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Adverse Implications of Heterosexism for PrEP Clinical Decision-Making & Considerations Regarding Provider Education

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Conflict of Interest Disclosure



- Sarah Calabrese has no real or apparent conflicts of interest to report.

Background



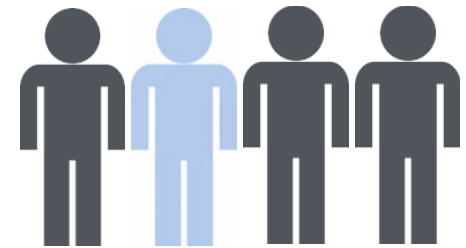
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U.S. MSM & Access to PrEP

- **U.S. MSM are a PrEP priority population**

- ▣ MSM account for 70% of new HIV infections in U.S.¹
- ▣ 1 in 4 MSM are indicated for PrEP²



- **PrEP access depends on provider uptake**

- **Concerns about patient behavior may interfere with providers' willingness to prescribe PrEP**

- ▣ Sexual risk compensation³⁻⁵
- ▣ Adherence^{3,4}

PrEP & Prejudice Among Med Students

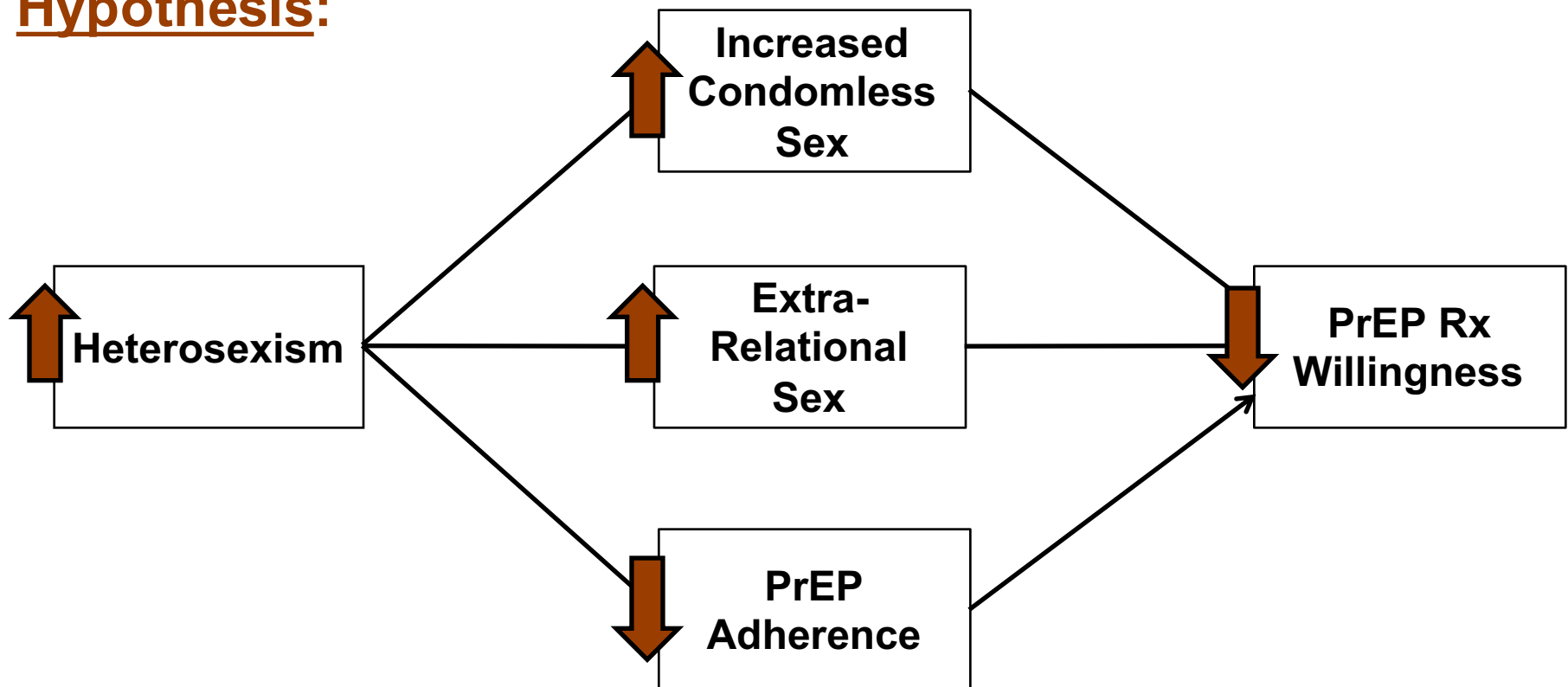
- Prejudice has previously been implicated in med students' assumptions about patient behavior and PrEP Rx willingness⁹
- Heterosexism = prejudice against sexual minorities
- High implicit heterosexism among med students¹⁰
- Med students are the next generation of physicians
 - ▣ Many years of service ahead
 - ▣ Potential recipients of formal PrEP education



