

Innovative Strategies for Reducing Health Disparities:

Adaptation and National Dissemination of a Brief, Evidence-Based, HIV Prevention Intervention for High-Risk Men Who Have Sex with Men

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Adaptation and National Dissemination of a Brief, Evidence-Based, HIV Prevention Intervention for High-Risk Men Who Have Sex with Men

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Summary

CDC's high-impact human immunodeficiency virus (HIV) prevention approach calls for targeting the most cost-effective and scalable interventions to populations of greatest need to reduce HIV incidence. CDC has funded research to adapt and demonstrate the efficacy of Personalized Cognitive Counseling (PCC) as an HIV prevention intervention. Project ECHO, based in San Francisco, California, during 2010–2012, involved an adaptation of PCC for HIV-negative episodic substance-using men who have sex with men (SUMSM) and a randomized trial to test its efficacy in reducing sexual and substance-use risk behaviors. Episodic substance use is the use of substances recreationally and less than weekly. PCC is a 30-minute to 50-minute counseling session that involves addressing self-justifications men use for engaging in risky sexual behavior despite knowing the potential for HIV infection. By exploring these justifications, participants become aware of the ways they make sexual decisions, become better prepared to realistically assess their risk for HIV during future risky situations, and make decisions to decrease their HIV risk. The findings of Project ECHO demonstrated the efficacy of PCC for reducing HIV-related substance-use risk behaviors. The study also demonstrated efficacy of PCC for reducing sexual risk behaviors among SUMSM screened as nondependent on targeted drug substances. CDC has identified PCC as a “best evidence” HIV behavioral intervention and supports its national dissemination. Several features of PCC enhance its feasibility of implementation: it is brief, delivered with HIV testing, relatively inexpensive, allows flexibility in counselor qualifications and delivery settings, and is individualized to each client. The original PCC and its adapted versions can contribute to reducing HIV-related health disparities among high-risk MSM, including substance users, by raising awareness of and promoting reductions in personal risk behaviors.

Project ECHO Study Team:

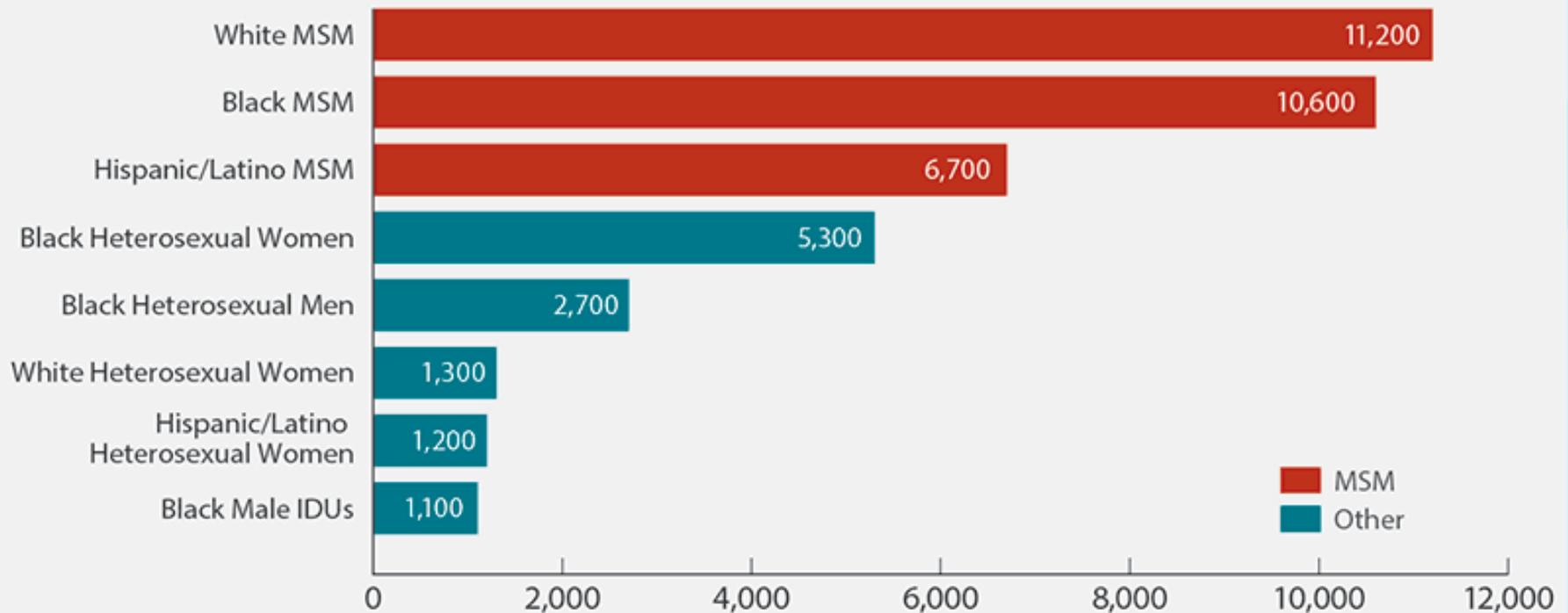
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Today's Talk

