



What MI Research Tells Us

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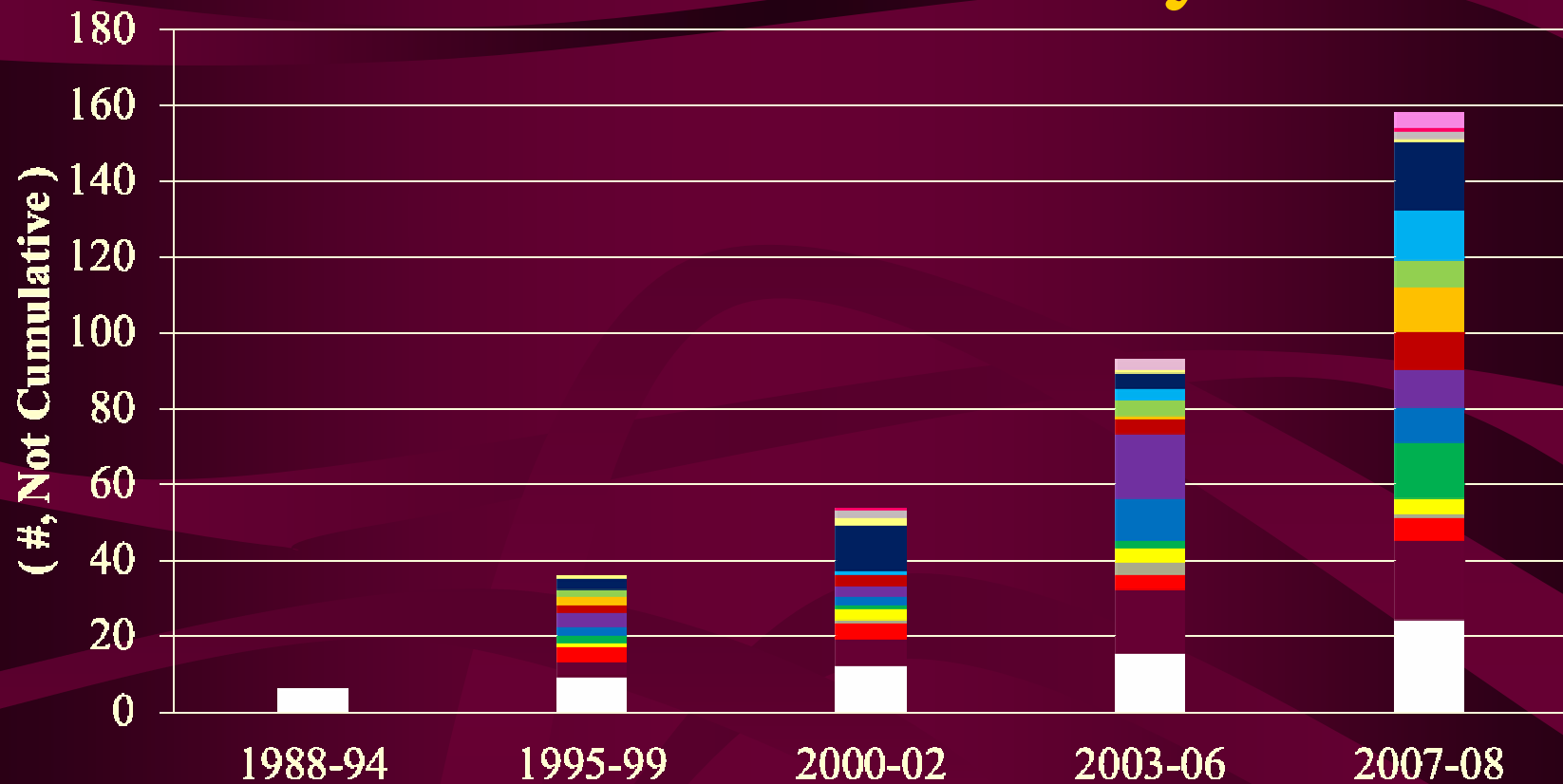
Nordic TNT

June 2011

1. MI can impact a wide variety of behavior problems

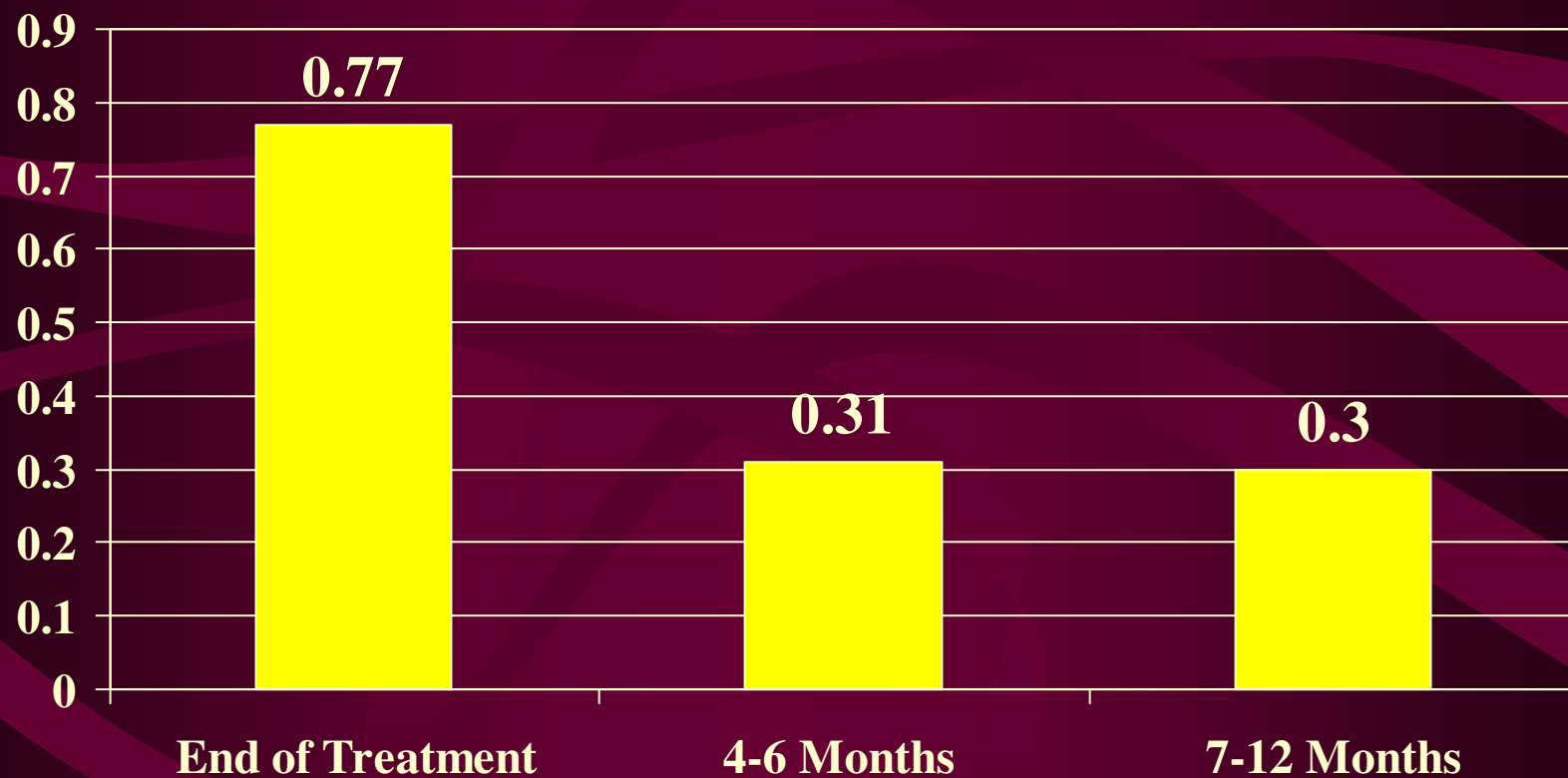
- Modest average effect size
- Average impact of MET on alcohol problems is similar to that of more intensive treatments

MI Outcome Studies by Era



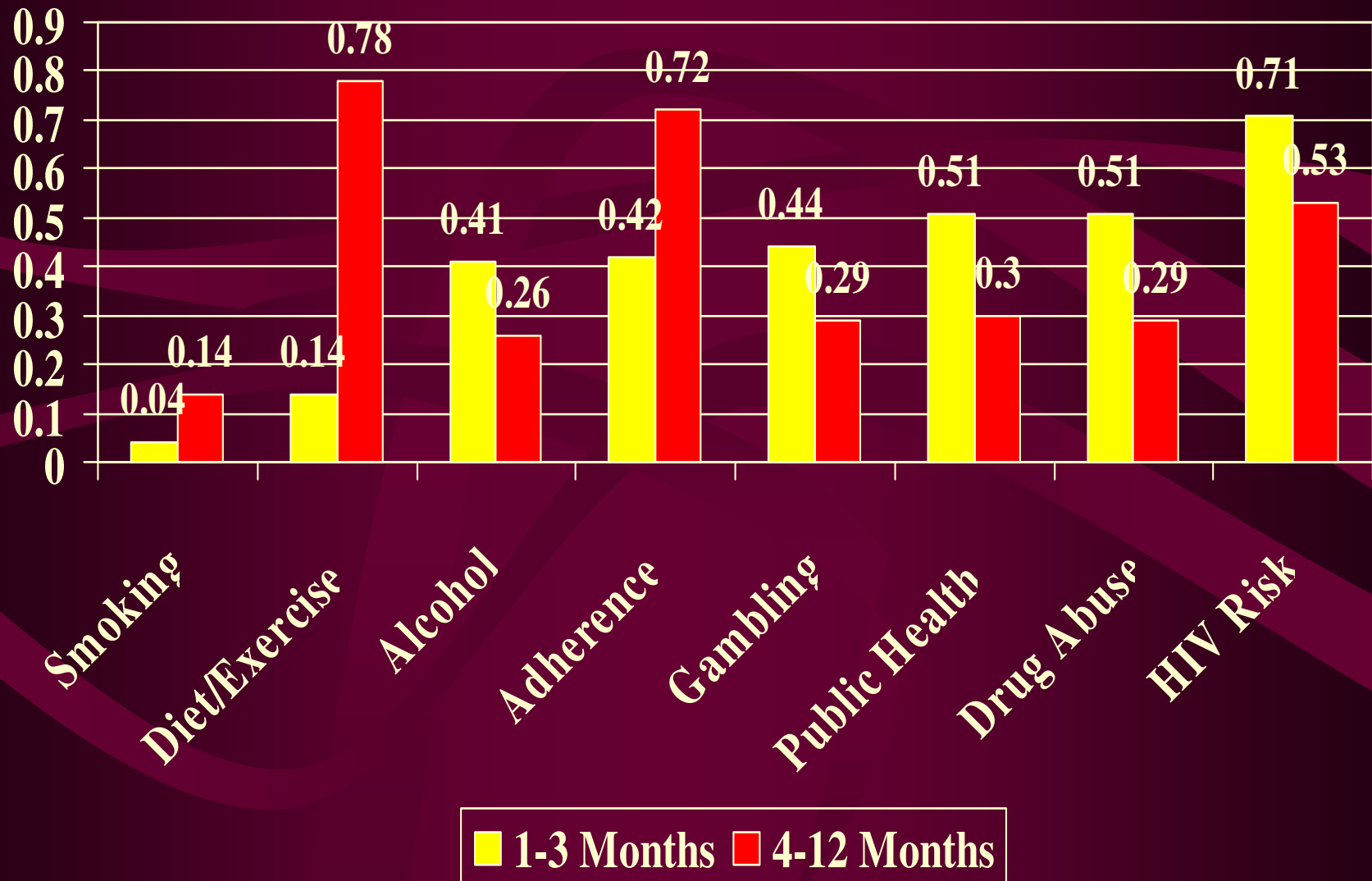
- Alcohol
- Drugs
- Dual Dx
- Gambling
- Offenders
- Eating Dis.
- Adh/Retention
- Smoking
- HIV Risk
- Cardiac
- Diabetes
- Psychiatric
- Health Promo
- Family
- Violence
- Asthma
- Dental
- Cancer

