

Research Findings on Psychotherapy and Counseling  
for Cocaine Use Disorders

*George E. Woody, M.D.*

Substance Abuse Treatment and Research Center

University of Pennsylvania/Philadelphia VAMC

## Definition

Psychotherapy = “a psychological treatment that aims to change problematic thoughts, feelings, and behaviors through creating a new understanding of the thoughts and feelings that appear causally related to the presenting difficulty”

## Theorized Mechanism of Change

“Change occurs in the context of a supportive relationship with a therapist who provides the patient with an opportunity to explore the underpinnings of maladaptive behaviors, thoughts, and feelings and then change patterns that contribute to distress”.

# Two Categories of Psychotherapy for Addictions

## 1) “Off the shelf”

- Used in general psychiatry
- Modified for addictive disorders
- Examples: CB, SE, IPT
- Therapists typically Ph.D's or MD's
- Much training

## 2) For addictions

- Motivational interviewing enhancement (Miller & Rollnick)
- Style is directive/non-directive
- Theory = insistence on immediate abstinence discourages rx entry
- Shorter training period than CB, SE, IPT
- Mirror opposite of DC/12-Step

# Drug Counseling for Addictions

The “standard”

Directive, concrete, drug-focused

Push for immediate cessation of use

Strong emphasis on 12-steps

Learned via courses, personal recovery, “on the job”

BA, MA or CAC

Basis for comparison with psychotherapies

## Settings Where Studies Done

### 1) Methadone Programs

- Potent pharmacotherapy
- Psychotherapy and counseling added
- Behavioral contingencies operative
- Penn and Yale studies examples

## 2) “Drug-free” programs

- NIDA Cocaine Psychotherapy study
- Project MATCH with alcohol
- Carroll study
- Few/no contingencies

### 3) Non-treatment-seeking

- MET/MI
- Focused on reducing HIV risk
- Booth study
- No contingencies

## Timeframes over which change assessed:

In methadone studies, after “stabilization”

- Usually have had reduction in use

In outpatient cocaine & alcohol studies, shortly after rx entry

- Little reduction in use

# Why Study Psychotherapy for Addictions?

Clinical observations

Many psychiatric problems/self medicate

Some substance-induced/disappear with abstinence

Others independent & need longer term rx

Help resolve ambivalence (MET/MI)

Psychiatric symptoms a common cause of relapse

High symptom levels = worse outcome

Most treatment done by persons with little psychiatric training

Maybe psychorx can improve, at least for some

Engage more; resolve ambivalence

# First Studies In Methadone Programs

## 1<sup>st</sup> Penn/VA study

- 1) After stabilization on methadone, random assignment to
  - DC
  - DC + SE
  - DC + CB
- 2) Therapies for 6 months

## Results

- 1) All improved
- 2) No differences for low severity patients
- 3) High severity patients did better if had additional psychorx
- 4) Improvements in drug use + other areas
- 5) ASPD alone improved less than ASPD + depression

## **High Severity Patients**

### **ANCOVA**

#### **Differences between groups**

**Employment area, SE and CB better than DC**

**Drug abuse area, SE and CB better than DC**

**Legal area, CB and SE better than DC**

**Psychiatric area, SE and CB better than DC**

Significant differences in outcome by therapist

Mediating factors:

- “Helping Alliance”
- Compliance with therapy

**Table 2. Per Cent Change from Start of Treatment to 7-Month Follow-up Outcome Measures\***

	N	DRUG USE	EMPLOYMENT STATUS	LEGAL STATUS	PSYCHIATRIC STATUS	BECK SCL-90 DEP.	MAUDSLEY N SCALE	AVERAGE EFFECT-SIZE†
<b>SE THERAPIST</b>								
A	10	34	32	20	102	58 44	64	0.74
B	8	33	34	17	49	37 46	59	0.59
C	8	-14	12	7	-4	8 -2	13	0.19
<b>CB THERAPISTS</b>								
D	11	61	19	17	34	36 39	44	0.53
E	10	70	22	13	19	24 30	30	0.44
F	9	48	10	11	14	14 21	33	0.46
<b>DC THERAPISTS</b>								
G	9	51	8	13	9	4 9	-1	0.20
H	6	46	-4	6	2	-3 11	3	0.13
I	7	66	17	7	15	14 15	17	0.27

Looked like psychotherapy effect due to “matching phenomena on H.S. pts

But, not sure since:

- Therapist effects present
- Unbalanced design – no “placebo” psychiatrist

Did show that psychosocial rx with methadone patients can help

## Yale Study

Randomized to DC or DC+IPT

All patients improved

No differences between groups

No interaction with psychiatric severity

Very low levels of drug use throughout

Title of paper: “Psychotherapy in Treated Addicts”

## Why Differences?

Therapist effects?

Low enrollment at Yale site

- Therapist offices not in clinic

Strong contingency in effect at Yale

- Suspension if urines positive after 3 months
- “Ironed” out/before randomization

