Proposing and Applying the Observational-Implementation Hybrid Approach

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Proposing the Observational-Implementation Hybrid Approach: Designing Observational Research for Rapid Translation

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Podcast: https://www.buzzsprout.com/2195469/13546638

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Premise:

Incorporation of implementation science methods and measures into observational studies to collect information that would allow researchers to anticipate, estimate, or infer about the effects of interventions and implementation strategies

Observational researchers might currently not be collecting data relevant to the eventual implementation of programs or interventions

Effectiveness-implementation hybrid designs: combining elements of clinical effectiveness and implementation research to enhance public health impact

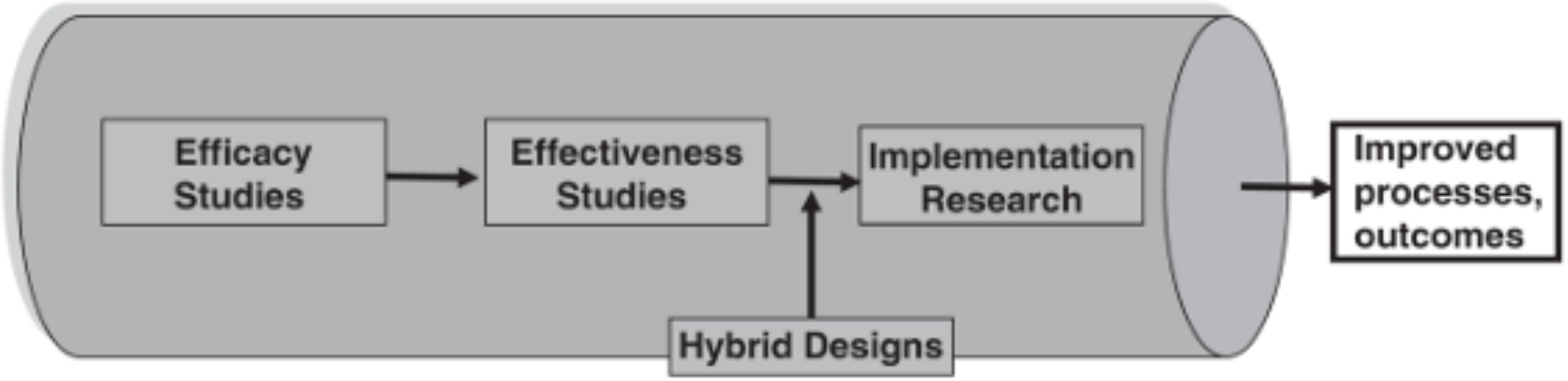

FIGURE 1.
Research pipeline.

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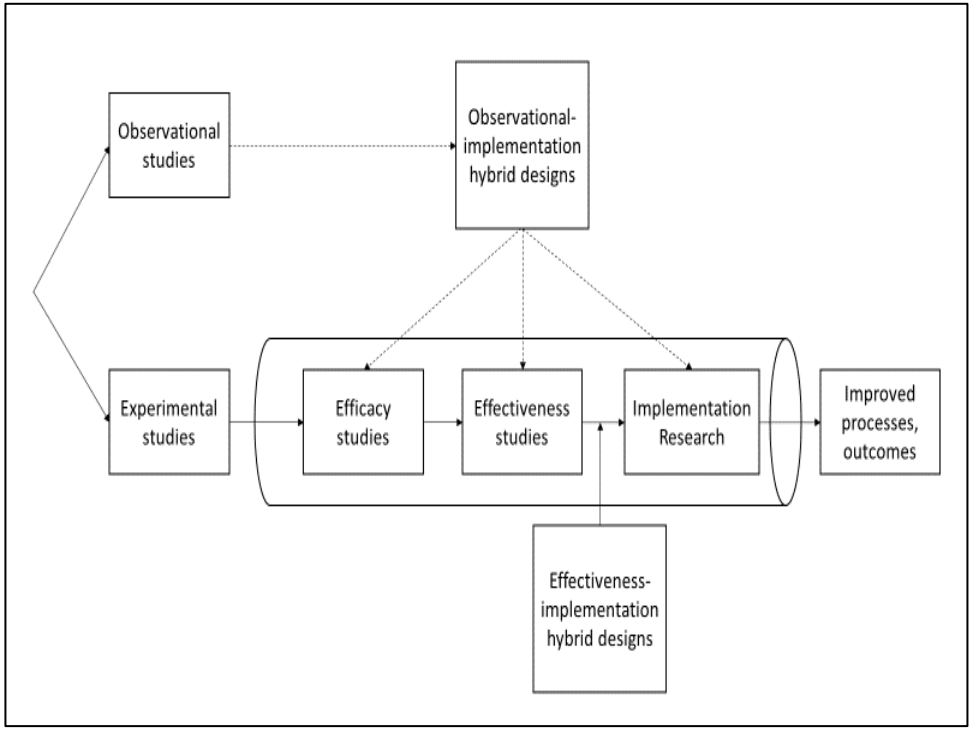
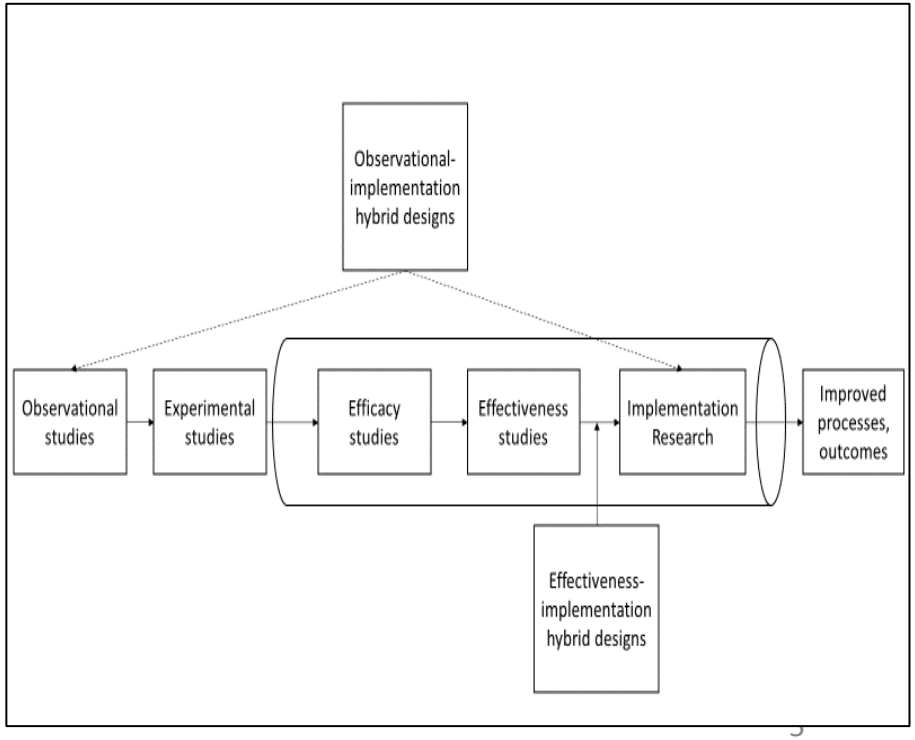
A practical approach to make the research pipeline more <u>efficient</u> and to <u>decrease time</u> from research to impact.