Average Between-Group Effect Size (d) of MI Across All Reported Outcome Measures (N=72 trials)

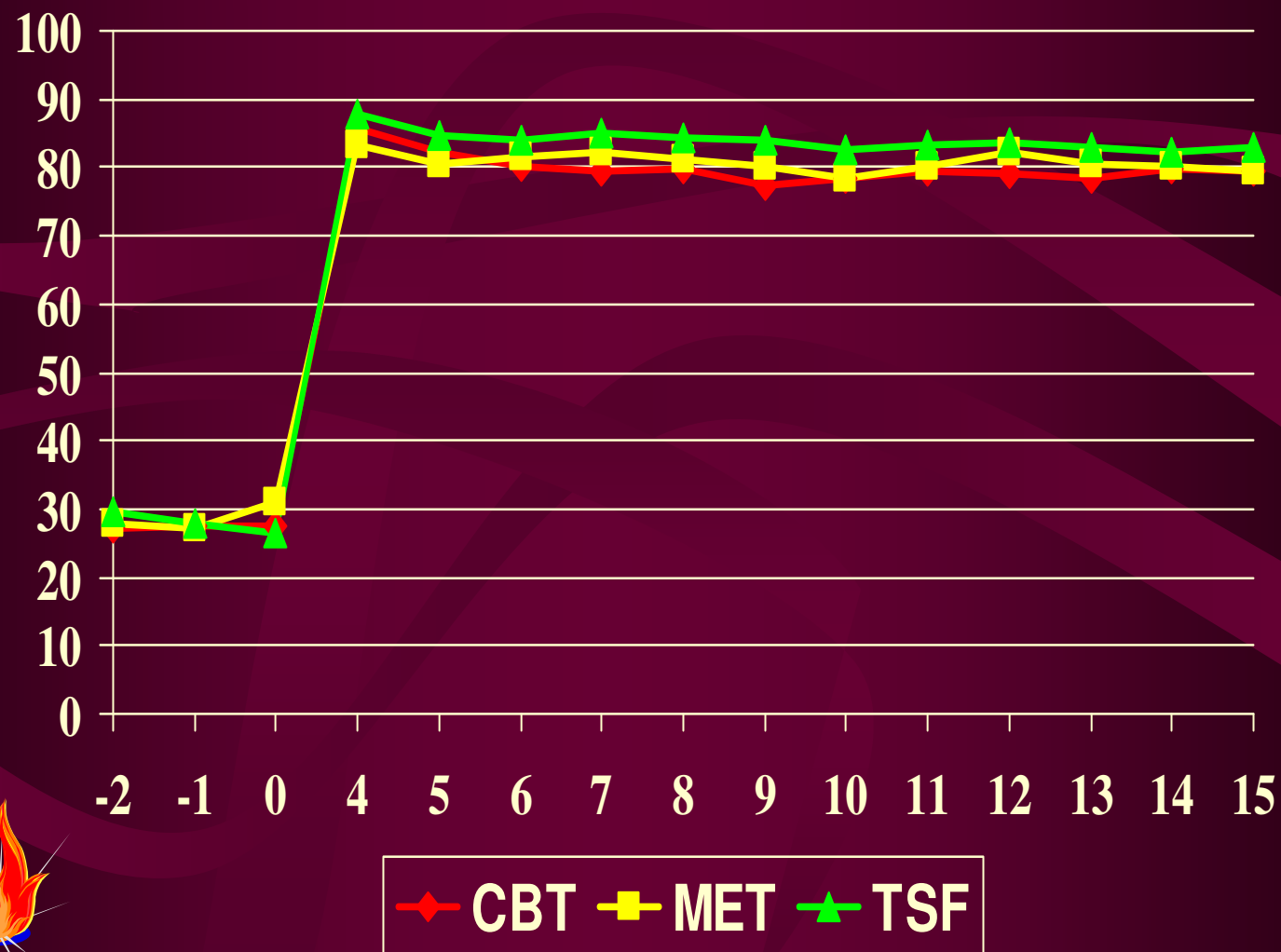


Hettema et al. 2005, *Annual Review of Clinical Psychology*, 1, 91-111.

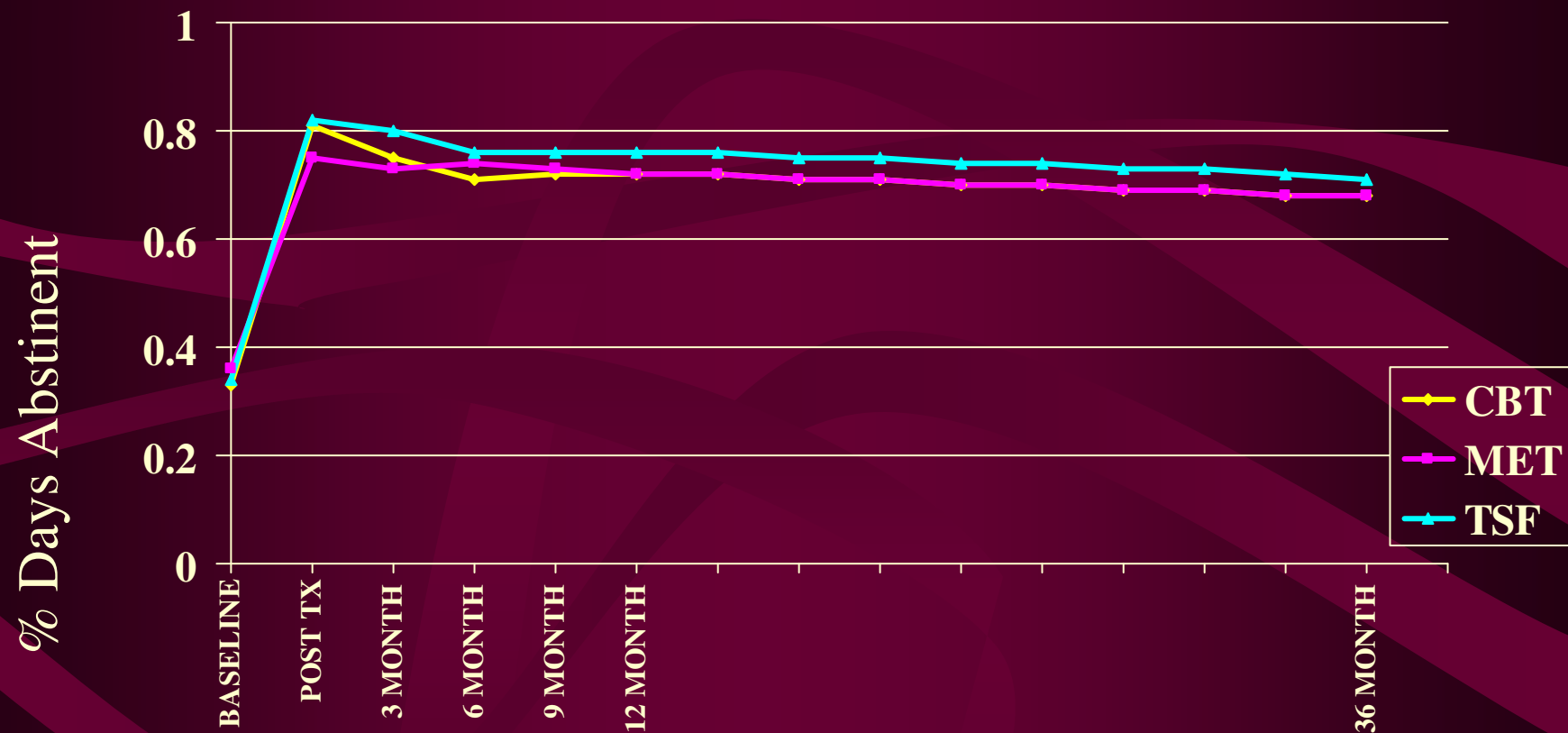
Mean Combined Effect Size by Problem Area (N=72 Clinical Trials)



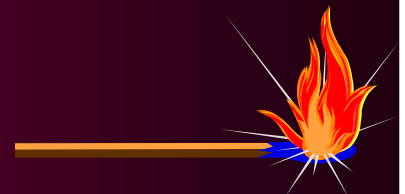
Mean Percent Days Abstinent as a Function of Time (Outpatient)