- ❑ HIV-related health disparities among gay, bisexual and other MSM
- ❑ CDC's Adopting and Demonstrating the Adaptation of Prevention Techniques (ADAPT-2; PS07-004)
 - Project ECHO in San Francisco, CA
 - Adaptation of brief *Personalized Cognitive Counseling (PCC)* for episodic substance-using MSM
 - Sexual risk outcomes
 - Drug and alcohol use outcomes
- ❑ Public health impact
- ❑ Future directions

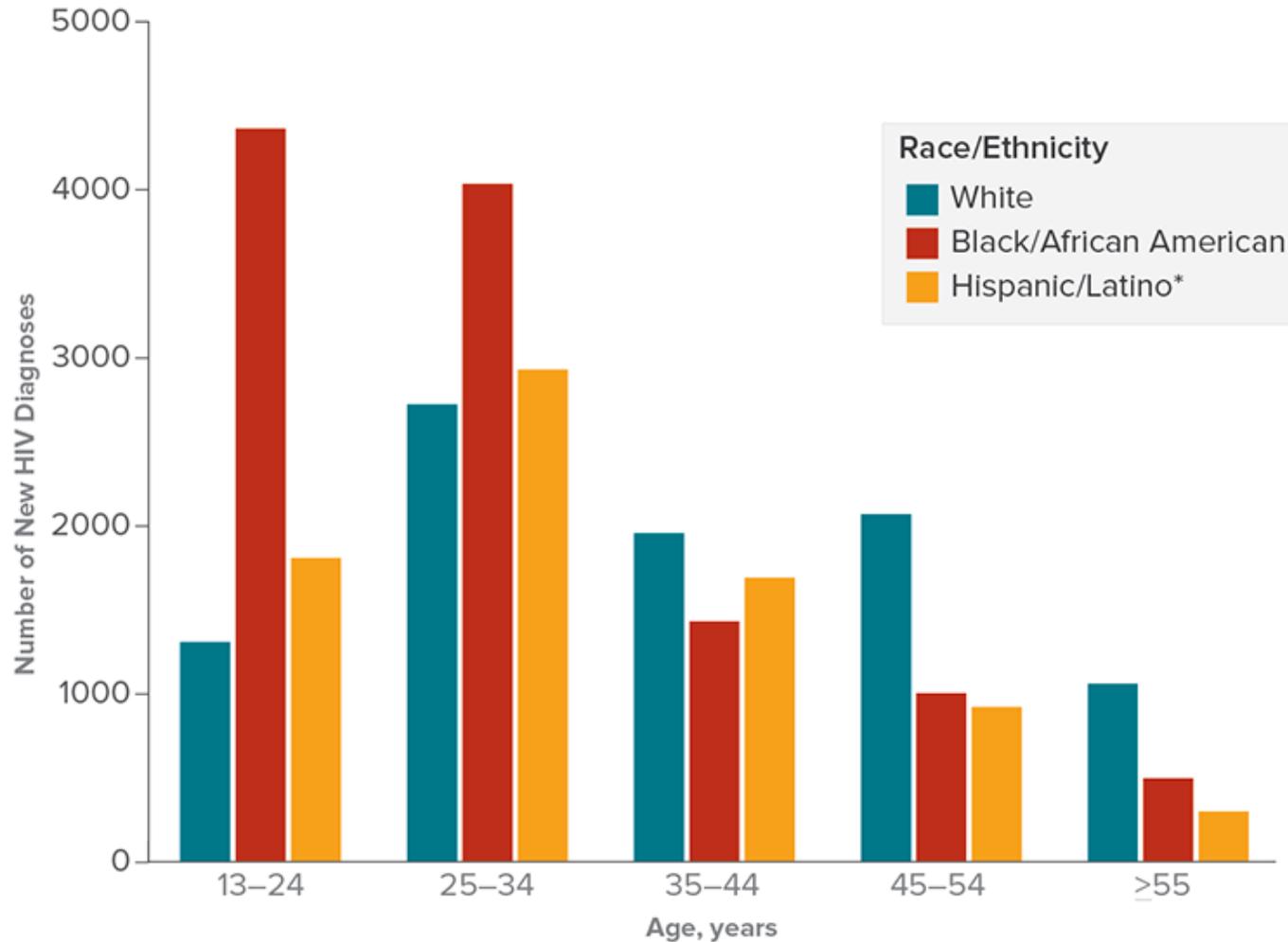
Estimates of New HIV Infections in the United States for the Most-Affected Subpopulations, 2010



Source: CDC. Estimated HIV incidence among adults and adolescents in the United States, 2007–2010. *HIV Surveillance Supplemental Report* 2012;17(4).

Subpopulations representing 2% or less are not reflected in this chart. Abbreviations: MSM, men who have sex with men; IDU, injection drug user.