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Contexts

1. Observational cohorts that individually enroll participants – either for existing (to which implementation concepts could be added) or for newly planned studies.
2. Routinely collected program data, at either the individual or aggregate levels.
3. Collection of data from study participants enrolled in an observational cohort study who are also involved in interventions linked to that study (e.g., collecting data about their experiences with those interventions).

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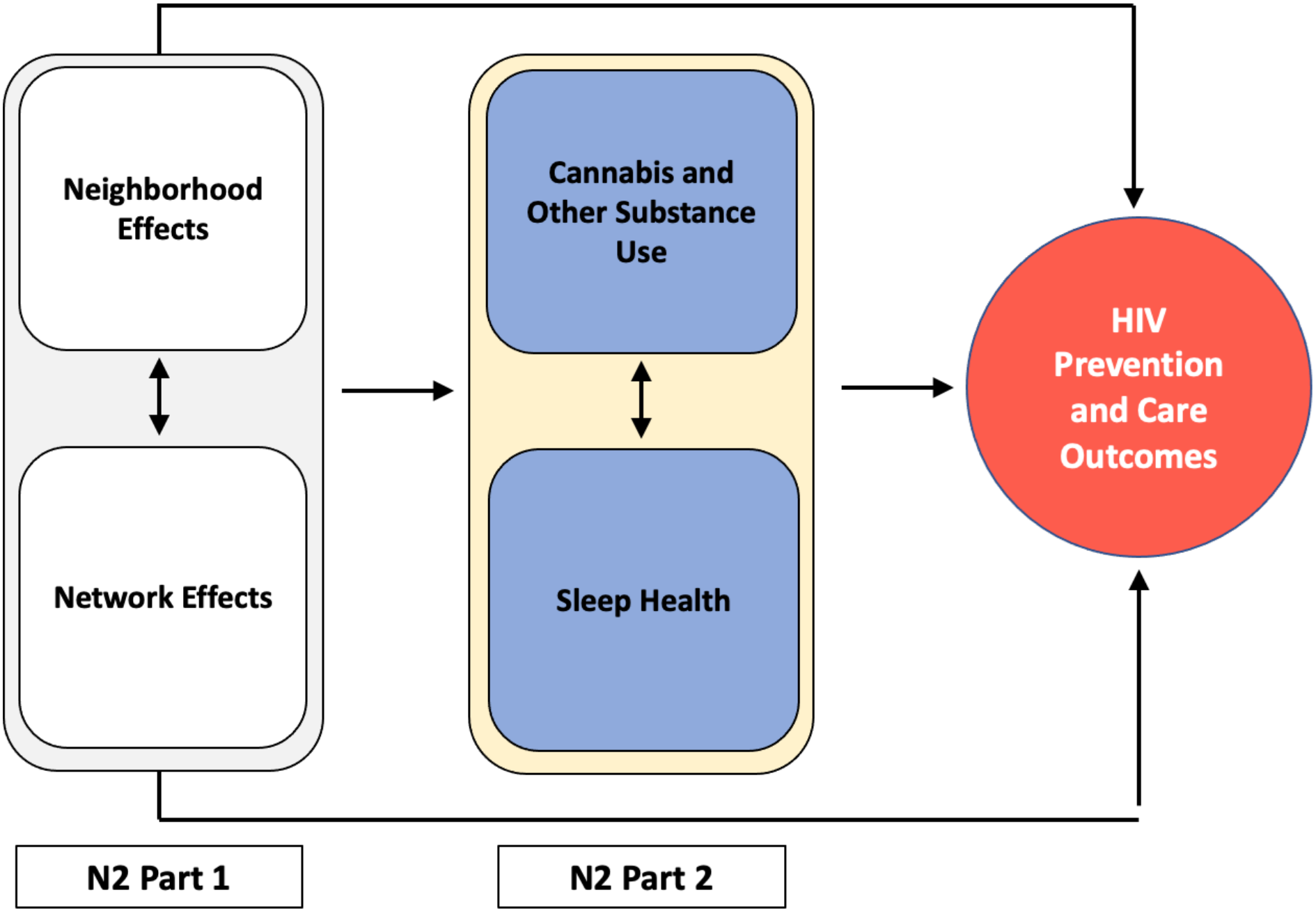
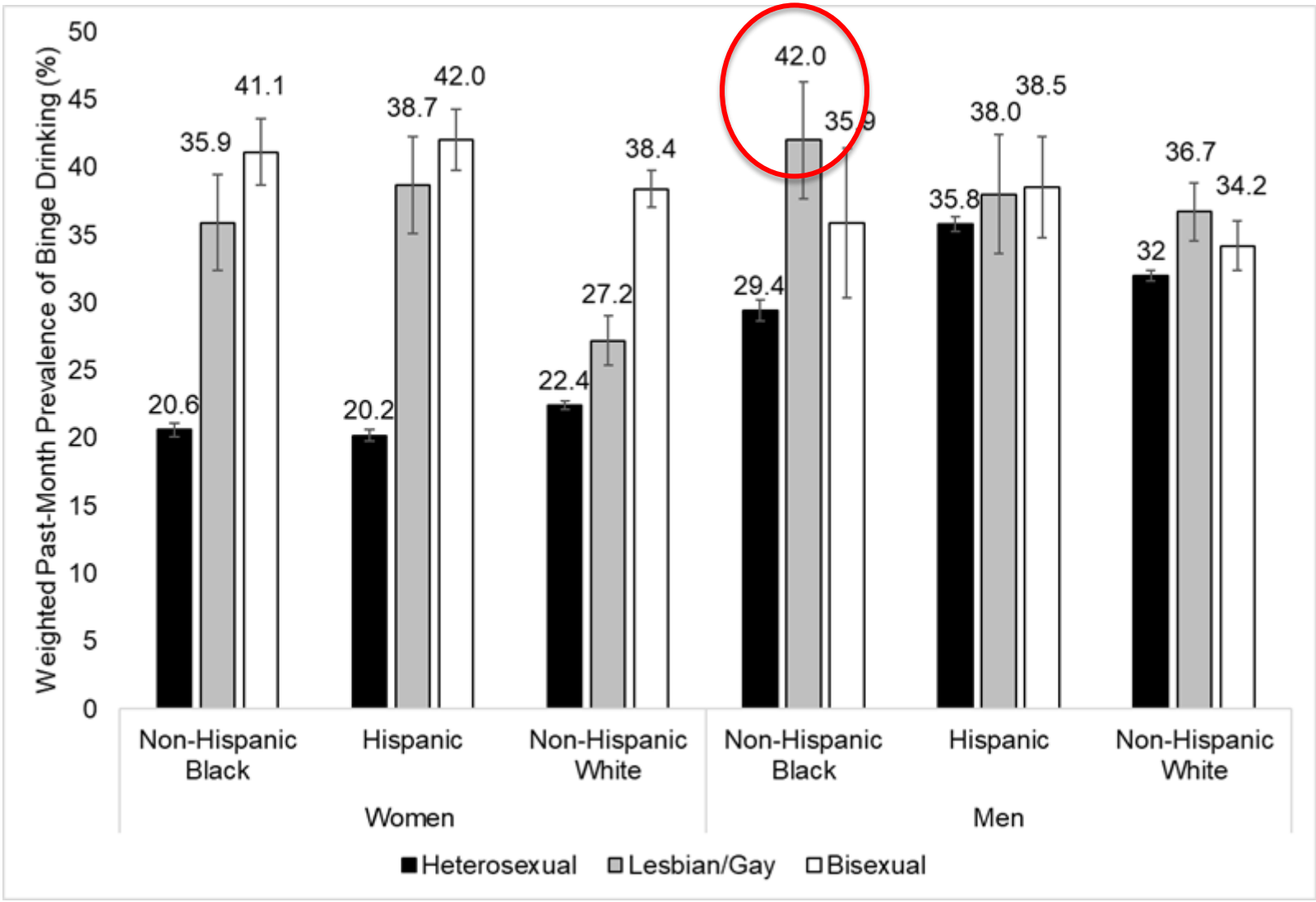
Methods

