

Interventions Targeting Medication Adherence and Drug Use for HIV+ Men: Perspectives from an Academic/Outpatient Clinic

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with massive assistance from

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NIDA



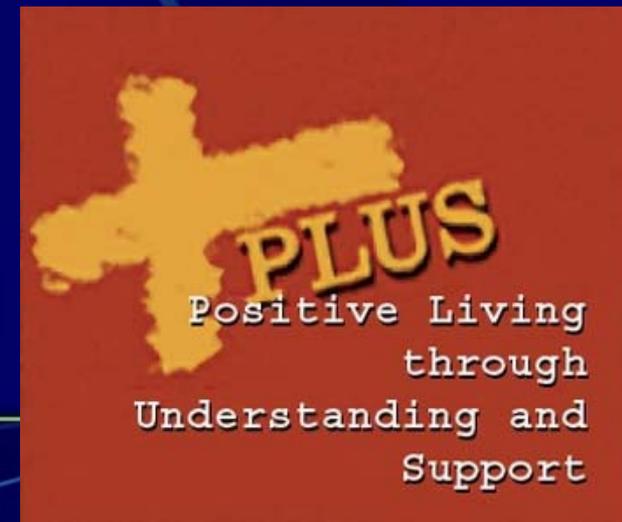
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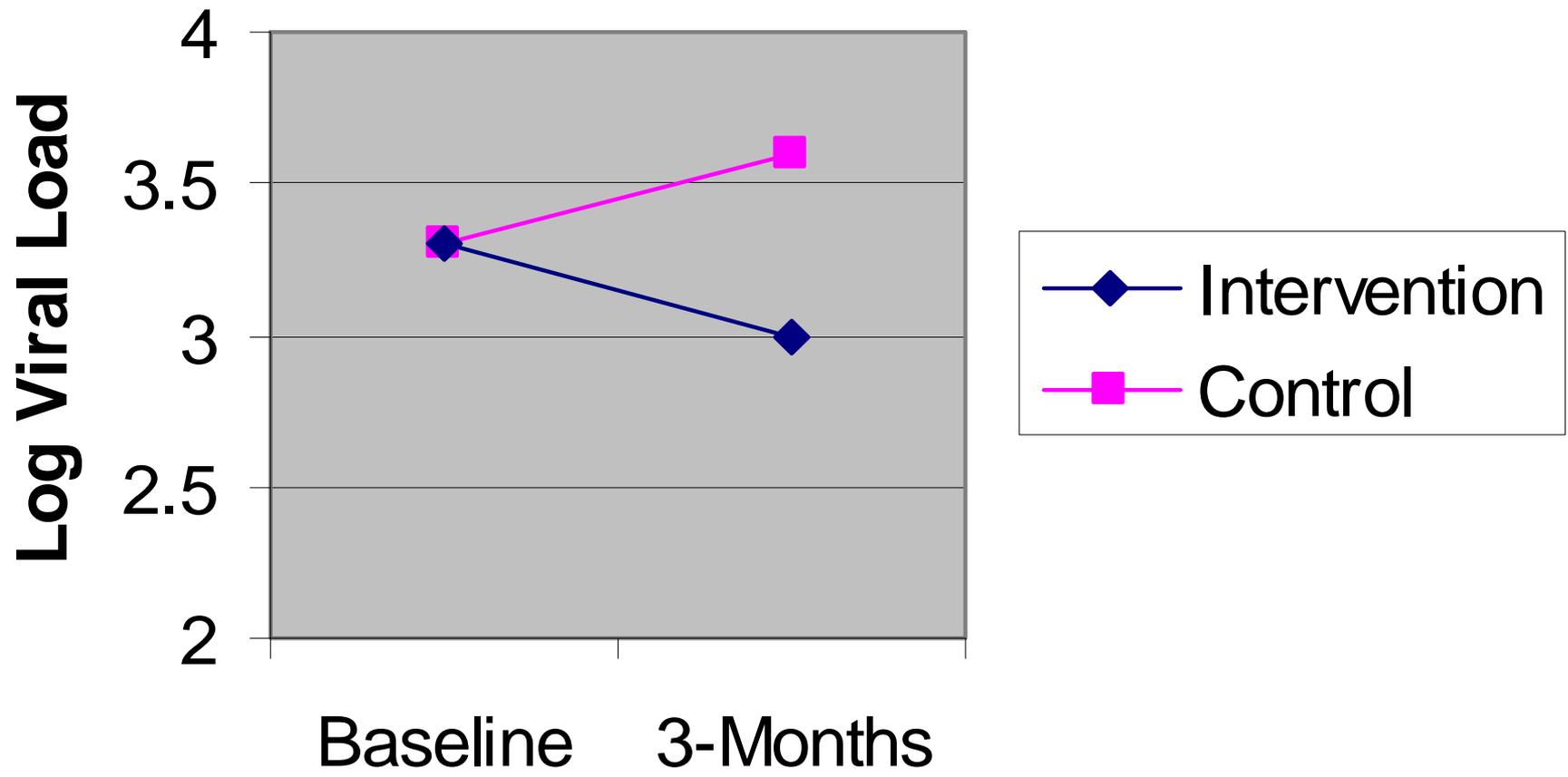
The City University of New York

