



Adolescent Treatment Effectiveness  
Second Chance Act Grantee Meeting  
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# Goals

- To take stock of how far we have come as a field, particularly in the last few years
- To identify Evidence-Based Treatments that are the most effective for populations with co-occurring mental health and trauma related problems that are manualized, replicable, and have training/certification

# Early Adolescent Treatment Work



<b>1910</b>	Worth Street Narcotic Clinic in NY – 743 youth
<b>1920</b>	Federal Narcotic Farms in Lexington, KY & Fort Worth, TX 22-440/yr
<b>1930</b>	Riverside Hospital in NYC – 250 youth
<b>1940</b>	Teen Addiction Hospital Wards in several cities
<b>1950</b>	Drug Abuse Reporting Program (DARP)- 5,405 youth (587 followed)
<b>1960</b>	Treatment Outcome Prospective Study (TOPS)- 1042 youth (256 followed)
<b>1970</b>	Services Research Outcome Study (SROS) - 156 youth
<b>1980</b>	National Treatment Improvement Evaluation Study (NTIES) - 236 youth
<b>1990</b>	Drug Abuse Treatment Outcome Study of Adolescents (DATOS-A) - 3,382 youth (1,785 followed)
<b>1996</b>	

Source: Dennis, M.L., Dawud-Noursi, S., Muck, R., & McDermeit, M. (2003)

# What these early studies taught us

- Treatment of adolescents with adult models and/or mixed with adults does not work and is actually associated with drop out and increased use
- Need to modify models to be more developmentally appropriate for youth'
- Need for assess and treat a wider range of problems including victimization, co-occurring mental health and education needs
- Need to modify materials to be more concrete and use examples relevant to youth

# Major limits through 1997

- Lack of standardized and evidenced based assessment and treatment limited the reliability of what was done
- Participation, treatment completion, and followup rates were often low limiting the validity of what could be learned
- The lack of any manualized evidenced based adolescent approaches limited the ability to disseminate and replicate what did work
- Difficult for clinicians, evaluators and/or researchers to work together or even enter the field

# CSAT's 10+ Year Investment in Improving Adolescent Treatment Effectiveness

- 1997-2001, Cannabis Youth Treatment (CYT) – 600 youth
- 1998-2001, Adolescent Treatment Models (ATM) -1334 youth
- 1998-2004, CSAT/NIAAA experiments – several hundred youth
- 2000-2002, Persistent Effects of Treatment Study of Adolescents (PETS-A) - 1200 youth
- 2001-2003, CSAT/RWJF Reclaiming Futures, 445 youth
- 2002-2007, Strengthening Communities for Youth (SCY) – 2,249 youth
- 2002-2012, Targeted Capacity Expansion (TCE) – 1,417 youth
- 2003-2006, Adolescent Residential Treatment (ART) – 1,458 youth
- 2003-2007, Effective Adolescent Treatment (EAT) – 5,854 youth
- 2004-2009, Co-occurring State Infrastructure Grants (COSIG) -system
- 2004-2009, Young Offender Re-entry Program (YORP) – 1,597 youth
- 2005-2008, State Adolescent Coordinator (SAC) -system
- 2005-2010, Juvenile Treatment Drug Court (JTDC) – 1,678 youth
- 2006-2010, Adolescent Assertive Family Tx (AAFT)-2,769 youth
- 2007-2011, Brief Interventions and Referrals to Treatment (BIRT) and other Office of Juvenile Justice and Delinquency Prevention and Robert Woods Johnson Foundation (OJJDP/RWJF)- 315 youth
- 2010- Currently working to extend work in collaboration with CSAP, ED, DOL, HRSA, and OJJDP

# Big Changes

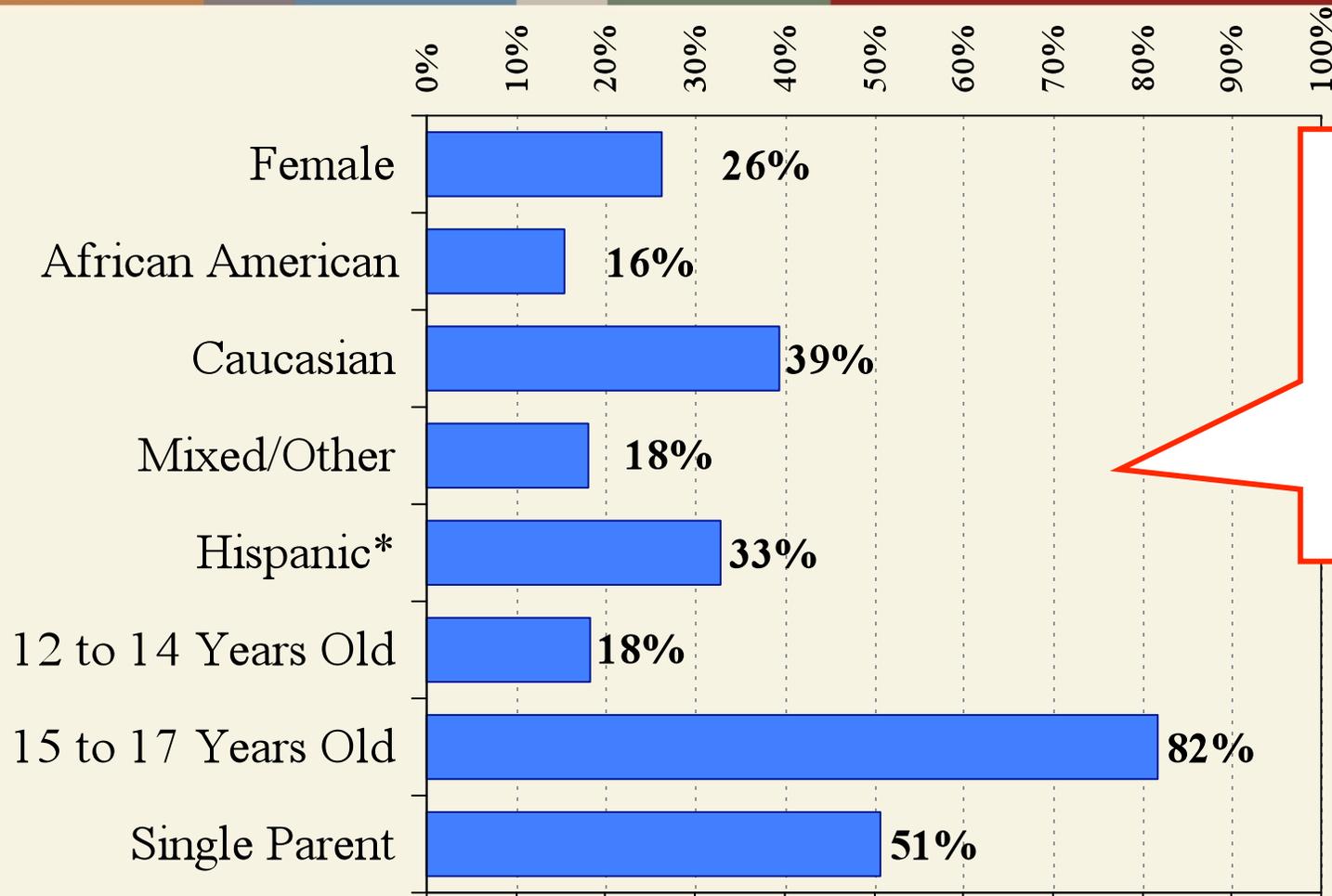
- Over 80% participation, use of evidenced based assessment, use of evidenced based intervention, and follow-up
- Have pooled data from 19,229 youth assessed with the Global Appraisal of Individual Needs (GAIN), including 88% with one more follow-up, made available for program evaluation and secondary analysis, and helped to generate over 200 publications
- Have supported the creation and evaluation of over 20 adolescent treatment manuals
- Several System level grants