MATCH: 3 Year Follow-up

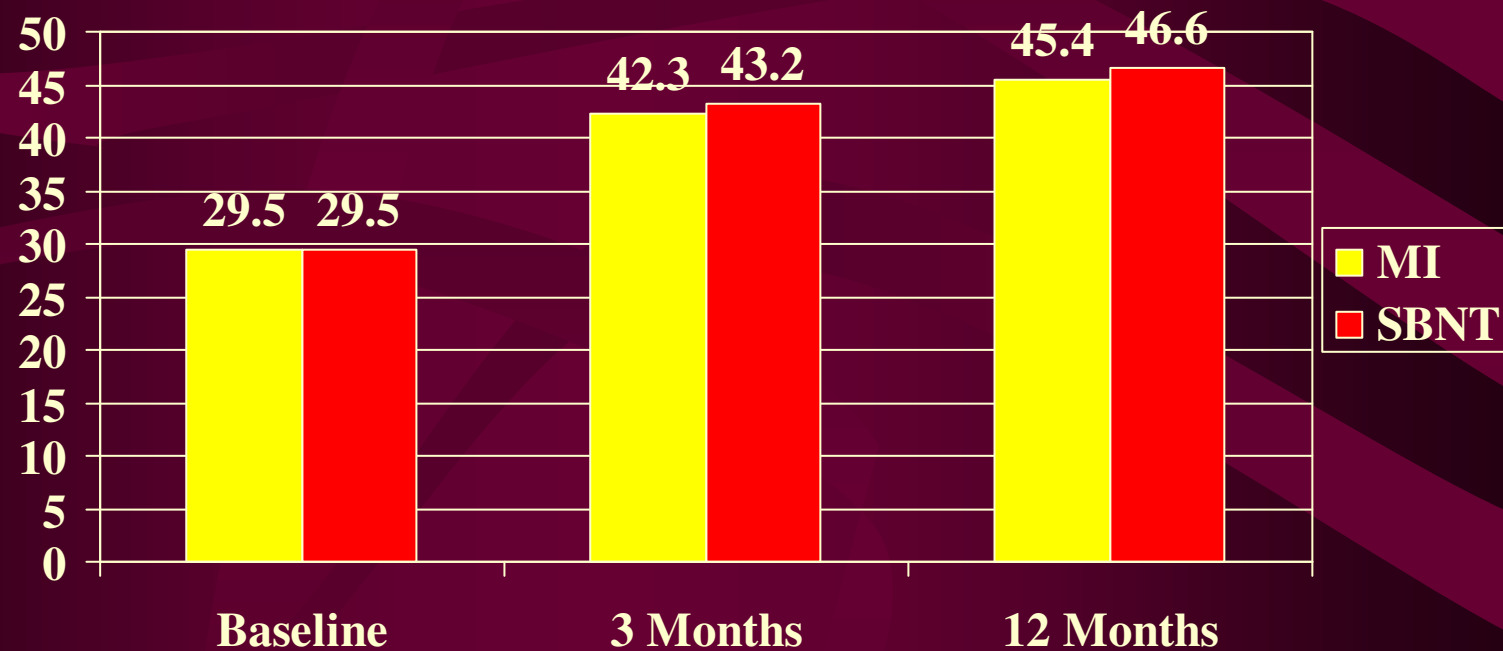


Timeline Relative to Treatment Window



UKATT, 2005

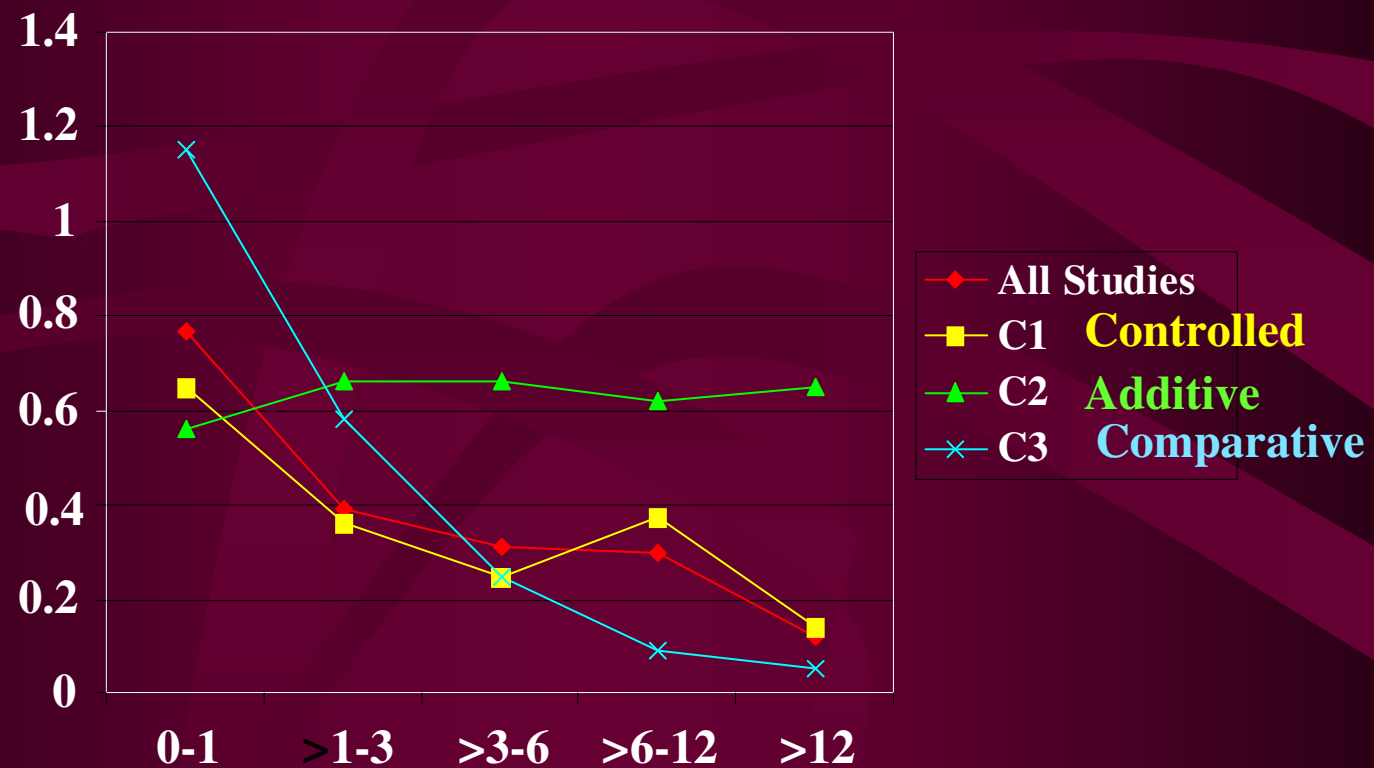
Percent Days Abstinent



2. Adding MI to another active treatment can increase efficacy

- Synergistic effects – the other treatment works better through improved retention and adherence
- MI works better because beyond its own effect are the effects of the other treatment
- The effects of MI tend to endure longer (e.g. 12 months) with this kind of design

Effect Size of MI Over Time



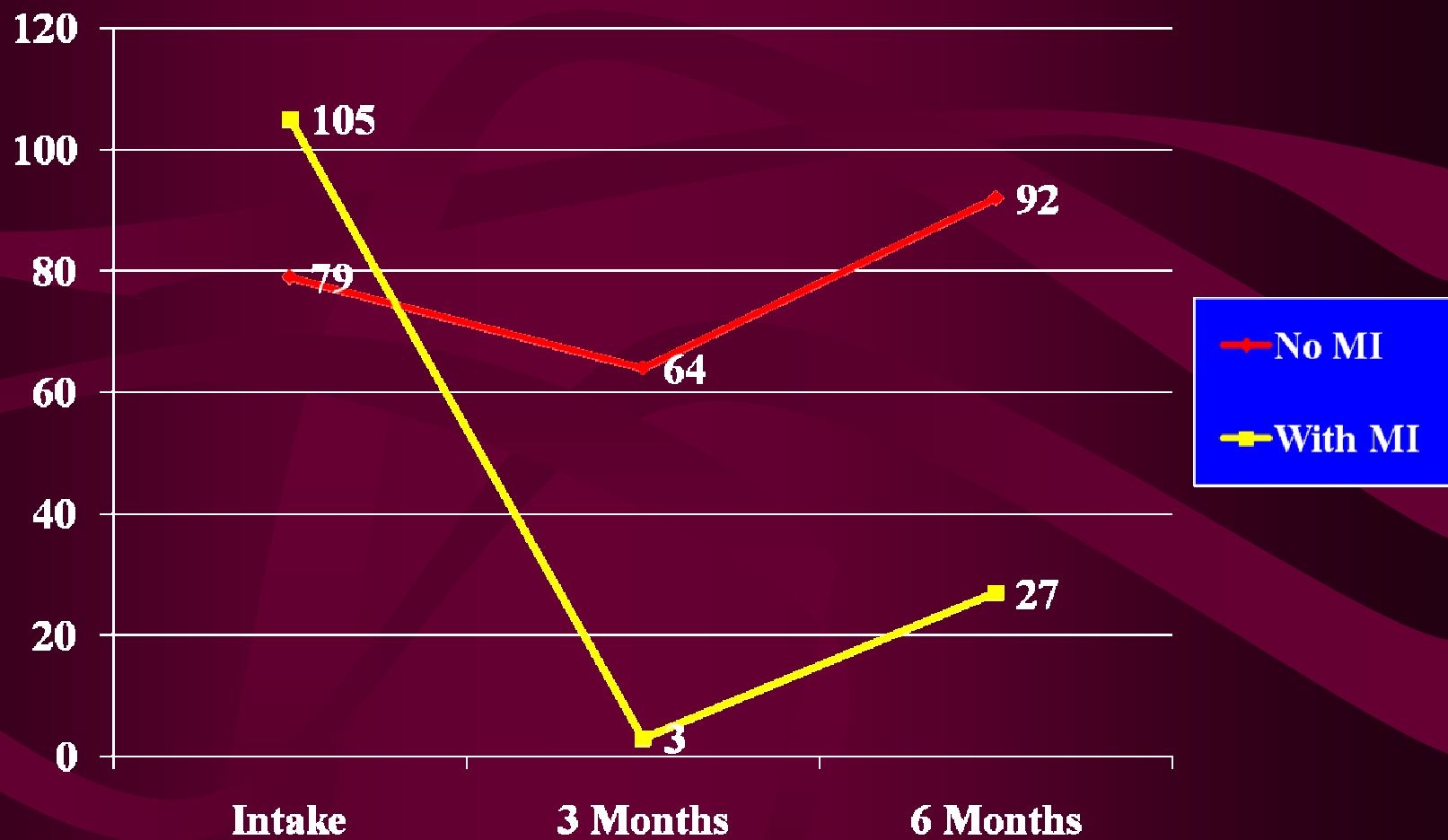
MI as a Prelude to Treatment

3 randomized clinical trials of treatment as usual with or without MI session at intake

- VA outpatient adult treatment
 - Bien et al (1993) *Behavioural & Cognitive Psychotherapy* 21: 347-356
- Private residential adult treatment
 - Brown & Miller (1993) *Psychology of Addictive Behaviors*, 7:211-218
- Public outpatient adolescent treatment
 - Aubrey (1998) Ph.D. dissertation, University of New Mexico