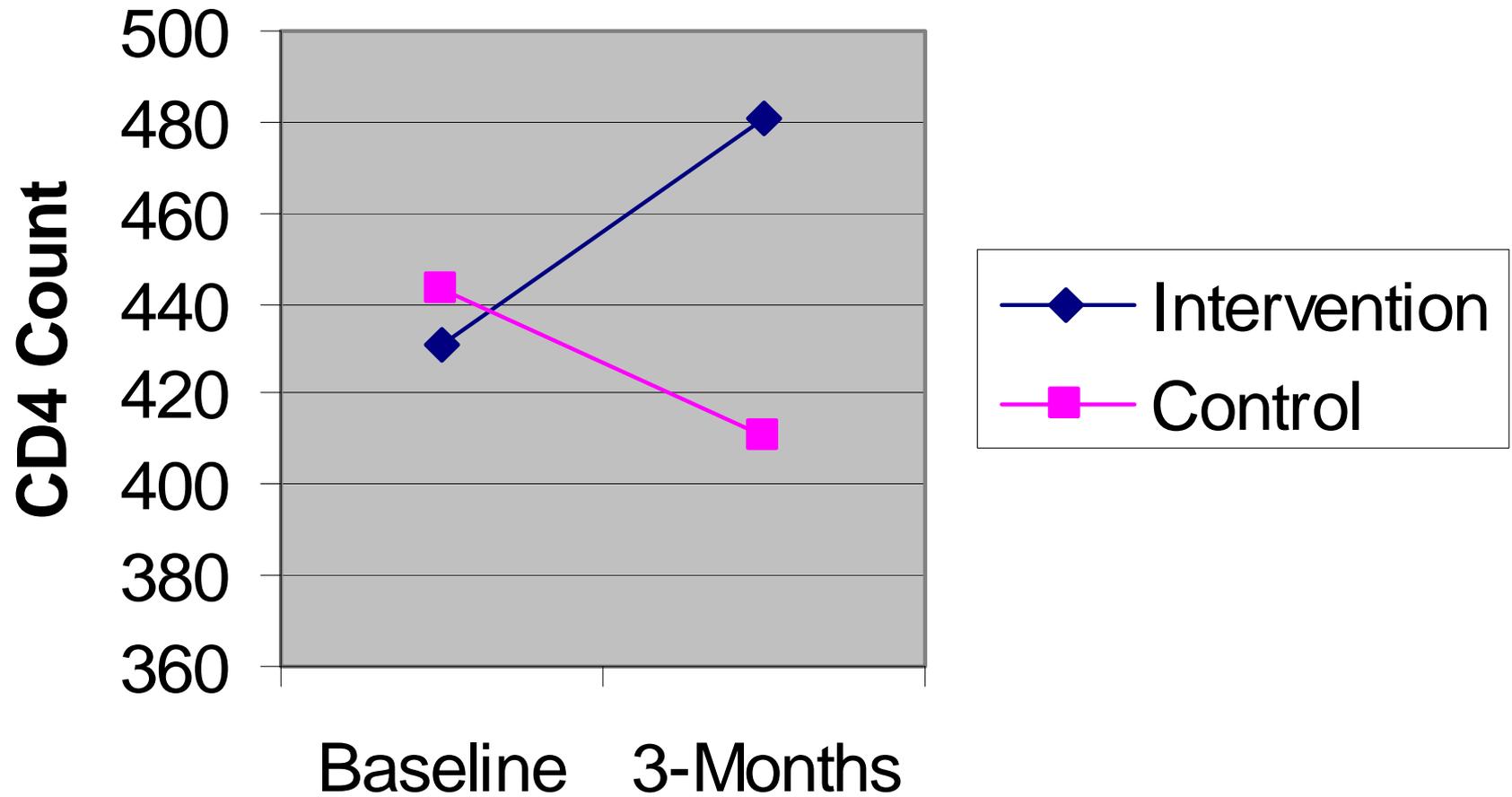


Previous Adherence Intervention Work

- Clinic-based versus non-clinic-based
- Dual-focused interventions, individually-tailored
- Project PLUS
 - Significant effects on
 - self-reported adherence
 - Viral load
 - CD4 counts







Moving Beyond Project PLUS

- Among MSM, use of methamphetamine (Meth) is highest among those with HIV.
- Meth use and dependence are associated with poor adherence and increased viral load.
- Meth use has many negative effects on the health of people living with HIV.

ACE : Adherence, Counseling and Education

Medication Adherence Among HIV Positive Crystal Meth Abusers



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Shoshana Y. Kahana, Project Officer

The ACE Team

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Study Description

- Project ACE is aimed at simultaneously improving HIV medication adherence and reducing meth use among HIV+ MSM in NYC.
- Eight-session, manual-driven, individual intervention using a combination of Motivational Interviewing (MI) and Cognitive Behavioral Skills Building (CBST).
- Driven by the IMB Model of Fisher & Fisher



Methods

Eligibility

- Confirmed HIV+ and taking HAART
- ≥ 3 missed med days in the last 30
- ≥ 3 days of Meth use in the last 90 days
- Past sex with men
- At least 18 years old

Random Assignment

- Using urn randomization
- Two arms: intervention or education (attention control)

Recruitment

- Active and passive



Clinic Brochure

The ACE Program:

You will be randomized (like flipping a coin) to see which of two programs you will receive. Both programs involve eight weekly meetings with a ACE counselor where you will have the chance to talk about your drinking and medication adherence. Unlike some other programs or some forms of counseling, ACE counselors will work with you to identify and achieve your goals. Some people may want to stop drinking and some people may just want to cut down on their drinking. You will set the goals that are right for you.