# Big Changes - Continued

- Funded large scale replications of three major evidenced based practices
  - Motivational Enhancement Therapy/ Cognitive Behavior Therapy (MET/CBT) in the 36 site EAT program and multiple independent grants
  - Adolescent Community Reinforcement Approach (A-CRA) and Assertive Continuing Care (ACC) in the 74?? Site AAFT program and multiple independent grants
- Also funded multiple state and independent grants to replicate other evidenced based practices including
  - Family Support Network (FSN)
  - Motivational Interviewing
  - Multidimensional Family Therapy (MDFT)
  - Multi-Systemic Therapy (MST)
  - Seven Challenges (7C)



# Demographic Characteristics

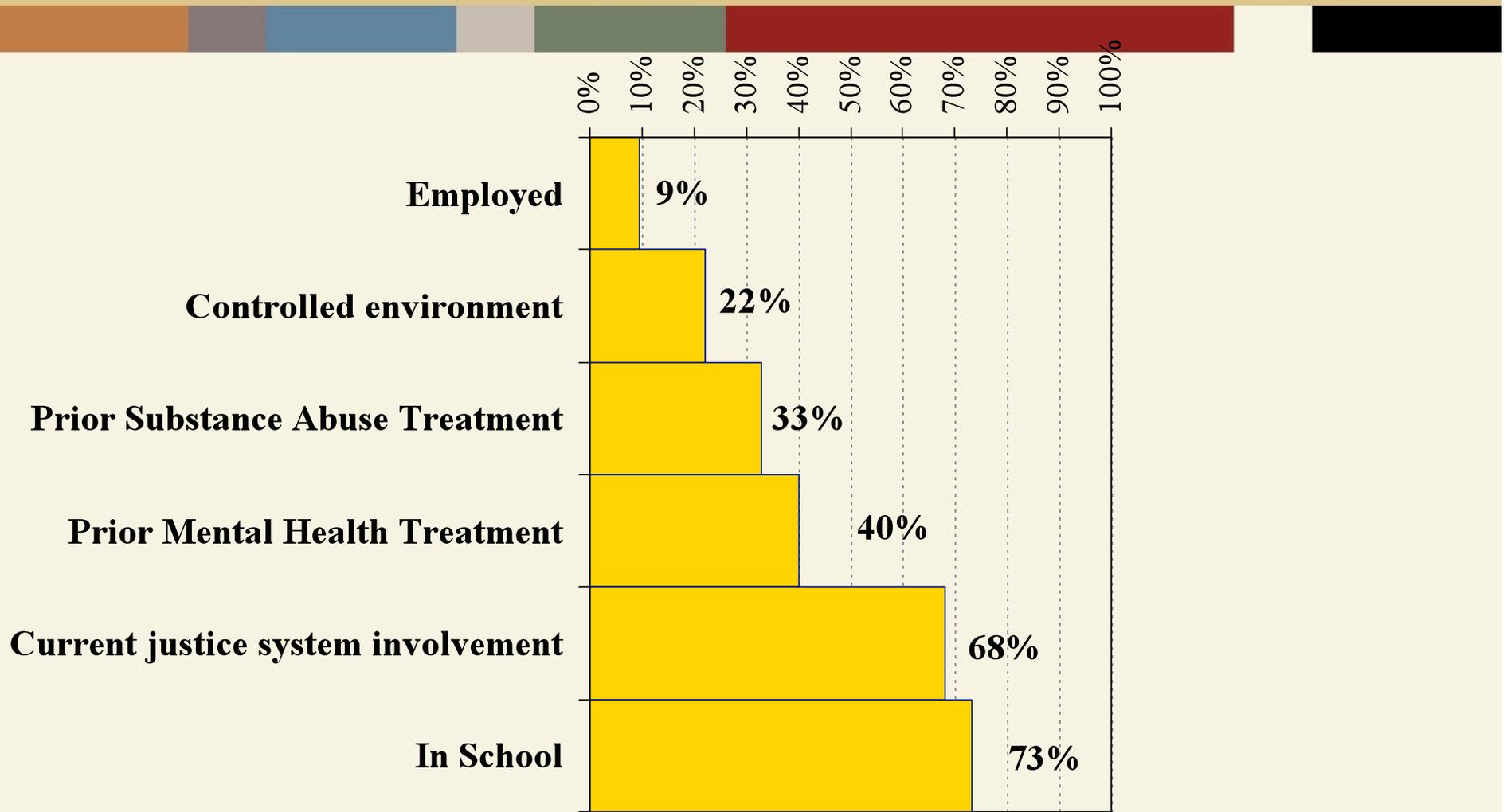


**CSAT data is diverse with large numbers of females, minorities, and younger adolescents**

\*Any Hispanic ethnicity separate from race group

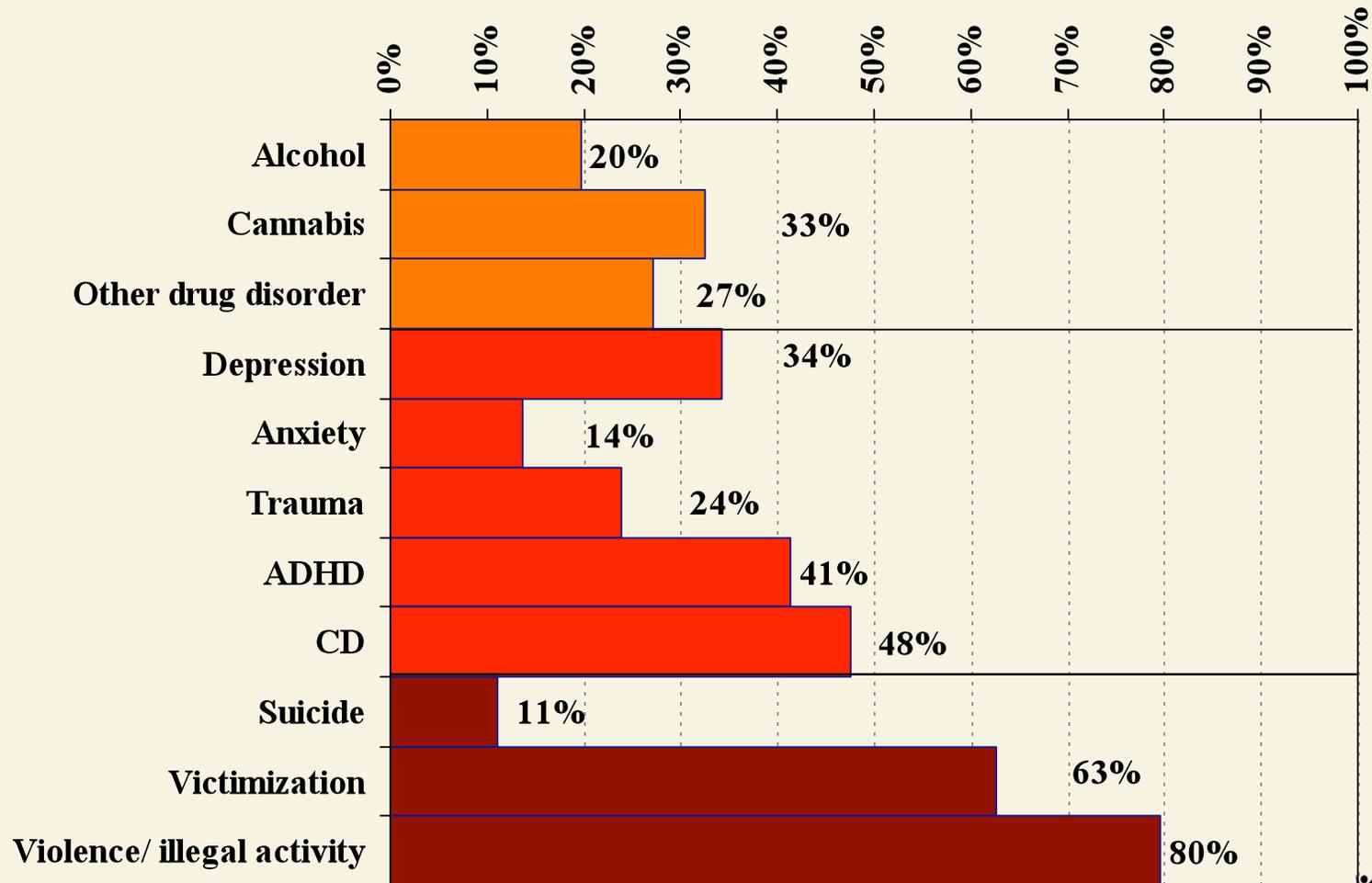
Sources: CSAT 2009 SA data set Adolescent Subset (n=19,145).

Youth are involved in multiple systems placing competing demands on them and potentially in conflict with each other



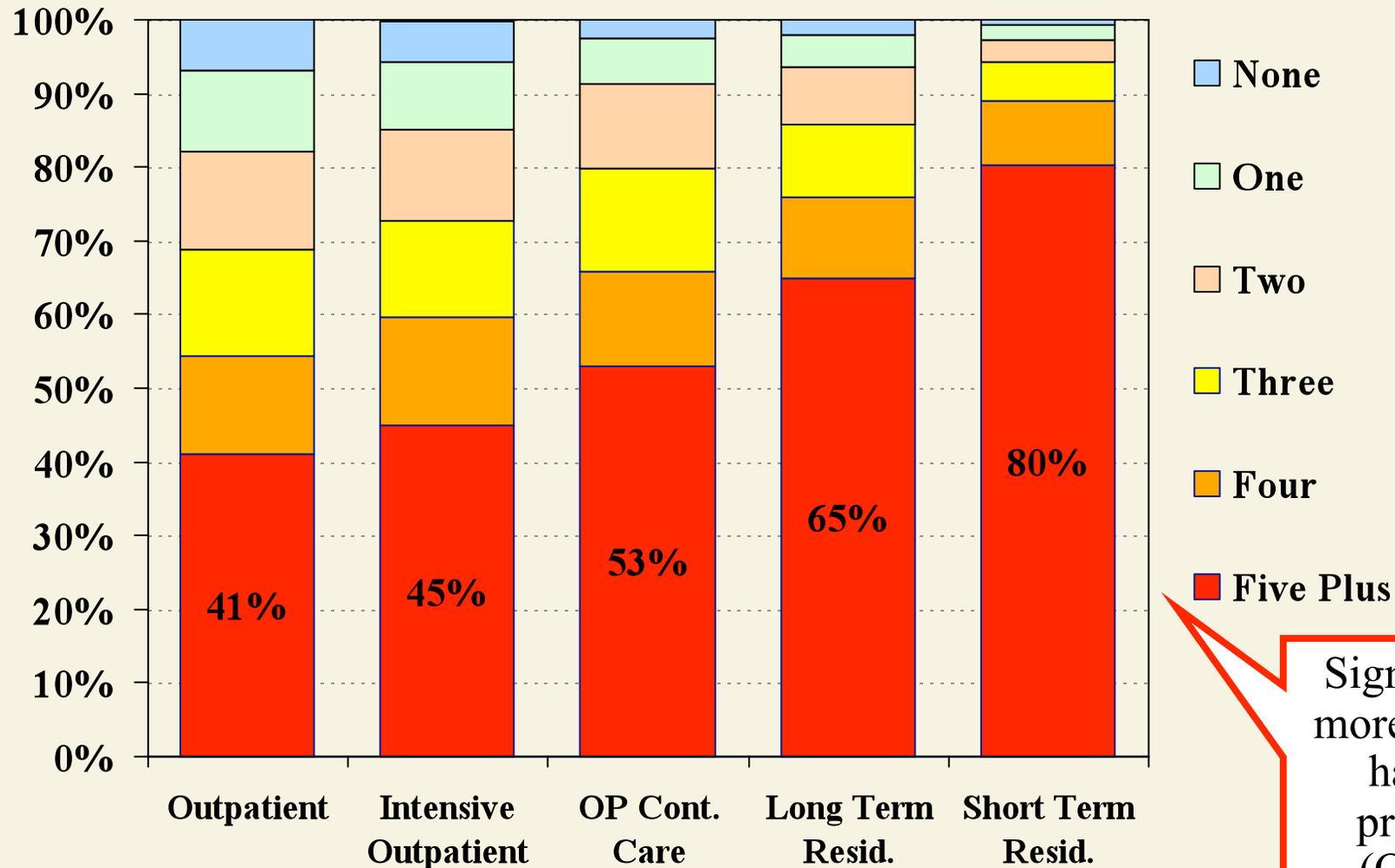
Source: CSAT 2009 SA Data Set Adolescent Subset (n=19,108)

# Multiple Clinical Problems are the NORM!



Source: CSAT 2009 Summary Analytic Data Set (n=20,826)