Objective 1

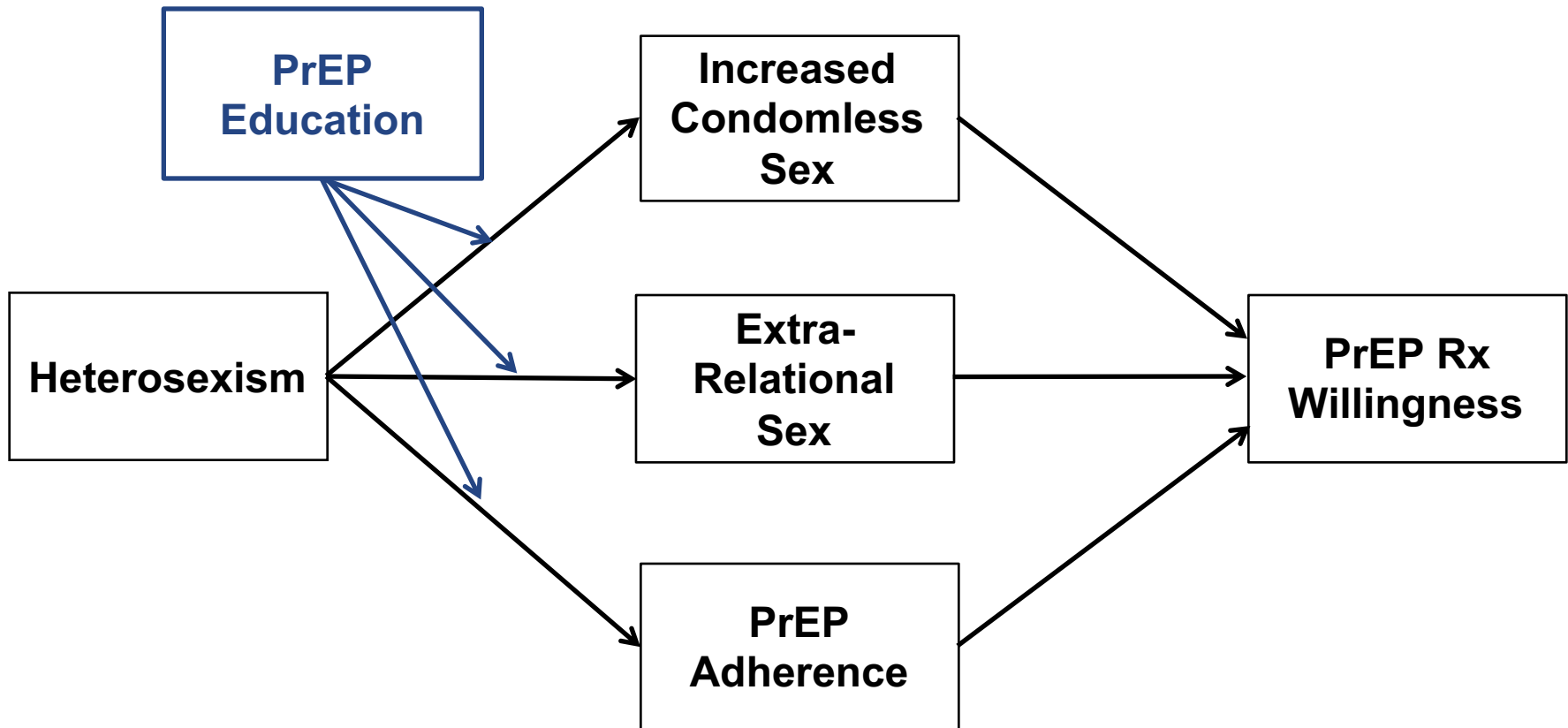
- To examine the relationship between heterosexism and PrEP clinical decision-making among med students

Hypothesis:



Objective 2

- To explore PrEP education as a potential buffer



METHODS



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Study Design & Participants

- **Online, vignette-based survey**
- Participants **recruited via mass email** to all students enrolled at 2 Northeastern medical schools (Fall 2015)
 - ▣ $n = 115$ U.S. medical students



Clinical Vignette*

- **31-year-old male patient requesting PrEP Rx**
 - **Confirmed HIV-**
 - Insured

- **Monogamous with 1 male sex partner**
 - **Partner is HIV+** and not virally suppressed
 - Inconsistent condom use

- **In good health**
 - No physical complaints
 - No history of STIs, surgery, or hospitalization
 - No medications, drug use, or drug allergies

Survey Measures

- **PrEP familiarity and prior education**
 - ▣ *Have you learned about PrEP as part of your medical or nursing school training?*
 - Yes
 - No

