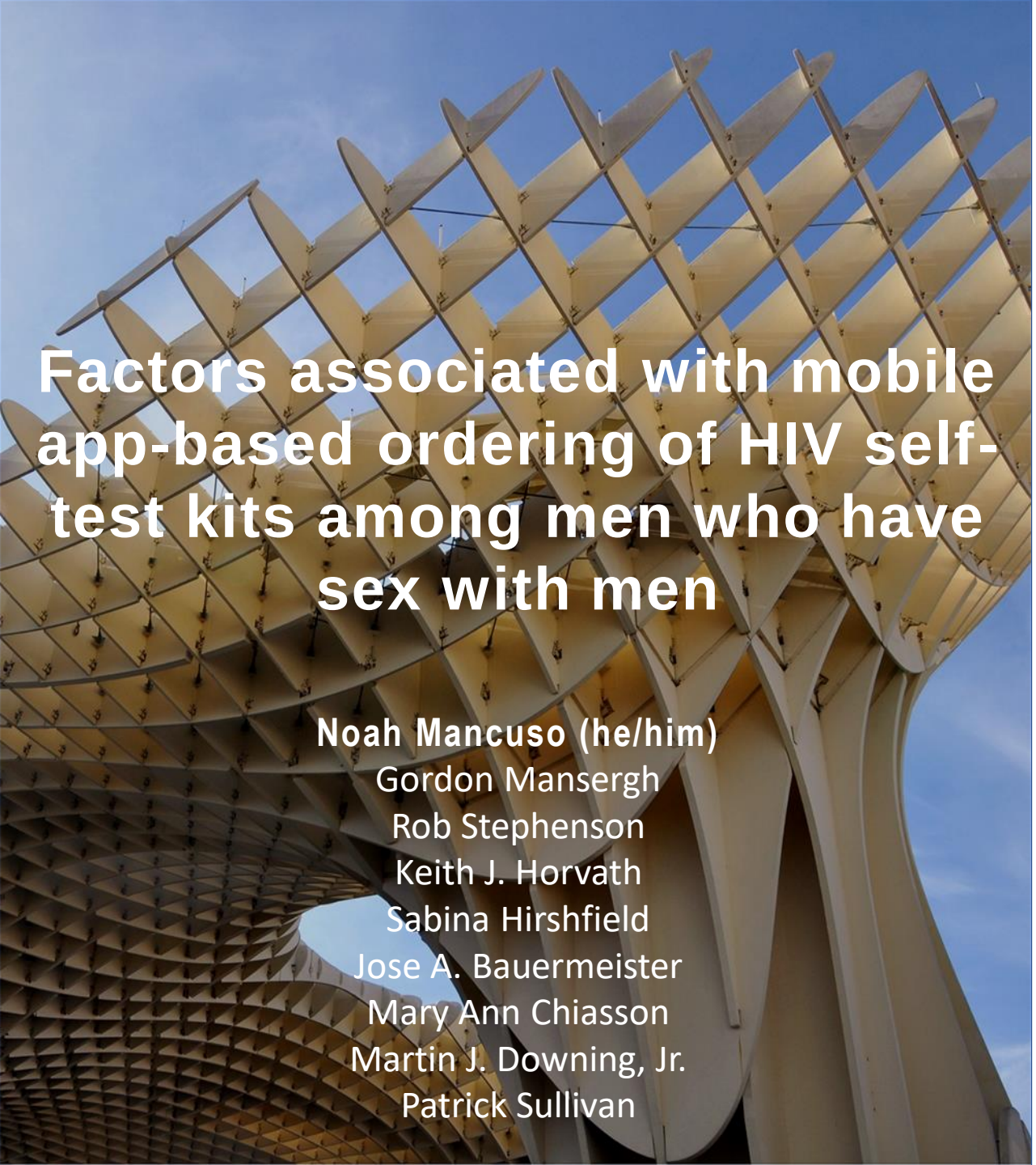

Factors associated with mobile app-based ordering of HIV self-test kits among men who have sex with men

Noah Mancuso (he/him)
Gordon Mansergh
Rob Stephenson
Keith J. Horvath
Sabina Hirshfield
Jose A. Bauermeister
Mary Ann Chiasson
Martin J. Downing, Jr.
Patrick Sullivan