Estimated New HIV Diagnoses Among Men Who Have Sex With Men, by Race/Ethnicity and Age at Diagnosis, 2014—United States



Source: [HIV Among African American Gay and Bisexual Men](#)

MSM HIV-related health disparities

❑ Disparities in access to and receipt of medical care

■ In national survey:

- 25% of HIV-positive MSM reported delayed linkage to HIV care
- 12% received no HIV care
- Of men reporting at least one health care visit, 30% were not receiving life-sustaining antiretrovirals



■ Racial/ethnic minority MSM

- Report lower rates of HIV testing and, if they test HIV-positive, lower rates of linkage to care, retention in care, access to antiretrovirals and HIV viral suppression than white MSM



MSM HIV-related health disparities

- Common factors hampering access to care:
 - Personal experiences (stigma, discrimination, homophobia)
 - Negative experiences with providers
 - Barriers to health insurance
 - Syndemic conditions – individual or in combination increase HIV risk:
 - Substance use & abuse
 - Mental health problems
 - STDs in community
 - Poverty
 - Unemployment
 - Emotional, sexual & physical violence & abuse



Role of substance use and HIV risk

- ❑ Alcohol and other drugs impair judgment and increase HIV risk behaviors
 - Four substances consistently associated with HIV risk:
 - Methamphetamine
 - Amyl nitrate (poppers)
 - Cocaine
 - Heavy alcohol use (i.e., binge drinking)



- ❑ Substance-using MSM (SUMSM) often use substances “episodically” or recreationally
 - Many may not be aware of their risk level

Adopting and Demonstrating the Adaptation of Prevention Techniques (ADAPT2) -- 2007-2013

- Research Question: Do evidence-based behavioral interventions (EBIs) remain efficacious when adapted for a different population or setting
- Funded 4 sites to evaluate efficacy of an adapted EBI in a randomized trial

Site	EBI	New Population or Setting	Adapted Intervention
Emory University	SHLE/Horizons	Detained African American female adolescents in GA	IMARA
Research Triangle Institute (RTI)	Women's CoOp	African American female adolescents at risk of dropping out of school in NC	Young Women's CoOp (YWC)
UNC-Chapel Hill	S.A.F.E.	Incarcerated women in NC	P.O.W.E.R.
PHFE/SFDPH	Personalized Cognitive Counseling (PCC)	Episodic substance-using MSM in San Francisco	ECHO

Personalized Cognitive Counseling (PCC)

- Originally developed by Jim Dilley and colleagues at UCSF for repeat-testing, HIV-negative MSM*
 - Predicated on hypothesis that HIV-negative MSM who take risks do so despite knowing the potential for HIV infection

- Brief (30-50 min) counseling session
 - Primes participants to disclose self-justifications for engaging in risky sex through use of Self-Justification Elicitation Instrument
 - Links self-justifications, thoughts & feelings to a recent memorable encounter of unprotected sex with a man of unknown or serodiscordant HIV status
 - Encourages participants to explore strategies to avoid future risk
 - Delivered in conjunction with HIV testing

*Dilley et al. JAIDS. 2002;30:177-86; Dilley et al. JAIDS. 2007;44:569-77; Dilley et al. 2011;15:970-5.

Five Steps to Implementing PCC

Step 1. Counselor asks client to recall a recent memorable event of UAI.

Purpose: After the client is determined to be eligible for PCC, the counselor asks him to think of a recent memorable event of UAI. Through conversation, the counselor helps the client identify an appropriate incident.

Step 2. Counselor administers PCC questionnaire.

Purpose: Once an appropriate incident is identified, the counselor asks the client to complete the PCC questionnaire with the specific event in mind.

Step 3. Counselor assists client to draw out story and asks about his thoughts and feelings.

Purpose: The counselor helps the client tell the whole story of the recent event of UAI—what led up to it, what he did, what happened afterward, and how he felt about it. As the client tells his story, the counselor asks what his thoughts and feelings were before, during, and after.

Step 4. Counselor identifies and discusses the self-justification(s) with client.

Purpose: While listening for any self-justifications for UAI, such as "It just happened, I didn't mean to," the counselor asks the client how and to what extent he thought about HIV transmission during the event. The counselor asks the client what he thinks now about the self-justifications that were in his mind during the UAI event.

Step 5. Counselor asks client about approaches he will take in the future.

Purpose: After the story has been told and the client has reflected on his thoughts and feelings, the counselor asks the client what he thinks will happen in the future, what he thinks he will do in a similar situation, and how he might approach it differently. The counselor supports the client's constructive plans.

PCC Questionnaire

Self-Justification Elicitation Instrument (SJEI)

AT THE TIME I DECIDED TO F**K WITHOUT A CONDOM:	I had this thought <u>strongly</u> (in the forefront of my mind)	I had this thought to a moderate <u>degree</u>	I had this thought <u>slightly</u> (in the back of my mind)	I <u>didn't</u> have this thought at all	I <u>can't</u> <u>remember</u> at all whether I had this thought or not
6) I thought to myself something like: "This guy and me have been faithful to each other for a long time now, and neither of us has symptoms of HIV. So it will probably be OK."	[]	[]	[]	[]	[]
7) I thought to myself something like: "We take chances every day— after all, it's even taking a chance to cross a road. Taking a risk is part of life."	[]	[]	[]	[]	[]
8) I thought to myself something like: "I'm feeling low and I need something to make me feel good and this will do it for me."	[]	[]	[]	[]	[]
9) I thought to myself something like: "It'll be safe to fuck without a condom, so long as we don't cum in the ass. So we'll just fuck without cumming."	[]	[]	[]	[]	[]
10) I thought to myself something like: "Other guys fuck without a condom much more often than I do. I'm at less risk than most guys."	[]	[]	[]	[]	[]

PCC: Published research & accumulation of evidence

Study	Population	Dates	HIV test technology	Findings
Dilley et al. (2002)	Repeat-testing HIV-MSM (PCC delivered by mental health prof)	1997-2000	Conventional HIV test based on blood test & pre-/post-test counseling	Decrease % UAI with non-primary partners of unknown or discordant HIV status at 6 and 12 months
Dilley et al. (2007, 2011)	HIV- MSM (PCC delivered by para-professional)	2002-2004	Conventional HIV test based on blood test & pre-/post-test counseling	Decrease % UAI with non-primary partners of unknown or discordant HIV status at 6 months. Subanalysis indicated PCC reduced sexual risk among African American MSM
Schwarcz et al. (2013)	HIV+ MSM (PCC delivered by mental health prof)	2006-2010	N/A	No significant effects on behavioral outcomes

UAI = unprotected anal intercourse

Why selected by OMHHE for MMWR?

