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 ≥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

Gerend, Madkins, Phillips, & Mustanski, 2016
Sexually Transmitted Diseases
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: 70%
- No: 21%
- Don't know: 9%
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

Information

Behavioral Skills

Motivation

HPV Vaccination

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

Gerend et al., 2019
LGBT Health
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

Gerend et al., 2020
*Annals of Behavioral Medicine*
2 Intervention Arms: Treatment vs. Control

**Treatment**
- Focused primarily on HPV vaccination
- Informed by theory (IMB Model)

  - **Week 1**
    - HPV and HPV Vaccine Information
  - **Week 2**
    - Motivation
  - **Week 3**
    - Behavioral Skills

**Control**
- Focused on general sexual health
- Briefly mentioned HPV vaccination

  - **Week 1**
    - Basic STI/HIV Information
  - **Week 2**
    - Testing, PrEP, Condom Use
  - **Week 3**
    - Healthy Relationships

**Treatment** n = 72

**Control** n = 76
Participant Demographics (N = 150)

- **Age**: 18 - 20 | 21 - 23 | 24 - 25
- **Race/Ethnicity**: White | Latino | Black | Asian | Oth
- **Sexual Orientation**: Gay | Bisexual | Oth
- **Relationship Status**: Married/Serious Relationship | Casual Dating | Not Dating
- **Education**: ≤ HS/GED | Some College | College | Grad Sch.
- **Employment**: Full Time | Part Time | Unemployed
- **Location**: North Side | South Side | West Side | Suburbs
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 ≤ 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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References