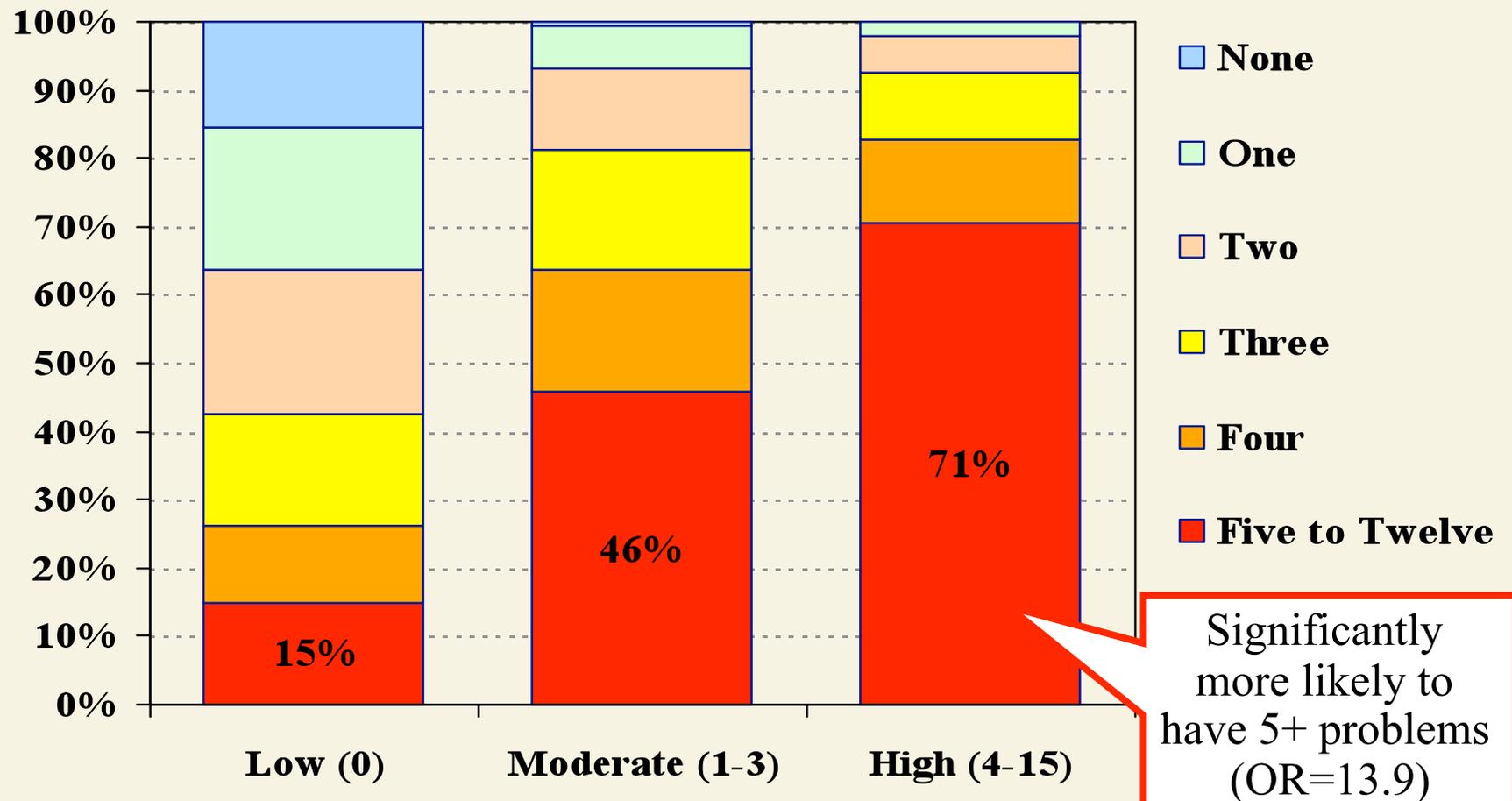
# The Number of Clinical Problems is related to Level of Care



Source: CSAT 2009 Summary Analytic Data Set (n=21,332)

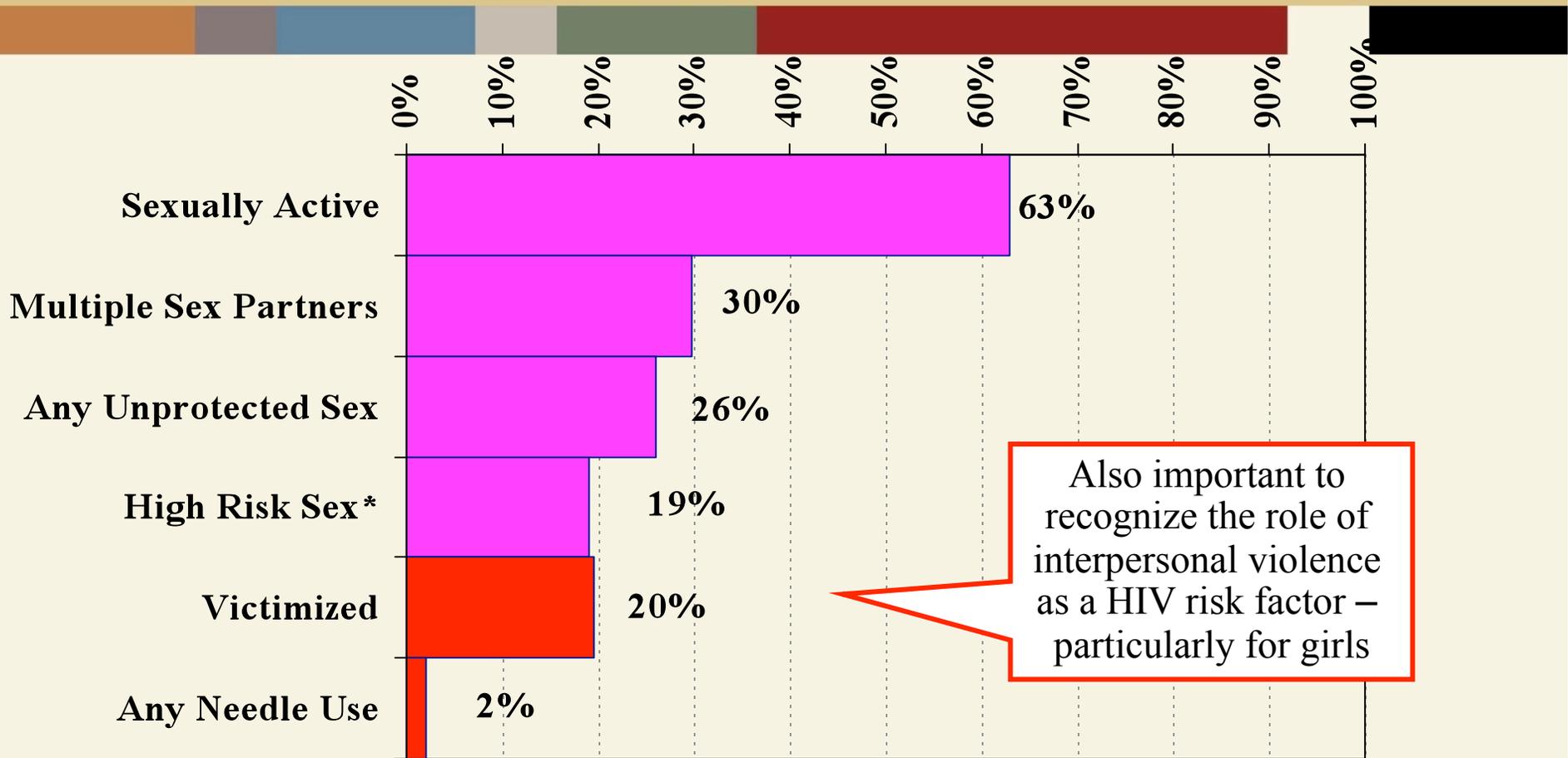
Significantly more likely to have 5+ problems (OR=5.8)