- ❑ PCC delivered in conjunction with HIV testing
 - Contribute to reducing HIV-related health disparities by raising awareness of and promoting reductions in personal risk behavior
 - Counseling session, HIV testing service, and referral process emphasize importance of HIV prevention among men and their sex partners

- ❑ Example of a program that might be effective in reducing health disparities affecting high-risk MSM, including substance users

Project ECHO

❑ Adapted PCC for:

- HIV-negative *episodic* substance-using MSM who reported recent UAI and concurrent use of methamphetamine, poppers, cocaine or binge-drinking during past 3 months
 - "*Episodic*" defined as use of substances recreationally & less than weekly



❑ Formative research (2007 - 2009) to adapt PCC Self-Justification Elicitation Instrument (SJEI)¹

- In-depth interviews, pilot testing of adapted PCC SJEI, & pilot testing of adapted PCC intervention with substance-using MSM
- Added booster session after 3-mo follow-up assessment to address self-justifications and high-risk behaviors

¹Knight et al. *Prev Sci*. 2014. <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC4674782/>

Project ECHO: Sample & Design

❑ RCT in San Francisco from 2010-2012

❑ Eligibility:

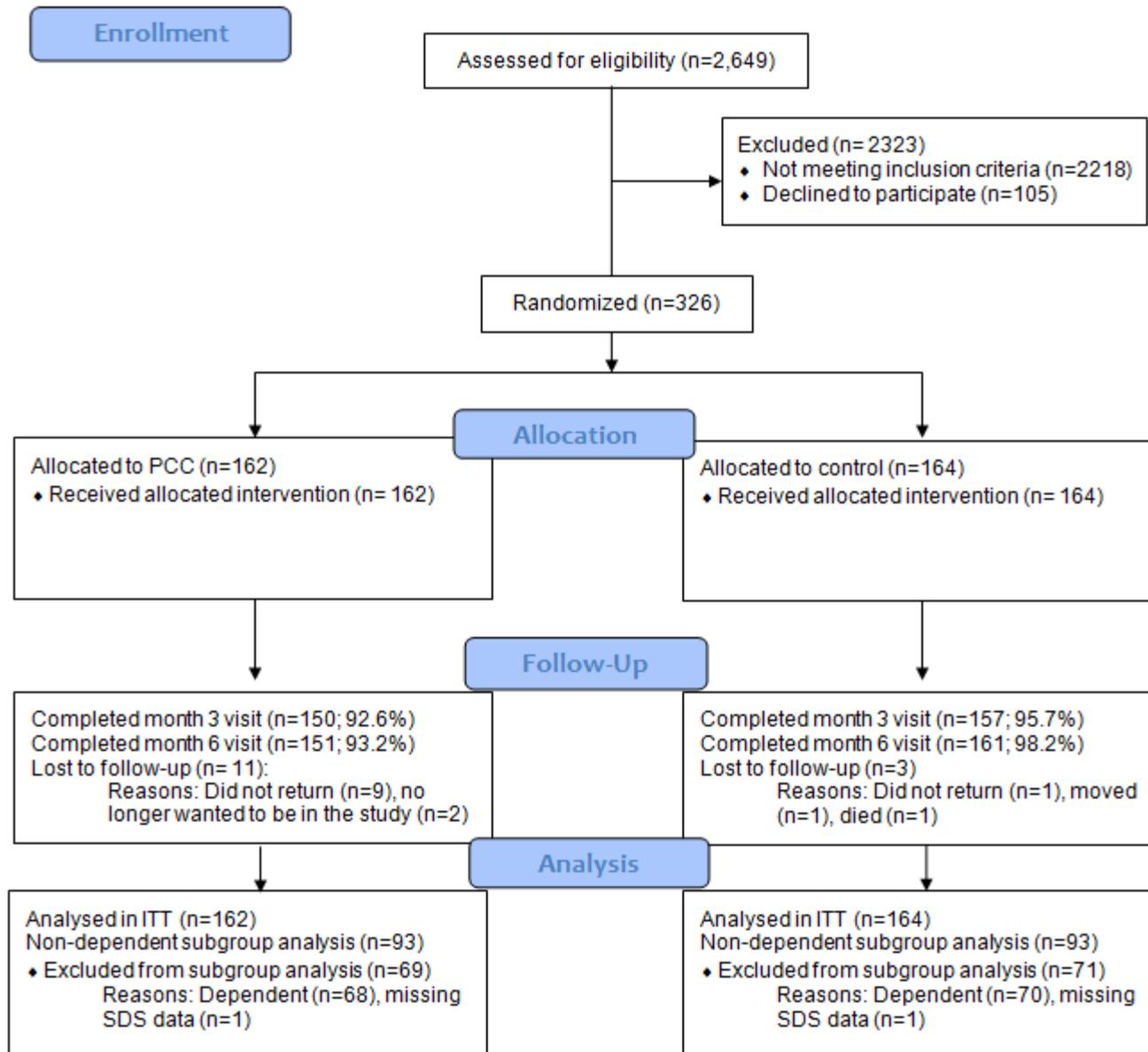
- Male; HIV-negative or unknown serostatus by self-report; UAI with another man while under the influence of at least one or any combination of select substances within 2 hours before/during sex within the past 6 months;
- Not in substance use treatment, self-help program, HIV prevention study or receiving prophylaxis treatment; no IDU past 6 months