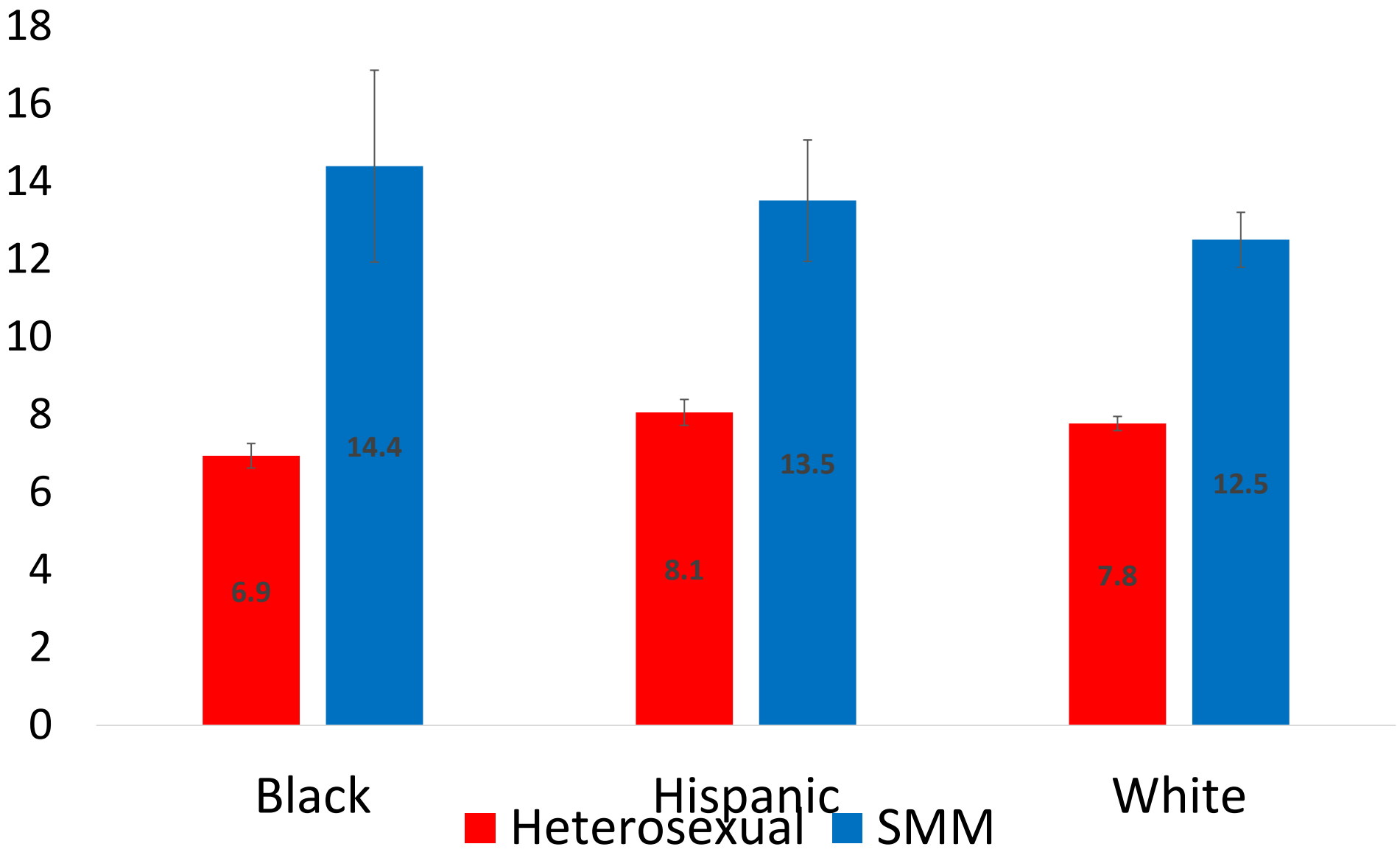
- IS theories and frameworks (e.g. CFIR)
- Transportability
- Willingness
- Acceptability
- Preference elicitation
- End-user perspectives


Neighborhood Effects
Network Effects
Cannabis and Other Substance Use
Sleep Health
HIV Prevention and Care Outcomes
N2 Part 1
N2 Part 2

