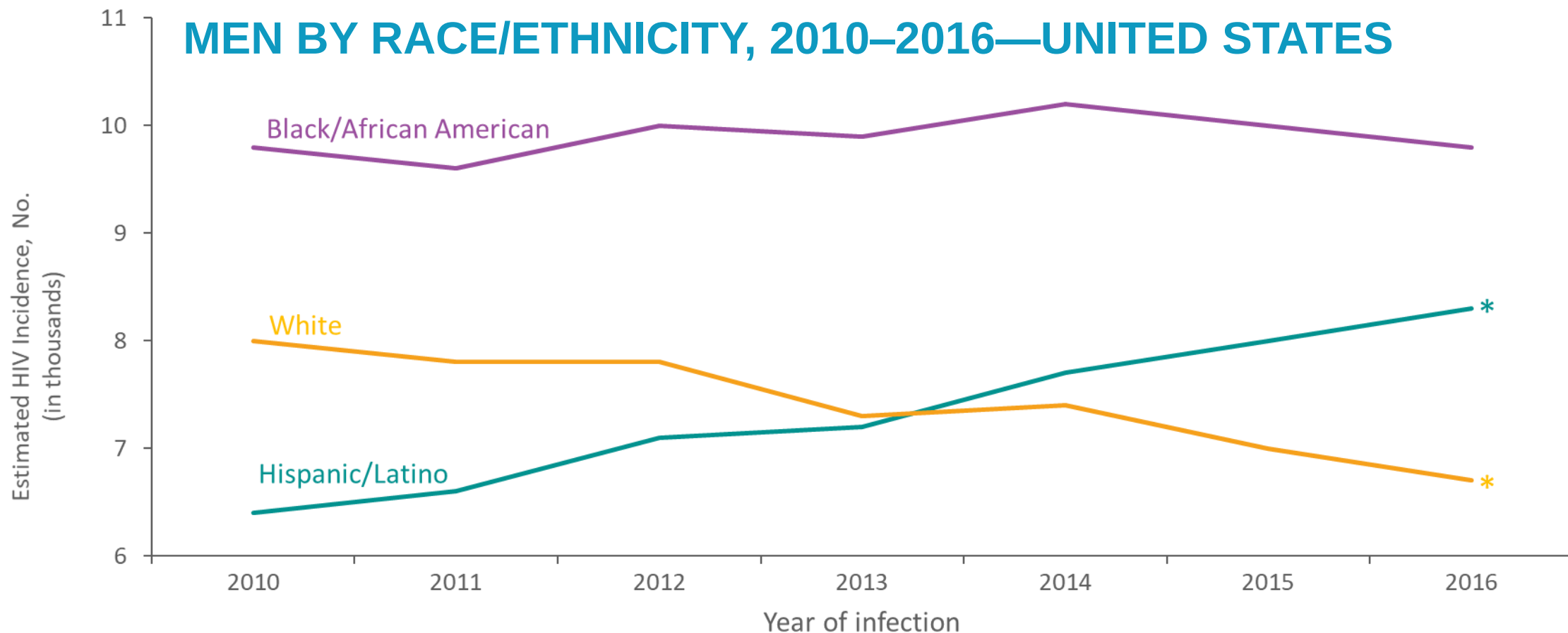


Association of Risk Perception and Biomedical HIV Prevention Strategies

Black men who have sex with men in HPTN 073

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ESTIMATED HIV INCIDENCE AMONG MEN WHO HAVE SEX WITH MEN BY RACE/ETHNICITY, 2010–2016—UNITED STATES



Note. Estimates were derived from a CD4 depletion model using HIV surveillance data. Data have been statistically adjusted to account for missing transmission category. Data on men who have sex with men do not include men with HIV infection attributed to male-to-male sexual contact and injection drug use. Hispanics/Latinos can be of any race.

*Difference from the 2010 estimate was deemed statistically significant ($P < .05$).

Introduction

- HIV infections among men who have sex with men (MSM) have started to stabilize
 - however Black MSM continue to have disproportionate rates of HIV infection.
- Strong emphasis on comprehensive HIV prevention interventions and advances in biomedical primary and secondary HIV prevention
- These interventions are impacted by contextual factors such as risk perception, risk compensation, and long-term behavior change