Survey Measures

- **PrEP familiarity and prior education**
- Clinical judgments of vignette patient:
 - **Increased condomless sex**
 - ***How likely would this patient be to have MORE unprotected sex (sex without condoms) if he started taking Truvada as PrEP?***
 - Not at all likely
 - A little bit likely
 - Somewhat likely
 - Very likely
 - Extremely likely

Survey Measures

- **PrEP familiarity and prior education**
- Clinical judgments of vignette patient:
 - ▣ **Increased condomless sex**
 - ▣ **Extra-relational sex**
 - ▣ **PrEP adherence**
 - ▣ **PrEP Rx willingness**
- Other survey measures:
 - ▣ **Heterosexism** (5-item scale: ATG-R-S5; Herek, 1994)
 - Rating of agreement with attitudes toward MSM
 - Ex. ***I think male homosexuals are disgusting.***

Survey Measures

- **PrEP familiarity and prior education**
- Clinical judgments of vignette patient:
 - **Increased condomless sex**
 - **Extra-relational sex**
 - **PrEP adherence**
 - **PrEP Rx willingness**
- Other survey measures:
 - **Heterosexism**
 - **Relevant background characteristics**
 - Gender, race, sexual orientation, years of med school

RESULTS



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Participant Characteristics (*n* = 115)

□ Gender

- 67% female
- 32% male
- 1% other

□ Race

- 62% White
- 26% Asian
- 6% Black
- 4% Latino
- 2% Other

□ Sexual Orientation

- 86% heterosexual
- 5% gay/lesbian
- 5% bisexual
- 4% other

□ Year in Medical School

- 23% 1st
- 33% 2nd
- 24% 3rd
- 21% 4th+



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PrEP Familiarity & Prior Education