NSDUH 2015-19: Prevalence of Past-Month Binge Drinking



NSDUH 2015-19: Prevalence of Past-Year AUD



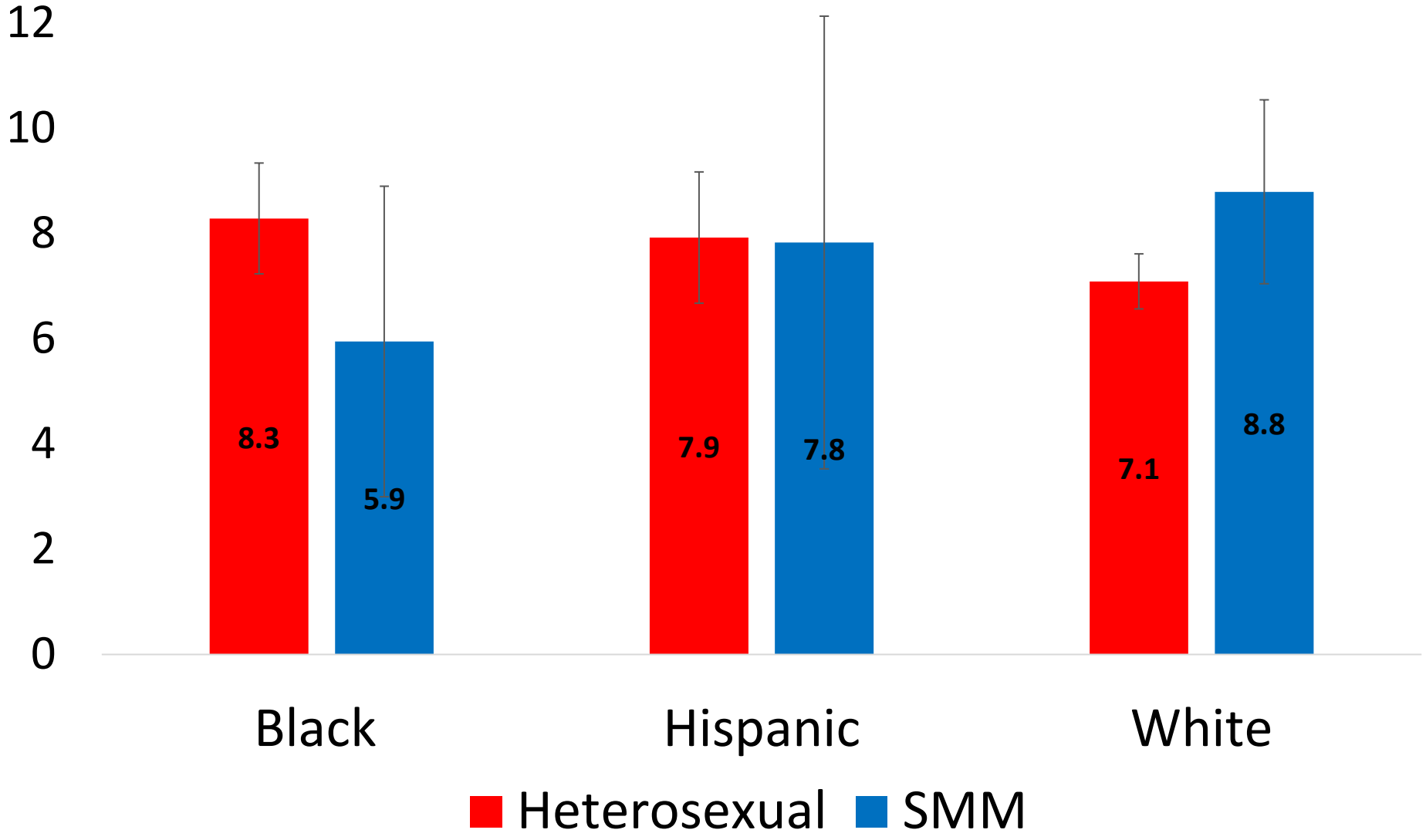
THE LANCET
Psychiatry

Prevention, screening, and treatment for heavy drinking and alcohol use disorder

Justin Knox, Deborah S Hasin, Farren R R Larson, Henry R Kranzler

- Heavy drinking and alcohol use disorder are major public health problems.