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Background

- In the US, new HIV diagnoses have declined overall for MSM in past 10 years but increased in certain age and racial/ethnic groups
- Only half of MSM in the US report annual HIV testing in accordance with CDC recommendations
- Online and mobile app services have shown promise in increasing testing but evidence from RCTs is lacking and concerns about a “digital divide” persist

Mobile Messaging for MSM (M-Cubed)

- mHealth intervention using tailored text and video messages
- Risk/eligibility screening and commodity ordering
- RCT showed high-risk MSM were ~2 times as likely to test for HIV using the app[1]

1. Sullivan PS, Stephenson R, Hirshfield S, Mehta CC, Zahn R, Bauermeister JA, et al. Behavioral Efficacy of a Sexual Health Mobile App for Men Who Have Sex With Men: Randomized Controlled Trial of Mobile Messaging for Men. J Med Internet Res. 2022 Feb 2;24(2):e34574.

Research Question

- What factors are associated with ordering HIV self-test kits among men offered the opportunity to order them via the M-Cubed app?

Covariate Selection

- Demographics chosen based on literature review and factors known to be associated with the HIV epidemic (age, race/ethnicity, geography, income)
- Theoretically informed co-variates

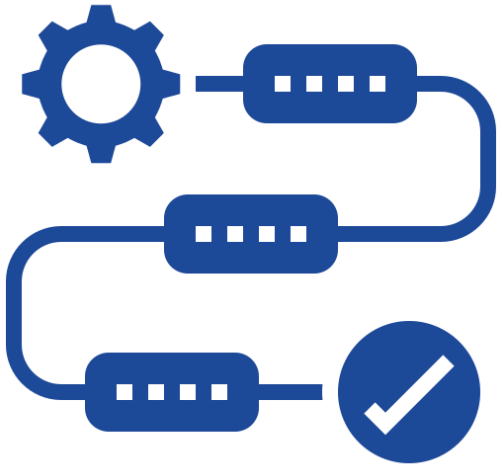
Theoretical Framework

SCT Domains	Intervention Variables
Behavior	HIV testing history (ever, past 3 months, past 12 months)
Knowledge	How often should you be tested for HIV?
Environment	Total number of partners, Status of partners
Goal Setting	When do you plan to get test for HIV next?
Self-Efficacy	How likely are you to get tested / see a provider in the next 3 months?
Outcome expectations	How much protection against HIV will getting tested provide?

→ **HIV Prevention Behavior (Outcome)**
Ever ordering an HIV self-test kit

Methods

- M-Cubed data used from Atlanta, Detroit, and New York.
- Multivariable logistic regression used to describe variables related to the outcome of ordering one or more test kits.
- Predictor variables that yielded $p<0.05$ in bivariate analyses were considered for inclusion in the empiric model.
- Demographic variables chosen a priori were added to final model estimating adjusted prevalence ratios (aPR).



Demographic Results

Demographic Variables	Ordered (n=219)	No Order (n=198)	Significance
Age, mean (SD)	32 (11)	35 (12)	ND
Race/Ethnicity, n (row %)			ND
White, non-Hispanic	117 (55)	96 (45)	
Black/African American, non-Hispanic	46 (51)	44 (49)	
Hispanic/Latino	30 (49)	31 (51)	
Other	26 (49)	27 (51)	
Income, n (row %)			ND
$0-$14,999	40 (50)	40 (50)	
$15,000-$29,999	47 (58)	34 (42)	
$30,000-$49,999	47 (54)	40 (46)	
$50,000-$74,999	41 (48)	45 (52)	
$75,000 or more	43 (52)	39 (48)	