You will be PAID for your time at each session.

The Assessment:

You will participate in an initial assessment, which will involve an interview with one of our ACE staff members, a blood draw, and completion of survey.

You will be PAID for your time for this assessment.

The Follow-Up:

You will return for four follow-up assessments over the course of 12 months. Each follow-up assessment will involve a brief interview, a blood draw, and another survey.

You will be PAID for your time for these follow-up



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Medication
+ You

Dealing with your
substance use
212-206-7919 x232



Recruitment Cards and Ads



When confronting HIV
it's good to play with
a full deck



LET'S FACE IT:

TRYING TO BALANCE PARTYING
AND
TAKING HIV MEDS ON TIME
-EVERY TIME
CAN BE TOUGH!

LEARN MORE ABOUT THE
OPTIONS YOU HAVE
TO KEEP IT ALL TOGETHER.

A.C.E.
(ADHERENCE, COUNSELING, AND EDUCATION)

ASKS YOU TO TELL YOUR STORY.

PARTICIPATE IN RESEARCH
DESIGNED FOR YOU AND EARN
UP TO \$430.
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Assessment

- **Baseline:** \$40 reimbursement
 - Majority of assessment done on A-CASI.
 - Blood drawn at baseline and all follow-ups.
 - Randomized and receive 1st session immediately following
- **Follow-Ups** (3, 6, 9, 12 month): \$45, \$50, \$55, \$60 reimbursements
- **Biological** and **self-report** measures for both adherence and meth use



The Intervention

Eight individual sessions

- First two sessions focus exclusively on **Motivational Interviewing (MI)**.
- Last six sessions use MI and **Cognitive Behavioral Skills Building (CBST)**.