- Practitioners not specializing in alcohol treatment are often unaware of the guidelines for preventing, identifying, and treating heavy drinking and alcohol use disorder.
- We reviewed existing information and recent developments in clinically useful and valuable tools to prevent, screen and treat heavy drinking and alcohol use disorder.

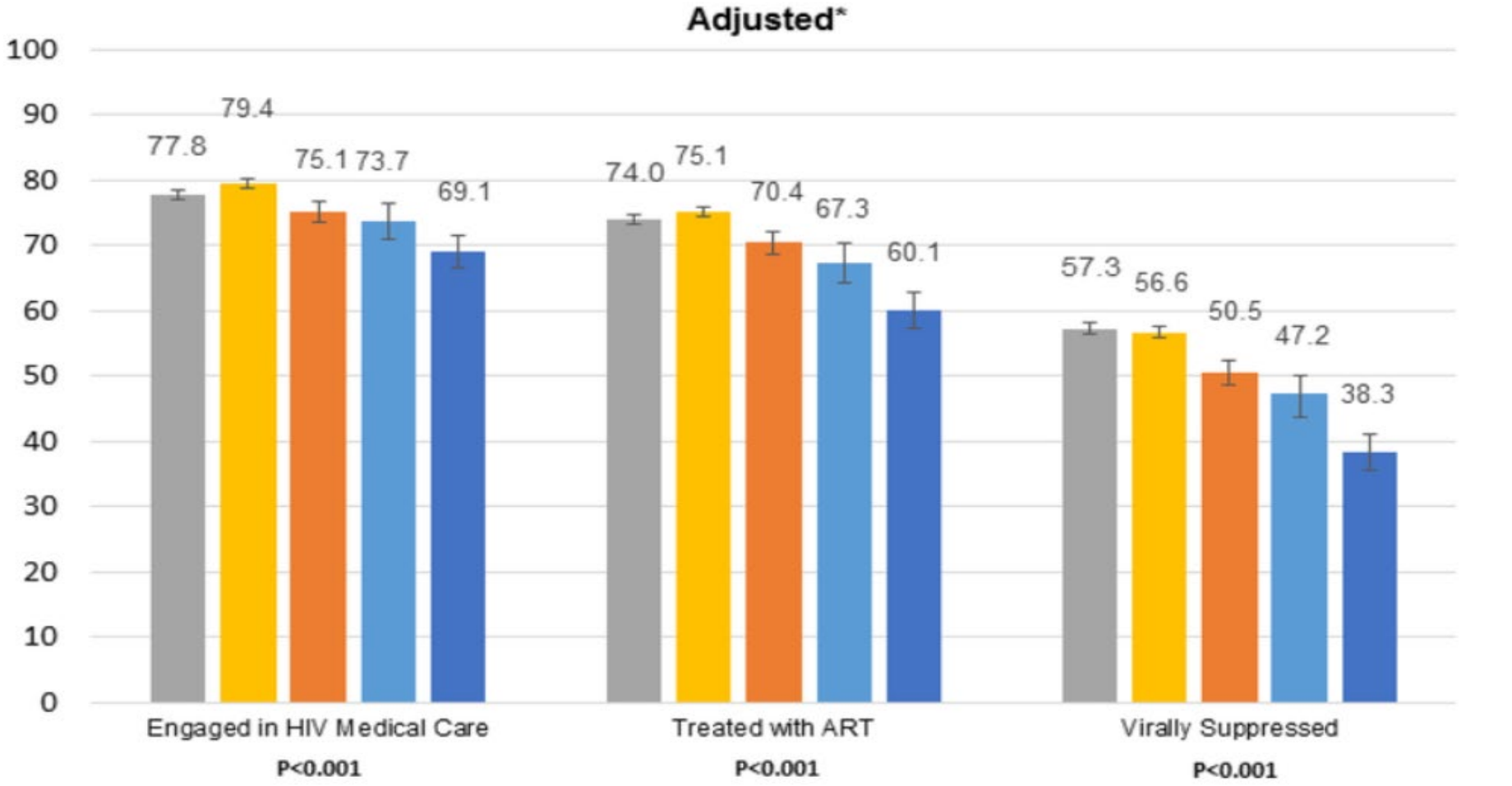
NSDUH 2015-19: Prevalence of Past-Year AUD Treatment



