

# **Young Sexual Minority Men's Perspectives on HPV Vaccination**

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# Disclosures

- No disclosures

# Burden of HPV in Sexual Minority Men

Sexual minority men\* bear a disproportionate burden of HPV infections and HPV-related cancers

- Higher prevalence of anal HPV infection among MSM (41.2%) vs. heterosexual men (6.9%)
- MSM are 20 times more likely than other men to develop anal cancer
- Burden of HPV infection is especially high among **HIV-positive MSM**

Anal cancer incidence:

45.9 vs. 5.1 per 100,000 in HIV-positive vs. HIV-negative MSM

\*Men who identify as gay or bisexual or men who have sex with men (MSM)

# HPV Vaccine Coverage among MSM

- No national estimates available for MSM in the US
- Studies suggest coverage has been increasing

Uptake increased from 5% in 2011 to 33% in 2017

(Source: National HIV Behavioral Surveillance)

Meta-analysis: 37% of MSM have received  $\geq 1$  dose

**What is known about  
young sexual minority  
men's perspectives on HPV  
vaccination?**

# Initial Studies on HPV Vaccination among Sexual Minority Men

Rewind to 2014...

Very little work on HPV vaccination among sexual minority men

Only ~13% had received 1 or more doses

Objectives of this study were to identify:

demographic and psychosocial predictors of HPV vaccine uptake among young MSM

facilitators and barriers to HPV vaccination unique to young MSM

# Method

- Recruitment

Ads placed on a smartphone dating application designed for MSM

- Participants (N = 336)

Assigned male sex at birth, male gender identity

Aged 18-26 years

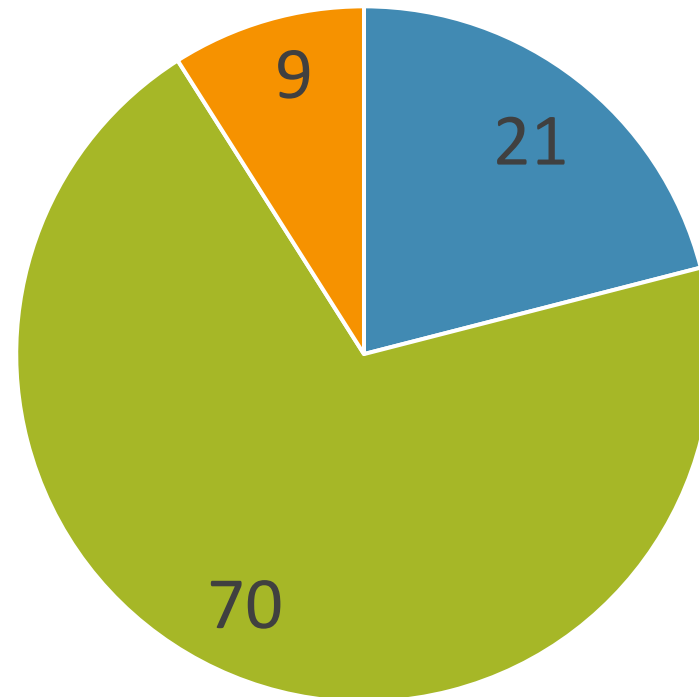
Gay, bisexual, or ever had sex with a man

- Procedure

Online survey (Nov 2014 - Feb 2015)

# HPV Vaccine Uptake (Percentages)

Received HPV vaccine?



■ Yes ■ No ■ Don't know



# Predictors of HPV Vaccination

- Provider recommendation was the strongest predictor of uptake  
40 times more likely to have been vaccinated
- + Lower odds
  - Ages 21-26 (vs. 18-20)
  - Latino ethnicity (vs. White)
- + Higher odds
  - Provider recommendation
  - HIV positive
  - More favorable attitudes
  - Higher perceived norms about HPV vaccination

# Facilitators & Barriers to Uptake

## Barriers

- + Poor understanding of HPV and HPV vaccine
- + Provider had not recommended the vaccine
- + Provider not aware of patient's sexual orientation

## Facilitators

- + Provider recommendation
- + Worried about HPV infection or an HPV-related disease  
cancer  
genital warts

# Intervention to Increase HPV Vaccination among Young Sexual Minority Men

- Specific Aims
  - Aim 1: Develop, iteratively refine, and pre-test messages using a 5-step formative research procedure
  - Aim 2: Test the feasibility, acceptability, and preliminary efficacy of the [txt2protect \(t2p\)](#) text messaging intervention in a pilot randomized controlled trial (RCT)
- Funded by the National Cancer Institute