# The Number of Major Clinical Problems is highly related to Victimization



Source: CSAT 2009 Summary Analytic Data Set (n=21,784)

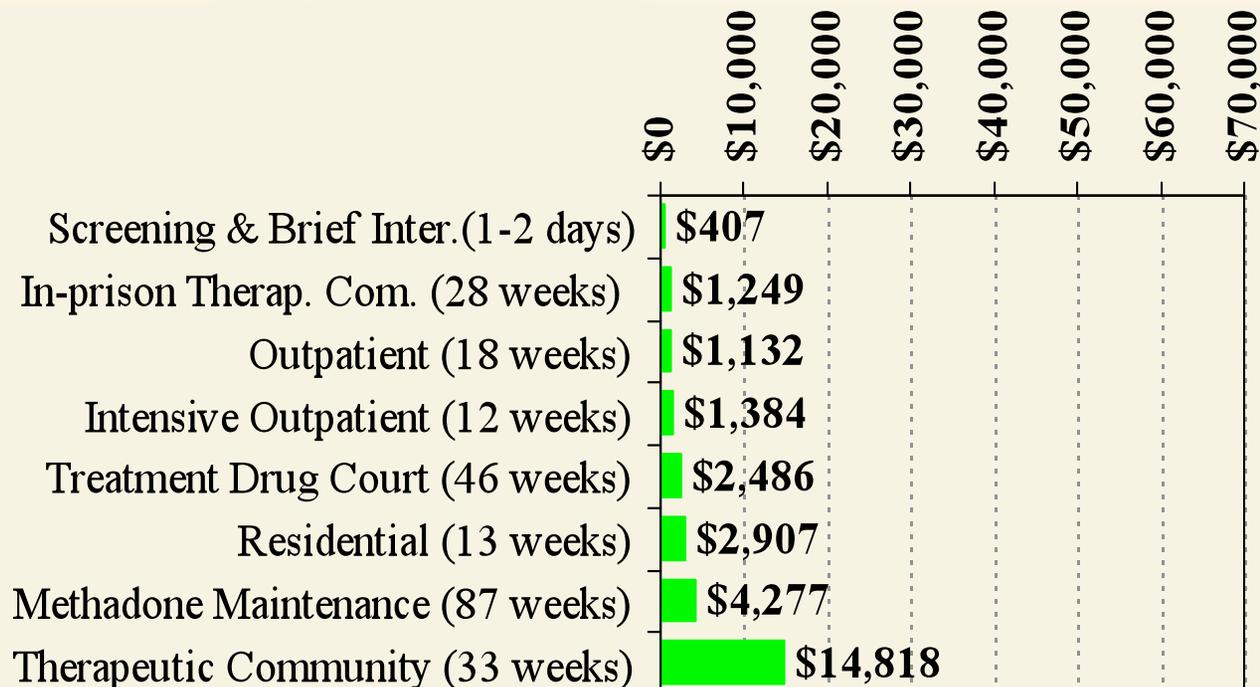
# Past 90 day HIV Risk Behaviors are more Related to Sexual Activity than Needle Use



\*Based on 1+ times had sex while intoxicated, with an injection drug user, with a man who had sex with men, with someone who was HIV positive, or traded sex for goods (n=415)

Source: CSAT 2009 SA Data Set Adolescent Subset (n=18,674)

# The Cost of Treatment is Small Relative to Reductions in other Costs



- \$750 per night in Detox
- \$1,115 per night in hospital
- \$13,000 per week in intensive care for premature baby
- \$27,000 per robbery
- \$67,000 per assault

**\$22,000 / year to incarcerate an adult**

**\$30,000/ child-year in foster care**

**\$70,000/year to keep a child in detention**

# Investing in Treatment has a Positive Annual Return on Investment (ROI)

- Substance abuse treatment has been shown to have a ROI within the year of between \$1.28 to \$7.26 per dollar invested
  - The main difference being how many different kinds of things economists “valued” in a given study
- Best estimates are that Treatment Drug Courts have an average ROI of \$2.14 to \$2.71 per dollar invested

*This also means that for every dollar treatment is cut, we lose more money than was saved.*

# Major Predictors of Bigger Effects Found in Multiple Meta Analyses (Lipsey, 1997, 2005)

1. A strong intervention protocol based on prior evidence
2. Quality assurance to ensure protocol adherence and project implementation
3. Proactive case supervision of individual
4. Triage to focus on the highest severity subgroup

# Impact of the numbers of these Favorable features on Recidivism in 509 Juvenile Justice Studies in Lipsey Meta Analysis

Number of favorable features	Distribution of programs	Percentage reduction in recidivism
0	7%	+12
1	50%	-2
2	27%	-10
3	15%	-20
4	2%	-24

Average Practice

The more features, the lower the recidivism

Source: Adapted from Lipsey, 1997, 2005

## Evidenced Based Treatment (EBT) that Typically do Better than Usual Practice in Reducing Juvenile Use & Recidivism

- Adolescent Community Reinforcement Approach (A-CRA)
- Aggression Replacement Training (ART)
- Assertive Continuing Care (ACC)
- Cognitive Behavior Therapy (CBT)
- Functional Family Therapy (FFT)
- Seven Challenges
- Thinking for a Change (TFC)
- Interpersonal Social Problem Solving (ISPS)

*Small or no differences in mean effect size between these brand names*

## Evidenced Based Treatment (EBT) that Typically do Better than Usual Practice in Reducing Juvenile Use & Recidivism

- Motivational Enhancement Therapy/Cognitive Behavior Therapy (MET/CBT)
- Motivational Interviewing (MI)
- Multi Systemic Therapy (MST)
- Multidimensional Family Therapy (MDFT)
- Reasoning & Rehabilitation (RR)
- Seven Challenges (7C)

