Motivational Interviewing Interventions for HIV and Drug/Alcohol Use: 10 Years of Lessons Learned

Jeffrey T. Parsons, Ph.D.
Hunter College – CUNY
Center for HIV Educational Studies & Training (CHEST)
Plans for my talk ...

- A “brief” overview of Motivational Interviewing
- Two research-based applications
  - Positive Choices
  - PLUS
- Conclusions
- Discussion
You would think that ....

... a heart attack would be enough to persuade someone to quit smoking, change their diet, and exercise more!
You would think that ....

... hangovers, an arrest for drunk driving, blackouts, and damaged relationships would be enough to convince a person to stop drinking!
You would think that ....

... the potential dangers from HIV-related risk behaviors would be enough to facilitate behavior change.
And yet...

Problematic behaviors persist despite overwhelming evidence of their destructiveness.
MOTIVATIONAL INTERVIEWING

Overview

People are often less than “ready, willing, and able” to change, despite our desire to help them.

Hesitancy about behavior change is normal.

Clients who seek treatment or change are ambivalent about it – they want it, AND they don’t.

Motivational Interviewing is a way of helping people acknowledge and accept that they feel two different ways about something, and then helping them choose which is the best for them.
MOTIVATIONAL INTERVIEWING

Overview

A directive, patient-centered counseling style that enhances motivation for change by helping the client clarify and resolve ambivalence about behavior change.

The goal of Motivational Interviewing is to create and amplify discrepancy between present behavior and broader goals.

Create cognitive dissonance between where one is and where one wants to be.
Typically brief – can be provided in one or two sessions.

Can be delivered by itself or as a prelude to other treatment (often cognitive-behavioral therapy or skills building).

Most widely used adaptation is Motivational Enhancement Therapy (MET) – which combines MI with personal feedback of assessment results.

Proficiency requires advanced training, practice, and on-going supervision.
MOTIVATIONAL INTERVIEWING

Are Brief Interventions Effective?

Treatment Research shows that brief interactions can be as effective as longer ones, especially when messages are encouraging and tailored to address clients’ concerns and needs.

- Brief interventions double the likelihood of change, even at 1-year follow-up (e.g., Wilk et al., 1997).
- Random assignment to brief (4 sessions MET) vs. extended treatment (12 sessions CBT) consistently shows no differences (e.g., Project MATCH, Stephens et al., 2000).
But ......

- In what settings does it work?
- For what behaviors does it work?
- For whom does it work?
2005 Meta-Analysis of 72 published MI intervention studies

- Alcohol (31)
- Drug Abuse (14)
- Smoking (6)
- HIV Risk (5)
- Treatment Compliance (5)
- Water purification (4)
- Diet and exercise (4)

One study each:
- Gambling
- Eating Disorders
- Relationships

Where was MI tested?

- Outpatient clinics (15)
- Inpatient facilities (11)
- Educational settings (6)
- Community organizations (5)
- G.P. offices (5)
- Prenatal clinics (3)
- Emergency rooms (2)
- Halfway house (2)
- EAP
- Telephone (3)
- In home (1)
- Jail (1)
- Mixed (7)
- Unspecified (8)
Who delivered MI?

- Paraprofessionals / students (8)
- Master’s level (6)
- Psychologists (6)
- Nurses (3)
- Physicians (2)
- Dietician (1)
- Mixed (22)
Sample Characteristics
(N = 14,267)

- N = 21 to 952
- Males = 54.8%
- Mean Age = 34
- Ethnic minorities: 43% (n = 37)
- Duration: Mean = 2.24 hours
- Mean = 198
- Range = 0 to 100%
- Range = 16 to 62
Some Generalizations

- Wide variability in effect size across studies, within problem areas
  - e.g., for alcohol problems, the effect size \((d)\) varies from 0 to 3.0
  - A \(d = 1.0\) represents a between-group difference of one standard deviation

- Using the same treatment (MI) with the same target behavior (e.g., alcohol), results in very different effects across sites and populations
  - Could be a function of site/population, or skill of delivery, or other factors
Some Generalizations

- Effects of MI appear early ..... BUT ..... 
- Effects of MI diminish over one year of follow-up
  - $d = .77$ at 0-1 months post-treatment
  - $d = .31$ at 4-6 months
  - $d = .30$ at 6-12 months
  - $d = .11$ at > 12 months
  - Except in additive studies in which MI is combined with some other treatment
    - $d = .60$ is maintained
Secondary Prevention Among HIV Positive Alcohol Abusers