## 2<sup>nd</sup> Penn/VA study

Done in community methadone programs

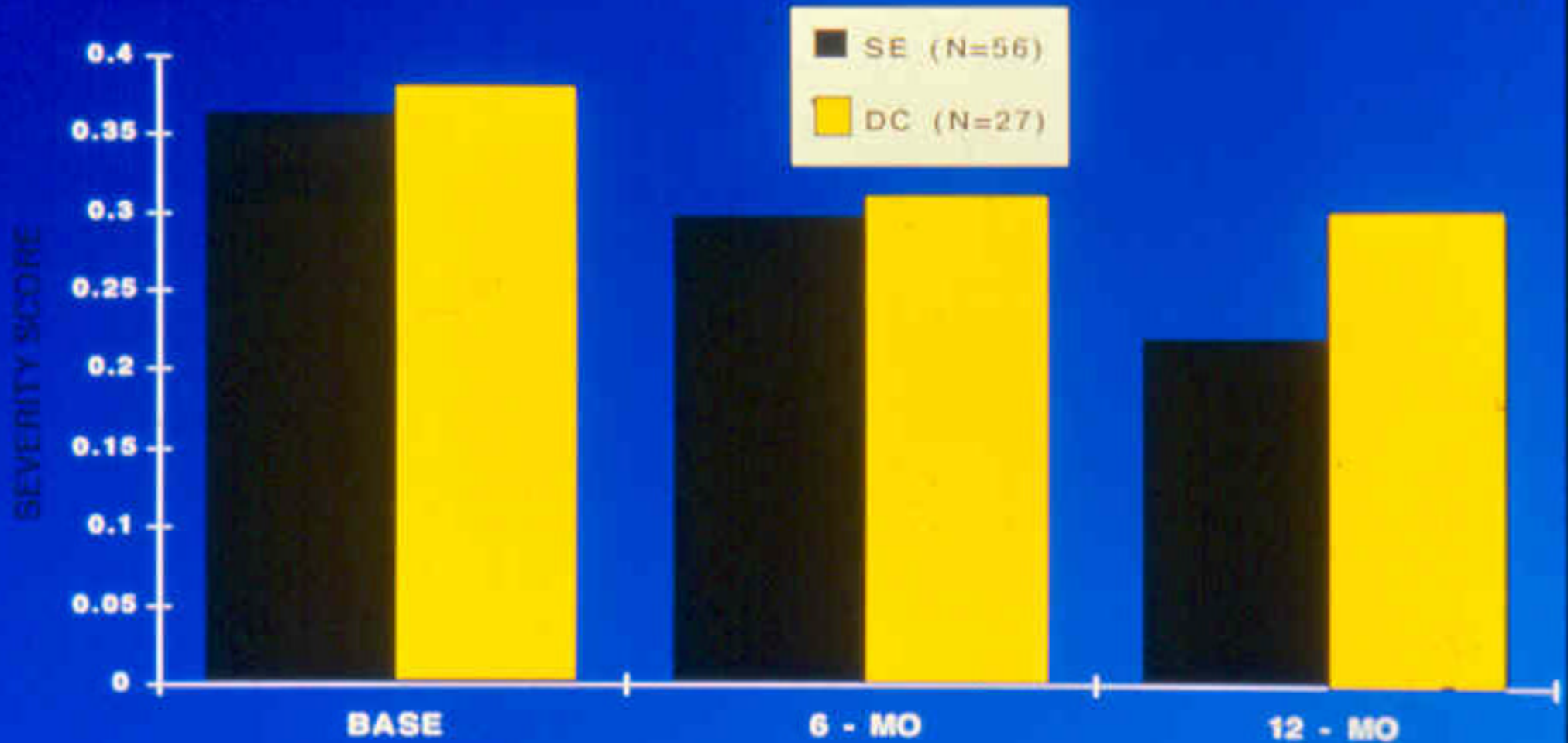
Enroll high severity patients only

Randomize to DC/DC or DC+SE

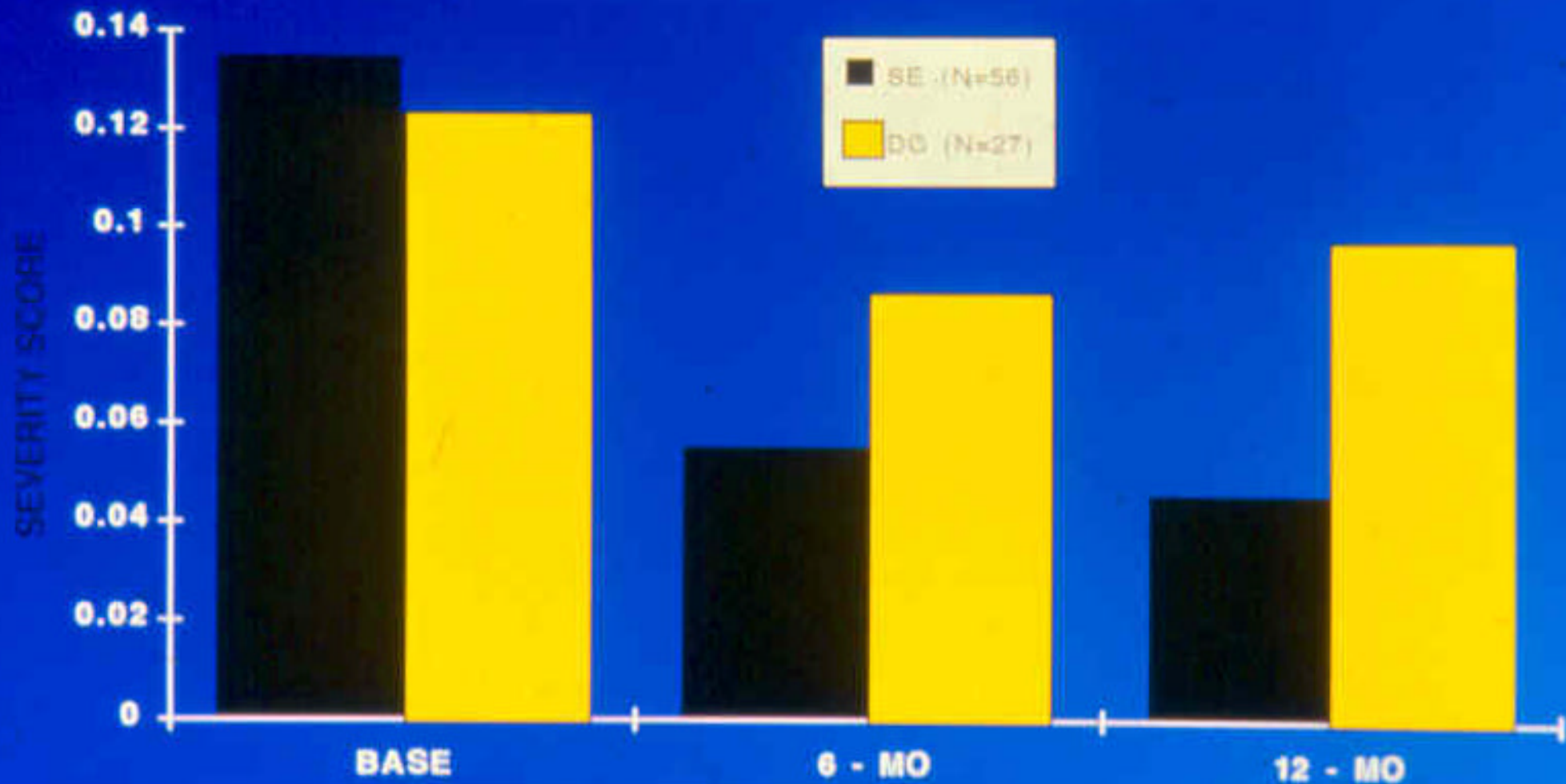
No differences at 6 months

Improvements favoring SE at 12 months

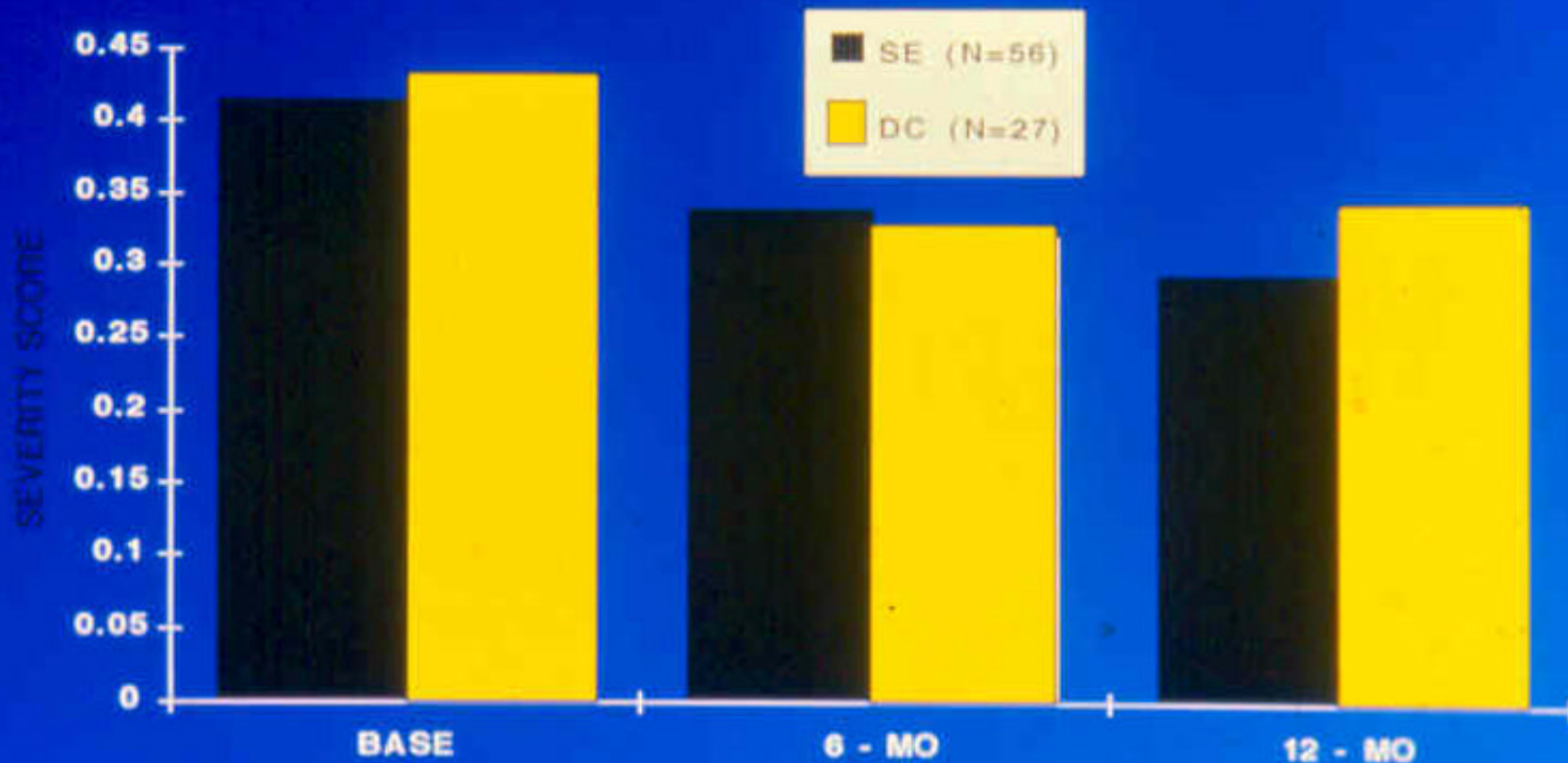
## DRUG PROBLEM: BASELINE TO 12-MONTH FOLLOW-UP