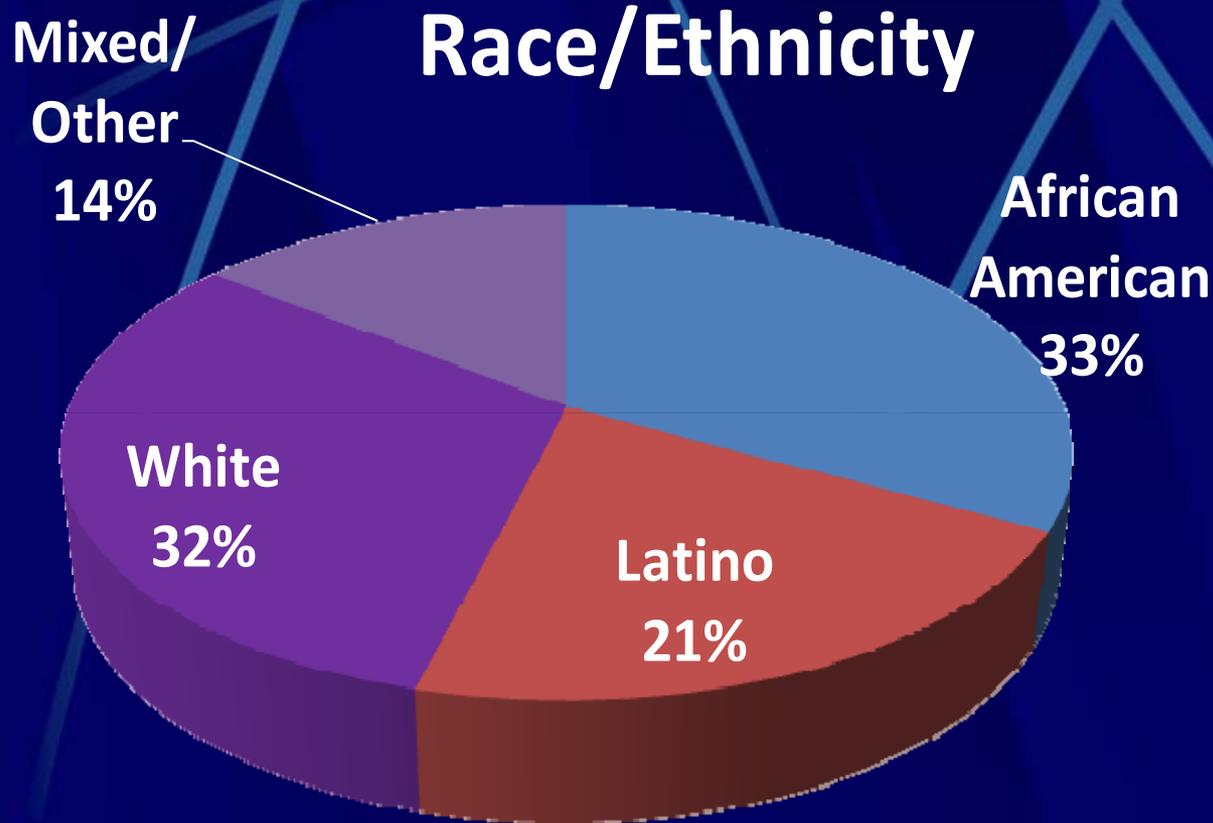


Comparison (Education) Condition

Eight individual sessions with health educators, using videotapes which provide education specifically tailored to MSM around HIV, adherence, and meth use, followed by a structured discussion of the information covered.