Alcohol use negatively impacts HIV care outcomes

Percent of VA Patients Living with HIV (n=33,224)) Meeting Three HIV Care Continuum Targets Across Level of Alcohol Use

Williams et al.*AIDS Behav*. 2019



*Adjusted for race, ethnicity, gender, fiscal year of AUDIT-C screening, age, and any mental health and non-alcohol substance use disorders

N2 Discrete Choice Experiment

Attributes	Levels			
Person of Interaction (who/what you would interact with)	Medical Provider (i.e. Physician, Nurse, HIV care specialist)	Peer (i.e. PLWHIV, BSMM, friend)	Automated chatbot (via phone/tablet/website)	Social worker or counselor
Venue of interaction	In home (virtual)	General Clinic (urgent care; primary care)	Specialty Clinic (substance use treatment facility; HIV clinic)	Hospital
Frequency of interaction	One time	Daily	Once a week	Every other week
Supplementary support	Daily medication (pill to reduce cravings)	Weekly support group (group of peers, in-person or virtual)	Smart phone application (sends daily reminders, tracks progress, etc.)	

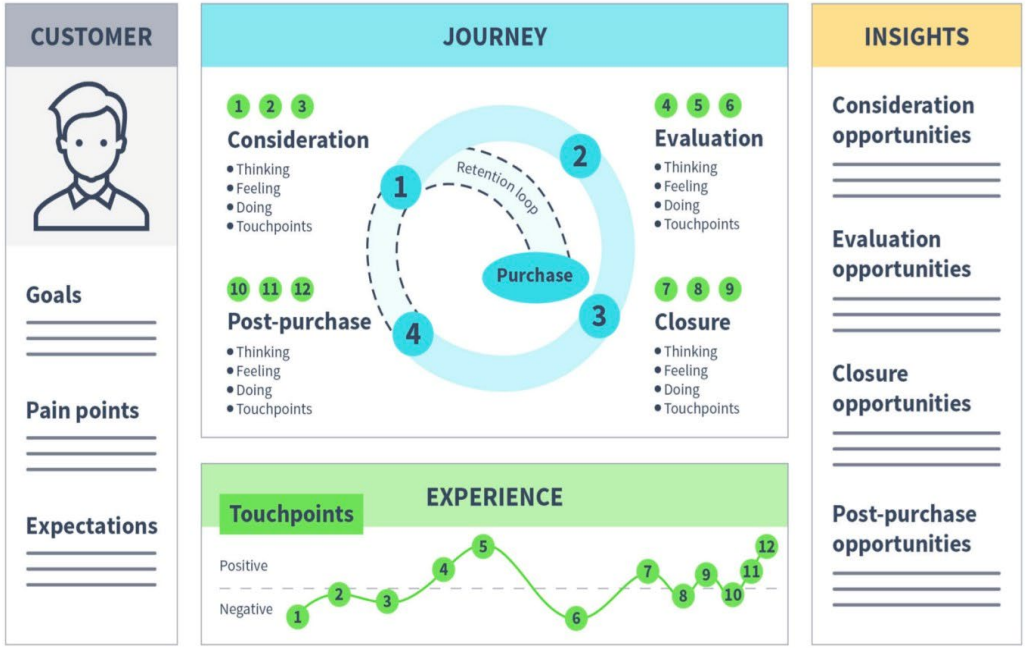
N2 Human-Centered Design (HCD)

HCD is a product development technique that focuses on the user perspective in order to optimally meet their needs

We are conducting IDI's with N2 participants on their emotional states as they access HIV prevention & care services

Data used to develop ***journey maps***: a visual tool of Black SMM physical and emotional journey through HIV clinical encounters

Journey maps can be used to understand: where, when, by whom alcohol screening and treatment can be integrated into HIV service settings



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Implications:

- Increase public health impact
- Expanding collaborations
  - Funding?
  - Support
- Expansion of epidemiological training
- Inequities
- Limitations
  - What scenarios would it not make sense (e.g., interventions not ready or not enough certainty about the harms of an exposure?)