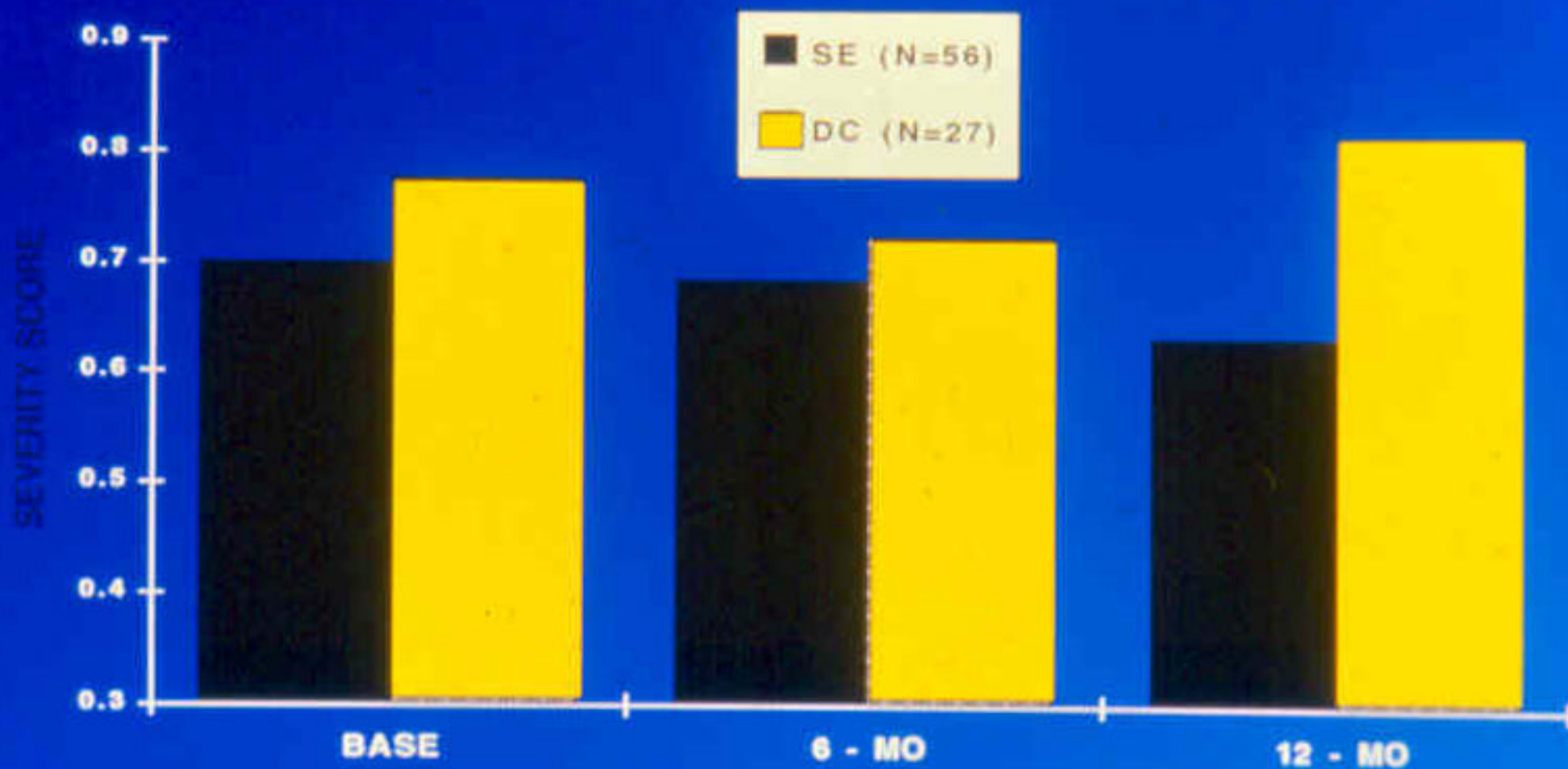
## ALCOHOL PROBLEM: BASELINE TO 12-MONTH FOLLOW-UP



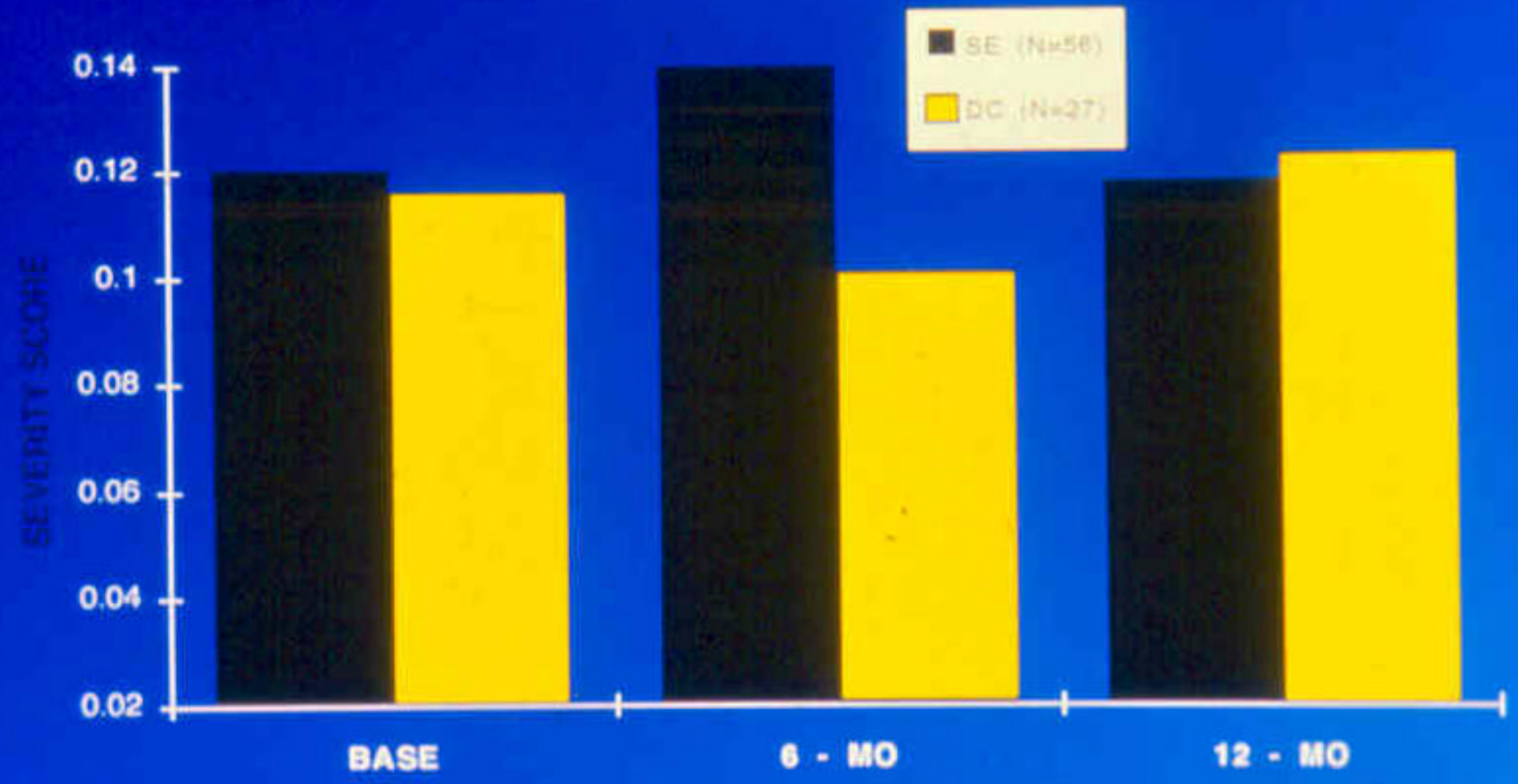
## PSYCHIATRIC PROBLEM: BASELINE TO 12-MONTH FOLLOW-UP



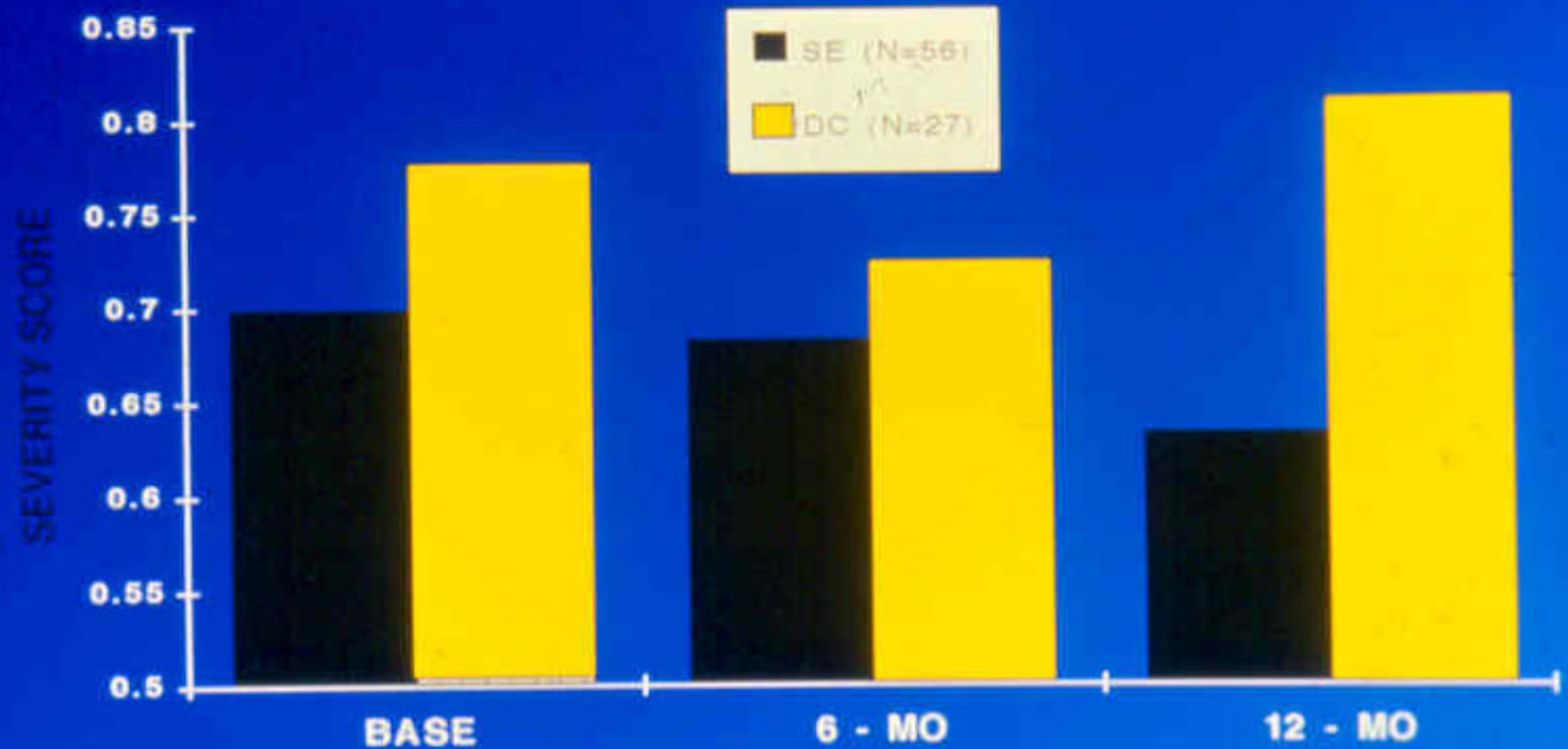
## MEDICAL PROBLEM: BASELINE TO 12-MONTH FOLLOW-UP



# LEGAL PROBLEM: BASELINE TO 12-MONTH FOLLOW-UP



## EMPLOYMENT PROBLEM: BASELINE TO 12-MONTH FOLLOW-up



## Value of “talking therapy” for methadone patients confirmed by McLellan, et al

- 1) Randomly assigned patients to:
  - One brief counseling session/month
  - Weekly counseling & referral out for psych med/rx
  - Weekly counseling & psych/med rx in clinic

