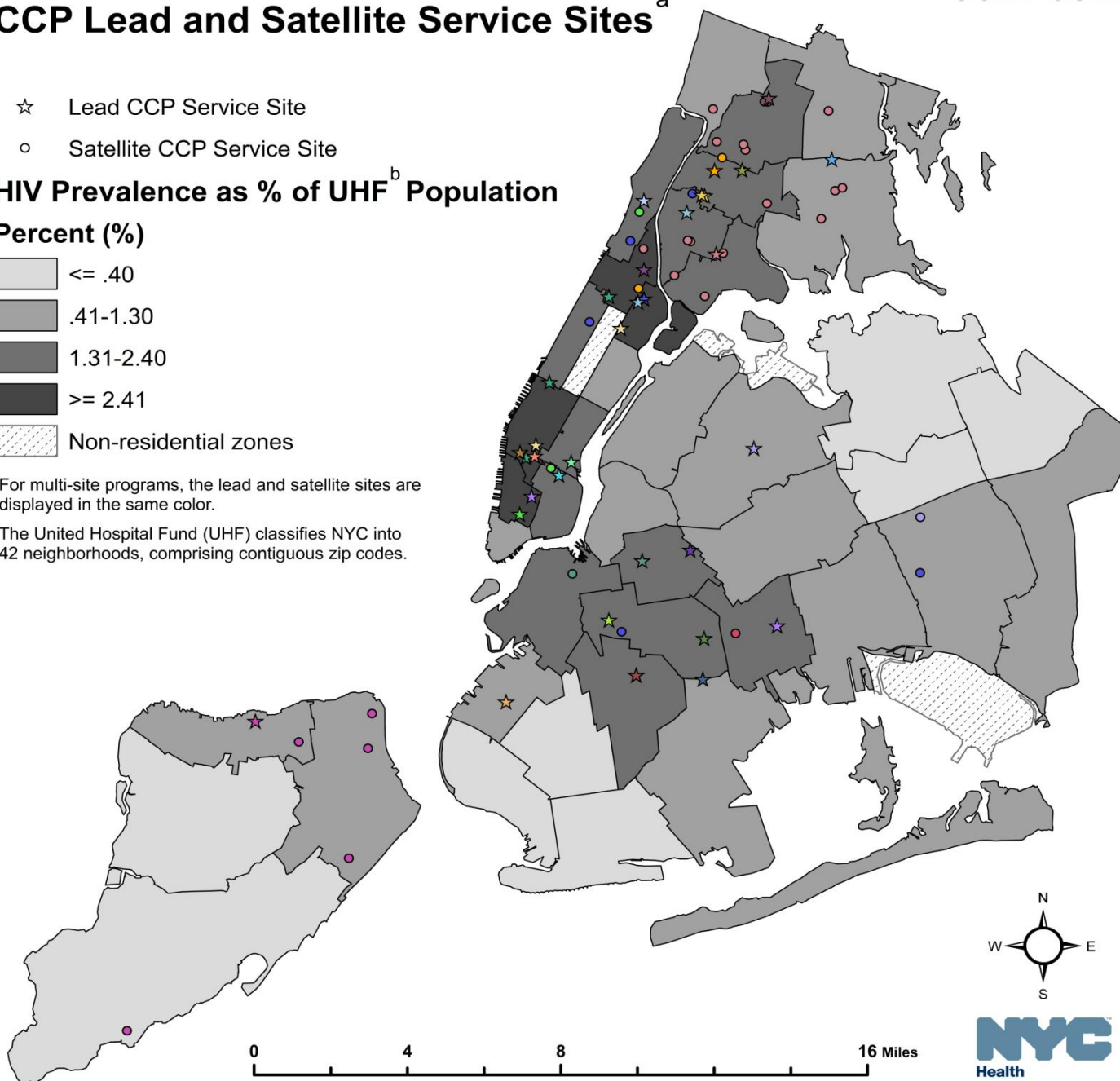
HIV Prevalence as % of UHF^b Population

Percent (%)