Funded by the National Institute on Alcohol Abuse and Alcoholism, RO1 AA 11808
10/1/97-9/30/02
Specific Aims

To test the effectiveness of an intervention based on MI and Stages of Change aimed simultaneously reducing alcohol use and risky sex among HIV+ MSM in NYC.
Inclusion Criteria:
• At least 18 years of age
• Residing in NYC Metropolitan Area
• Self-Identify as HIV+ MSM
• AUDIT score of eight or higher
• Sexually active in past 3 months with another man (MAJOR MISTAKE #1)

Exclusion Criteria:
• Current (past 6 months) diagnosis of drug dependence
• Current Psychotic Symptoms
• No Residential Stability
Assessment

Timeline followback for alcohol use and sexual risk behaviors for past 90 days, done by hand, with no benefit of ACASI (MAJOR MISTAKE #2)

- Standard drinks
- Sex acts by behavior (oral, anal, vaginal)
- Sex acts by position (insertive, receptive)
- Sex acts by partner serostatus (HIV+, HIV-, unknown)

Other relevant measures – decisional balance, self-efficacy, other drug use

Follow-up assessments at 3, 6, 9, and 12 months post-baseline
Intervention

Dual Focus - HIV Sexual Risk Behaviors & Alcohol Consumption

- Four individual sessions with trained Motivational Interviewing (MI) counselor
- Four peer support group meetings
- Personalized feedback
Intervention

Session 1 (Individual session)
- Introduction to approach & rationale
- Information Sheet providing factual material on HIV and alcohol (and potential effects on immunologic functioning)
- Decisional Balance for Alcohol & Safe Sex
- Staging Rulers for Alcohol & Safe Sex

Session 2 (Individual session)
- Deliver Personalized Feedback
- Goal Statements and Change Plans for Alcohol and Condom Use
- Prepare client for transition into Groups
Intervention

Sessions 3-6 (Peer Groups) (MAJOR MISTAKE #3)

- Led by gay-identified HIV+ men trained in MI
- Skills-based activities based on TTM Stages and Processes of Change
- Focus on condom use and HIV serostatus disclosure
Intervention

Sessions 7-8 (Individual sessions)

- Process Group Sessions
- Revisit Decisional Balance and Change Plans for Alcohol and Safer Sex
- Plan for future temptations and relapse prevention
- Address termination issues
356 Eligible
8 No longer interested
69 did not show up for baseline

279 Baselined
17 dropped due to co-morbidity
9 dropped due to other exclusions

253 Randomized

117 Intervention Condition
102 completed S1
56 completed G1
45 completed G3
72 completed S3

88 completed S2
59 completed G2
48 completed G4
61 completed S4

136 Community Referral Condition
Analyses

Did treatment, compared to a Community Referral Condition (MAJOR MISTAKE #4) decrease target behaviors?

- Combination of heavy drinking days and unsafe sex
- Drinking outcomes
- Unsafe sex outcomes
Did treatment decrease target behaviors?

- Combination of heavy drinking days (≥ 5 drinks in one day) and unsafe sex

- For those participants with baseline, at-risk behavior, those in the comparison group had a higher number of at-risk days by a factor of 2.19.
Did treatment decrease target behaviors?

Participants in the comparison group, at 3 months post-intervention, had a higher number of days in which unsafe sex was combined with drinking.
Did treatment decrease target behaviors?

- Heavy drinking days per month
  - Significant effects for time, and time by condition.
  - Being in the comparison group was associated with an increase in number of heavy drinking days per month by a factor of 1.5.
Did treatment decrease target behaviors?

- # of unsafe sex days per month

- Main effect for time only, which showed an overall reduction across time for both conditions.
Conclusions, Concerns and Lessons Learned from Positive Choices

Empirical conclusions:

• The intervention reduced days of heavy drinking and unsafe sex.
  • Particularly critical for a heavy drinking sample in which there is a connection between the behaviors
• The intervention reduced overall drinking.
  • Supports many previous findings in this area
Conclusions, Concerns and Lessons Learned from Positive Choices

Empirical conclusions:

• The intervention did not reduce unsafe sex in general.
• Overall, MI has shown less effectiveness for risky sex in clinical trials.
• Sex is NOT an individual behavior, and may require the addition of skills training.
• HIV+ persons may have less intrinsic motivation.
• Already using harm reduction.
Observational conclusions

- Groups are challenging
  - Coordination of schedules
  - Need to have a cohort ready to begin
  - Missed sessions can’t be “made up”
  - Unique issues with MSM in groups

- Many men had difficulty with termination -- even after only 4 sessions

- HIV+ MSM of color responded particularly well – high scores on perceived therapeutic alliance
If we had to do it all again....