- **PrEP Familiarity**

- 85% of participants had heard of PrEP

- **Prior PrEP Education**

- 50% had been educated about PrEP in med school

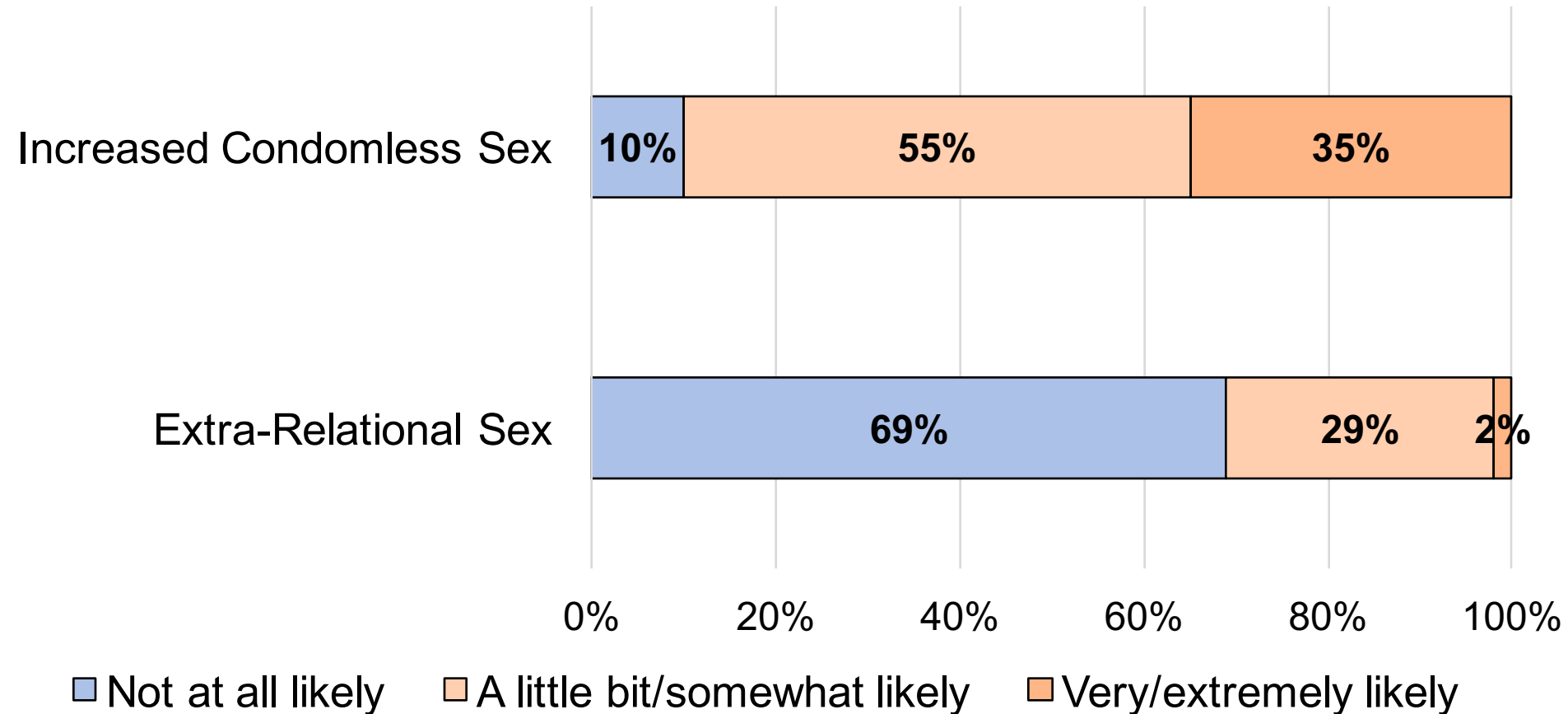


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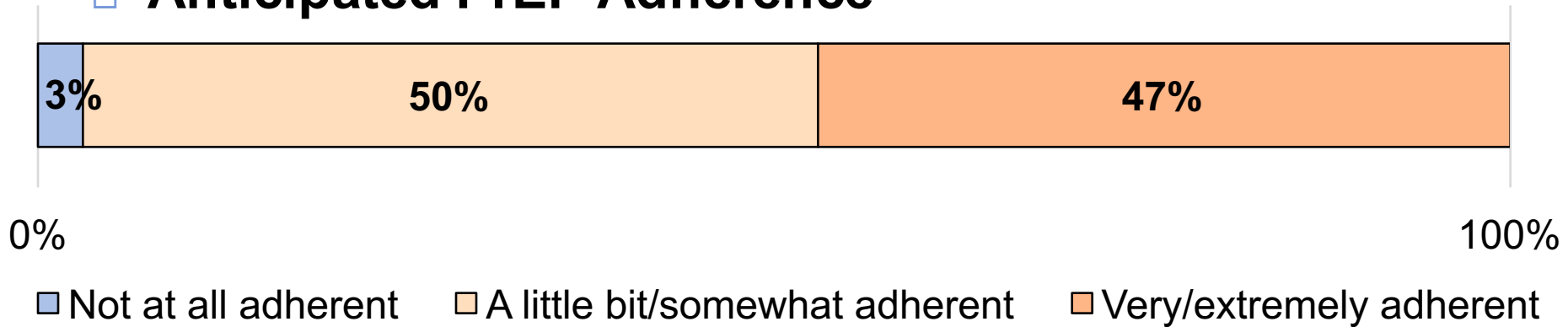
Clinical Judgments of Patient