Sample Characteristics ($N = 76$)



Means

- Age = 41.3
- % adherent = 72.2%
- Meth Days (last 30 days) = 4.4



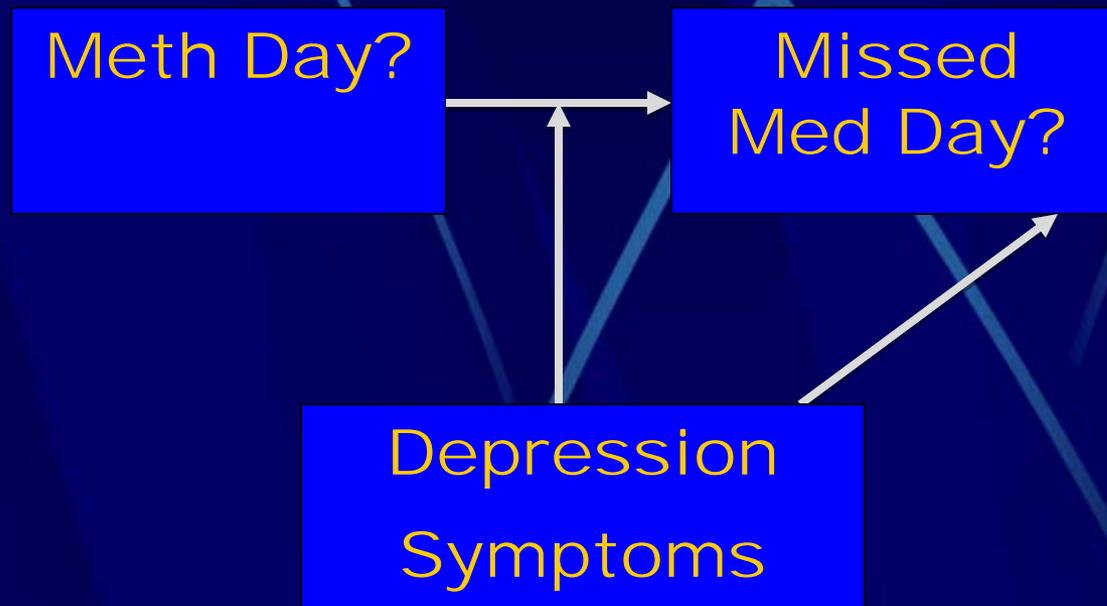
VERY Preliminary Results

- Aggregate data – no association between # of meth use days and # of missed med days ($r = -.01$ $p > .9$)
- However, analyses of day level data revealed a very different story.