# Levels of Treatment in Methadone Maintenance Programs

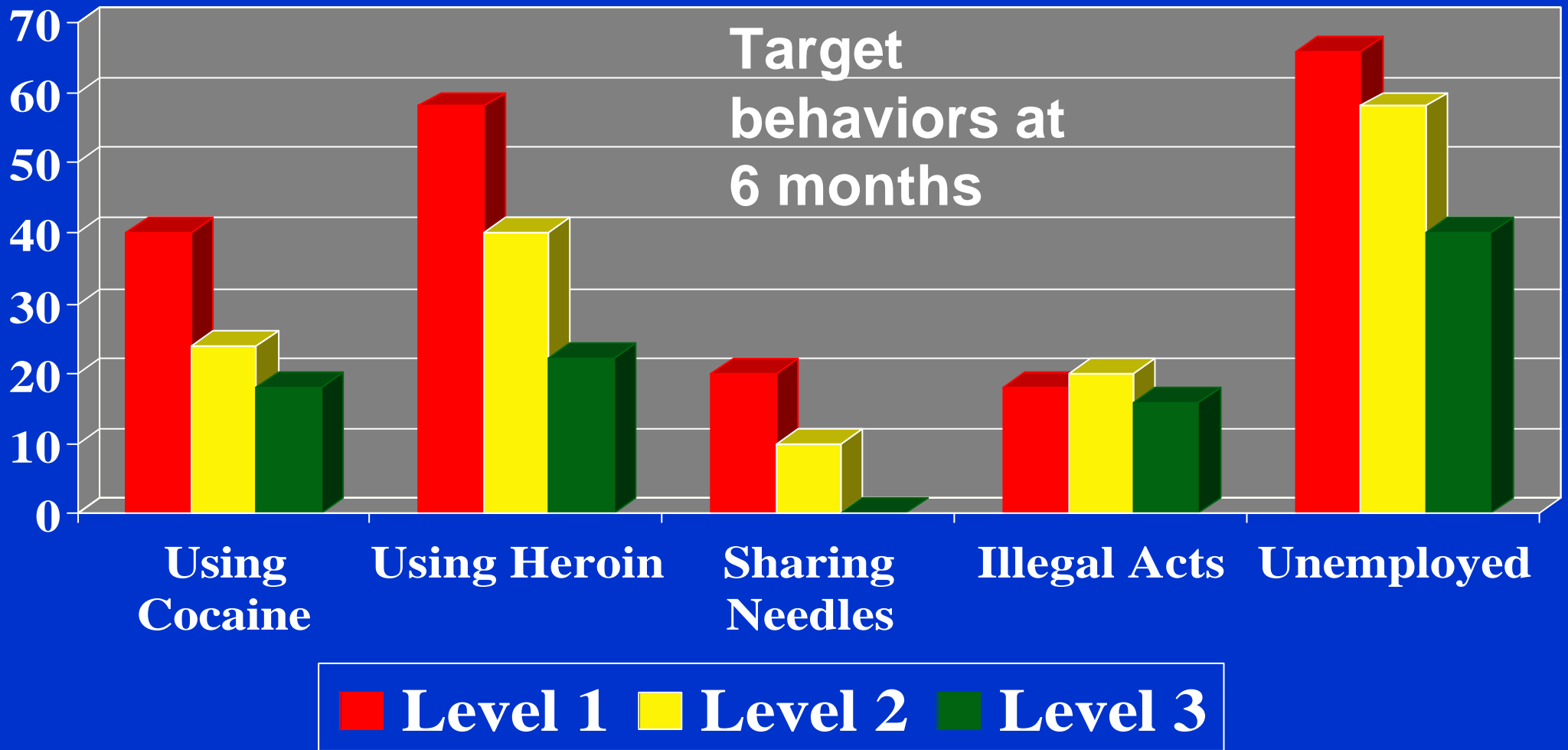
## Random Assignment

## 6 Months

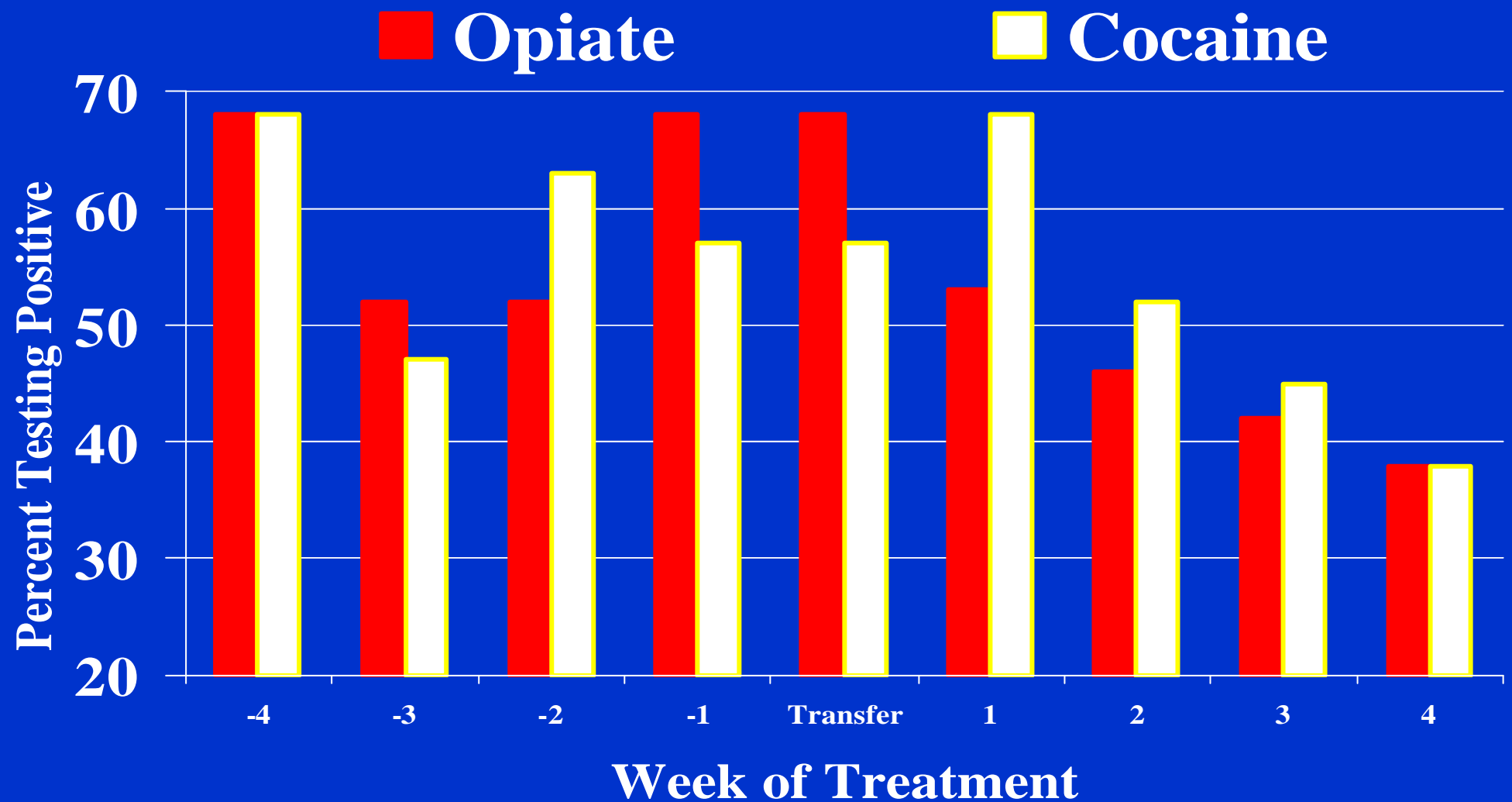
	<u>Level 1 *</u> <u>(n=29)</u>	<u>Level 2</u> <u>(n=34)</u>	<u>Level 3</u> <u>(n=36)</u>
<u>Methadone:</u>	> 60mg	>60mg	>60mg
<u>Urine/Breath:</u>	weekly	weekly	weekly
<u>Counseling:</u>	Emergency Regular	Emergency Regular	Emergency  Employment Family Therapy Psychiatric Care

\*does not include 13 patients not completing treatment

# Methadone Levels Study



# Methadone Only to Standard Treatment - Positive Urines



## Results

Stepwise improvement according to treatment condition

70% of brief counseling patients “protectively transferred”

Counseling & in-clinic psych/med rx did the best

“Dose-response” finding

Most cost-effective was weekly counseling

# **NIDA Collaborative Cocaine Treatment Study**

## **NIDA**

Jack Blaine, Lisa Simon-Onken

## **STUDY SITES**

### **Brookside Hospital**

Arlene Frank (P.I.)

Steven Butler (Co-P.I.)

Sarah Bishop (Project Director)

### **McLean/MA General**

Roger Weiss (P.I.)

David Gastfriend (Co-P.I.)

Lisa Najavits (Project Director)

### **University of Pennsylvania**

Lester Luborsky (P.I.)

Jacques Barber (Co-P.I.)

Delinda Mercer (Project Director)

### **University of Pittsburgh/WPIC**

Michael Thase (P.I.)

Dennis Daley (Co-P.I.)

Ihsan Salloum (Co-P.I.)