❑ Study arms:

- PCC: rapid HIV test + PCC + 3-mo PCC booster [N=162]
- Control: rapid HIV test only [N=164]

❑ Outcomes:

- Sex Behaviors: # UAI events, # UAI partners, # UAI events w/ 3 recent partners, # insertive/receptive UAI events
- Substance Use: alcohol, ecstasy, GHB, marijuana, meth, poppers, crack, cocaine, Rx drugs, erectile dysfunction & UAI with drug/alcohol use



Project ECHO: Enrolled Sample & Analysis

□ 326 episodic substance-using MSM

▪ Race/ethnicity:

- 47% white
- 53% non-white
 - 26% Latino; 10% black/African American; 11% API; 6% mixed/other

▪ Baseline substance use:

- 89% binge drinking (5+ drinks in single occasion)
- 42% poppers
- 34% cocaine (powder or crack)
- 10% methamphetamine

□ Analysis

- Intent-to-treat examining linear trends in behavioral outcomes by study arm using GEE Poisson models with robust standard errors

Project ECHO: Sexual Risk Reduction

Outcome	Study Arm	BL	3 Mo	6 Mo	RR 95%CI (over time)	PCC vs. Control RR (95% CI)
# UAI events	PCC Control	4.23 3.91	3.41 2.05	1.83 1.96	0.47 (0.32-0.69) 0.45 (0.30-0.68)	1.03 (0.58 – 1.83)
# UAI partners	PCC Control	2.71 2.60	1.54 1.37	1.27 1.16	0.46 (0.32-0.65) 0.43 (0.33-0.57)	1.06 (0.68 – 1.65)
# UAI 3 most recent non-primary partners	PCC Control	1.97 2.31	1.12 1.11	0.83 1.20	0.39 (0.29-0.54) 0.52 (0.39-0.70)	0.75 (0.52 – 1.12)
# serodiscord UAI	PCC Control	1.06 1.13	0.43 0.49	0.34 0.55	0.28 (0.18-0.45) 0.47 (0.31-0.71)	0.61 (0.34 – 1.08)
# receptive UAI events	PCC Control	1.39 1.48	0.61 0.73	0.45 0.82	0.31 (0.20-0.46) 0.53 (0.35-0.82)	0.57 (0.33 – 1.01) [†]

RR= risk ratio comparing PCC vs. Control.

[†]p=0.052

Project ECHO: Sexual Risk Reduction

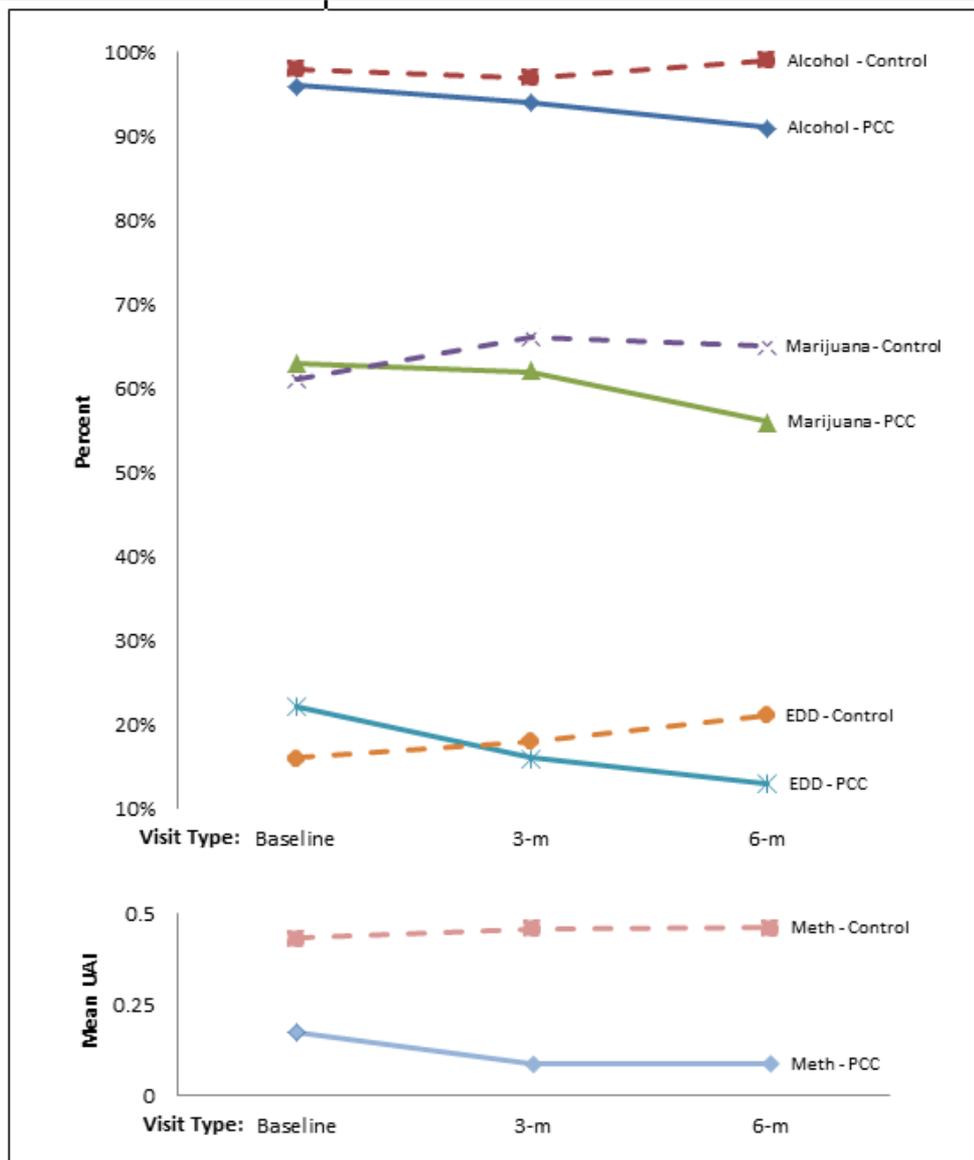
Stratified Analyses: Non-dependent Episodic SUMSM[†] (n=186)