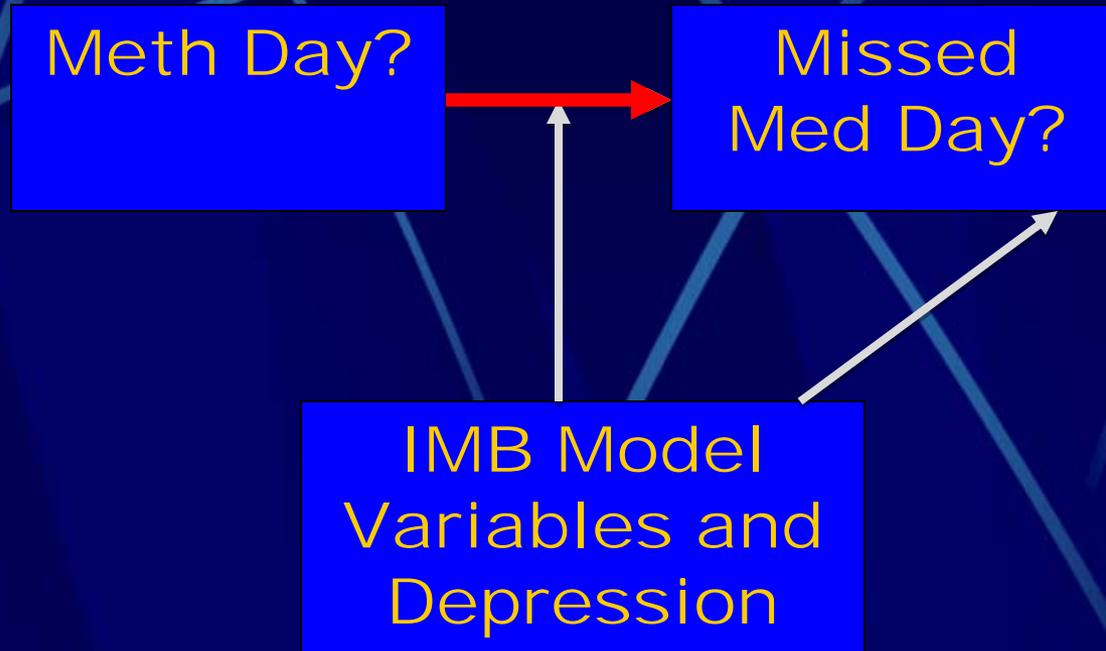
HLM methods

Day Level Variables



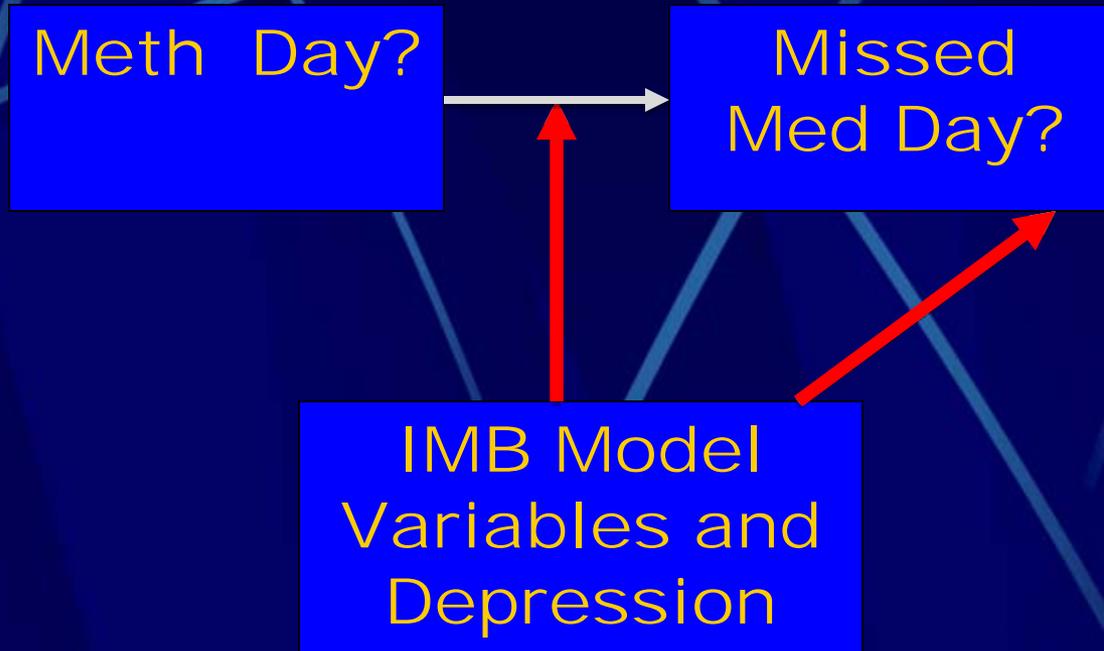
Person Level Variables

HLM methods



Initial analyses examined the effect of taking meth on a given day on the odds of missing meds that same day.

HLM methods



Person level variables allow us to examine 2 different points in the model:

The intercept allows us to examine the impact of the level 2 variable on the dependent variable.

