



# Implementing Evidence-Based Principles and Treatment Interventions: Challenges & Perils

---

**TOTAL**

Joan E. Zweben, Ph.D.  
Executive Director

East Bay Community Recovery Project  
Clinical Professor of Psychiatry, University of California,  
San Francisco



# Why Use Evidence-Based Principles and Practices ?

---

- To go beyond our preferences and biases
- To improve the effectiveness of what we do: what works best, for whom
- Because funders will increasingly insist on optimum utilization of inadequate resources



# Evidence Based Principles & Practices vs Evidence Based Treatment Interventions

---

- Principles and practices are derived from different types of research.
- Rigor often trumps relevance in determining what type of research is valued.
- Policy makers must be educated on these issues.



# Important Distinctions

---

- Evidence-based **principles** and practices guide system development
  - Example: care that is appropriately comprehensive and continuous over time will produce better outcomes
- Evidence-based **treatment interventions** are important elements in the overall picture. They are not a substitute for overall adequate care.



# Evidence-Based Principles

---

- Retention improves outcomes; we need to engage people, not discharge them prematurely.
- Addicts/alcoholics are a heterogeneous population, not a particular personality type.
- Addiction behaves like other chronic disorders
- Problem-service matching strategies improve outcomes. (Other matching strategies disappointing.)
- Harm reduction approaches yield benefits in terms of public health and safety.
- Pts in methadone maintenance show a higher reduction in morbidity and mortality and improvement in psychosocial indicators than heroin users outside treatment or not on MAT.



# Policies and Practices Not Supported by Research

---

- Requiring abstinence as a condition of access to substance abuse or mental health treatment
- Denying access to AOD treatment programs for people on prescribed medications
- Arbitrary prohibitions against the use of certain prescribed medications
- Discharging clients for alcohol/drug use

# Evidence-Based Practices: Key Issues in the Debate





# Efficacy Studies

---

Specific psychosocial interventions are usually investigated in random assignment studies using manualized treatments in carefully controlled trials. Samples and settings are homogeneous and treatment is standardized. Specific procedures assure fidelity to the model.