[†]Based on Severity of Dependence Scale (Gossop et al., 1995; 1997)

Outcome	Study Arm	BL	3 Mo	6 Mo	PCC vs. Control RR (95% CI)
# UAI events	PCC Control	4.13 4.03	2.04 4.18	1.42 1.90	1.61 (0.79 – 3.28)
# UAI partners	PCC Control	2.24 2.67	1.28 1.56	0.99 1.17	1.09 (0.64 – 1.86)
# UAI 3 most recent non-primary partners	PCC Control	1.86 2.32	0.94 1.20	0.75 1.45	0.56 (0.34 – 0.92)
# receptive UAI events	PCC Control	0.45 0.46	0.25 0.17	0.23 0.23	0.88 (0.51 – 1.53)

RR = risk ratio comparing PCC vs. Control.

Project ECHO: Substance Use Reduction



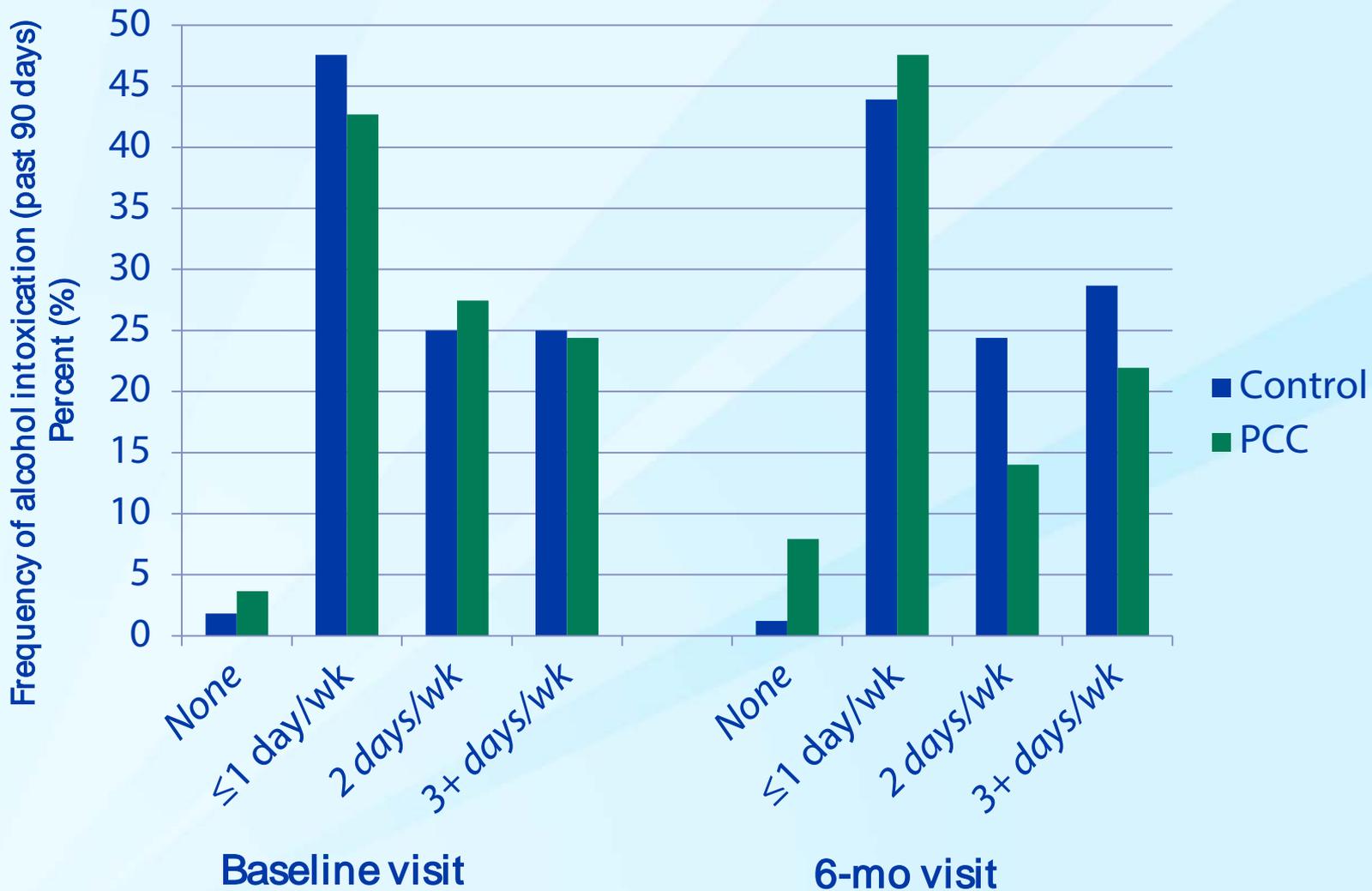