*Small or no differences in mean effect size between these brand names*

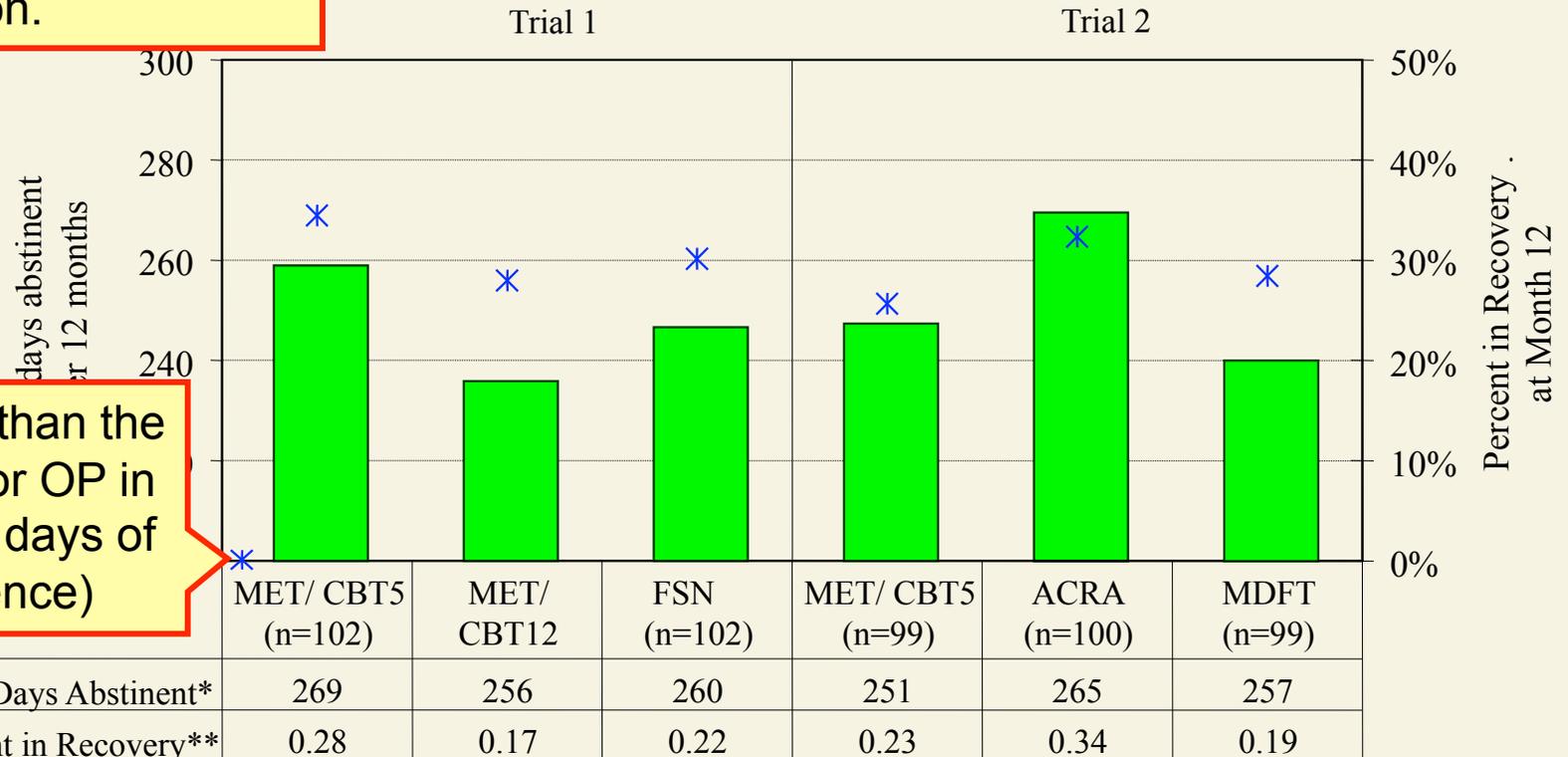
Source: Adapted from Lipsey et al., 2001, 2010; Waldron et al., 2001; Dennis et al., 2004

# Other Common Findings

- Low structure and ad hoc “treatment as usual” does not do as well as evidenced based practice
- Wilderness programs have mixed effects
- Treating adolescents like adults and in boot camp causes harm on average
- Relapse is still common and there is a need for on-going support, monitoring and when necessary re-intervention

# Similarity of Clinical Outcomes : Cannabis Youth Treatment (CYT):

Not significantly different by condition.



But better than the average for OP in ATM (200 days of abstinence)

\* n.s.d., effect size  $f=0.06$

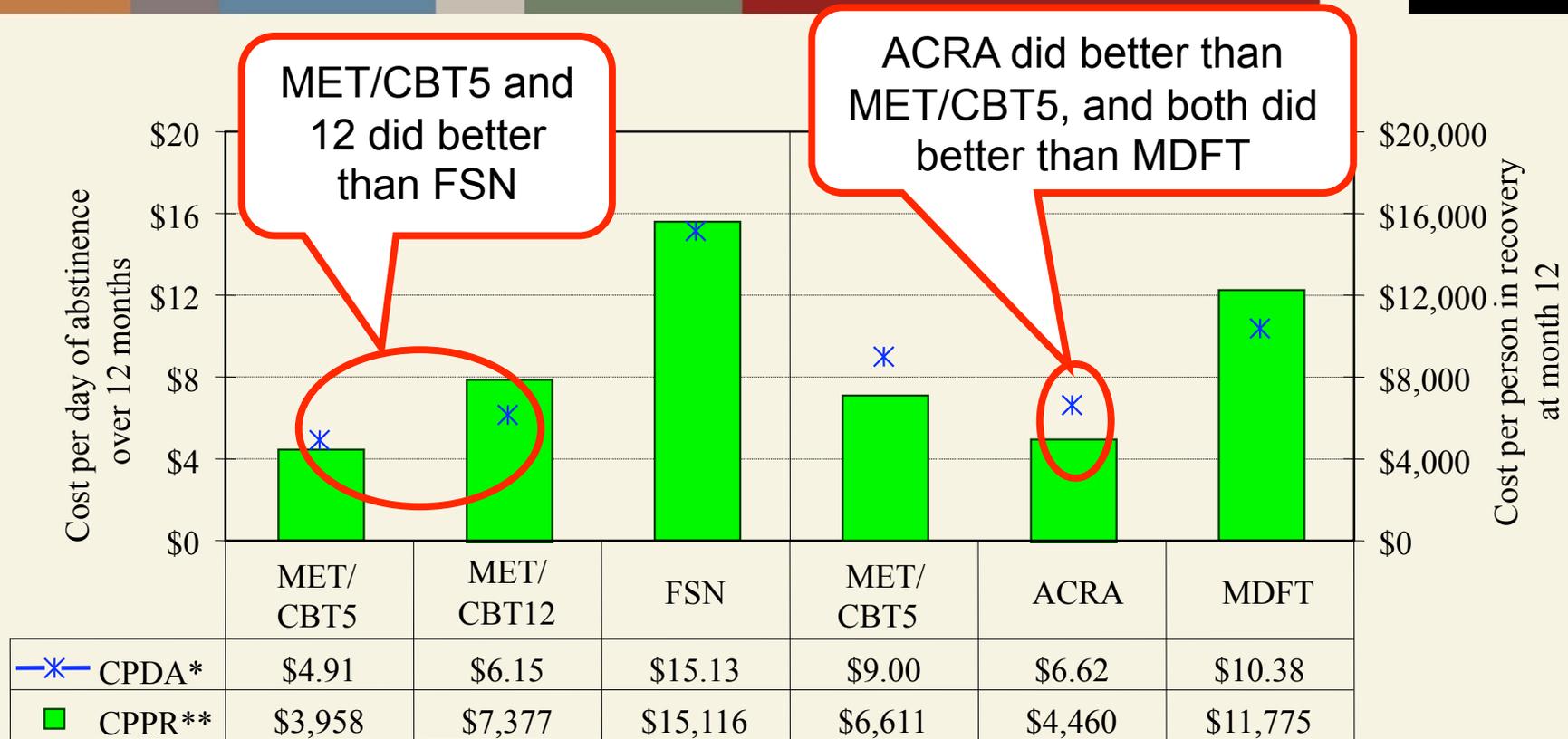
\*\* n.s.d., effect size  $f=0.12$

\* n.s.d., effect size  $f=0.06$

\*\* n.s.d., effect size  $f=0.16$

Source: Dennis et al., 2004

# Moderate to large differences in Cost-Effectiveness by Condition



\* p<.05 effect size f=0.48

\*\* p<.05, effect size f=0.72

\* p<.05 effect size f=0.22

\*\* p<.05, effect size f=0.78

Suggest the need to consider cost-effectiveness of treatment approaches

Source: Dennis et al., 2004

# Implementation is Essential

(Reduction in Recidivism from .50 Control Group Rate)