- Enroll **only** those who have problems with both target behaviors at screening
- Don’t assume a link between the two target behaviors
- Randomize into first session immediately after baseline (and use urn randomization)
- Use an attention control condition
- Audio-CASI is our friend!
- Invest in professional marketing, designs, and materials
Project PLUS: Positive Living through Understanding and Support

Medication Adherence Among HIV Positive Alcohol Abusers

Funded by the National Institute on Alcohol Abuse and Alcoholism, RO1 AA 13556
Marketing and Materials are critical!!!
if you are an HIV+ gay or bisexual man
& concerned about your drinking
you could qualify to be paid for 5 interviews over one year
& receive free counseling about drinking & HIV
TO FIND OUT MORE about POSITIVE CHOICES

call 1-888-6 POSITIVE
(1-888-676-7484)

all information is STRICTLY CONFIDENTIAL

sponsored by the Center for HIV/AIDS Educational Studies and Training & the NIAAA
Have trouble taking your HIV meds on time?

Think your drinking may be part of the reason?

Project PLUS is a program for HIV+ men and women having trouble taking their HIV meds on time, especially because of their alcohol use.

Call Project PLUS at 212.206.7919 x 232 to find out more.
What you can expect as a participant:

Assessment:
+ You will participate in an initial assessment, which will involve an interview with one of our PLUS staff members, a blood draw, and completion of a survey.
+ You will be PAID for your time for this assessment.

The PLUS 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 PLUS counselor where you will have the chance to talk about your drinking and medication adherence.
+ Unlike some other programs or some forms of counseling, PLUS 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.

Follow-up:
+ You will return for five follow-up assessments over the course of 15 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 assessments.

212.206.7919 x 232

medication

PLUS

Positive Living through Understanding and Support

you

CHEST

The City University of New York

HUNTER
Have trouble taking your HIV Meds on time?

Think your drinking might be part of the reason? You can be REIMBURSED up to $335 for completing confidential interviews and receive counseling at NO COST to you.

Project PLUS is a program for HIV+ men and women having trouble taking their meds on time, especially because of their alcohol use.

You can be REIMBURSED up to $335 for completing confidential interviews and receive counseling at NO COST to you.

Call Project PLUS at 212.206.7919 x232 to find out more.
Study Description

Project PLUS was aimed at simultaneously improving adherence to HIV meds and reducing drinking among heavy drinking HIV+ men and women in NYC.
Methods

Eligibility
- Confirmed HIV Seropositive Status
- On HAART
- AUDIT score $\geq 8$
- Heavy drinking $>16$ drinks/week for men; $>12$/week for women
- Alcohol problems $>$ Other Drug Problems
- At least 18 years old

Random Assignment
- Using urn randomization
- Matching on gender, AUDIT score and CD4 count
- Two arms: intervention or education (attention control)
Assessment

Adherence:

- Biological measures: viral load and CD4 count
- Self-report measures: Time Line Follow Back calendar for the past 14 days
Assessment

Alcohol use:

- Self-report measures: Time Line Follow Back for the past 14 days
  - Number of Standard drinks – summed number of standard drinks across the 14-day period.
  - Drinks per drinking day - total number of standard drinks in the past 14 days divided by the number of days during that period in which the participant had at least one alcoholic drink.
The Intervention
Eight individual sessions

First two sessions focus exclusively on Motivational Interviewing (MI).