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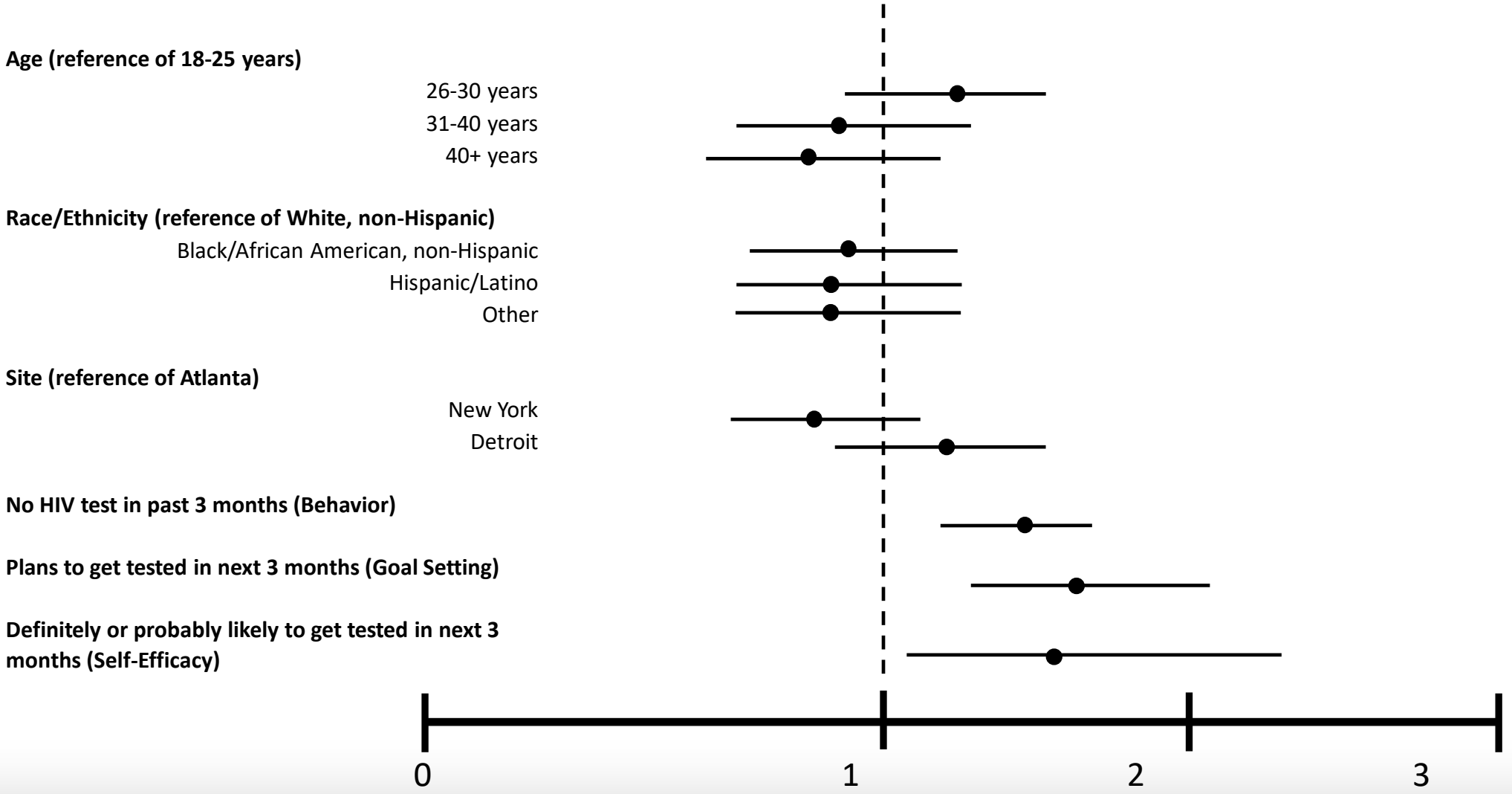
Selected Findings



Final Model Results

Participants were:

30% more likely to order **if they had not tested in the past three months (Behavior)**

60% more likely to order **if they reported plans to get tested in the next three months (Goal Setting)**

No statistical difference by:

Age

Race/Ethnicity

Income

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Discussion

Mobile app-based ordering of HIV self-test kits can help:

- Reach undertested populations.
- Supplement community-based and clinical testing.
- Align MSM testing intentions with actualized behavior.
- Overcome structural barriers to HIV prevention services.

Conclusion

1. The ability to order free HIV kits via mobile apps helps remove barriers to testing and allows MSM to follow through on their plans to test.

2. Accessible and frequent HIV testing for key populations is crucial for ending the HIV epidemic in the United States.

3. Offering free HIV self-test kits via mobile apps should be a critical component of this larger system of testing opportunities for MSM.

Acknowledgements

- Special thanks to Patrick Sullivan, Gordon Mansergh, Rob Stephenson, Keith J. Horvath, Sabina Hirshfield, Jose A. Bauermeister, Mary Ann Chiasson, Martin J. Downing, Jr., and the rest of the M-Cubed team
- This work was supported by a Cooperative agreement from CDC (CDC U01PS004977) and by the Center for AIDS Research at Emory University (NIH P30AI050409).

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