Program Implementation:  
Amount of Service, Quality of Delivery

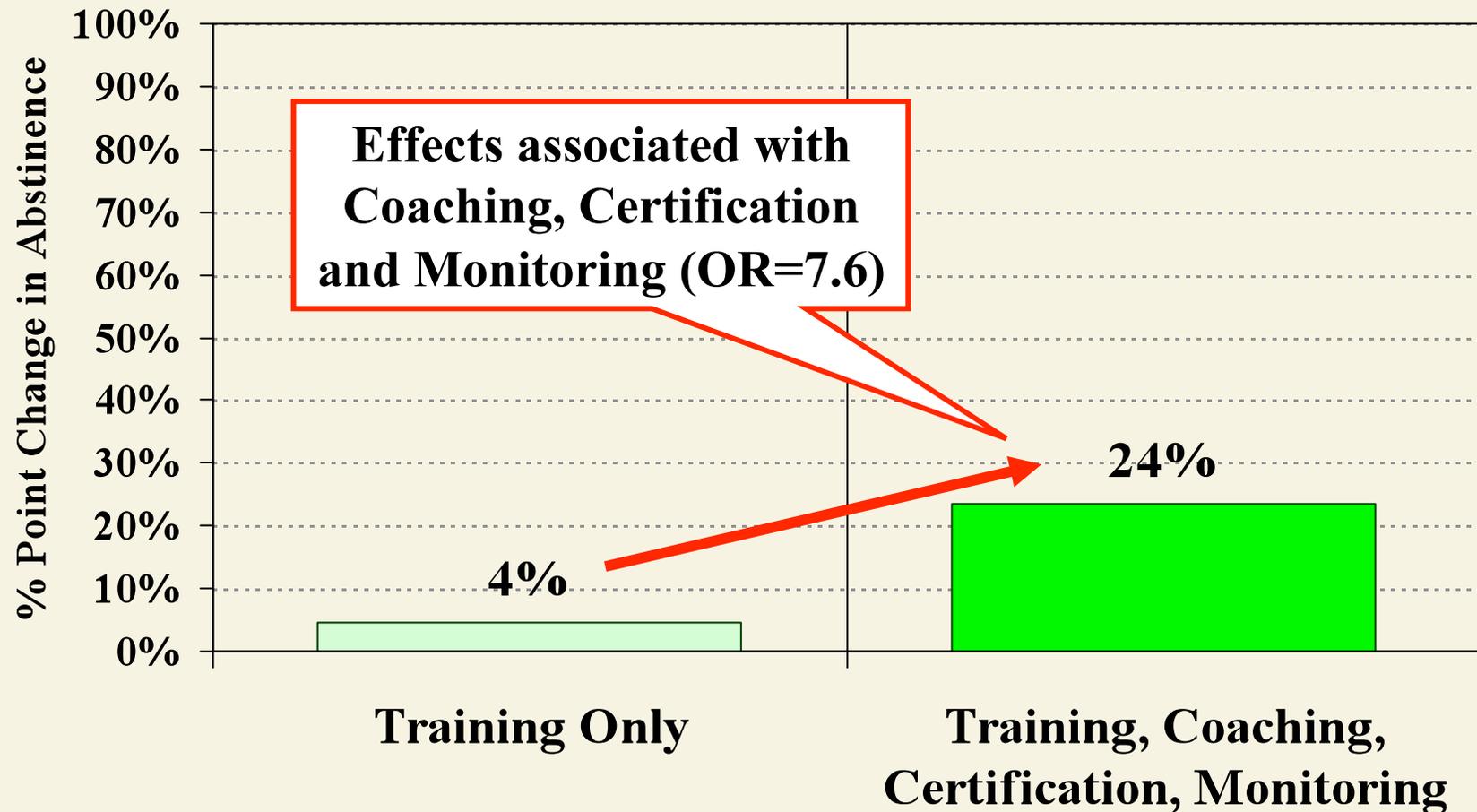
Program Type Grouped by Rank	Low	Medium	High
Group 1 (best)	24%	34%	46%
Group 2	16%	30%	40%
Group 3	6%	20%	32%
Group 4 (poorest)	0%	12%	24%

The best is to have a strong program implemented well

Thus one should optimally pick the strongest intervention that one can implement well

The effect of a well implemented weak program is as big as a strong program implemented poorly

# Change in Abstinence by level of Quality Assurance: Adolescent Community Reinforcement Approach (A-CRA)



Source: CSAT 2008 SA Dataset subset to 6 Month Follow up (n=1,961)