Anticipated Risk Compensation

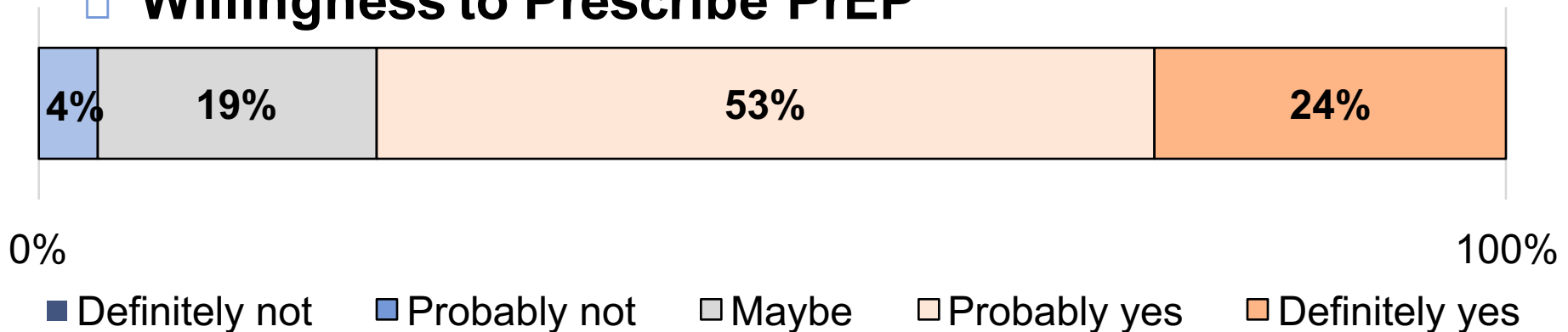


Clinical Judgments of Patient

Anticipated PrEP Adherence

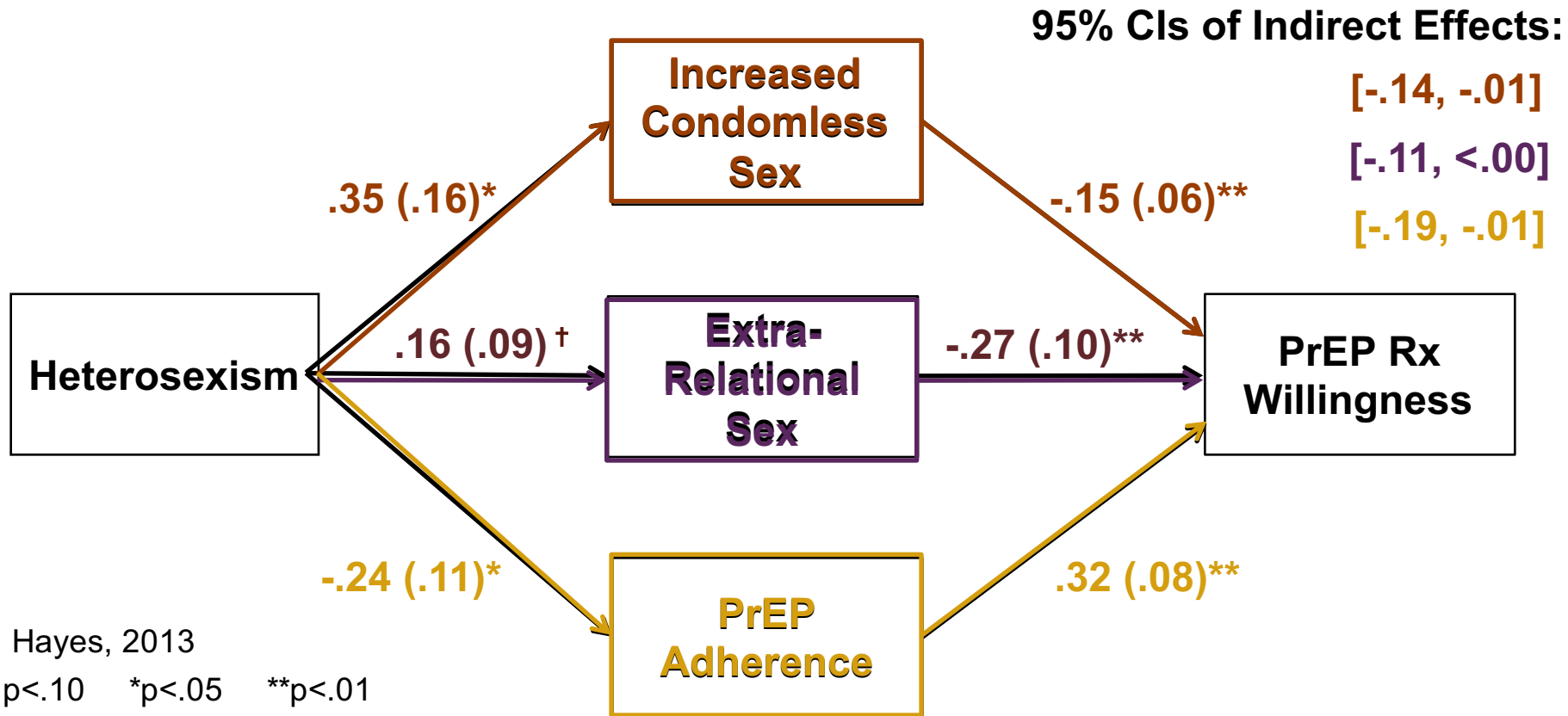


Willingness to Prescribe PrEP



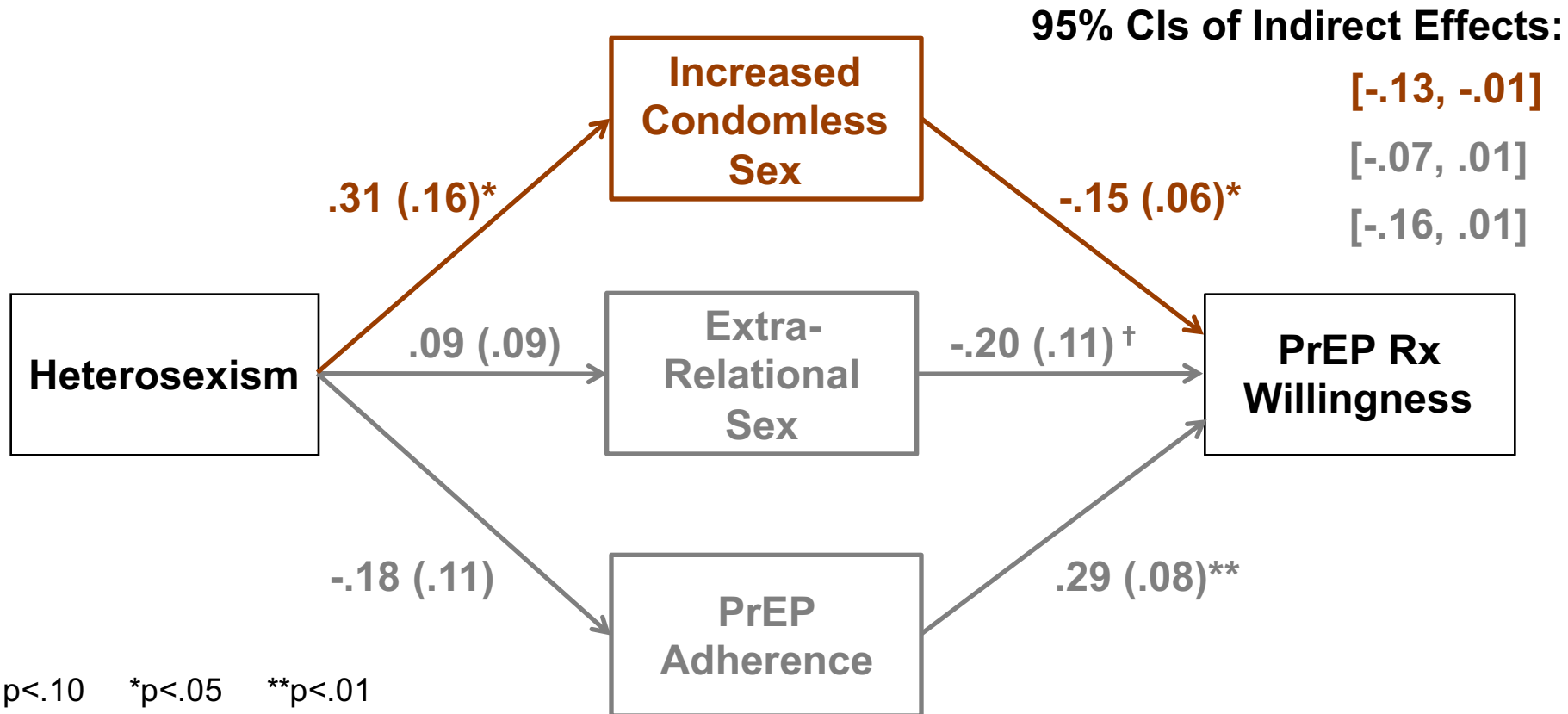
Objective 1: Unadjusted Mediation Analyses