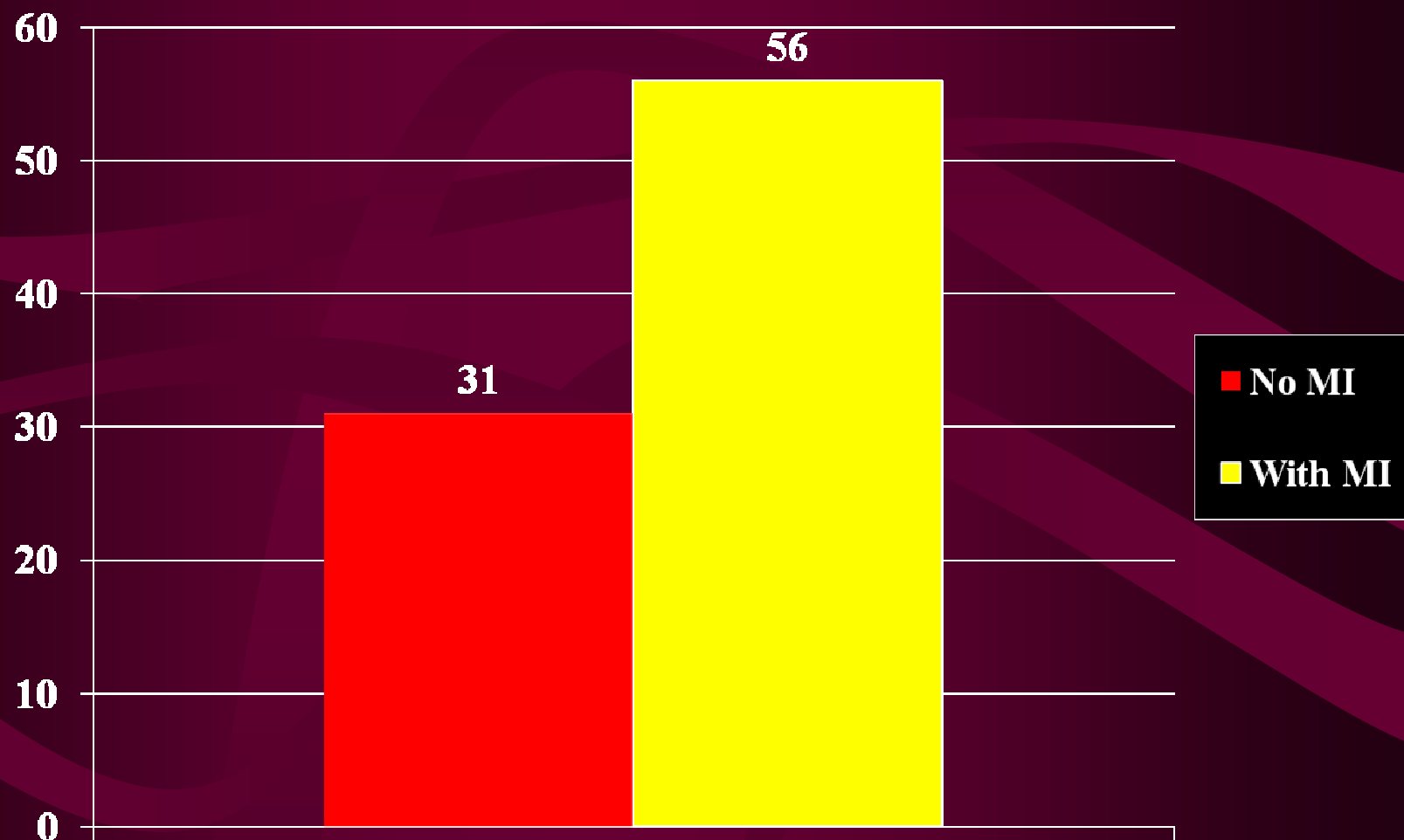
VA Adult Outpatient Treatment

Standard Drinks per Week



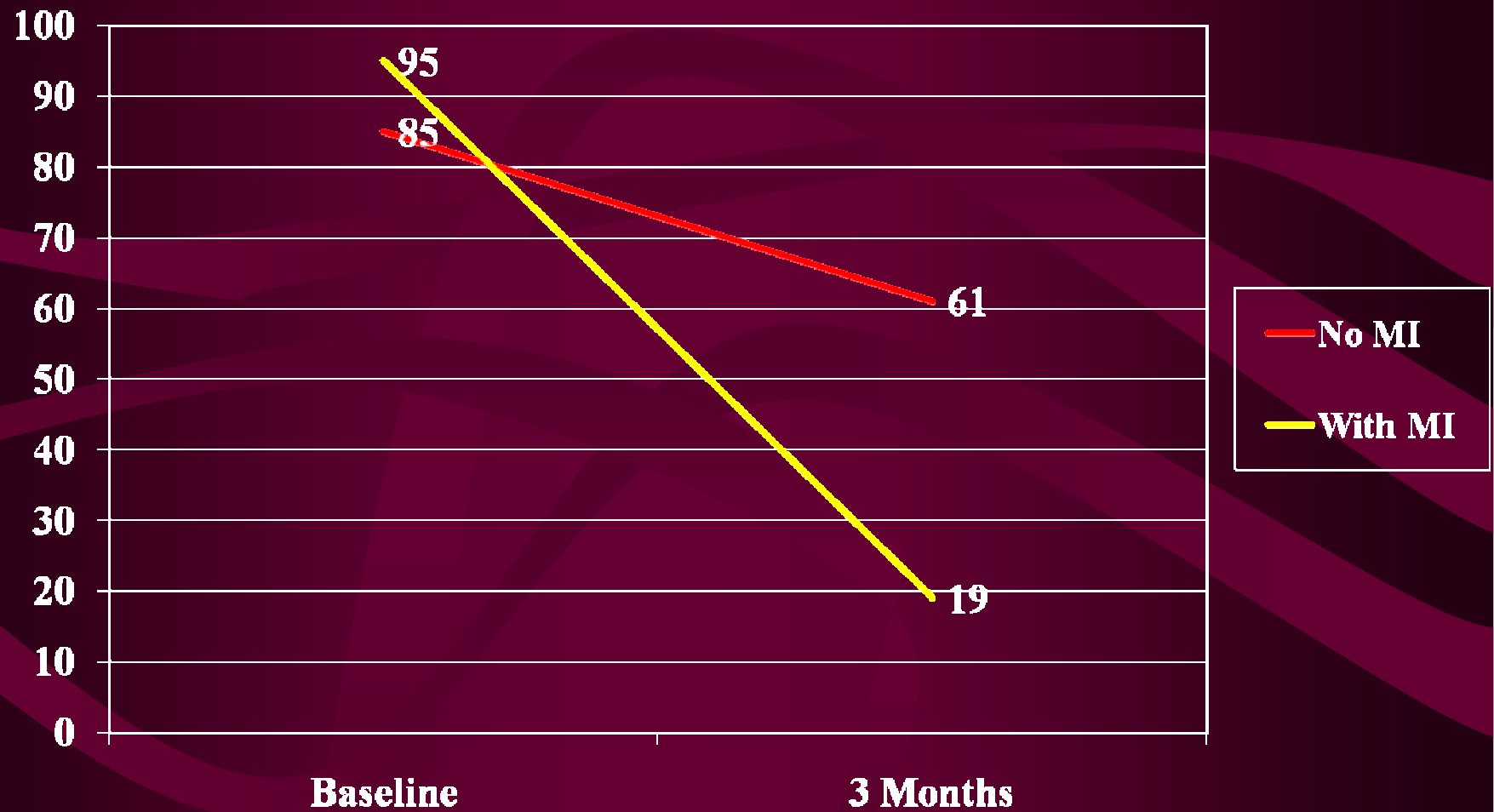
VA Adult Outpatient Treatment

3-Month Post-Treatment Abstinence Rate



Private Residential Treatment

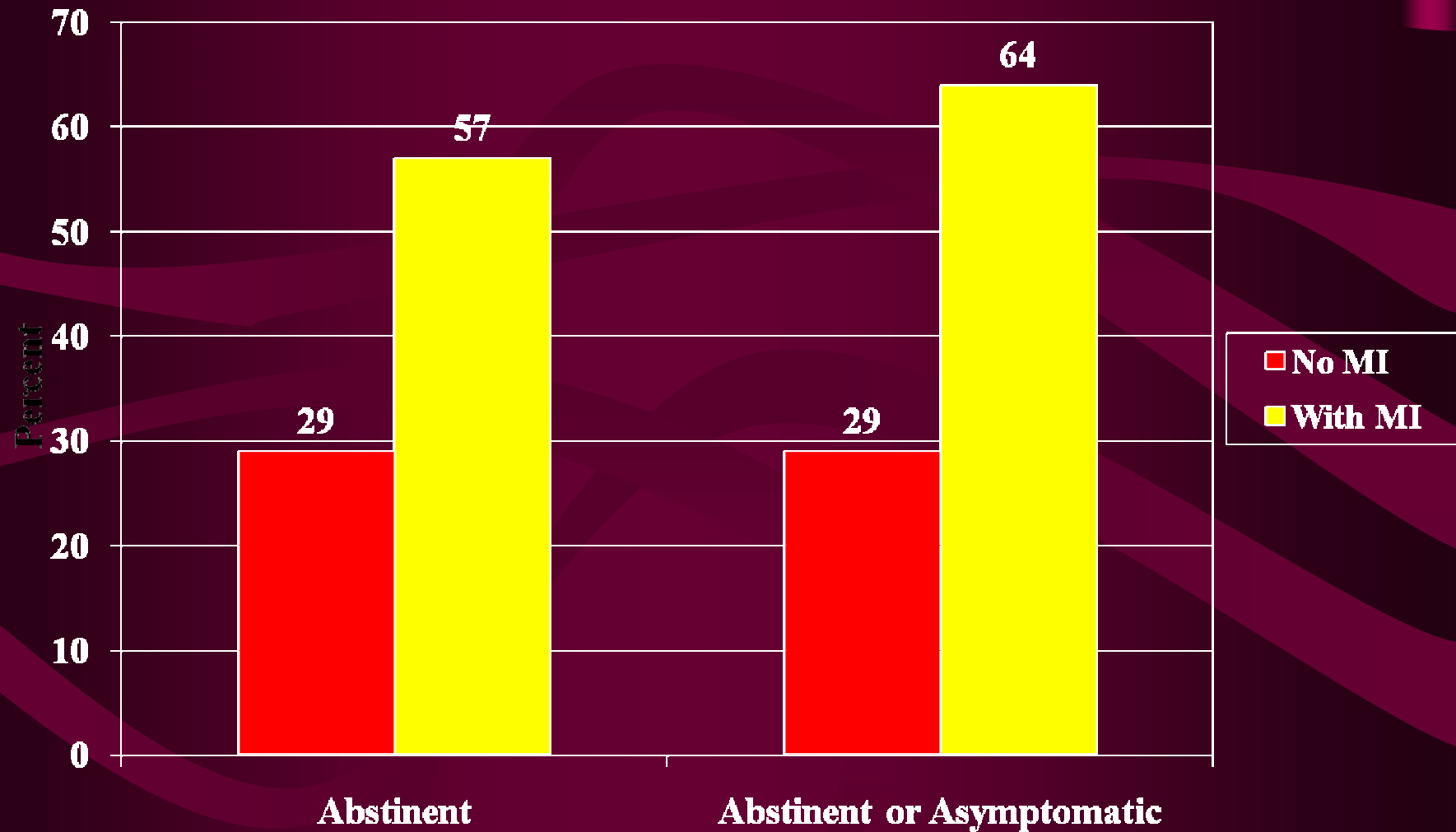
Standard Drinks / Week



$p < .001$

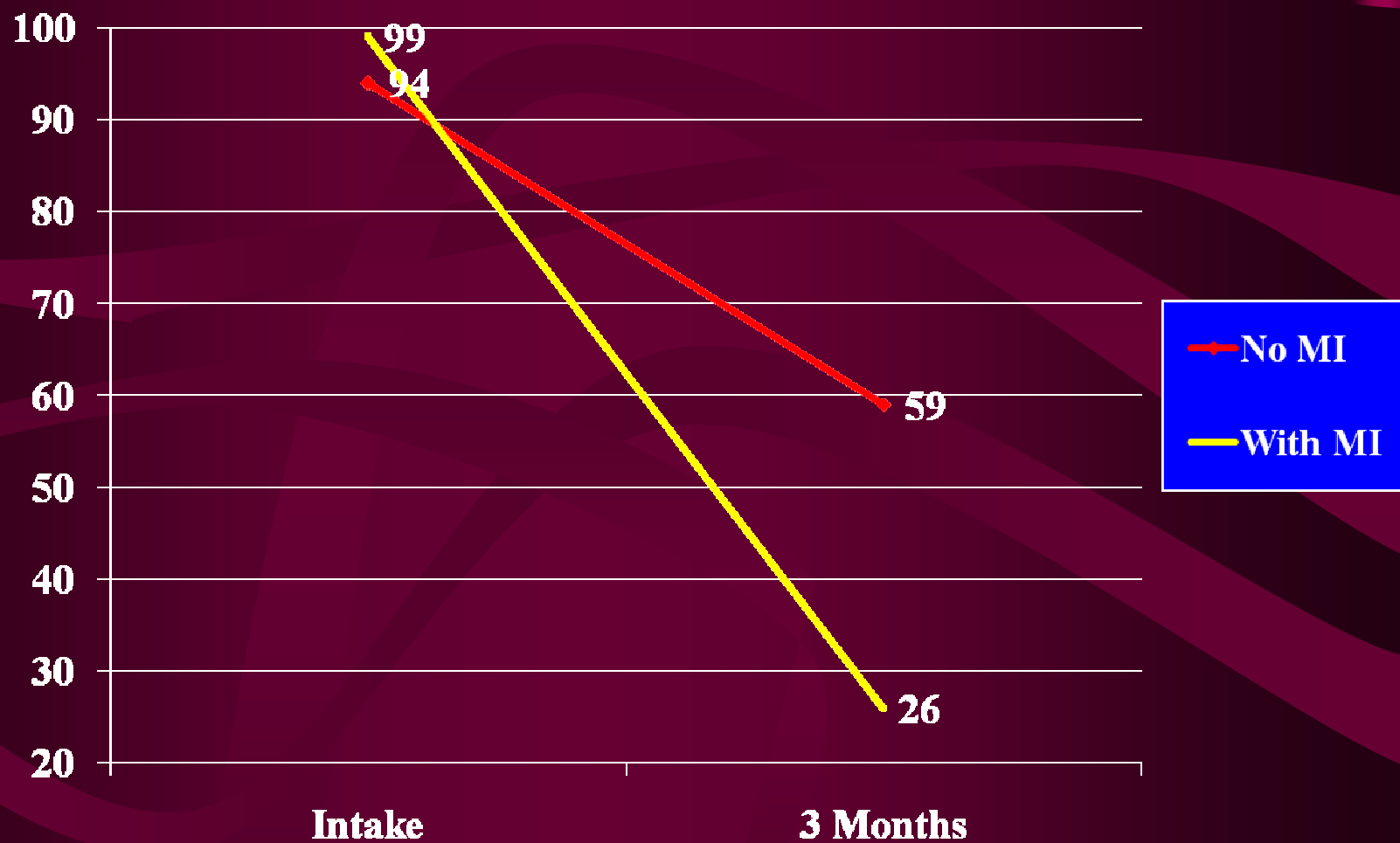
Private Residential Treatment

3-Month Abstinence Rate



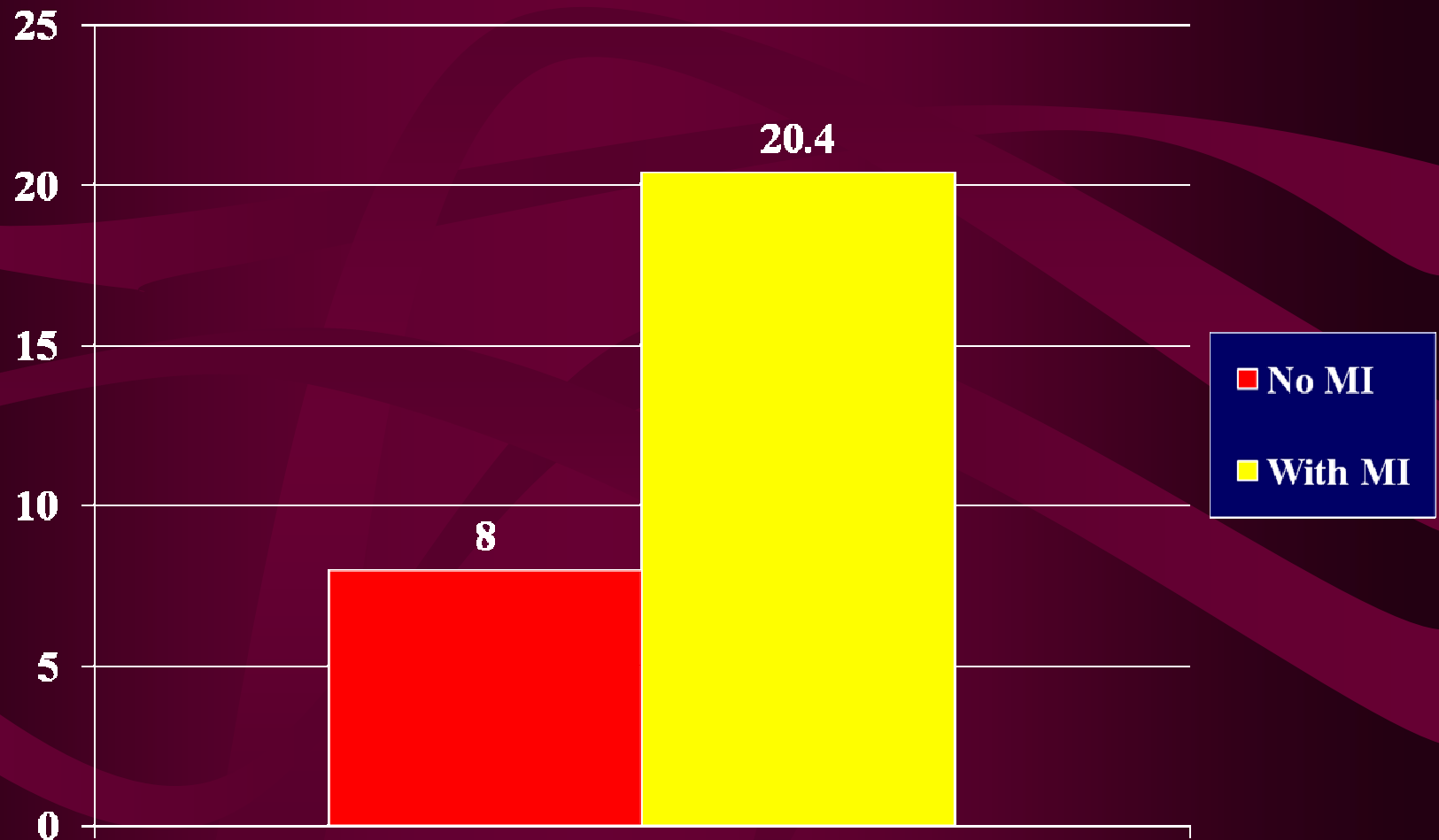
Outpatient Adolescent Treatment

% Days Drug Use



Outpatient Adolescent Treatment

Treatment Sessions Attended

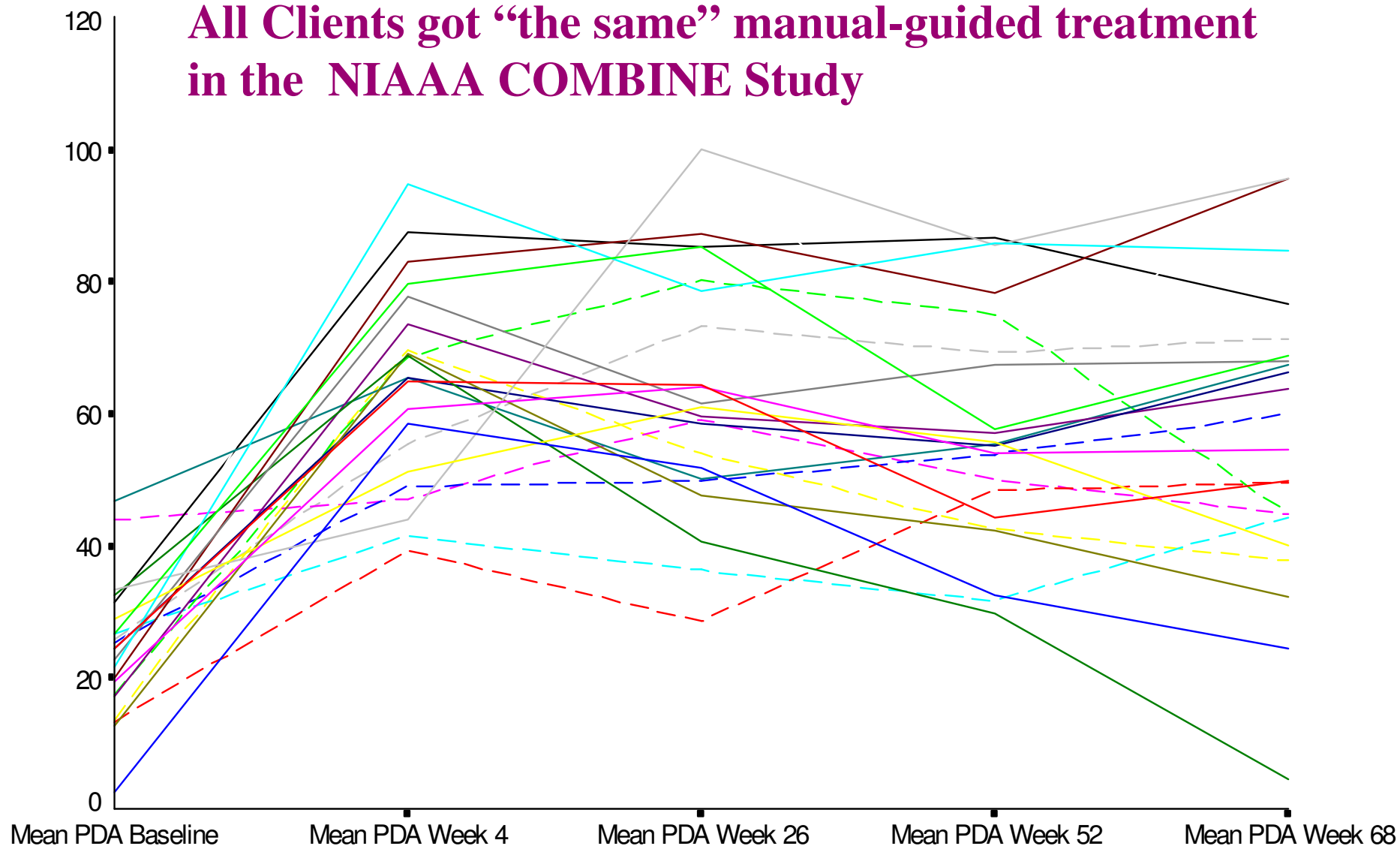


3. The efficacy of MI is highly variable

- Clinical trials yield inconsistent findings
- Large therapist effects
- Site by treatment interactions in multisite trials (MI “works” at some sites and not others)