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

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



BACKGROUND:
THERE ARE 28
COORDINATION
PROVIDER
AGENCIES IN
NEW YORK CITY

BACKGROUND: CCP ELIGIBILITY CRITERIA

- CCP targets persons at high risk for suboptimal care outcomes:
 - newly diagnosed
 - previously lost to care/never in care
 - irregularly in care
 - initiating a new regimen
 - with incomplete medication adherence or response to treatment

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

BACKGROUND: STUDY OBJECTIVES

- Assess the effectiveness of this large-scale, multi-site HIV care coordination program in NYC
- Compare engagement in care (EiC) and viral load suppression (VLS) in 12 months before and after CCP enrollment
 - Examine subgroup differences in outcomes*

* Subgroups defined based on characteristics at time of enrollment

METHODS: DATA SOURCES

- Matched CCP eSHARE with NYC HIV Registry data

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



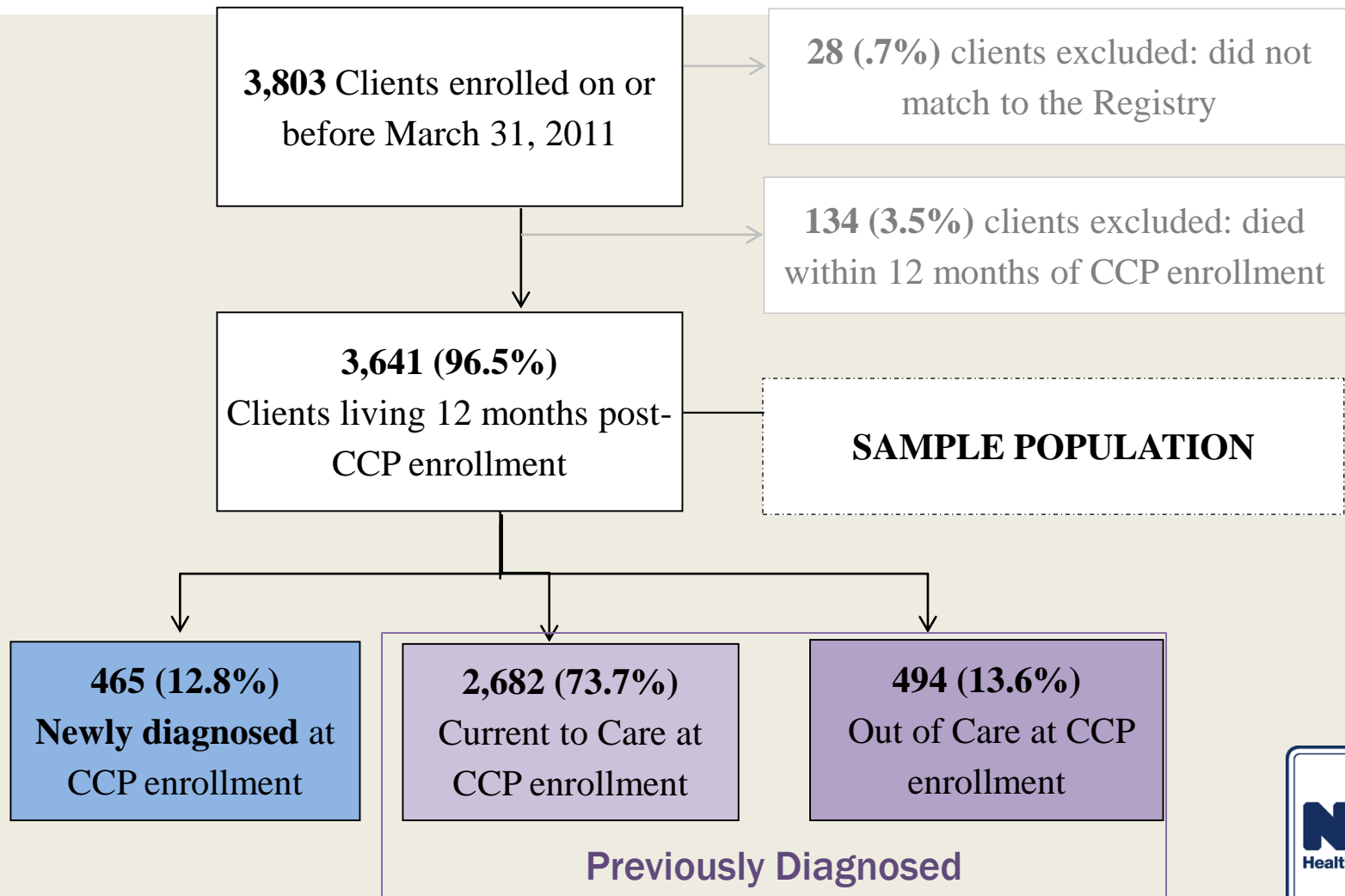
HIV Surveillance Data: Registry of NYC HIV cases (laboratory VL and CD4 tests, HIV diagnostic events)