RR=0.93 (0.89-0.97)**

RR=0.84 (0.73-0.98)*

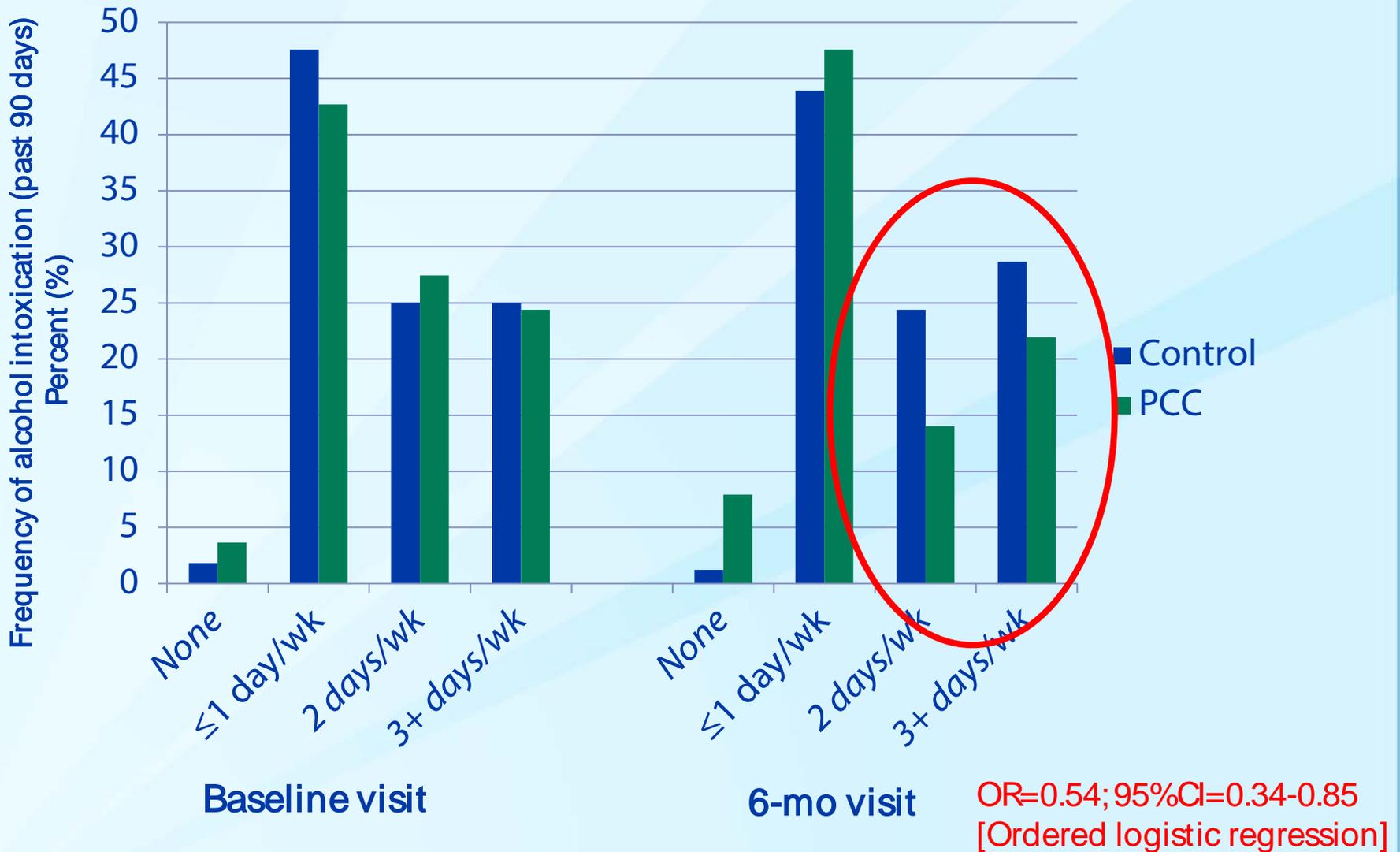
RR=0.51 (0.33-0.79)**

RR=0.26 (0.08-0.84)*

Project ECHO: Alcohol Use Reduction



Project ECHO: Alcohol Use Reduction



Project ECHO: Discussion

- ❑ Adapted PCC reduces sexual risk behavior among non-dependent substance-using MSM, and drug and alcohol behaviors in the total sample of episodic substance-using MSM
 - High prevalence of binge drinking & other episodic substance use among MSM
 - Add to growing body of evidence that PCC reduces risk behaviors of HIV-negative MSM