# Collaborators

- Northwestern University
  - Brian Mustanski, PhD
  - Gregory Phillips, II, PhD
  - Krystal Madkins
  - Michael Bass, PhD
  - Shariell Crobsy
  - Aaron Korpak
- Howard Brown Health
  - Magda Houlberg, MD



# Theoretical Framework: Information, Motivation and Behavioral Skills (IMB) Model

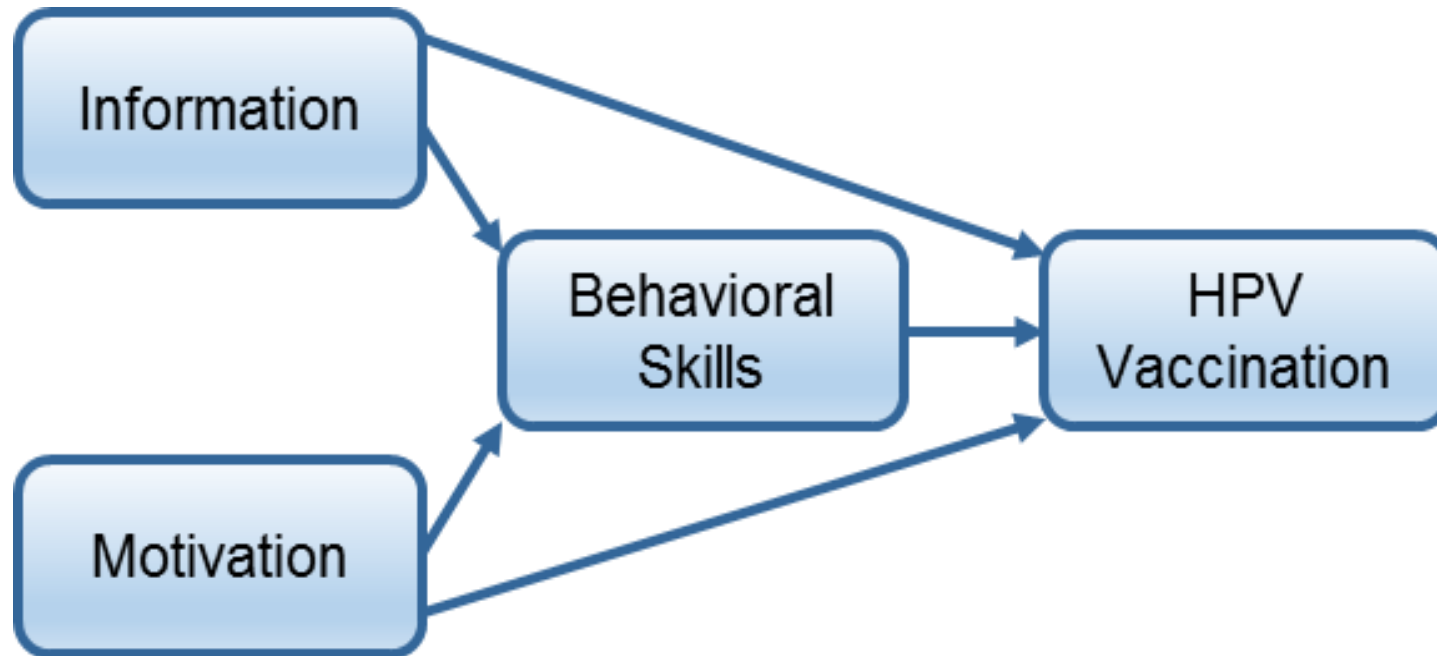


Figure 1. Guiding Theoretical Framework

# Message Development: Interview Study

- Recruitment
  - Social media
- Eligibility criteria
  - Assigned male sex at birth, male gender identity
  - Aged 18-26 years
  - Identify as gay, bisexual, or queer
  - Have a cell phone with unlimited texting
- Procedure
  - Semi-structured interviews with 29 sexual minority men

# Results

## Information

- High awareness
- Misconceptions and knowledge gaps

## Motivation

- Advantages: Prevent HPV, cancer, warts; protect partners
- Disadvantages: Side effects, stigma
- Encouragement from others (provider, family member)

## Behavioral skills

- Disclosure of sexual orientation
- Comfort discussing HPV vaccine
- External factors: Lack of health insurance or access

“It can prevent its spread, and it could, in fact, at some point, prevent cancer.”