- Bootstrapping test of parallel mediation model¹¹ indicated all 3 indirect pathways were significant



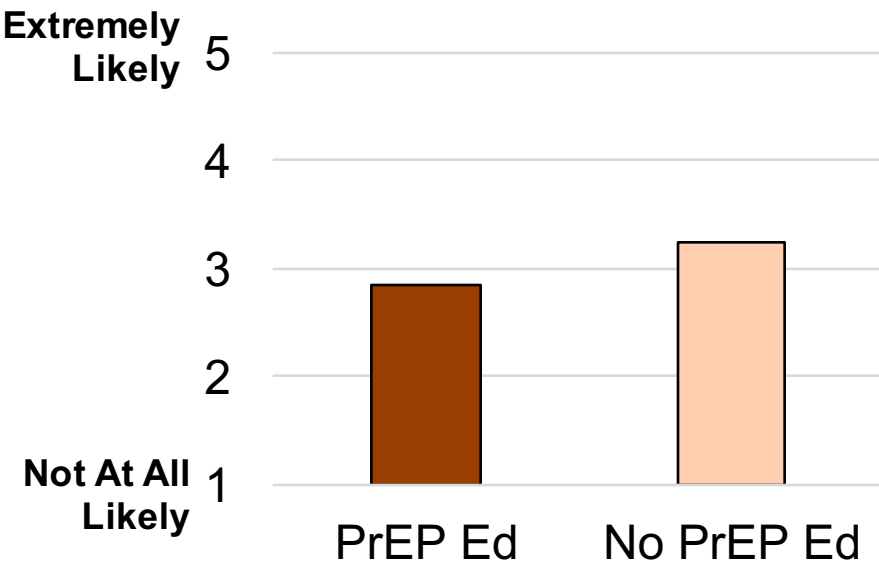
Objective 1: Adjusted Mediation Analyses

- The **top indirect pathway remained significant** after adjusting model for relevant background characteristics