- ❑ PCC, delivered with HIV testing, provides opportunity for high-risk MSM to become aware of their HIV risk
 - Intervention can support linkage of high-risk HIV-negative MSM to other HIV prevention programs and services, like antiretroviral pre-exposure prophylaxis (PrEP) for HIV prevention

Project ECHO: Limitations

- ❑ Intervention efficacy may be over- or under-estimated
 - Behavior change may not result in significant reductions in STD incidence (including HIV)
- ❑ Self-reported behaviors subject to recall and social-response biases
- ❑ PCC efficacy trials, including Project ECHO, conducted in San Francisco
 - City with well-established partnerships between health department and community members
 - Additional studies needed to demonstrate effectiveness and generalizability of PCC among diverse MSM populations, delivery settings, and geographic regions
- ❑ PCC not appropriate for MSM dependent on alcohol and other drugs
 - Consider more intensive interventions

Public Health Impact

- CDC dissemination of PCC:
 - Included as **Best-Evidence** behavioral intervention in the *Compendium of Evidence-Based HIV Prevention Interventions*
 - Intervention package developed by CDC in 2007
 - Nationally disseminated by CDC since 2011
 - 932 persons, representing 344 HIV prevention service organizations, completed one of 67 trainings for counselors
 - Trained facilitators represented 155 CBOs, 48 health departments, and 141 other agencies (health clinics, private practices, and universities)
- All intervention materials available online (<https://effectiveinterventions.cdc.gov/en/HighImpactPrevention/Interventions/PCC.aspx>)
- Estimated cost of PCC is \$145/client

PCC Identified by CDC as Best-Evidence HIV Behavioral Intervention

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Compendium of Evidence-Based HIV Behavioral Interventions

• **Risk Reduction Chapter**

• Medication Adherence Chapter

Personalized Cognitive Risk-Reduction Counseling (with optional sex diary)

BEST-EVIDENCE

Intervention Description

Target Population

Men who have sex with men (MSM) who are HIV seronegative and have undergone repeat HIV testing

Goal of Intervention

Reduce high-risk sexual behavior (i.e., unprotected anal sex with non-primary partners of unknown or discordant HIV status)

Brief Description

The *Personalized Cognitive Risk-Reduction Counseling* intervention (previously referred to as Self-Justifications Counseling) involves a single counseling session delivered to clients during the 1- to 2-week period between standard "pre-test" (risk-assessment) and "post-test" (results disclosure) HIV counseling. During the session, counselors ask the client to recall a recent encounter of unprotected anal sex with another man of unknown or serodiscordant HIV status. The client describes the encounter with as much detail as possible. The client is then encouraged to identify and express the thoughts, feelings, or attitudes that might have led to the high-risk behavior. Together, the client and the counselor examine the encounter to identify any thoughts that may have led the client to make a decision to engage in high transmission risk sex. Finally, the client and the counselor agree on strategies that can be used to deal with similar situations in the future.

An optional sex diary can be used to supplement the single counseling session. The diary asks clients to keep track of and describe all sex encounters for 90-days. The sex encounters include

Source: <http://www.cdc.gov/hiv/research/interventionresearch/compendium/rr/pcrrc.html>

PCC Nationally Disseminated by CDC

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 - Mpowerment
 - Nia
 - Partnership for Health - Safer Sex
 - Personalized Cognitive Counseling (PCC)
 - Resources & Tools for PCC

Personalized Cognitive Counseling (PCC)

Personalized Cognitive Counseling (PCC) is an individual-level, single session counseling intervention designed to reduce unprotected anal intercourse (UAI) among men who have sex with men (MSM) who are repeat testers for HIV. **PCC** focuses on the person's self-justifications (thoughts, attitudes and beliefs) he uses when deciding whether or not to engage in high risk sexual behavior. **PCC** is a 30 to 50 minutes intervention conducted as a component of *Counseling, Testing, and Referral Service (CTRS)* for MSM who meet the screening criteria.

PCC targets MSM who previously tested for HIV, are HIV-negative, and had UAI since their last test with a male who was not their primary partner, and that partner's serostatus was positive or unknown.



General Training Information for PCC

More Info...

RELEVANT LINKS

- Resources & Tools
- PCC Fact Sheet
- Hoja de información sobre CCP
- PCC Training Specifications
- PCC Implementation Manual & Workbook

PCC Core Elements

- Provide one-on-one counseling focusing on a recent, memorable high risk sexual encounter.
- Provide the service with counselors trained in HIV counseling and testing

Future Directions

- MSM disproportionately affected by HIV, yet few evidence-based interventions for these men
- PCC has potential for public health impact within context of persistent rates of HIV among MSM
 - Brief counseling designed to reduce risk behaviors among diverse groups of MSM
 - Adapted PCC is only behavioral intervention with proven efficacy to reduce drug and alcohol use behaviors
 - Important component of a comprehensive HIV prevention program for high-risk HIV-negative MSM
 - Consistent with goals of National HIV/AIDS Strategy
- Original & adapted PCC reduce HIV-related health disparities by raising awareness of and promoting reductions in personal risk behaviors among MSM

THANK YOU!

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