Judy Lis (Project Director)

# **NIDA Collaborative Cocaine Treatment Study**

## **UNIVERSITY OF PENNSYLVANIA COORDINATING CENTER**

Principal Investigator

Paul Crits-Christoph

Study Coordinator

Lynne Siqueland

Assessment Unit Director

Karla Moras

Data Management and Statistics Unit Director

Bob Gallop, Jesse Chittams

Larry Muenz

# Treatment Conditions

**CT: Cognitive Therapy + Group Counseling**

Beck, Wright, Newman & Liese (1993)

**SE: Supportive-Expressive Therapy + Group Counseling**

Mark & Luborsky (1992)

**IDC: Individual Drug Counseling + Group Counseling**

Mercer & Woody (1992), based on 12 step addiction & psychoeducational model

**GDC: Group Drug Counseling**

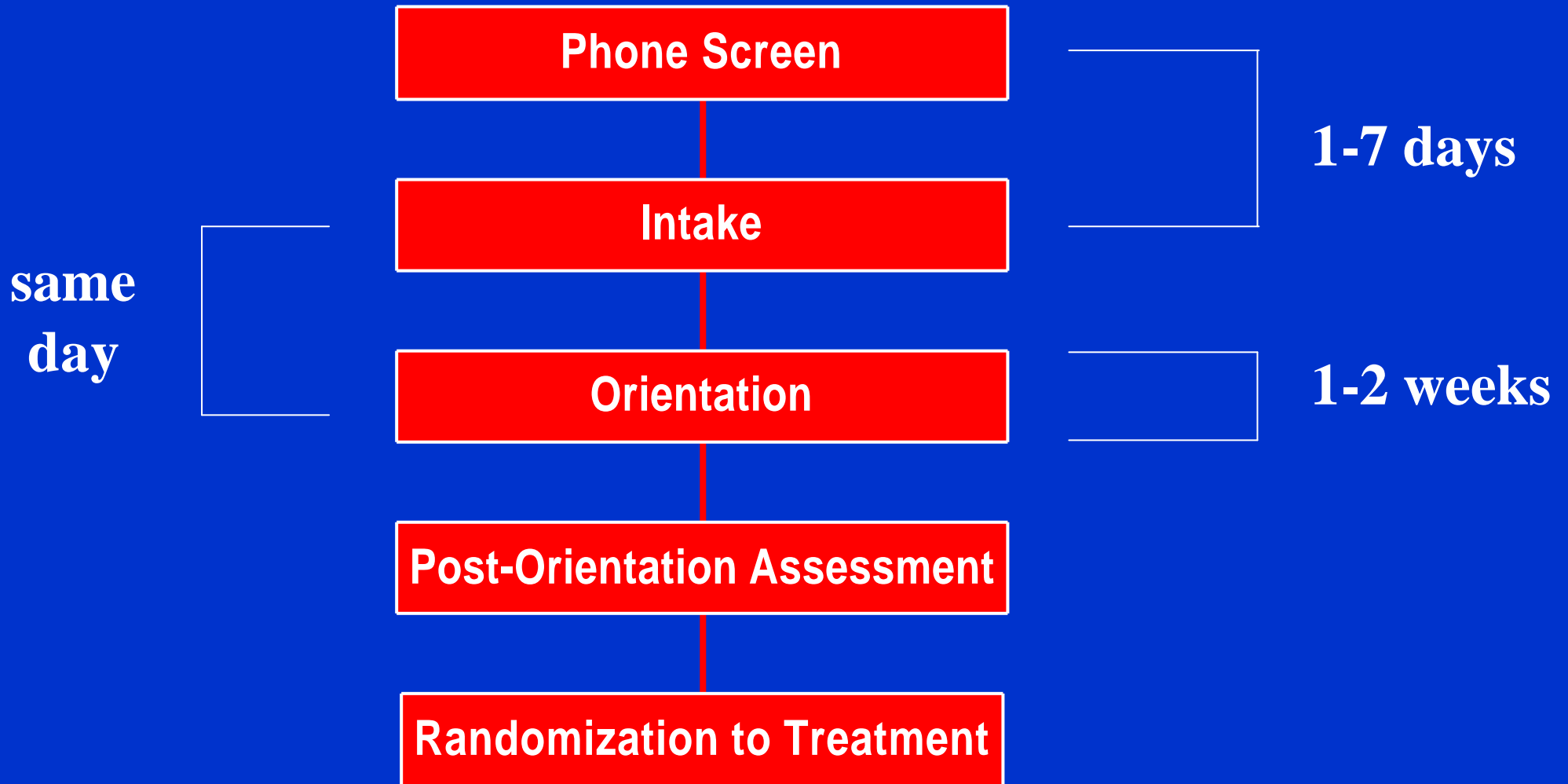
Mercer, Carpenter, Daley, Patterson & Volpicelli (1994), based on 12 step addiction & psychoeducational model

# Primary Goal of Study

To compare the short and long-term efficacy & patient acceptance:

- **Group Drug Counseling alone (GDC)**
- **Cognitive Therapy + GDC**
- **Supportive-Expressive Therapy + GDC**
- **Individual Drug Counseling + GDC**

# Study Design



# Study Design

## Active Phase of Treatment:

- Individual Treatment:
  - 2x/ week sess, 3 months
  - 1x/ week sess, 3 months
- Group Treatment
  - 1x/ week group, 6 months