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Future Directions

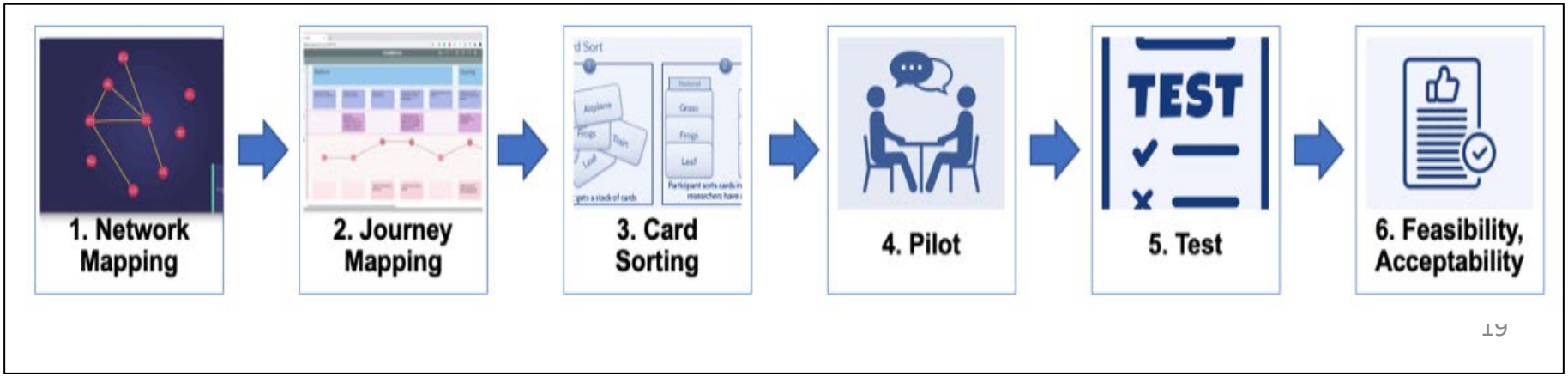
- Dissemination
- Grants (e.g., EHE, Asenze)
- Further papers
  - economists [qual]
  - examples [AJPH]
  - guidelines [types]
  - epi training
  - inequities

Extra Slides: Social Network Intervention

Aim 1: Human-Centered Design (HCD) Workshops

- HCD is a product development technique that focuses on the user perspective in order to optimally meet their needs

- Conduct 6 HCD workshops among diverse stakeholders using HCD methods to inform how to update and adapt the WiLLOW program social network alteration intervention to meet the unique needs of Black SMM