Therapists' Outcomes in CBI

All Clients got “the same” manual-guided treatment in the NIAAA COMBINE Study



Four CTN Trials Comparing MI/MET with Treatment as Usual

	Treatment	Primary outcome
004	MET	Drug use & retention days - <u>nsd</u>
005	MI	Use: <u>nsd</u> 5 vs. 4 sessions $p<.05$
013	MET	Retention <u>nsd</u> (pregnant users)
021	MET	Drug use & retention <u>nsd</u>

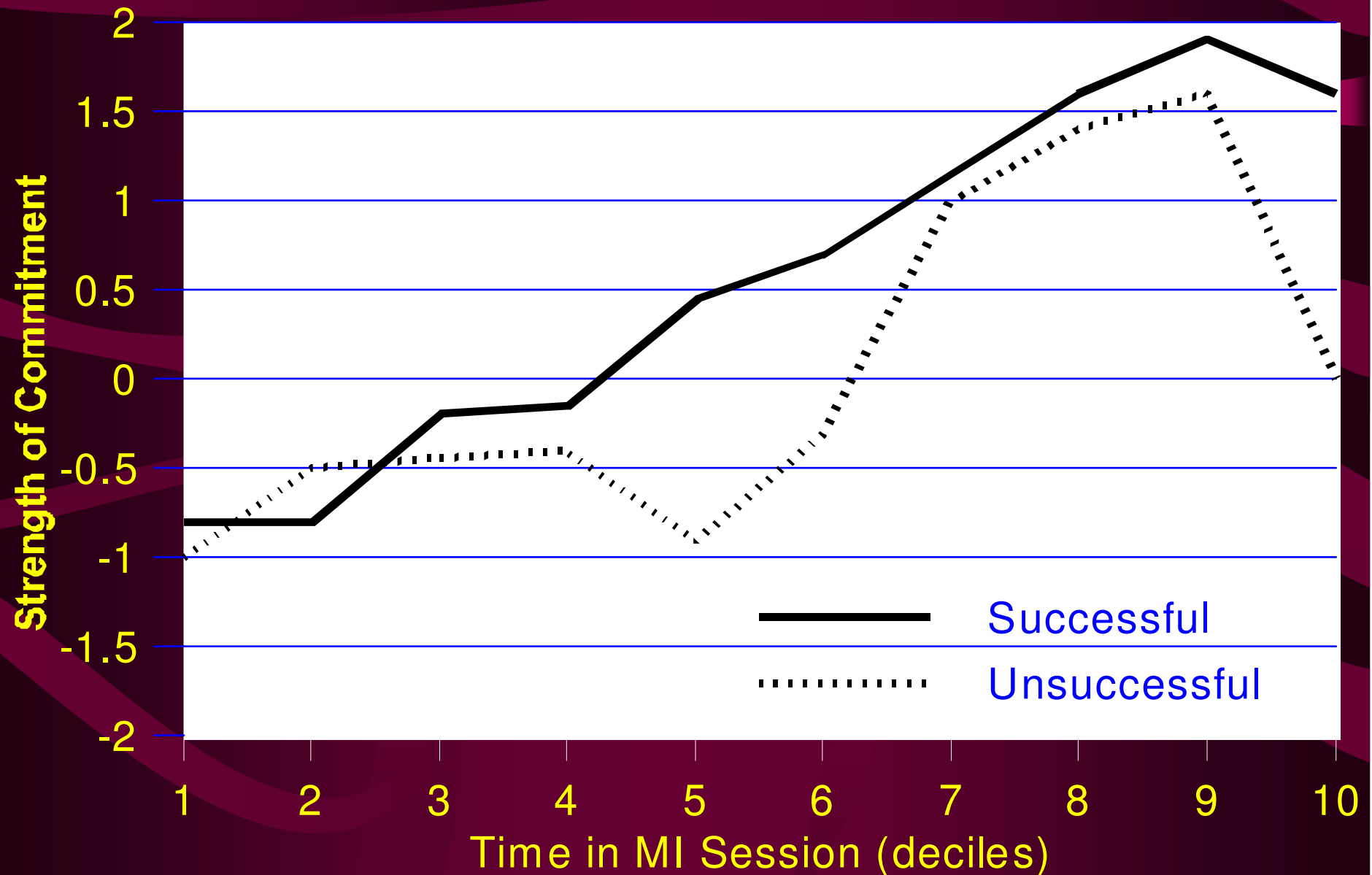
But there were site x treatment interactions

That is, MI worked at some sites and not others

4. Client change talk predicts behavior change

- Preparatory change talk (DARN) tends to precede mobilizing change talk (CATs)
- Commitment language may be more closely related to behavior change
- But DARN has also been found to predict change