“I did not know that it can cause cancers in men.”

“I care about my health, but I also care about other people’s health, too, and I don’t want anyone else to get infected.”

“If I don’t have easy access... that definitely would make me push it off for a long time”

“I have a very good relationship with my entire family. They all know I’m gay.”

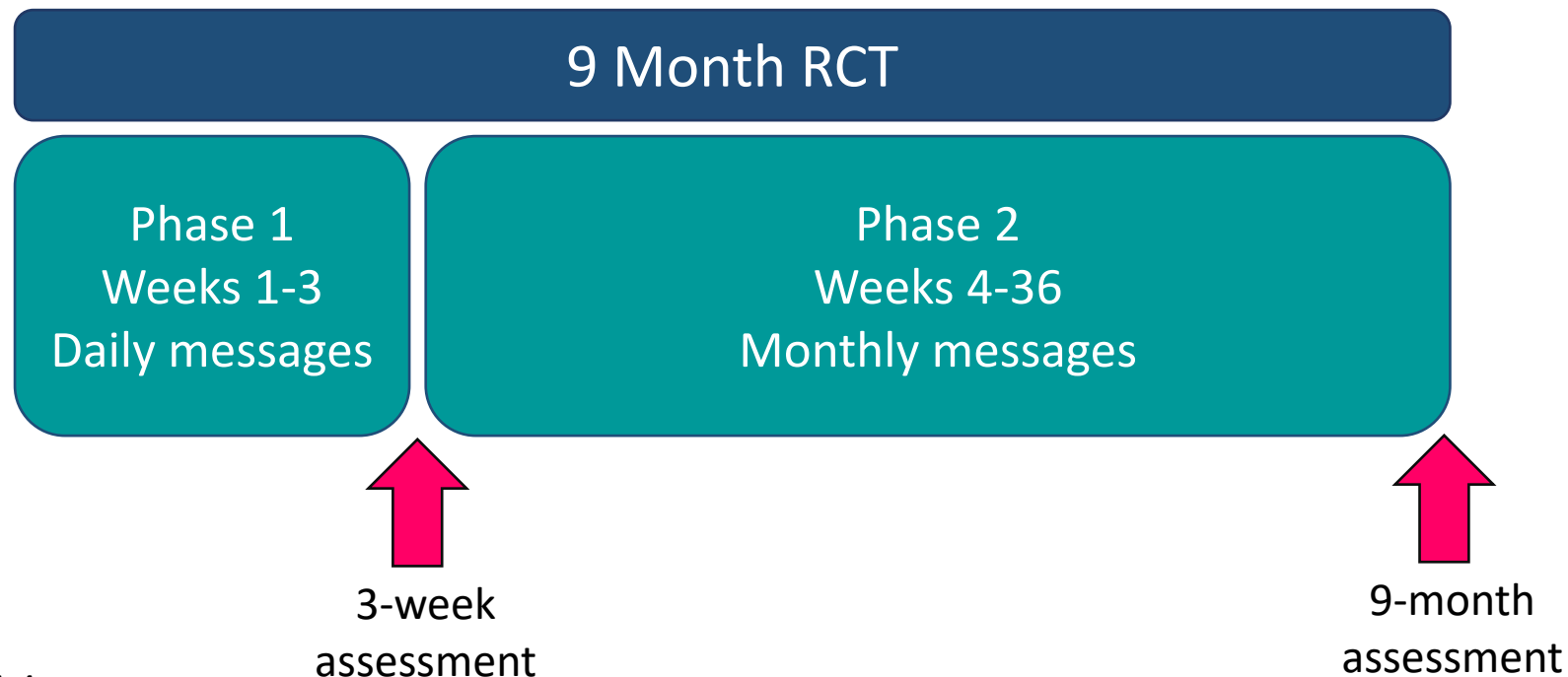
# Implications for Message Content

- Clarify misconceptions about HPV infection and the vaccine
- Underscore benefits of getting vaccinated
- Help participants overcome barriers to HPV vaccination
- Increase self-efficacy and skills relevant to HPV vaccination
  - Talk with health care providers or parents about HPV vaccine
  - Disclose sexual orientation