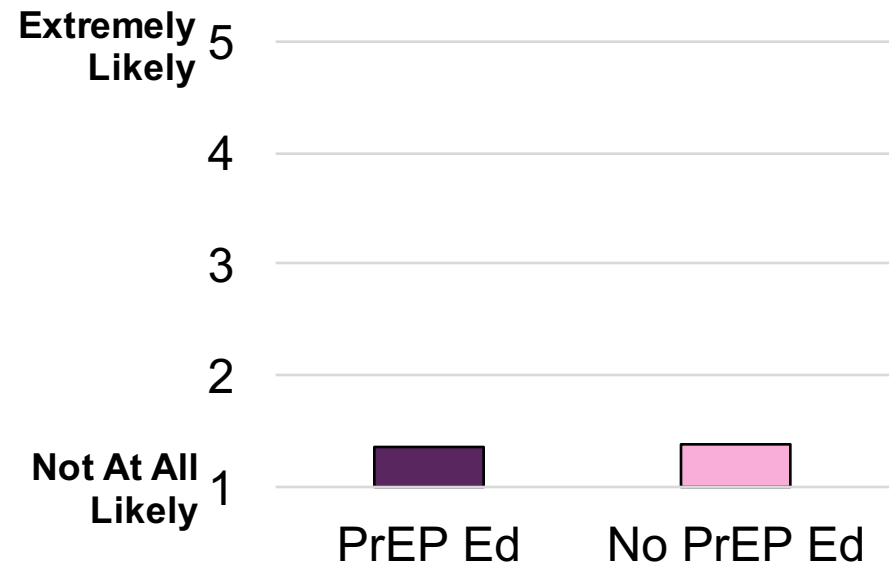


(Lack of) Mean Differences in Clinical Judgment Based on Prior PrEP Education

Increased Condomless Sex



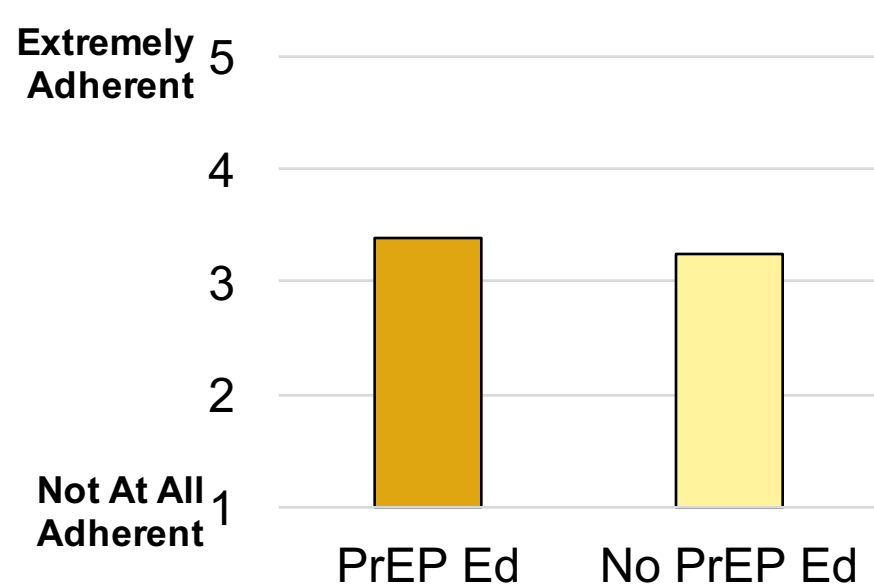
Extra-Relational Sex



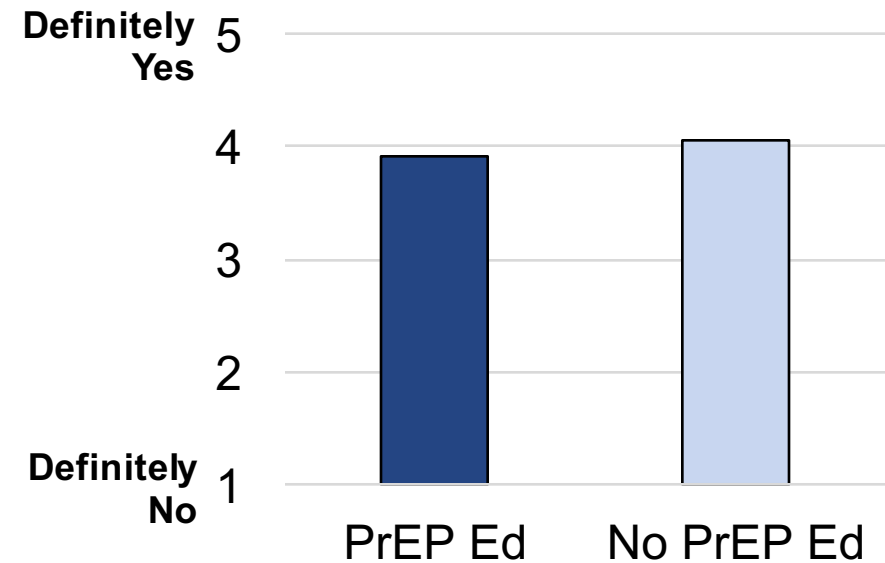
- Independent samples t-tests found no significant differences