- Client picks which behavior to focus on first
- Structured computer-generated personalized feedback on both behaviors is provided
- Also covers the Information component of the IMB model
Motivational Interviewing

- A change plan is formulated with the participant:
  - The changes I want to make are:
  - The most important reasons why I want to make these changes are:
  - The steps I plan to take in changing are:
The Intervention

Eight individual sessions

- Last six sessions use MI and Cognitive Behavioral Skills Building
  - A menu-approach is used.
  - Following a functional analysis, specific skills building sessions are chosen based on individual needs of each client and are assessed through a case conceptualization.
### Functional Analysis

Conducted for each behavior in order to best select skill-building sessions most appropriate for each client.
Cognitive Behavioral Skills Building

Provider chooses 3 modules for each behavior based on client’s skills deficits

**ALCOHOL**
- Coping with Triggers to Drink
- Managing Thoughts to Drink
- Refusal Skills
- Moderated Drinking

**ADHERENCE**
- Managing Side Effects
- Communication with Health Care Providers
- Behavioral Management
- Cognitive Management

**EITHER**
- Increasing Pleasant Activities
- Managing Negative Moods
- Making Time For Self
Control Condition

- The control condition consists of eight individual sessions with health educators, using videotapes which provide education around HIV, adherence, and alcohol use, followed by a structured discussion of the information covered.
Non-Hazardous Drinkers

(n = 167, 53.87%)

<table>
<thead>
<tr>
<th>Treatment Condition</th>
<th>Control Condition</th>
</tr>
</thead>
<tbody>
<tr>
<td>(n = 65, 45%)</td>
<td>(n = 78, 55%)</td>
</tr>
<tr>
<td>Mean (SD) sessions</td>
<td>Mean (SD) sessions</td>
</tr>
<tr>
<td>6.45 (2.31)</td>
<td>6.95 (2.18)</td>
</tr>
</tbody>
</table>

Completed 3 Month Follow Up

(n = 53, 84%)

Completed 6 Month Follow Up

(n = 53, 84%)

Completed 3 Month Follow Up

(n = 68, 87%)

Completed 6 Month Follow Up

(n = 62, 83%)

3 Month Follow Up not completed

(n = 12)

6 Month Follow Up not completed

(n = 12)

3 Month Follow Up not completed

(n = 10)

6 Month Follow Up not completed

(n = 16)
Adherence Results

- The primary outcome measures were changes in log viral load and CD4 count from baseline to 3-month follow-up.

- At baseline, the two groups did not differ significantly in their viral load or CD4 counts.

- At 3-months, there was a significant time x condition interaction – such that intervention participants demonstrated significant decreases in viral load ($F[1, 116] = 6.09, p < .02$), and significant increases in CD4 count ($F[1,115] = 6.44, p < .02$), compared to those in the control condition.
Drinking Results

- Participants in both conditions reported significant decreases in both the number of standard drinks they consumed from baseline to 3 months, $F(1, 112) = 62.7$, $p < .001$.

- Similarly, all participants reported significant decreases in number of drinks per drinking day from baseline to 3 months, $F(1, 112) = 35.1$, $p < .001$.

- There were no significant time by condition interaction effects for these variables.
Results at 6 months

- At the 6-month follow-up visit, there were no significant differences between individuals in the intervention and control condition on any outcome variable for adherence or drinking.

- Average log viral load and CD4 counts remained better among participants in the intervention condition, but the time-by-condition interaction effect did not achieve statistical significance.

- Drinking remained lower in both groups, but the interaction effect was not significant.
Summary of PLUS Results

This is the first published behavioral intervention to document efficacy across viral load, CD4 count, and self-reported adherence.

Both the intervention and the educational control sessions were equally efficacious in reducing drinking behaviors.

The reduction in the magnitude of the intervention’s efficacy at 6-month follow-up indicates the importance of intervention booster sessions.
Conclusions
Conclusions

Meta-analysis has shown a robust effect of MI on a variety of behaviors

- Positive Choices found effects on days of heavy drinking + risky sex and for drinking outcomes, but not for risky sex days in general
- Project PLUS found effects on biological markers and self-reported HIV medication adherence, but not for drinking
Conclusions

The effects of MI emerge relatively quickly, but tend to diminish over time.
Conclusions

- Positive Choices found effects for 3 and 6 months, but not for 9 and 12.
- Project PLUS found effects for 3 months, but not for 6 (still working on 9, and 12).
- Although – preliminary results seems to suggest a specific process of change (self-reevaluation) is related to longer-term success for viral load change at 9 and 12 months.
Conclusions

- MI is NOT a magic wand
Conclusions

- However, when added to other forms of treatment, it can improve and increase engagement and retention to other forms of treatment.
- It can produce quick results for many behaviors.
- Booster sessions may be necessary for sustained maintenance of behavior change.
- Can be delivered by a wide array of providers, with significant training and supervision.
Thanks!

jeffrey.parsons@hunter.cuny.edu