**Booster Phase:** 1 session a month for 3 months

# Patient Flow

**2206** patients screened



**1784** (81%) eligible for intake



**937** (52%) attended intake

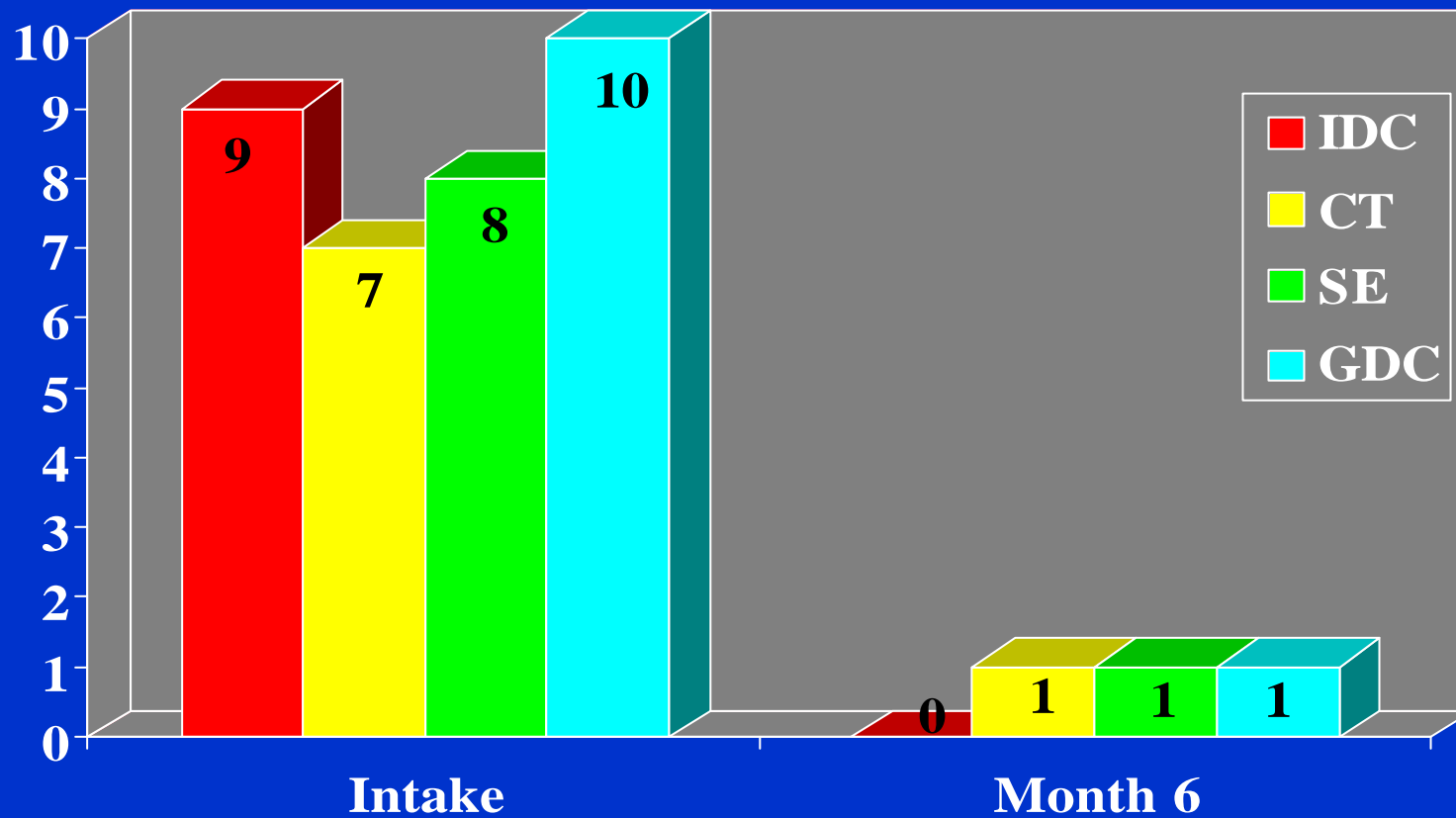


**871** (93%) began orientation

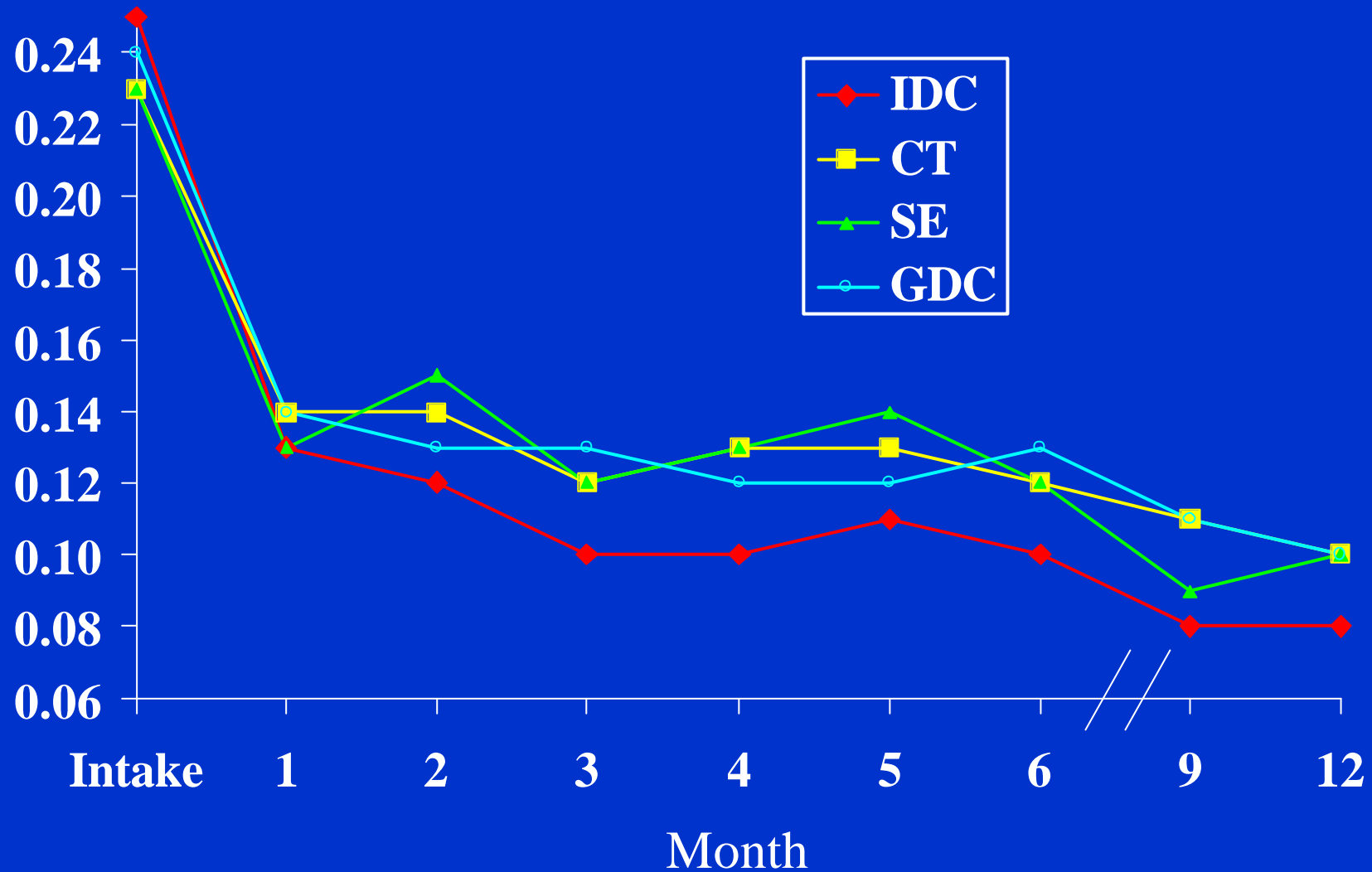


**487** (56%) randomized to treatment

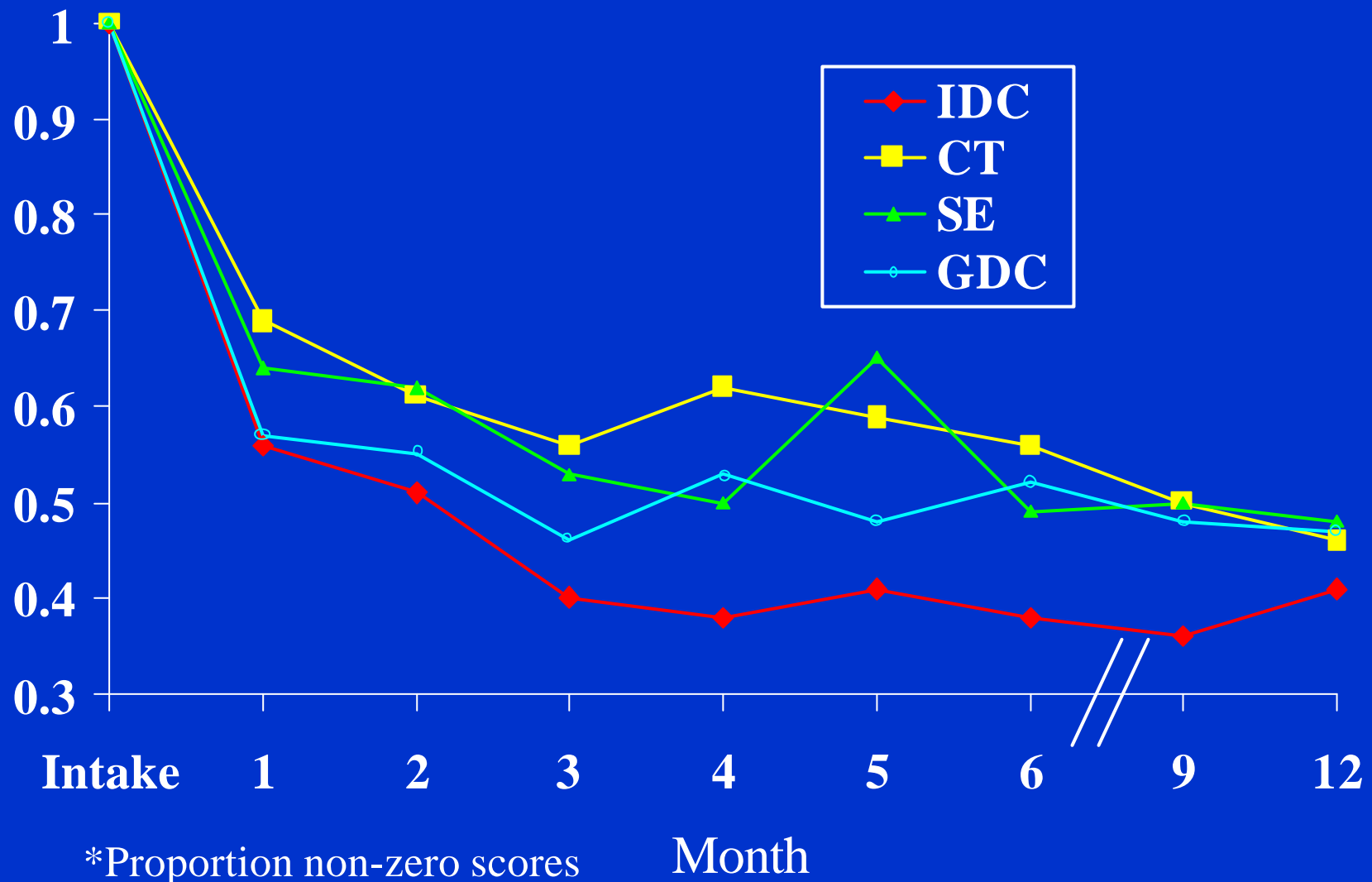
# Median Days Used Cocaine in Past 30 by Treatment Condition



# Mean ASI Drug Use Composite by Treatment Condition



# Percent Using Cocaine (past 30 days) by Treatment Condition\*



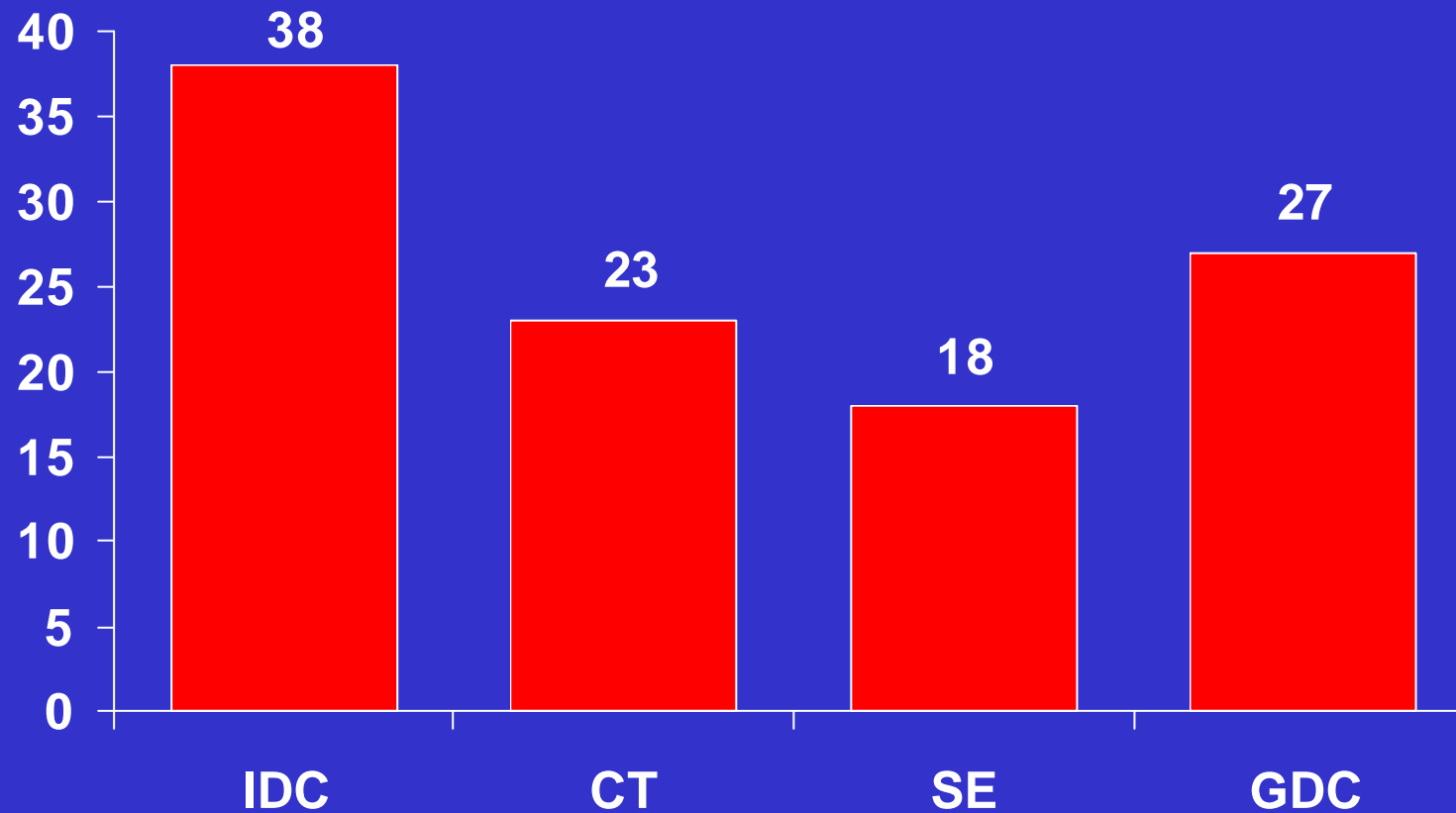
# Longitudinal Analysis of Cocaine Used Last 30 Days

	p value
<b>Overall treatment effect</b>	<b>.025</b>
IDC vs. CT & SE	.002
IDC vs. GDC	.11
GDC vs. CT & SE	.20