(Lack of) Mean Differences in Clinical Judgment Based on Prior PrEP Education

Anticipated PrEP Adherence



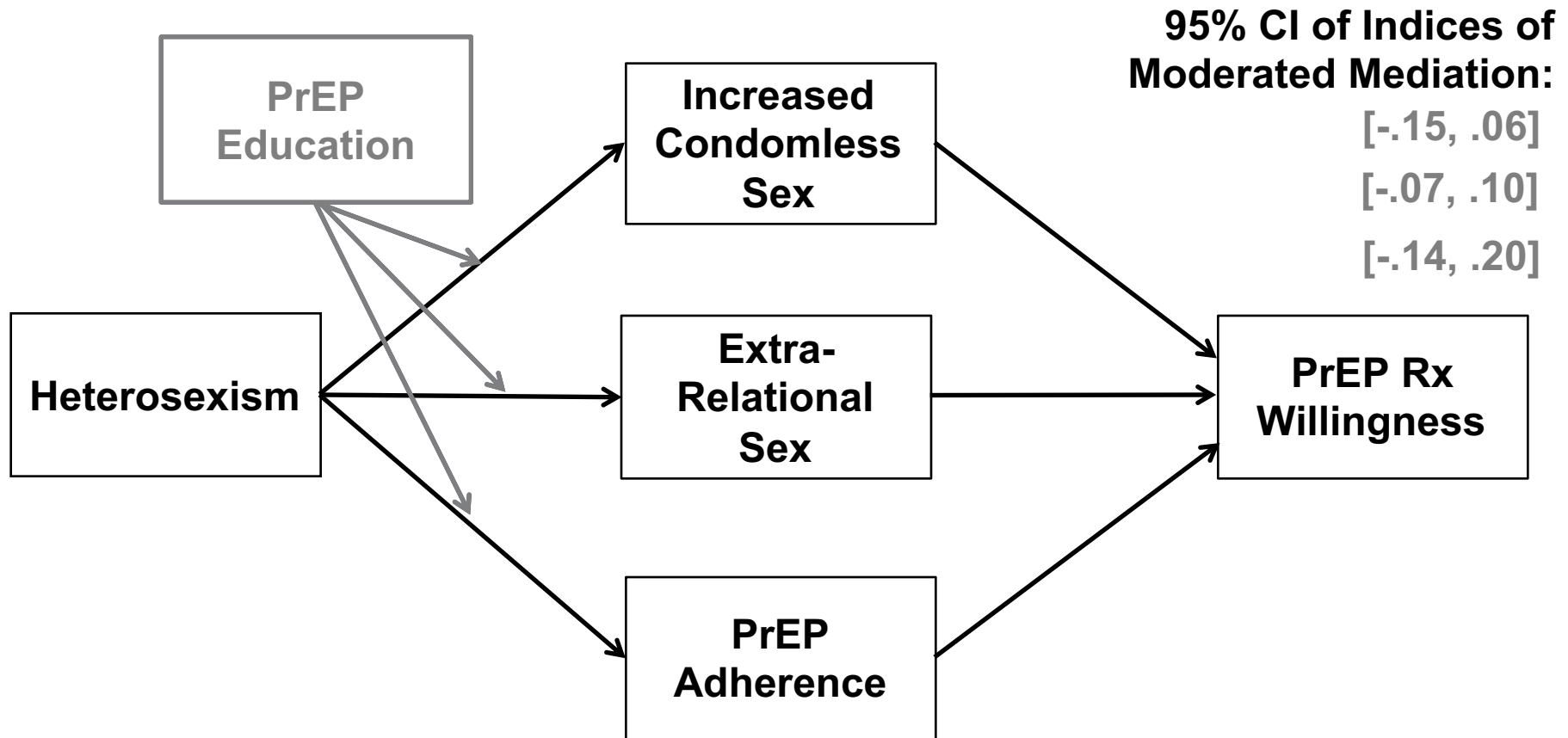
PrEP Rx Willingness



- Independent samples t-tests found no significant differences

Objective 2: Moderated Mediation Analyses

- Prior PrEP education **failed to buffer** any indirect effects




Conclusions



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Summary of Findings

- Most participants had heard of PrEP and half had learned about it in med school
- **Participants expected behavioral challenges with PrEP:**
 - **Risk compensation** was highly anticipated
 - **Suboptimal adherence** was predicted by most
- Heterosexism indirectly affected PrEP prescription willingness through clinical judgments about patient behavior:


The diagram illustrates a causal pathway: Heterosexism leads to an increase in Predicted Condomless Sex (indicated by an upward arrow), which in turn leads to a decrease in Rx Willingness (indicated by a downward arrow).
- **Prior PrEP ed was unrelated to clinical judgments and failed to buffer the adverse impact of heterosexism**

Implications & Next Steps

- **Heterosexism may compromise clinical judgment, ultimately diminishing PrEP access**
- **Future research** should assess differences in PrEP-related judgments & service provision by patient sexual orientation
- Given the marginalized status of MSM and other PrEP priority populations, **cultural competence needs to be integral component of PrEP ed**
- **Systematic evaluation** of PrEP ed within and beyond medical schools should be performed with respect to both clinical and cultural competence outcomes

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Thank you!

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Supplementary Slides



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Heterosexism Scale Items

1. I think male homosexuals are disgusting.
2. Male homosexuality is a perversion.
3. Male homosexuality is a natural expression of sexuality in men.
4. Sex between two men is just plain wrong.
5. Male homosexuality is merely a different kind of lifestyle that should not be condemned.

PrEP Ed by Years of Med School Completed

# Yrs. Med School Completed	% Reporting PrEP Ed
0	8%
1	58%
2	63%
3	74%
4+	60%