Phase 1: Discover

Workshop 1: Network visualizations

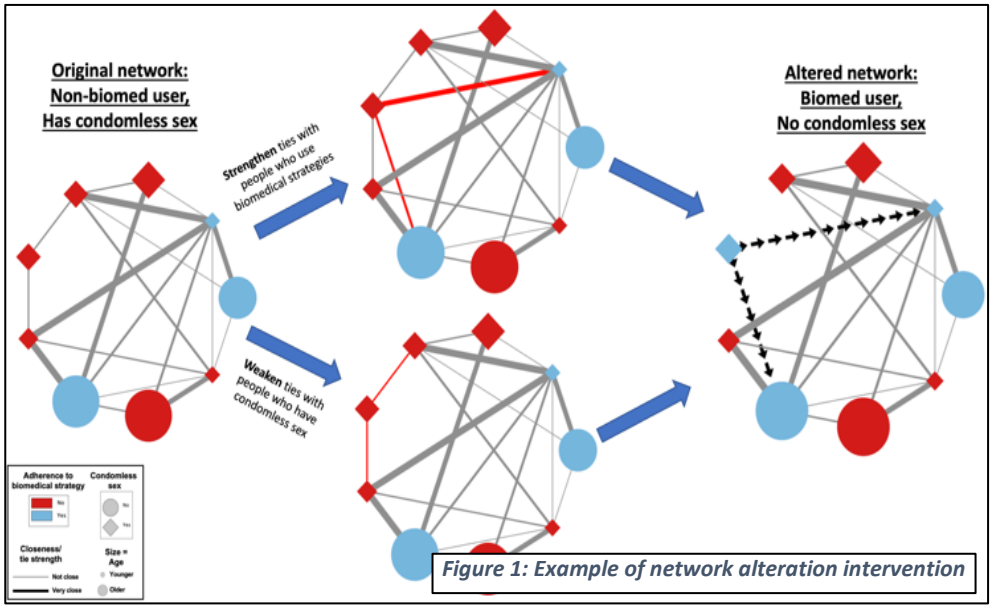


Figure 1: Example of network alteration intervention

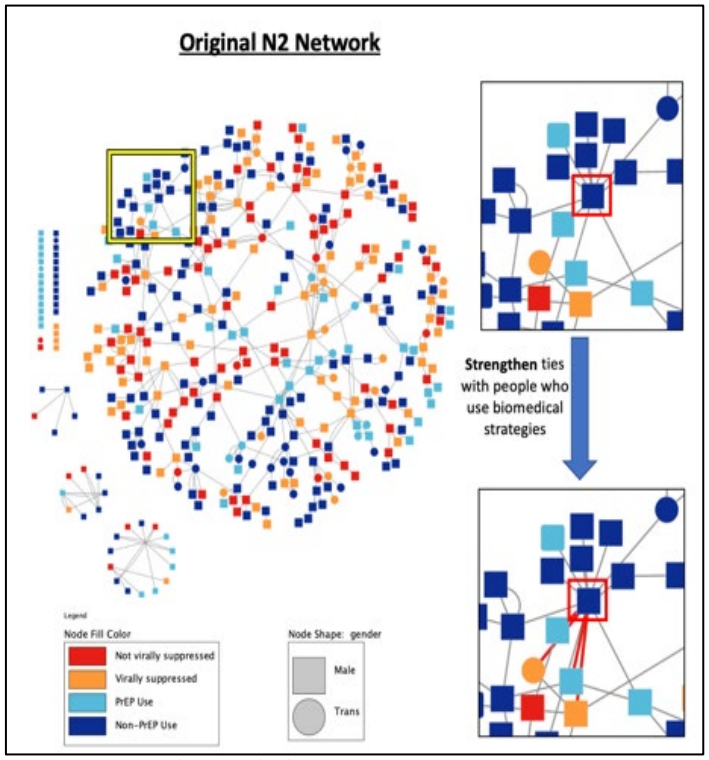


Figure 3: Social network alteration intervention

Workshop 2: Journey Mapping

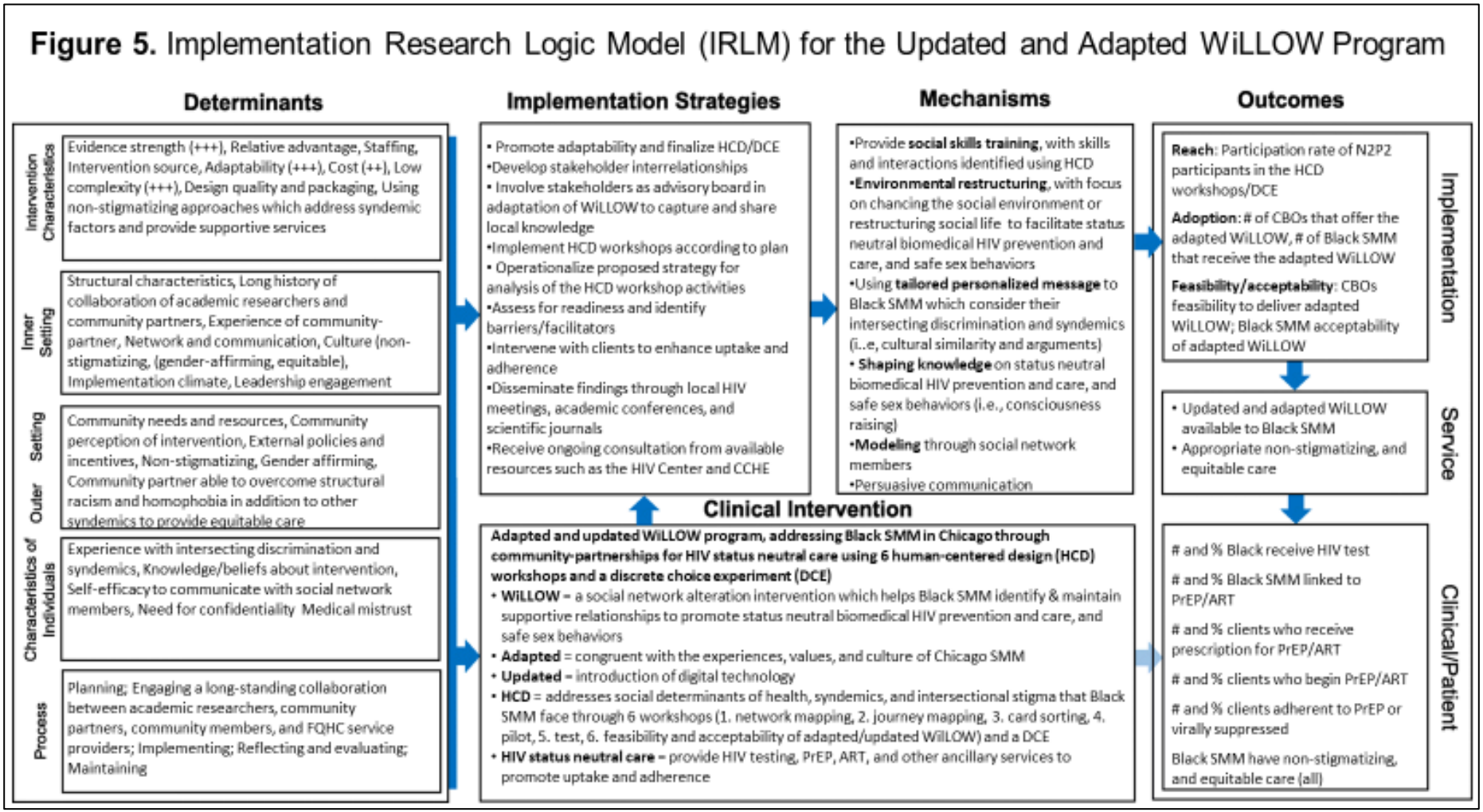
Workshop 3: Card Sorting

Phase 2: Review and Revise

- Identify desired benefits reflecting community priorities and principles for intervention format
- Rapid prototyping
  - Leverage data from phase 1
  - Develop a discrete choice experiment (DCE)

Phase 3: Design and Build

Figure 5. Implementation Research Logic Model (IRLM) for the Updated and Adapted WiLLOW Program



Aim 2: Discrete Choice Experiment

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