METHODS: ELIGIBLE SAMPLE AND CARE STATUS GROUPS

- **Clients Eligible for Analysis:** enrolled by March 2011, 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: SAMPLE ELIGIBILITY



METHODS: STATISTICAL MEASURES

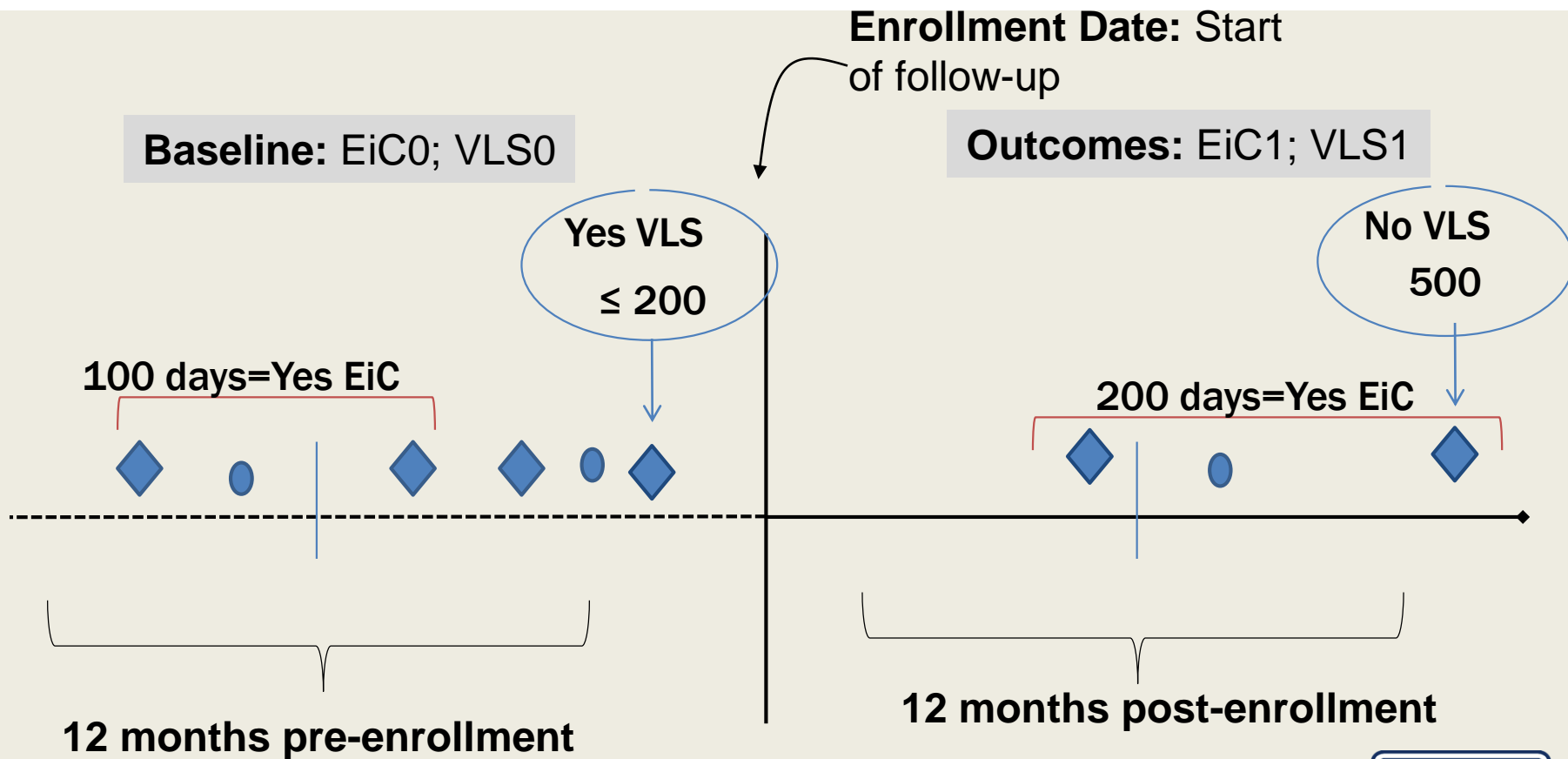
■ Outcome Measures:

- 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) using GEE

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

METHODS: CCP FOLLOW-UP TIME FOR OUTCOME MEASURES



Viral Load Lab



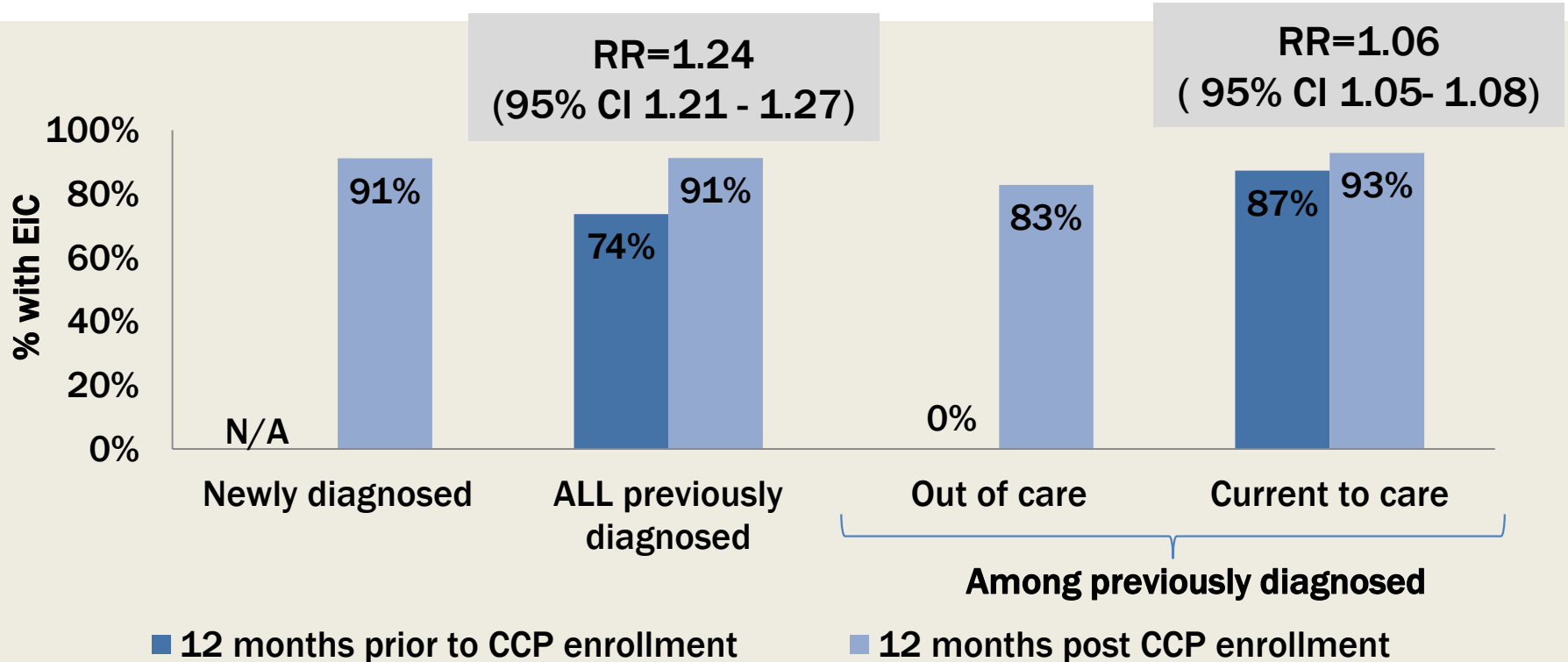
CD4 Lab



Study Population Characteristics at CCP Enrollment		CCP Overall N	%
	TOTAL	3,641	100.0
Sex	Male	2,286	62.8
	Female	1,355	37.2
Race/Ethnicity	Black	1,936	53.2
	Hispanic	1,393	38.3
	White	204	5.6
	Other/Unknown	108	3.0
Age (years)	≤ 24	224	6.2
	25 – 44	1,534	42.1
	45 – 64	1,767	48.5
	65+	116	3.2
Primary language	English	2,717	74.6
	Spanish	736	20.2
	Other	188	5.2
Country of birth	US/US dependency	2,403	66.0
	Foreign country	828	22.7
	Unknown	410	11.3
Insurance	Insured	2,643	72.6
	Uninsured	998	27.4