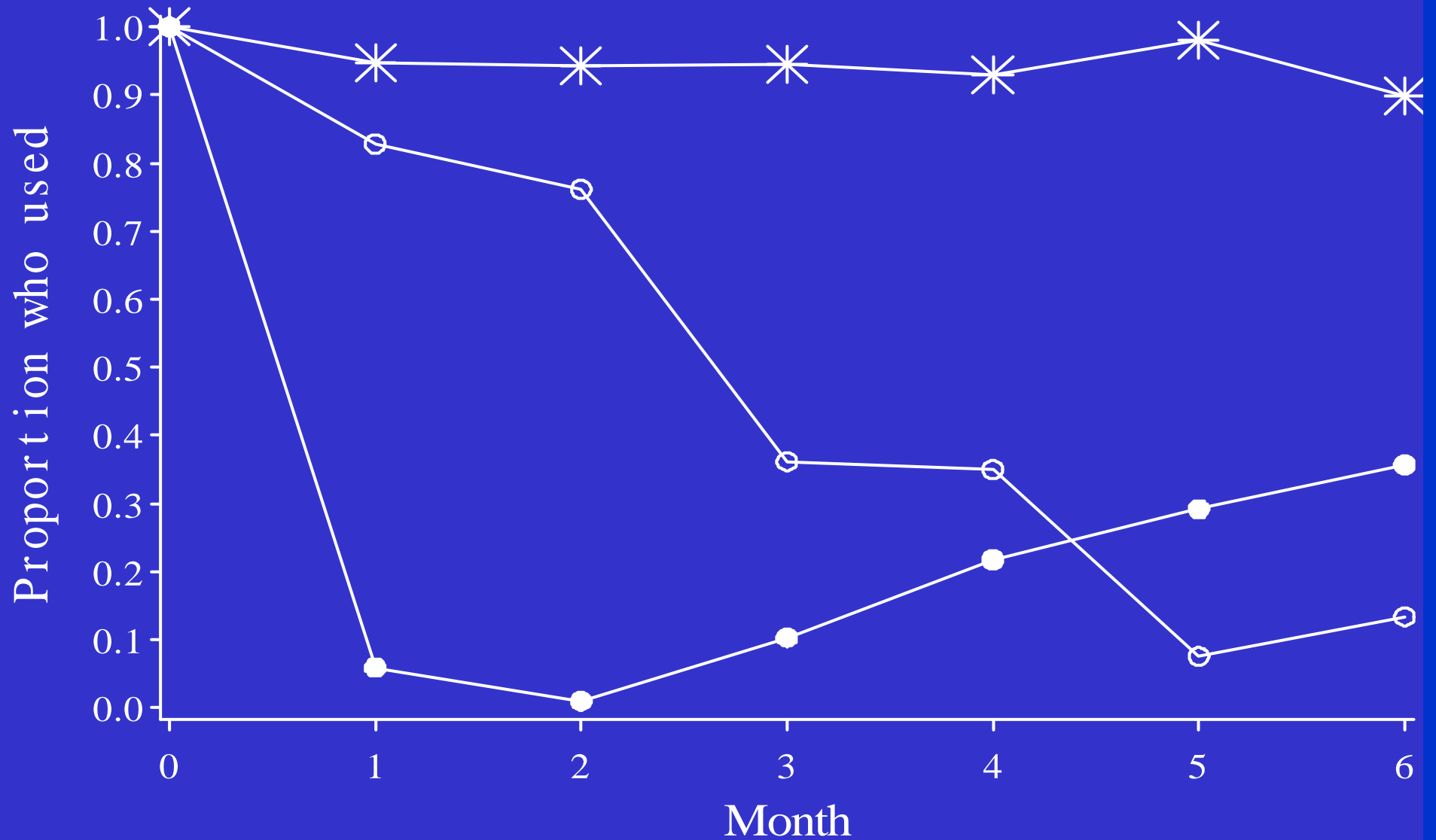
\*Bonferroni adjusted p value= .0167 (.05/3)

including covariates: site, intake drug and psych sev & CPI Soc

# Percent of Patients Achieving Three Months Abstinence



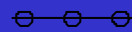
# Patterns of change in Drug Use Outcome



Cluster



Early Improvers



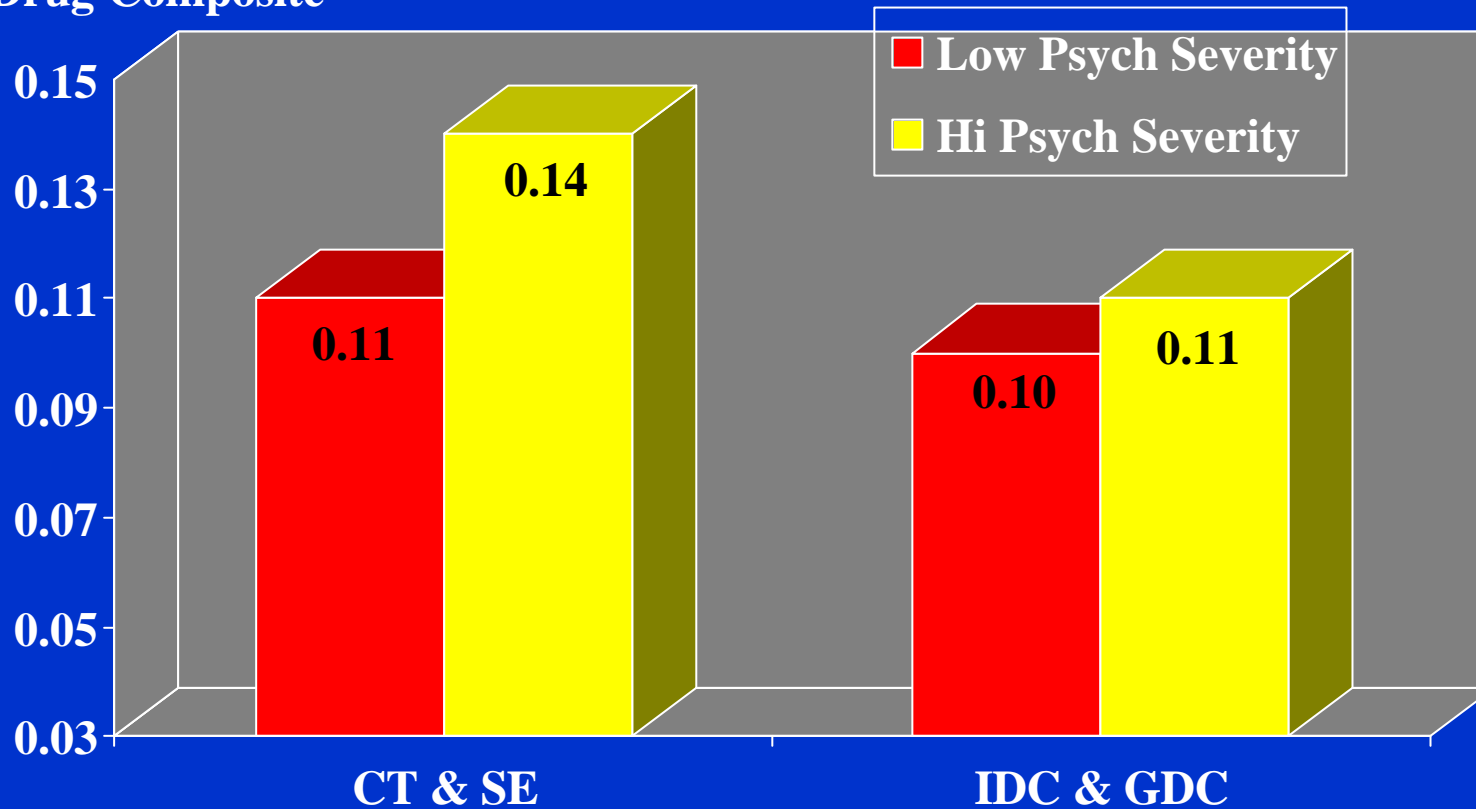
Steady Improvers



Continued Users

# Psychiatric Severity Interaction: ASI Drug Use Outcome by Treatment Condition

ASI Drug Composite



No therapist effects found

Helping Alliance high in all conditions

Attributable to extensive training and selection

## Conclusions:

- Hypothesis concerning superiority of psychotherapies to group alone not confirmed
- Hypothesis regarding better outcome in psychotherapies for patients with more psychiatric severity not confirmed
- Hypothesis regarding better outcome in CT than SE for patients with an externalizing coping style/sociopathy not confirmed