# Which general approaches address co-occurring mental health/trauma issues?

## A Comparison of Nine Treatment Approaches

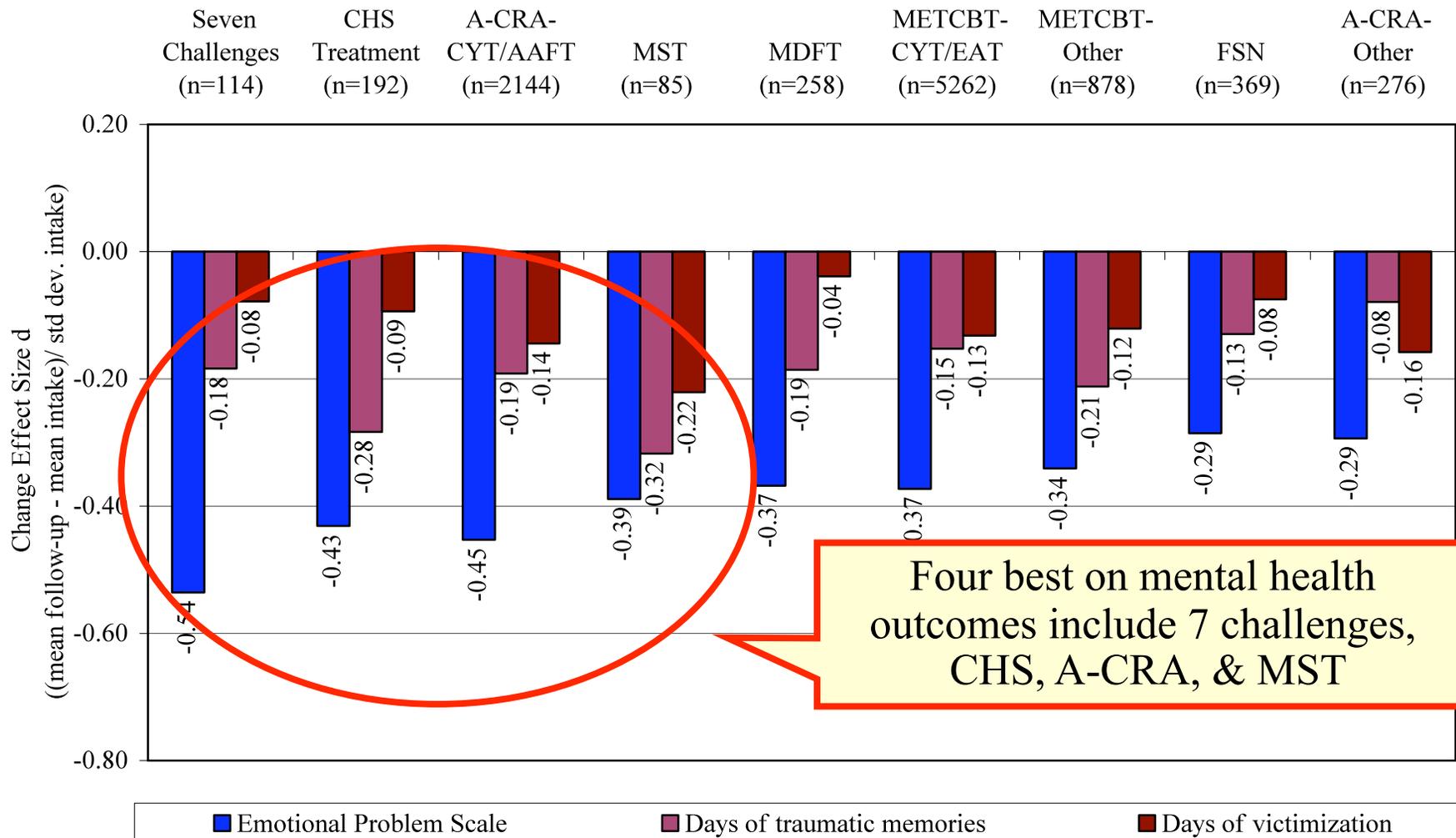
- **Seven Challenges** (Schwebel, 2004) (n=114)
- **Chestnut Health Systems** (CHS; Godley et al. 2002) Treatment (n=192)
- **Adolescent Community Reinforcement Approach** (A-CRA; Godley et al., 2001) -CYT/AAFT (n=2144) and -Other (n=276)
- **Multi-Systemic Therapy**  
(MST; Henggeler et al., 1998) (n=85)
- **Multi-Dimensional Family Therapy**  
(MDFT; Liddle, 2002) (n=258)
- **Motivational Enhancement Therapy-Cognitive Behavior Therapy**  
(METCBT; Sampl & Kadden, 2001)-CYT/EAT (n=5262) and -Other (n=878)
- **Family Support Network**  
(FSN; Hamilton et al., 2001) (n=369)

# Co-occurring Disorders

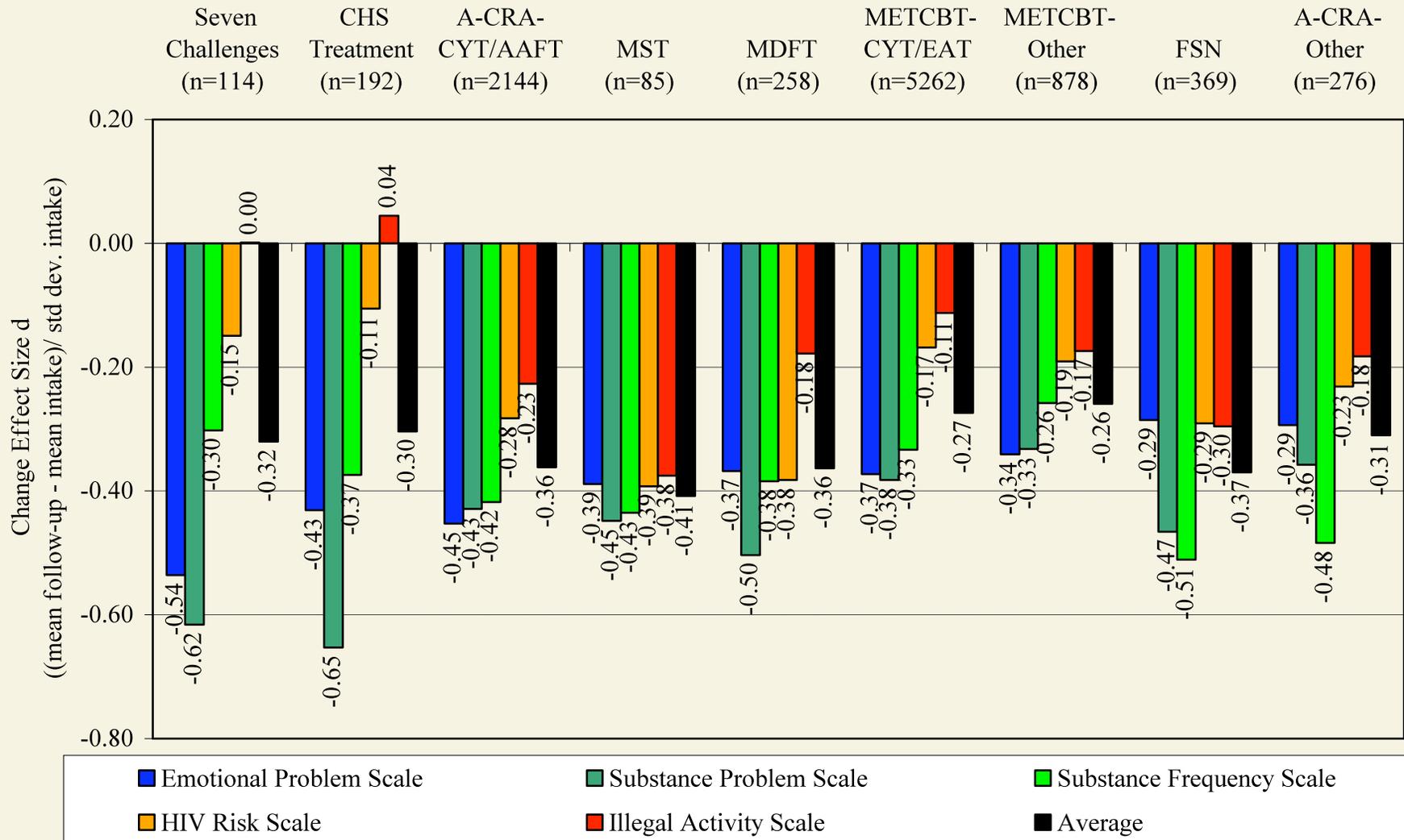
## Mental Health

- Emotional Problems Scale
- Days of Victimization
- Days of Traumatic Memories

# Change (post-pre) Effect Size for Emotional Problems by Type of Treatment



# Change (post-pre) Effect Size for Core Treatment Outcomes by Type of Treatment



# Summary

- All programs reduced **mental health / trauma problems** with 4 doing particularly well: Seven Challenges, CHS, A-CRA, & MST
- Where we could break in two (A-CRA & MET/CBT), programs with more training, quality assurance, monitoring and technical assistance did better than those with less
- A-CRA with a mix of BA/MA did as well as MST which targets MA level therapists and family therapists that are often in short supply
- While it is not the most effective, the shortest & least expensive (MET/CBT5) still has positive effects

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