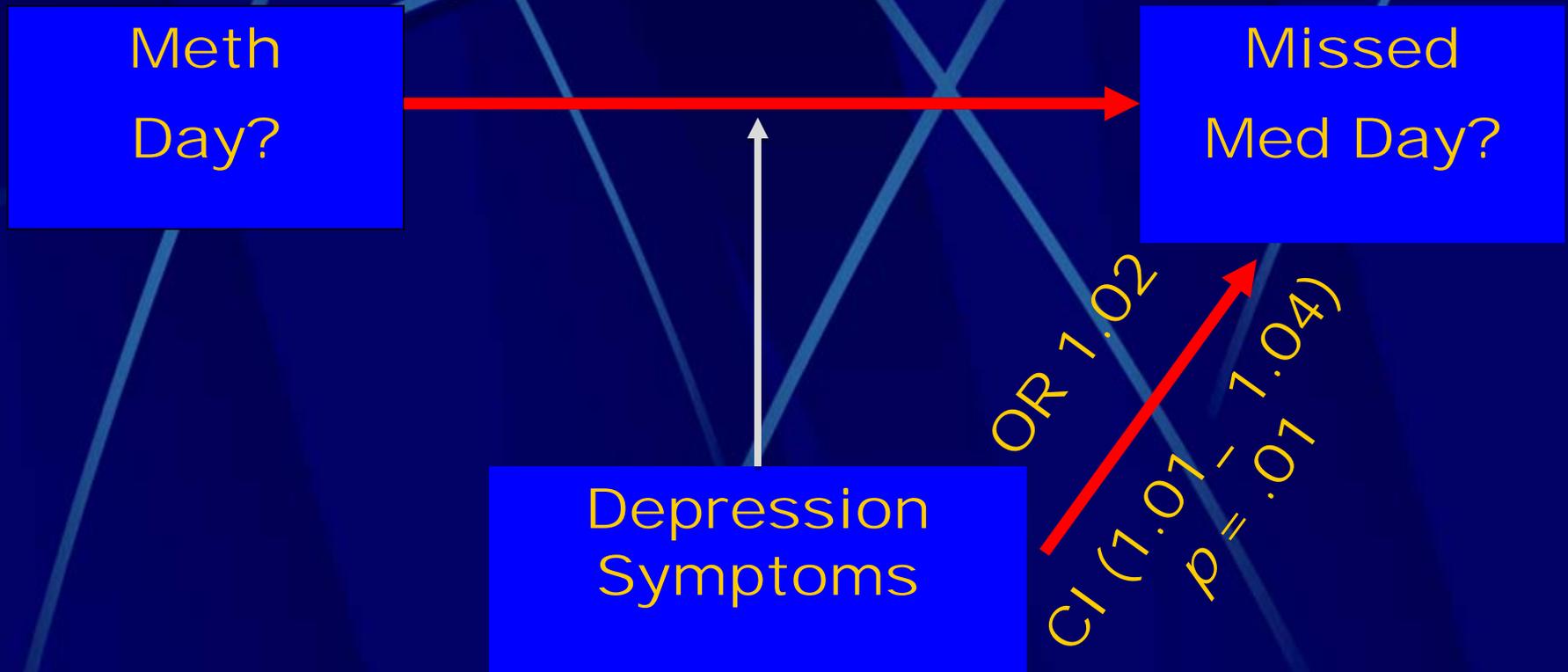
We also can examine the impact of level 2 variables upon the relationship between level 1 variables.