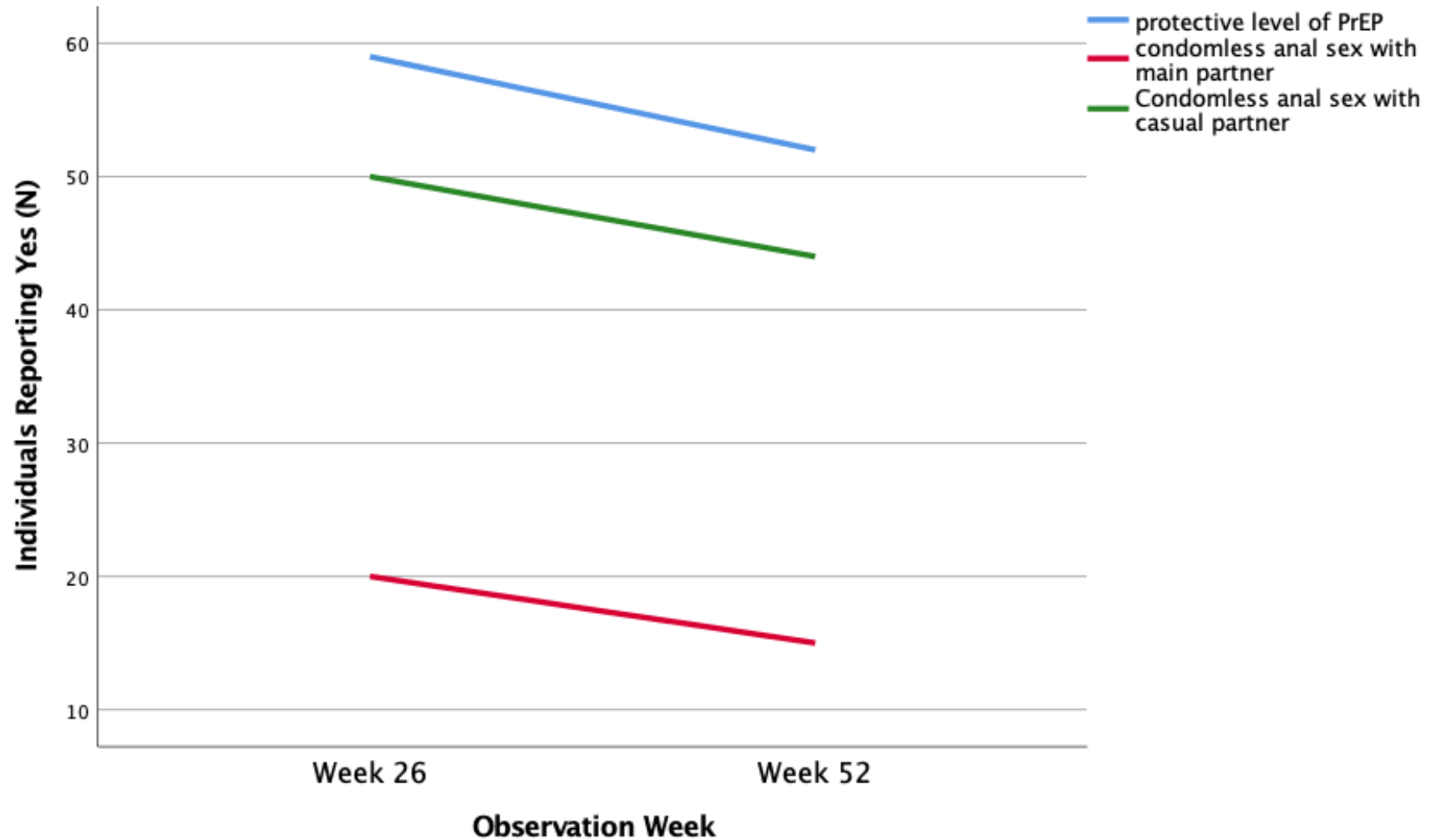
Purpose of Study

- To examine perceived risk and its influence on different biomedical HIV prevention strategies (condom use and PrEP use) used by BMSM from HPTN 073.

Methods

- Secondary data analysis with data from HPTN 073 participants
- Self reported knowledge of HIV-negative men PrEP use and condom use
- Perceived Vulnerability to HIV Scale assessed HIV risk perception
- PrEP adherence was assessed using levels of TFV-DP
 - Outcome variables were dichotomized for analysis
- For the analysis, we used matched data (26 and 52 weeks)
- Generalized estimation equation to test associations between risk perception, knowledge of HIV-negative men PrEP use and biomedical prevention strategy outcomes (PrEP use and condom use)

ENGAGEMENT IN BIOMEDICAL PREVENTION



Results

	PrEP adherence (DBS)		Condomless sex with main partner		Condomless sex with casual partner(s)	
	Unadjusted OR (95% CI)	Adjusted OR (95% CI)	Unadjusted OR (95% CI)	Adjusted OR (95% CI)	Unadjusted OR (95% CI)	Adjusted OR (95% CI)
PrEP Knowledge						
Knowledge of HIV negative men on PrEP (yes v. no)	2.13 (1.14, 3.96)	1.12 (0.43, 2.91)	3.86 (1.22, 12.21)	1.99 (0.53, 7.41)	1.39 (0.78, 2.48)	
Knowledge of PrEP efficacy (yes v. no)	2.17 (1.14, 4.13)	1.54 (0.55, 4.29)	2.95 (0.93, 9.36)		1.51 (0.82, 2.78)	
HIV risk perception (yes v. no)	1.01 (0.95, 1.07)		0.93 (0.85, 1.02)		1.12 (1.05, 1.21)	1.12 (1.03, 1.22)
PrEP Self-efficacy (yes v. no)	1.15 (1.06, 1.25)	1.16 (1.08, 1.25)	1.19 (1.01, 1.41)	1.12 (0.95, 1.32)	1.04 (0.99, 1.09)	
Condom Self-efficacy (yes v. no)	0.99 (0.96, 1.02)		1.01 (0.96, 1.07)		0.93 (0.89, 0.96)	0.93 (0.89, 0.98)

Key Results

- Knowledge of HIV –negative men PrEP use
 - PrEP adherence: odds ratio (OR) = 2.13, $p = .016$
 - Condomless anal sex with main partner: OR = 3.86, $p = .02$
 - Condomless anal sex with casual partner(s): OR = 1.39, $p = .25$
- Risk perception
 - PrEP adherence: OR = 1.01; $p = .75$
 - condomless sex with a main partner OR = .93; $p = .11$
 - condomless sex with casual partner(s) OR = 1.12 = $p < .01$

Conclusions

- The pattern of use of biomedical strategies differed depending on knowledge of MSM PrEP use and risk perception.
- Behavioral compensation occurred among Black MSM.
- Need for adaptive HIV prevention messaging and situational HIV prevention interventions.

Summary

- Conducted a secondary data analysis from HPTN 073 data.
- Examined relationship between behavioral compensation and engagement in biomedical HIV prevention strategies.
- Behavioral compensation was present among men in HPTN 073.
- Need for adaptive HIV prevention messaging and situational HIV prevention interventions.

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