## Unexpected Finding:

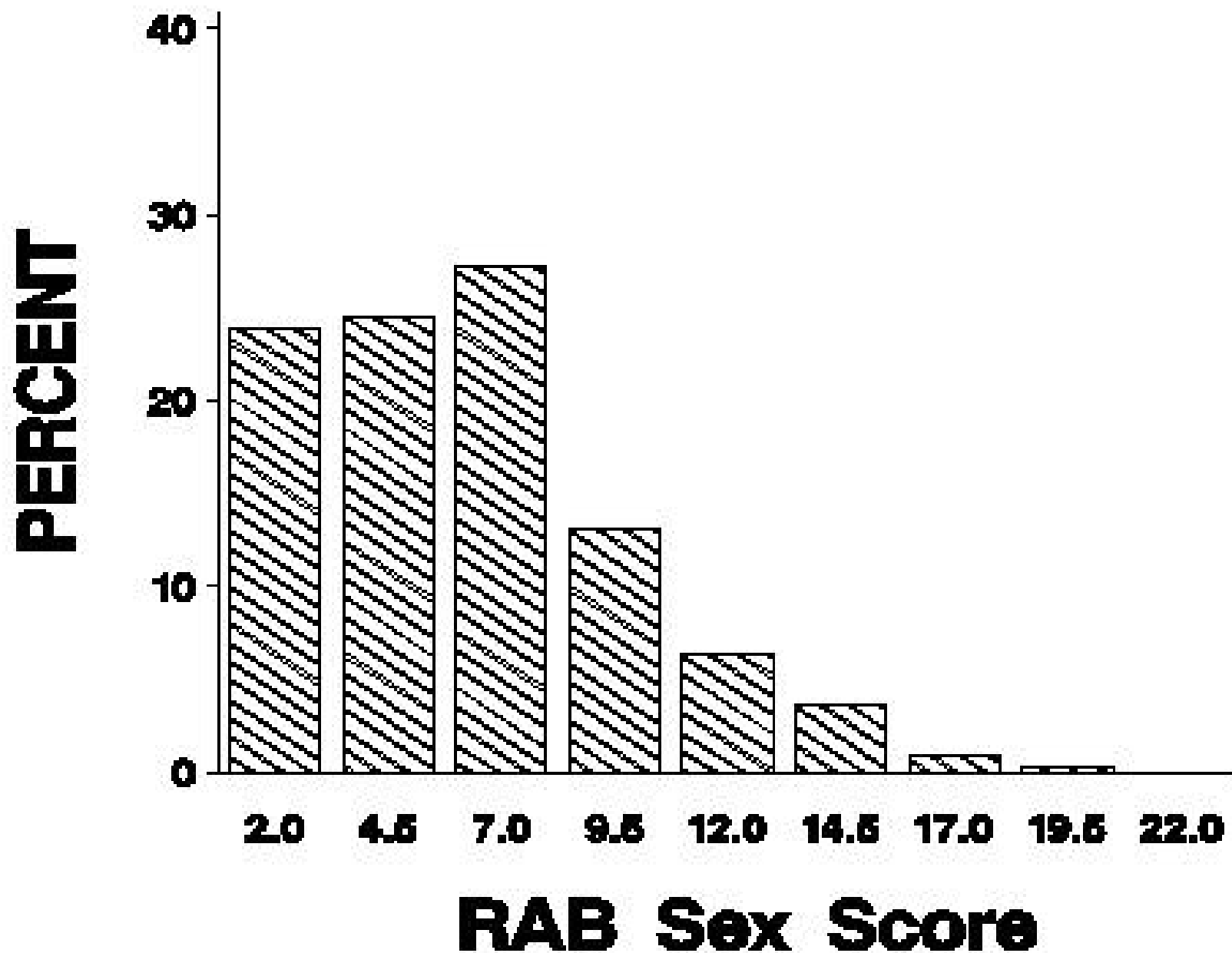
- Individual Drug Counseling consistently better outcome than psychotherapies

Reduction in cocaine use associated with an average 40% decrease in HIV risk

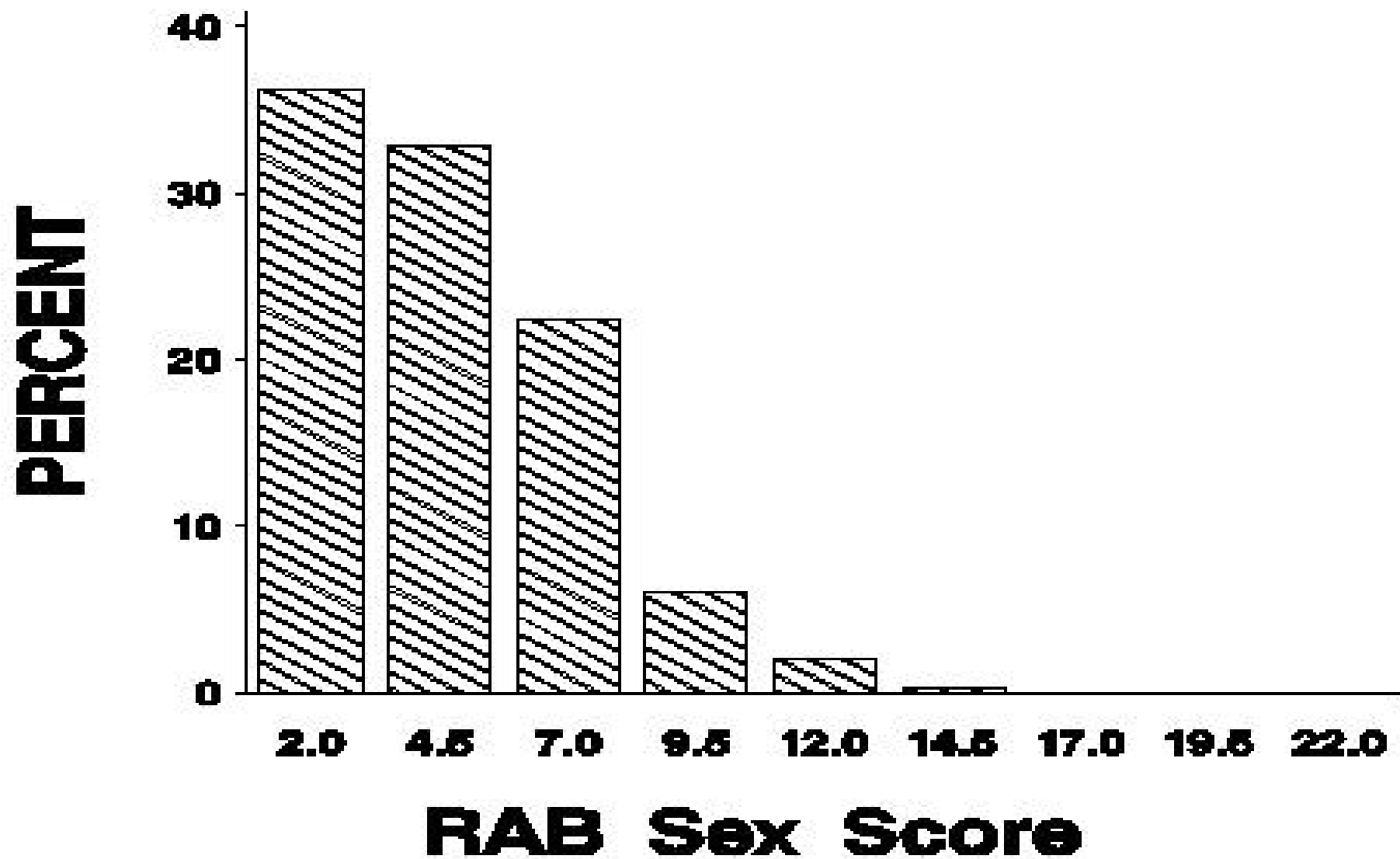
Seen across all treatment, gender and ethnic groups

Due to fewer sexual partners and less unprotected sex

# Post Stab SEX Risk



# Month 6 SEX Risk



# Project MATCH

1726 patients: 10 sites

2 arms: inpatient & outpatient rehab

3 therapies: CB, TSF, MET

12 wks therapy

1 yr follow-up

## Findings

60-80% reduction in:

- Percent days abstinent
- Drinks/drinking day

TSF = 40% abstinent in 90 days prior to 15 month FU

CBT & MET = 36-38% abstinent

Difference significant but not large

No interactions with psychiatric severity, ASPD, many others

Very similar to cocaine/psychorx study

## MI Study; Carroll et al:

- Random assignment to MI or TAU at intake
- One MI interview
- 2-3 times increase in attendance at first therapy session

## Un-Motivated Drug Users

- **Booth** et al. University of Denver
  - 4,000 IV Drug Users in 15 cities
  - Seeking HIV testing - Not Treatment
- **Randomly assigned to:**
  - HIV Testing Only
  - HIV Testing **PLUS MET Counseling**
- Six Month Follow-Up Results

# Drug Injection at Six Months

- HIV Testing Only

45%

- HIV Test + MET

\*20%

# Abstinence at Six Months

- HIV Testing Only

11%

- HIV Test + MET

\*42%

# Arrest Rate at Six Months

- HIV Testing Only

24%

- HIV Test + MET

14%

## CONCLUSIONS

Psychosocial treatments help

Effect size mild/moderate

Differences between therapies not large, when found

- Similar to psychorx studies for depression, anxiety, etc

Therapist effects can be significant

Can remove by training and selection

As “stand alone rx”:

IDC + GDC looks pretty good

MET/MI new and useful

HIV risk reduction with non methadone rx's

Cocaine rx:

- ? in use, sexual partners & unprotected sex
- mm: ? in injecting & sharing

Psychiatric therapies help H.S. methadone pts.

- If combined with DC
- Suspension may suppress

Similar findings with antidepressant studies (Nunes; others)

Similar benefits for HS cocaine or alcohol patients if used with a highly effective medication?