Commitment Language in MI



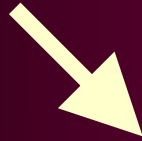
Language and Change

MI

**Desire
Ability
Reasons
Need**

Commitment

Change



5. Clinicians can substantially influence client change talk

- Average rates
- A-B-A-B within-client design
- At the response level: Sequential coding

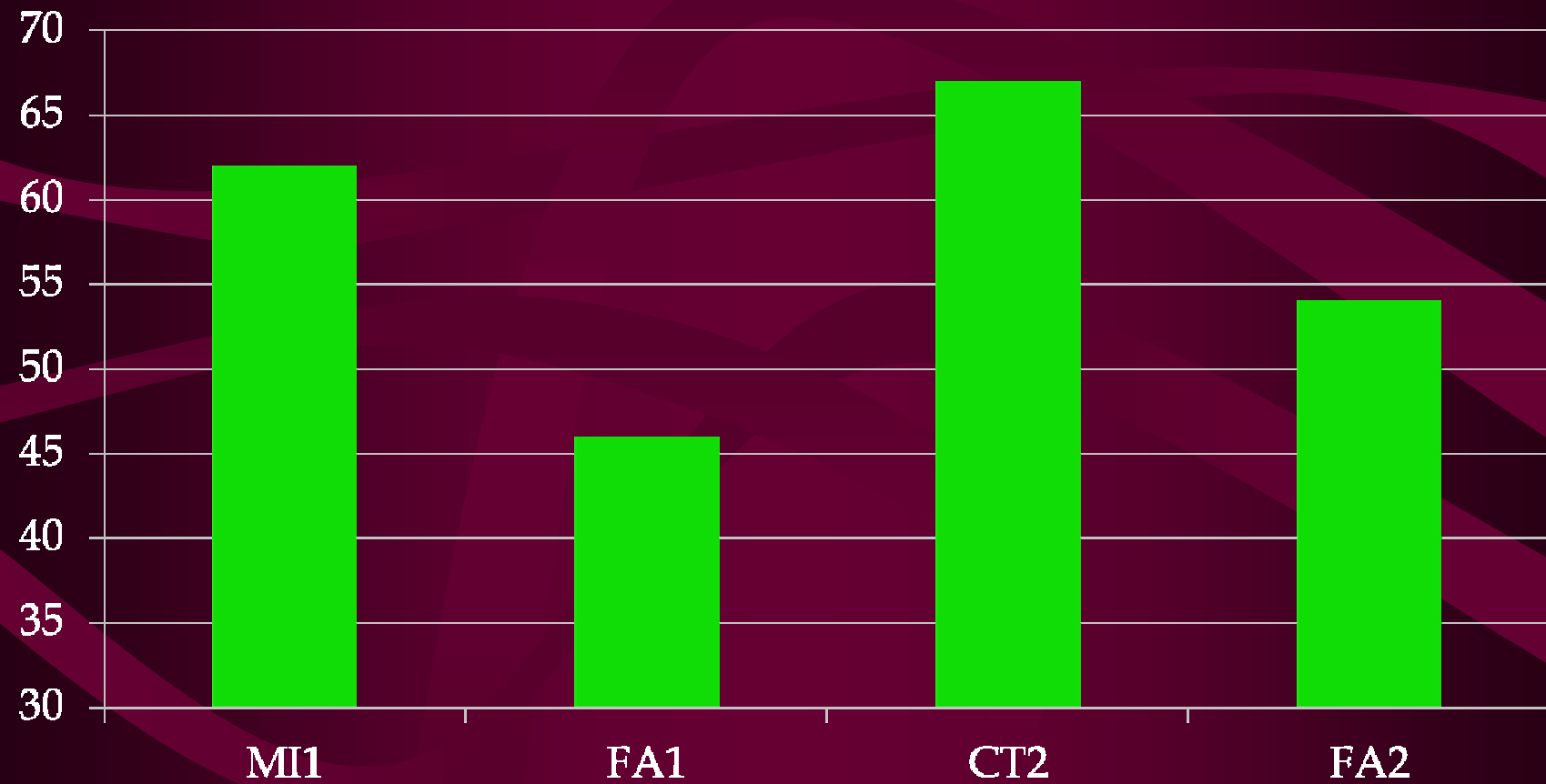
Evoking Change Talk

Glynn & Moyers (2010), *Journal of Substance Abuse Treatment* 39: 65-70

- 9 counselors in 47 conversations about drinking concerns alternated (in 12-minute segments) between
 - MI: MI-style change talk evocation and
 - FA: Functional analysis of drinking
- Coded change talk (CT) and sustain talk (ST)
- Dependent measure: % Change Talk defined as frequency of CT \div CT + ST

% Change Talk

CT / CT + ST



6. Client sustain talk and “resistance” predict lack of change

- CT:ST ratio predicts change
- “Resistance” behaviors predict nonchange

Predictors of Client Drinking Outcomes

(standard drinks per week at 1 year)
in Motivational Enhancement Therapy

Miller, Benefield & Tonigan (1993) *JCCP* 61: 455-461

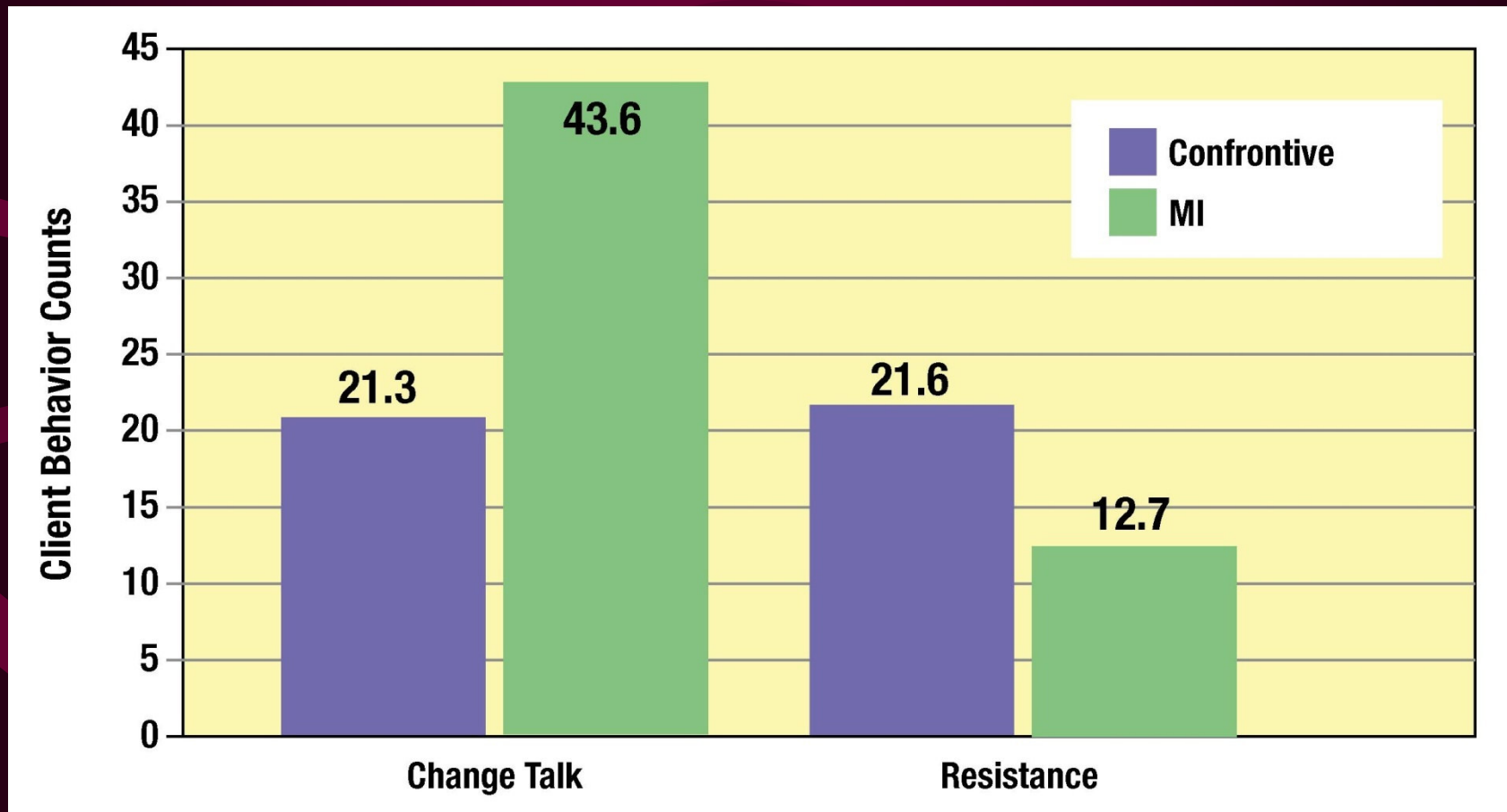
- Client Responses
 - Interrupt $r = .65, p < .001$
 - Argue $r = .62, p < .001$
 - Off Task $r = .58, p < .001$
 - Negative $r = .45, p < .01$

One therapist response (confront) also predicted outcome
 $r = .65, p < .001$ and all four client resistance responses

7. Clinicians can substantially impact sustain talk and discord

- Experimental (between-group) designs
- Within-subject designs
- Response-by-response sequential coding of response probabilities