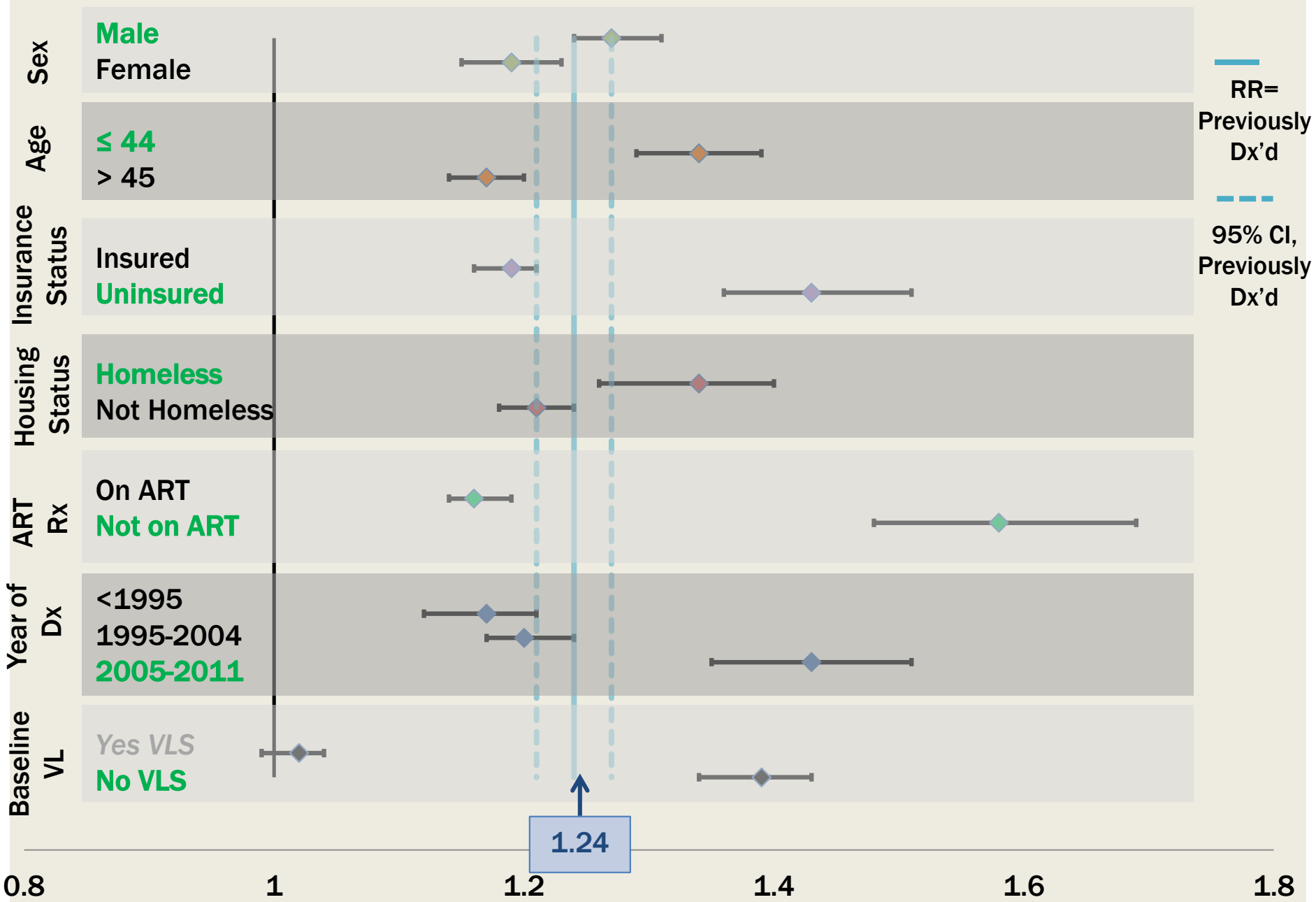
Study Population Characteristics at CCP Enrollment		CCP Overall N	%
Housing status	Homeless	820	22.5
	Not Homeless	2,707	74.3
	Unknown	114	3.1
Household income level	< \$9,000	1,403	38.5
	≥ \$9,000	1,229	33.8
	Missing	1,009	27.7
Taking ART	Yes	2,562	70.4
	No	1,079	29.6
Year of HIV Diagnosis	<1995	690	19.0
	1995 - 2004	1,732	47.6
	2005 - 2011	1,219	33.5
Viral suppression (≤200 copies/mL)	Yes	1,072	29.4
	No	2,324	63.8
	Unknown	245	6.7
CD4 (cells/μL)	< 200	972	26.7
	200 - 349	683	18.8
	350 - 499	509	14.0
	500+	692	19.0
	Unknown	785	21.6