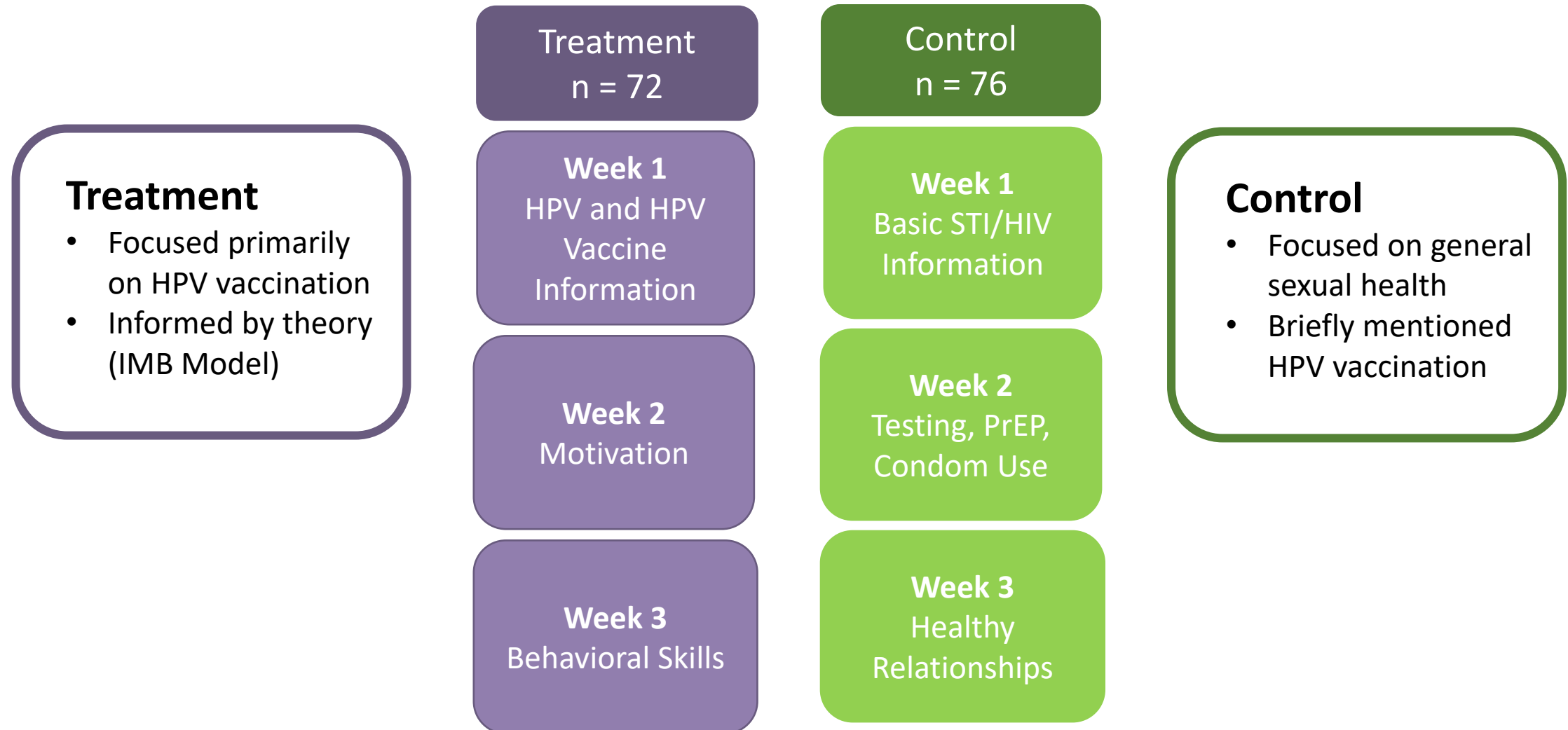


# Method for RCT

- Recruitment & Procedure
  - In 2018, unvaccinated gay and bisexual men (aged 18-25) were recruited from Chicago to participate in a 9-month sexual health program