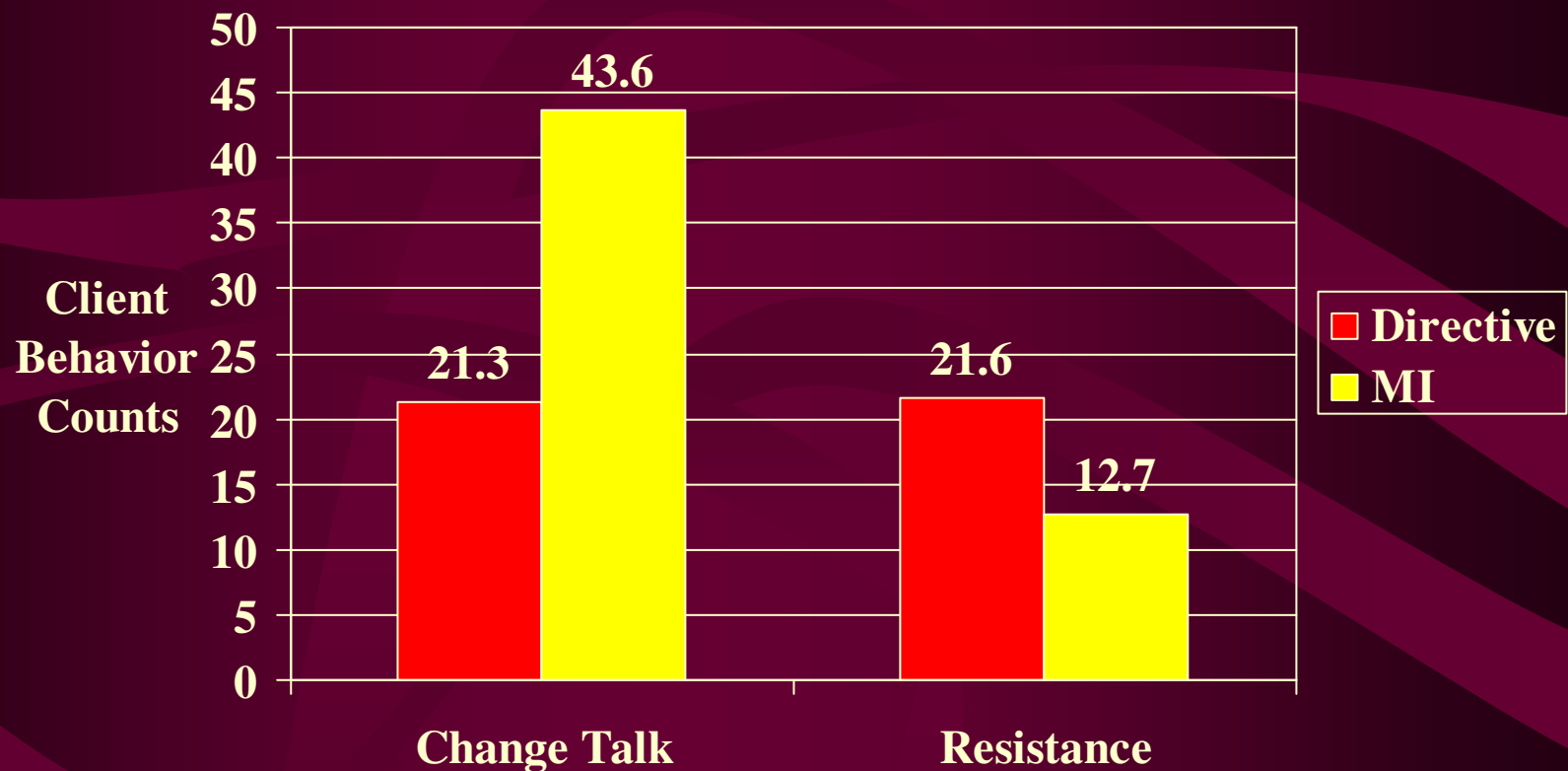
MI vs. Confrontive Counseling Style



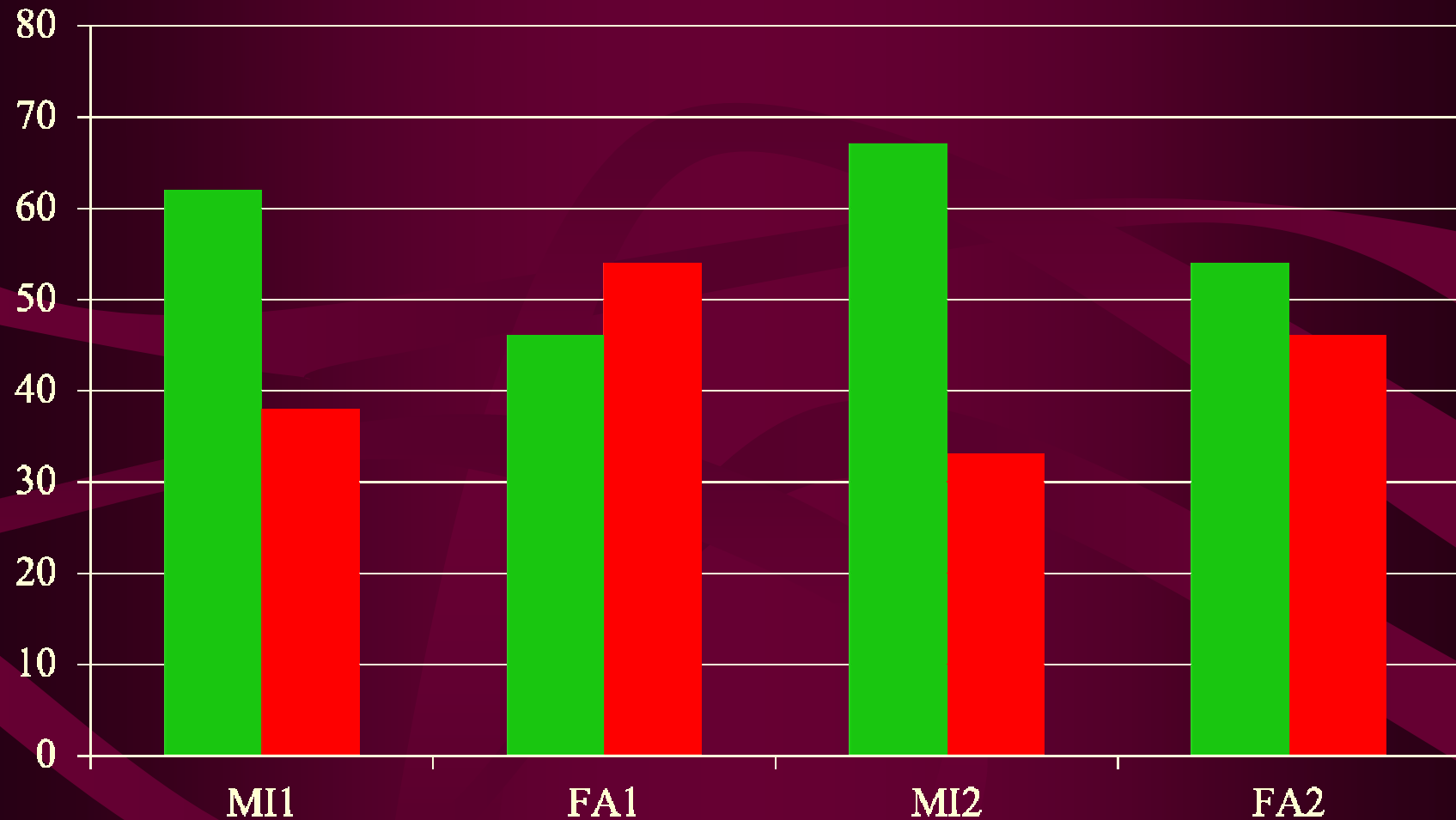
Miller, Benefield & Tonigan (1993) *JCCP* 61: 455-461

Therapist Style and Client Response

Miller, Benefield & Tonigan (1993) *JCCP* 61: 455-461



% Change Talk and Sustain Talk



Glynn & Moyers (2010), *Journal of Substance Abuse Treatment* 39: 65-70

8. MI fidelity predicts client change talk and behavior change

- Predictors: MI-consistent ratio, empathy, spirit
- Transitional probabilities in sequential analyses
 - MI-consistent predicts change talk
 - MI-inconsistent predicts sustain talk

9. MI can be reliably measured

- Therapist-only coding systems
 - (e.g. MITI, BECCI)
- Client-only coding systems
 - (e.g., CLAMI)
- Therapist and client coding systems
 - (e.g., MISC)
- Sequential coding systems
 - (e.g., SCOPE)

ICC Reliability of MITI

(undergraduate student coders)

- | | | | |
|------------------|-----|-------------------|-----|
| • Spirit | .72 | • Complex Ref | .71 |
| • Empathy | .69 | • Total Reflect | .91 |
| • Open Q | .96 | • MI Adherent | .88 |
| • Closed Q | .98 | • MI Non-adherent | .84 |
| • Simple Reflect | .88 | | |

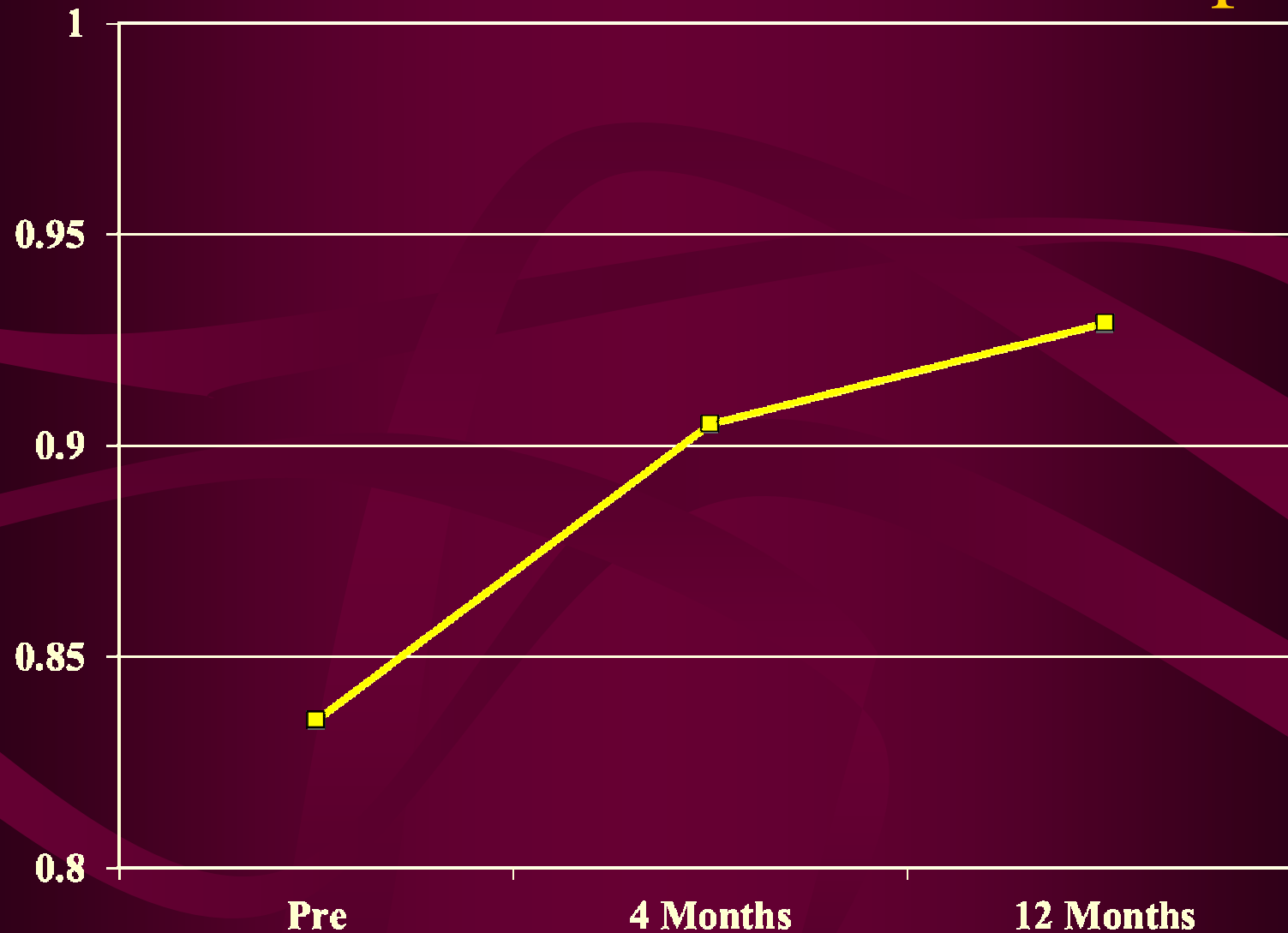
Validity of the MITI

- Demonstrated sensitivity to clinician training: Significant pre/post changes in Spirit, Empathy, and all behavior summary scores

10. MI is learnable

- Training research shows significant improvement in MI practice with training
- No relationship found so far between years of education and ability to learn MI