RESULTS: ENGAGEMENT IN CARE, PRE & POST

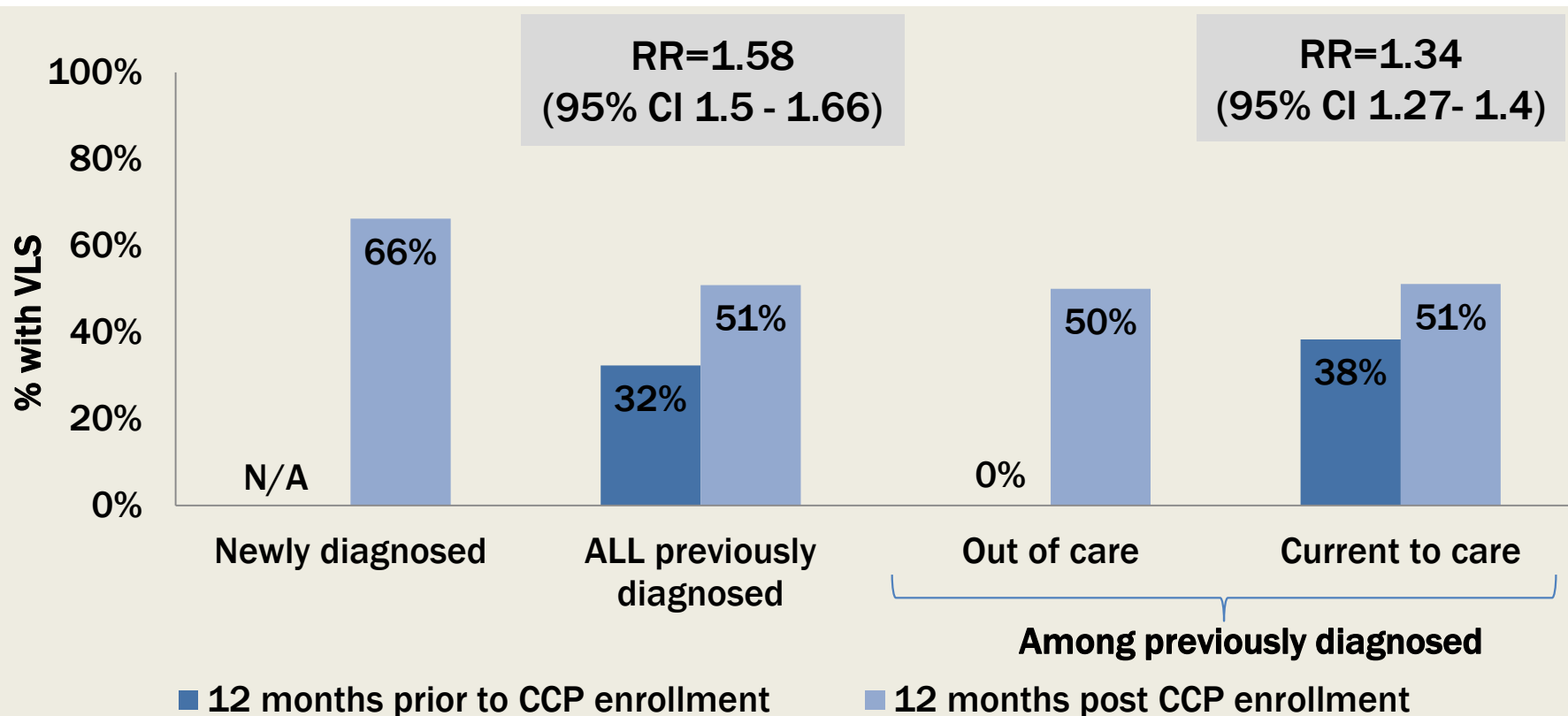


- Improvements were observed for EiC at 25 (89%) of the 28 agencies

Engagement in Care (previously dx'd): Post- vs. Pre- Enrollment Change, Relative Risk