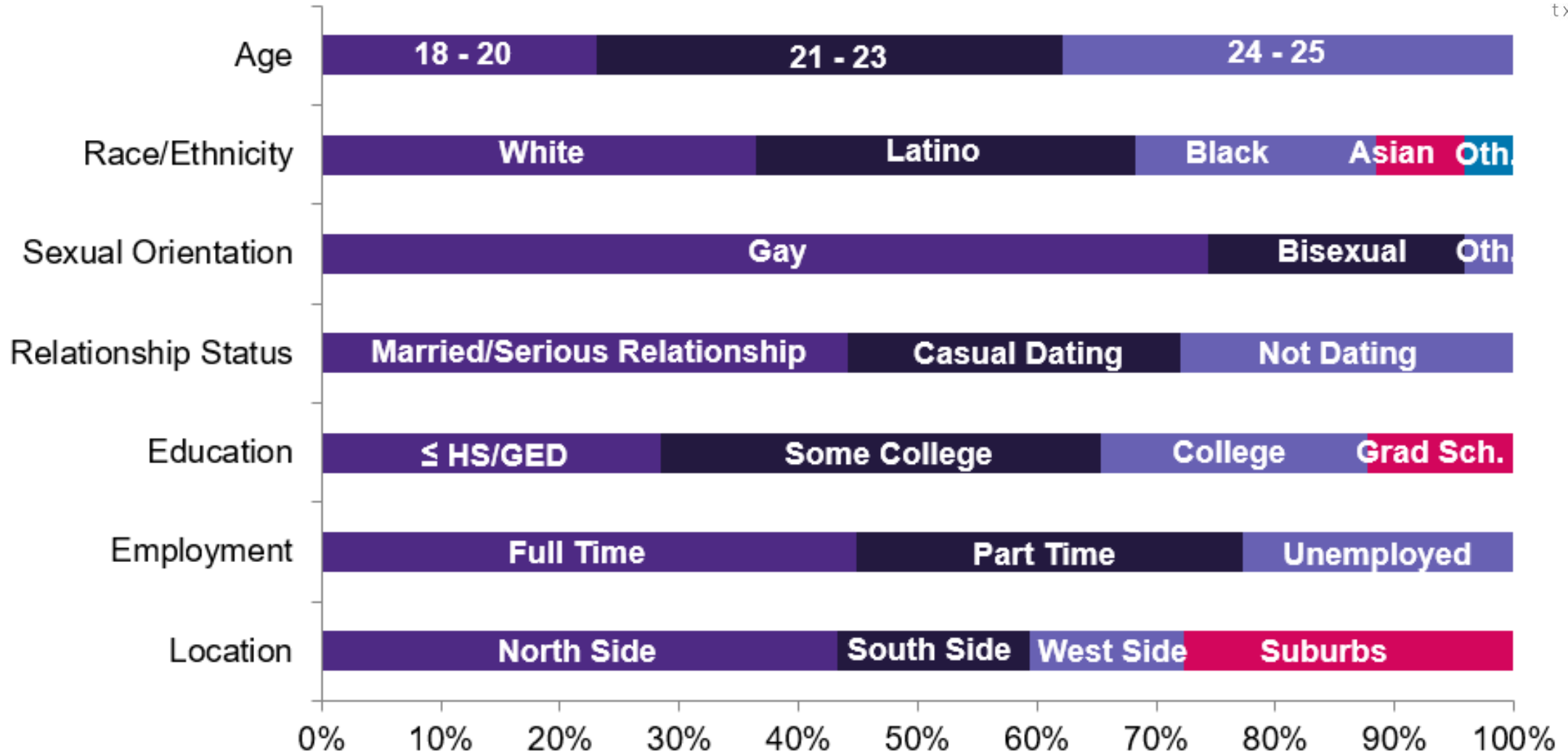
## 2 Intervention Arms: Treatment vs. Control



# Participant Demographics (N = 150)



txt2protect



# Results

- **Acceptability:** High levels of satisfaction in both conditions
- **Feasibility:** Retention in the intervention was high (88% completed the 9-month survey), yet the study fell short of meeting its recruitment goal
- **Efficacy:** Receipt of  $\leq 1$  dose of HPV vaccine:

Treatment:	19.4%
Control:	6.6%

# Limitations and Implications

- Limitations
  - HPV vaccine initiation (not completion)
  - Vaccination was self-reported
  - Chicago area
- Mobile health (mHealth) interventions are a potentially promising strategy for increasing HPV vaccine uptake among young sexual minority men

# Additional Strategies to Increase Uptake

- Mobile interventions
  - Outsmart HPV
- Offer HPV vaccine in settings where MSM regularly seek health care
  - HIV/STD and LGBTQ clinics
- Bundle HPV vaccination with HIV testing
- Ensure health care providers are recommending HPV vaccine to sexual minority patients and reducing missed opportunities

# Conclusion

- Sexual minority men are at increased risk for HPV infections and HPV-related cancers
- Practical and psychosocial barriers may hinder uptake
- Growing number of strategies and interventions available to overcome these barriers and increase HPV vaccination coverage

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- Aaron Korpak



**Thank you!**

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