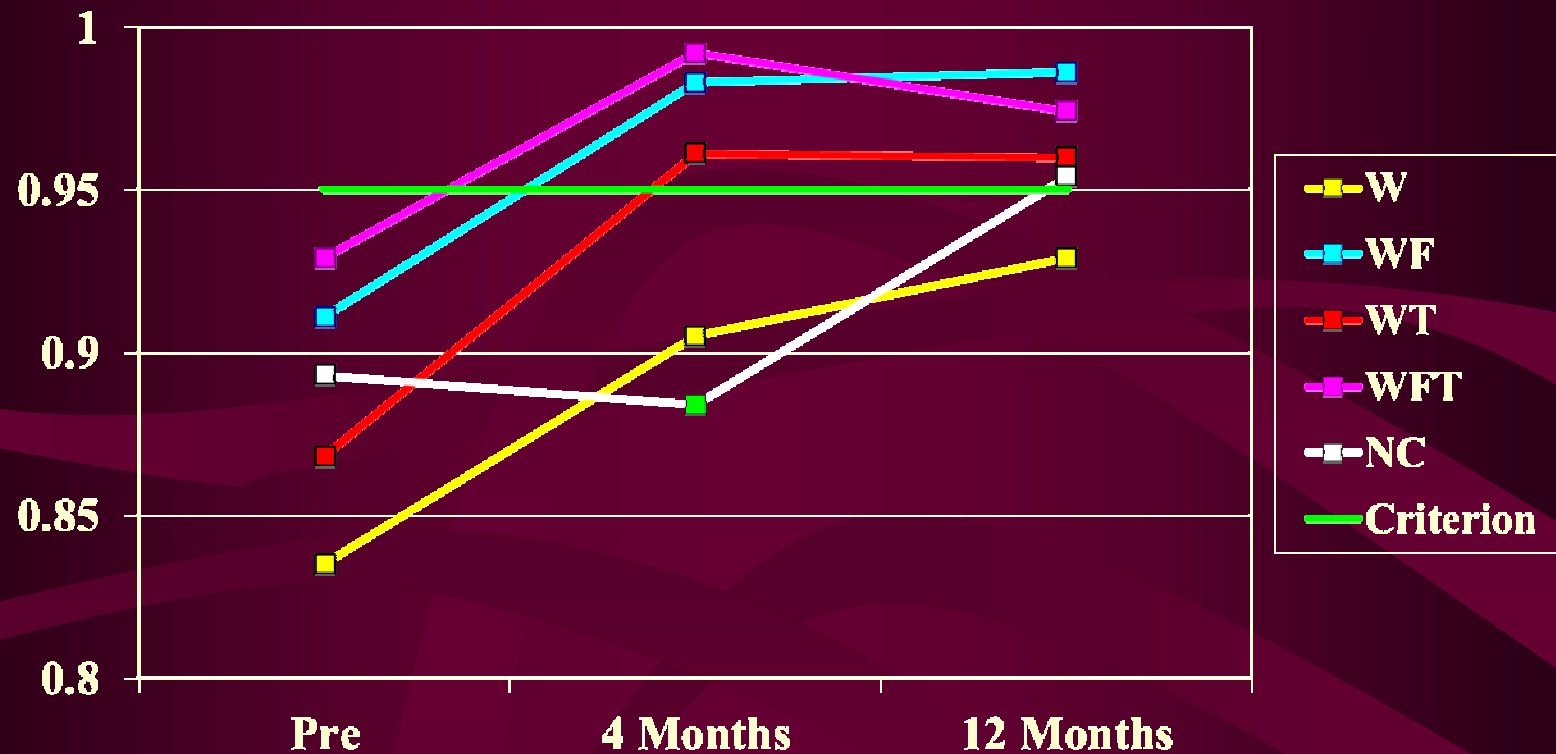
Percent MI-Consistent Responses Before and After MI Workshop



11. Feedback and coaching help substantially in learning MI

- Self-study: no significant improvement
- Workshop: small temporary changes
- Feedback improves MI performance
- Coaching improves MI performance
- Only feedback+coaching allowed trainees to increase client change talk

Percent MI-Consistent Responses

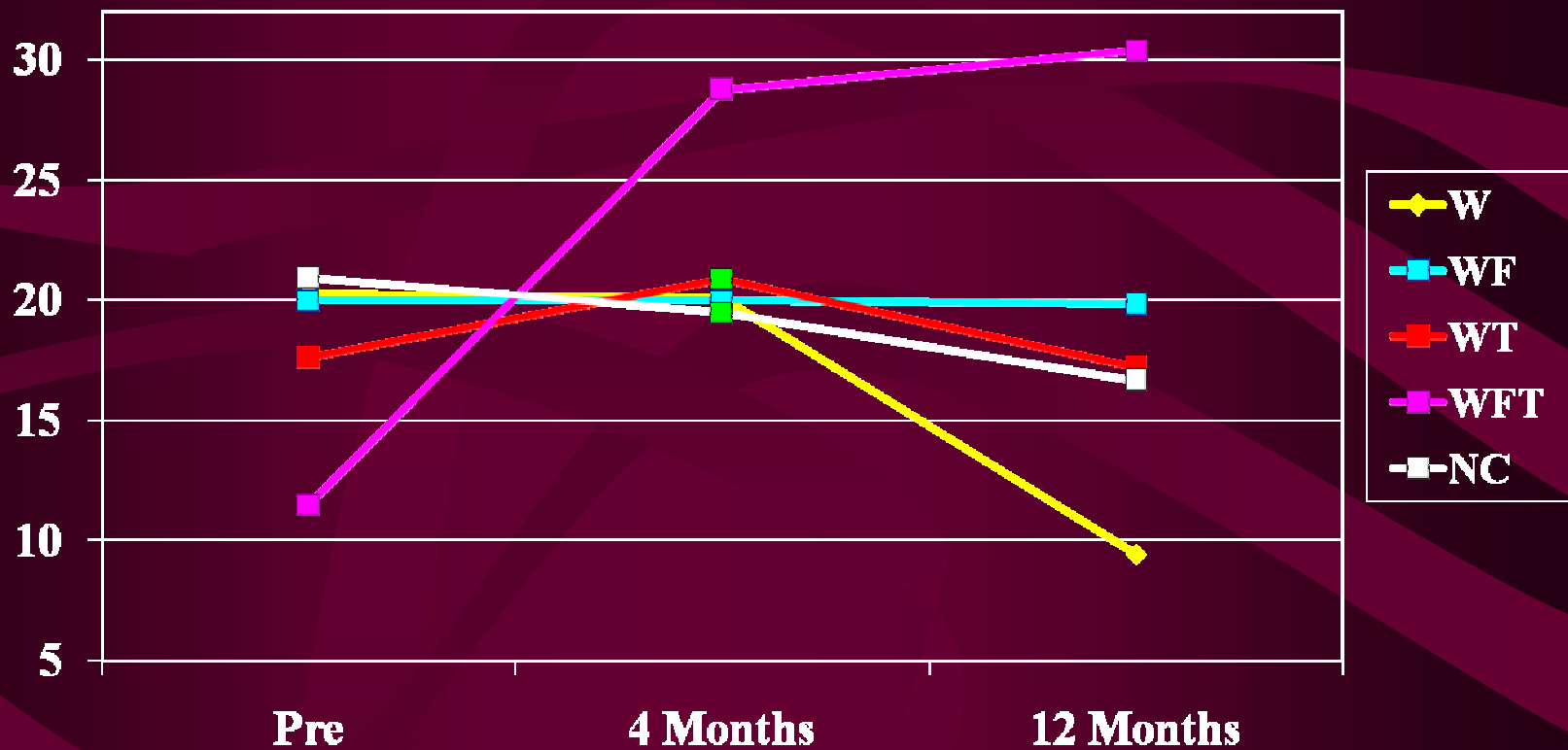


Trained groups > control at 4 months $p < .001$

All enhanced training groups exceed criterion

Due mostly to decreased MI-inconsistent responses

Client Change Talk



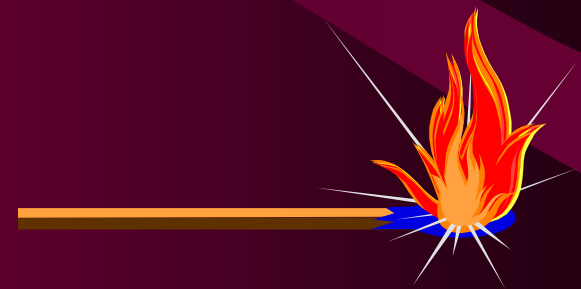
No significant increase except in Group WFT

12. Predictors of Client Response

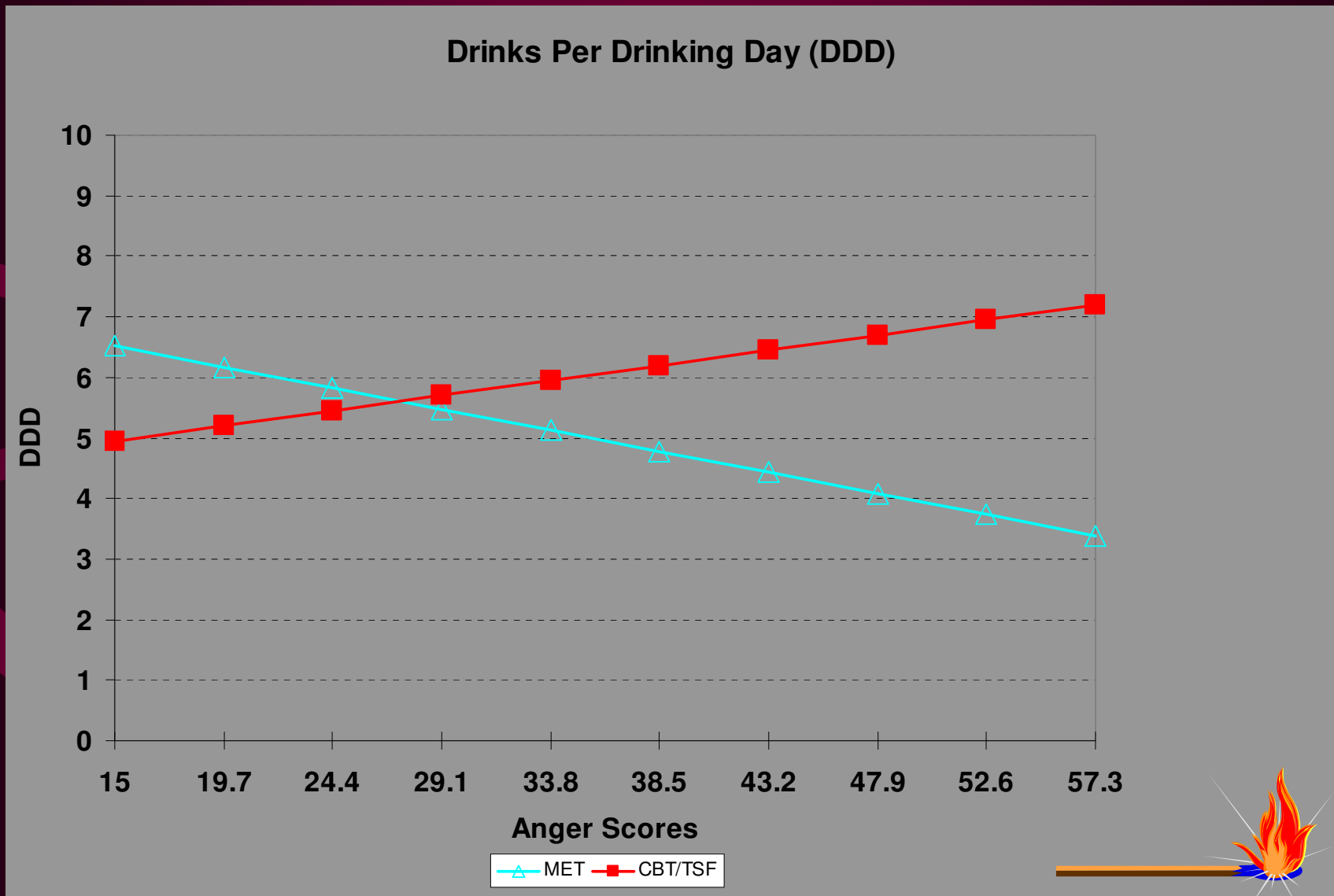
- Indicated for people who are less ready for change
- People who are already at the “action” stage do not benefit from MI, and may be deterred
- Higher response in minority populations
- Thus far few personality or diagnostic predictors of (non)response
- Trait anger predicts better relative response

Matching Hypothesis

Clients high in state/trait anger
will fare better in MET than in
CBT or TSF



Anger Match



MI Trainers and Translations

- Afrikaans
- Arabic
- Bulgarian
- Catalan
- Chinese
- Creole (Haiti)
- Croatian
- Czech
- Danish
- Dutch
- English
- Estonian
- Finnish
- Fon
- French
- Gaelic
- German
- Greek
- Hebrew
- Hindi
- Italian
- Japanese
- Korean
- Norwegian
- Persian/Farsi
- Polish
- Portuguese
- Punjabi
- Romanian
- Russian
- Serbian
- Sesotho
- Sign (U.S.)
- Slovenian
- Sotho
- Spanish
- Swedish
- Tamil
- Tswana
- Turkish
- Urdu
- Ukrainian
- Xhosa
- Zulu

Supported Steps in a Causal Chain

MI Training
Feedback
+ Coaching



Increased
MI Fidelity



Client
Change Talk



Change