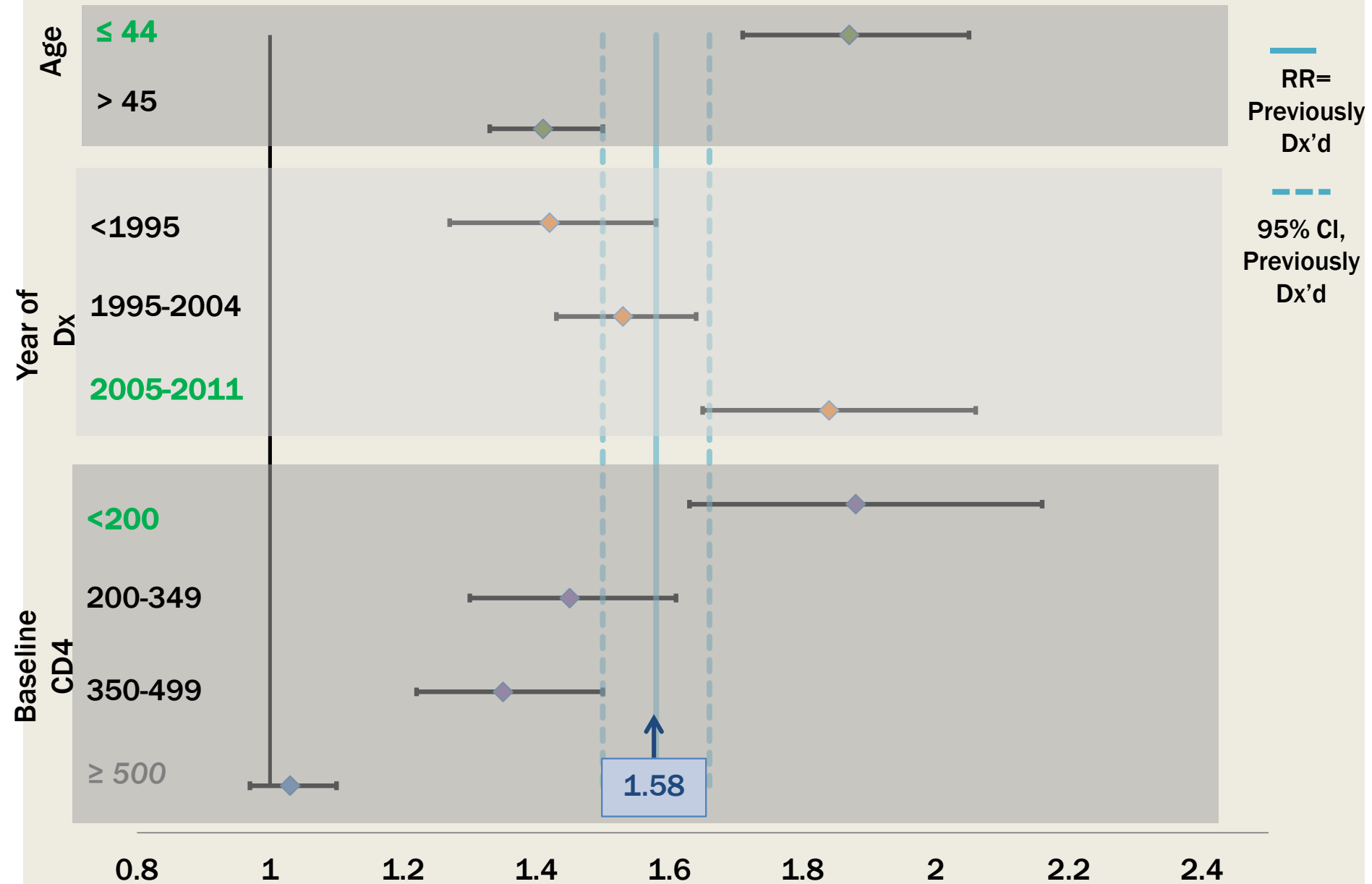


RESULTS: VL SUPPRESSION PRE & POST



- Improvements were observed for VLS at 21 (75%) of the 28 agencies

Viral Load Suppression (previously dx): Post- vs. Pre- Enrollment Change, Relative Risk



LIMITATIONS AND CONSIDERATIONS

- Labs are an imperfect proxy for primary care
 - May overstate care engagement to the extent that some labs reflect acute care vs. primary care visits
 - Not all primary care visits produce lab data
- Ceiling effects may explain some subgroup findings
 - Certain groups have very little room for improvement
- Evolving HIV service and policy landscape

CONCLUSIONS

- Short-term EiC and VLS improvements were robust across most subgroups examined
 - Especially among those previously diagnosed and out of care
- Newly diagnosed also show promising outcomes
- CCP may substantially improve short-term adherence to care and treatment among persons at risk for sub-optimal outcomes

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