HLM Results



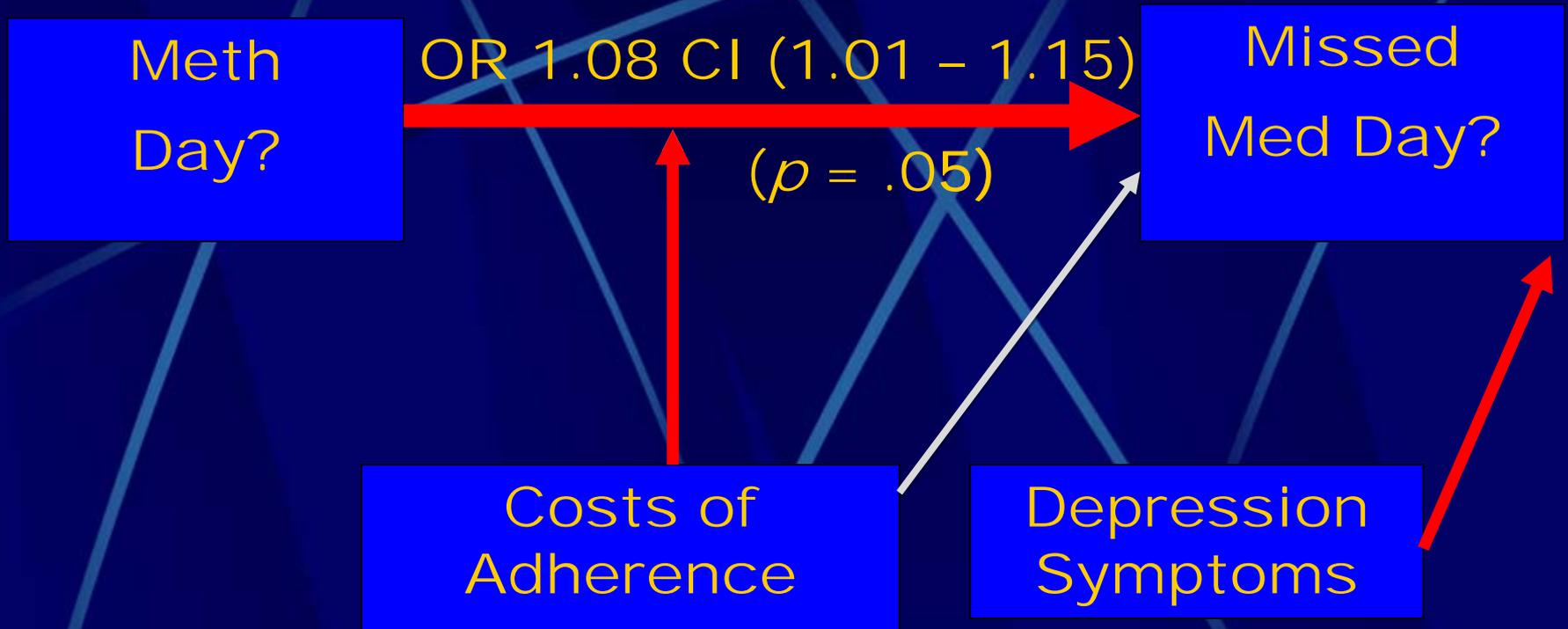
On a day that a participant used meth the odds were 2.9 times greater ($p < .001$) that they would miss their meds than on a day they did not use meth.

HLM Results



A 1 point increase in CES-D score was associated with a 2.5% increase in the odds that non-adherence would occur on a non-meth use day.

HLM Results



Those with more negative attitudes were even more likely to be non-adherent on a day they used meth ($p = .05$).

A 1 point increase in negative attitudes was associated with a 7.5% increase in the odds of non-adherence on a meth use day.

Preliminary Conclusions

- Among meth-using MSM, adherence is worse on meth-use days.
- Implications for harm reduction intervention approaches to reduce meth use days.
- Depression remains a factor in non-adherence, but not more so on days in which meth was used.
- Negative attitudes about adherence exacerbate the meth = non-adherence relationship.



Falling through the cracks of ACE

- While running ACE, it was discovered in both our study population and our screener population that crack cocaine use posed a similar problem for adherence in HIV+ MSM.



Study Sample ($n = 76$)

	Crack Users ($n = 34$)	Non-Crack Users ($n = 40$)	p
Mean % Day Adherence (14 days)	63.8%	78.8%	.02*
Mean % Adherence (90 days, VAS)	60.7%	73.1%	.004**
Meth Use Days (90 days)	3.9	4.5	0.60
Drug Use Events (90 days)	19.0	15.3	0.21

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Screenener Sample

- Overall, 56% of the 681 participants that screened for ACE were less than 90% adherent to their antiretroviral medications
- A significantly higher percentage of crack users were non-adherent when compared to methamphetamine users (67% versus 59%, $p < .05$)

Screenener Sample

- In a 3-step logistic regression, predicting non-adherence, we found:
 - **Step 1 – Race was entered**
 - Black MSM 1.43 X more likely to be non-adherent.
 - **Step 2 – Crack was entered**
 - Effect of race eliminated.
 - Crack users 2.21 X more likely to be non-adherent.
 - **Step 3 – Meth was entered**
 - Meth users 1.5 x more likely to be non-adherent.
 - Crack users 2.2 x more likely to be non-adherent.
 - Meth use and crack use were independent predictors of non-adherence.

Crack Conclusions

- HIV medication adherence is a serious problem among HIV+ MSM who report crack use.
- This risk population of HIV+ crack using MSM is one in severe need of attention with regards to intervention development.

Thanks!

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