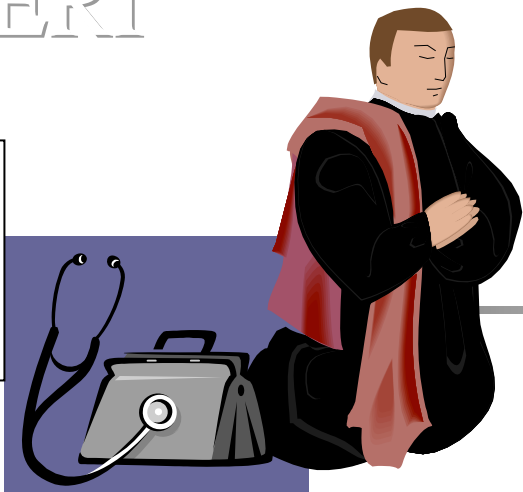


# Are RCT's Over-rated?

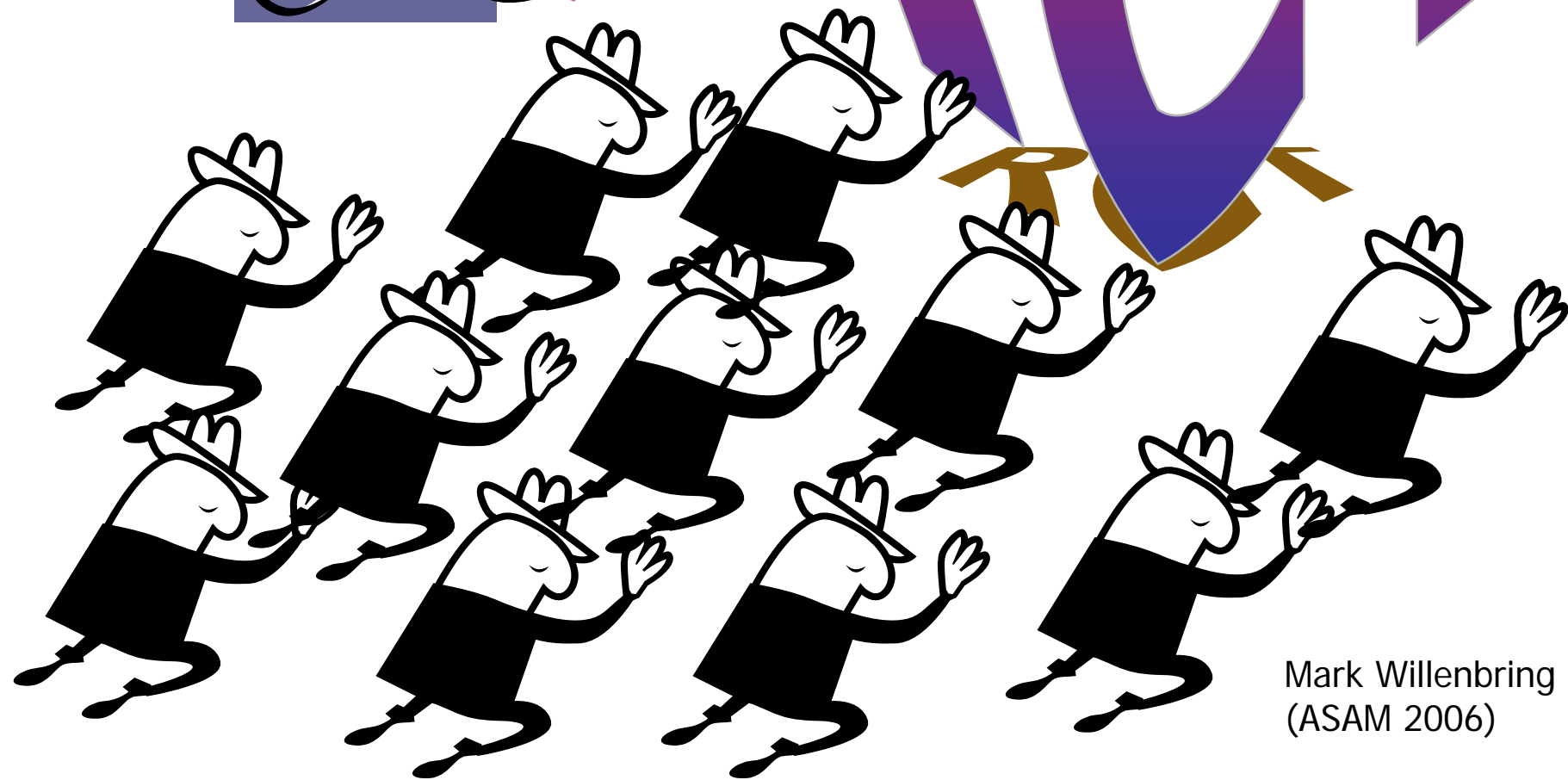
---



QUERI



# RCT



Mark Willenbring MD  
(ASAM 2006)



# Issues with RCT's

---

- Is the research question an appropriate question?
  - Example: CBT A compared with CBT B, vs CBT A compared with TAU
- Are the treatment effects modest or robust?
- What is the cost to achieve and maintain the intervention? Are the results worth it?

# What Methodology Fits the Research Question?

## *Extending the Evidence Hierarchy:*

- RCT designs have limitations and are not always best for investigating key aspects of behavior change process:
  - What influences people to seek and engage in treatment?
  - How do these self-selection processes and contextual influences contribute to the change process?

(Tucker & Roth, *Addiction*, 2006)



# Evidentiary Pluralism, cont.

---

- RCT's commonly use restricted, unrepresentative samples
- Alternative methods: multivariate, longitudinal, and observational studies
- Investigate pathways and mechanisms of change, with or without treatment
- Public health perspective: a modestly efficacious treatment that is adopted and diffused easily can have much greater impact at the population level

(Tucker & Roth, *Addiction*, 2006)

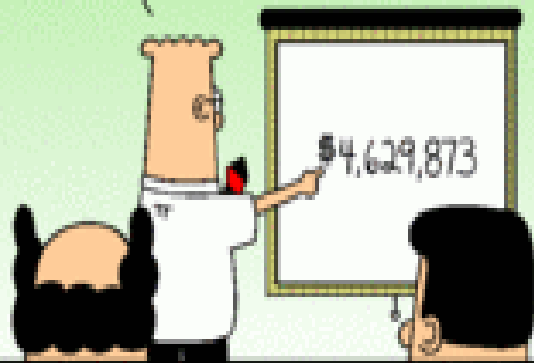


# Adaptive Designs: An Emerging Paradigm

---

- Individualize treatment using decision rules that recommend when and for whom tx should change
- Utilize a sequence of treatments, randomizing S's based on clinical response
- Starts with consensus-based clinical guidelines and fine tunes the sequence
- Example: The STAR-D study

I DIDN'T HAVE ANY ACCURATE NUMBERS SO I JUST MADE UP THIS ONE.



scottadams@aol.com

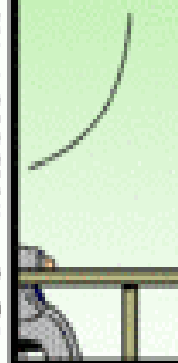
www.dilbert.com

STUDIES HAVE SHOWN THAT ACCURATE NUMBERS AREN'T ANY MORE USEFUL THAN THE ONES YOU MAKE UP.



5-8-09 © 2008 Scott Adams, Inc./Dist. by UFS, Inc.

HOW MANY STUDIES SHOWED THAT?



EIGHTY-SEVEN.





# What About the Therapeutic Alliance?

---

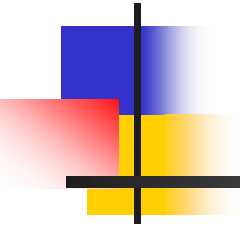
- Studies outside substance abuse show this accounts for a greater % of the variance than specific techniques
- Different “specific” therapies yield similar outcomes, but there is wide variability across sites and therapists
- More therapist education/experience does not improve efficacy

(Adapted from W.R. Miller, Oct 06)

IMPLEMENTATION

ISSUES

---





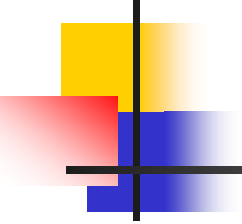
# Barrier: Resource Allocation

---

99% = Investment in Intervention  
Research to develop solutions (\$95 billion/yr)

1% = Investment in Implementation  
Research to make effective use of those solutions (Up from ¼% in 1977) (\$1.8 Trillion/yr on service)

Dean Fixsen, 2006



---

Can we assume that interventions with documented efficacy will be effective in the community if we only implement them correctly?



# Rethinking the Efficacy-to-Effectiveness Transition

---

- Assumption that effectiveness research naturally flows from efficacy research is faulty.
- The tight controls of efficacy studies limit their generalizability.
- Focus more on intervention reach, adoption, implementation, and maintenance.
- Published studies should include more info on external validity.

(Glasgow et al, AJP, 2003)



# Important Questions to Ask

---

What are the characteristics of interventions that can:

1. Reach large numbers of people, especially those who can most benefit
2. Be broadly adopted by different settings
3. Be consistently implemented by different staff with moderate training and expertise
4. Produce replicable and long lasting effects (with minimal negative impact) at reasonable costs.

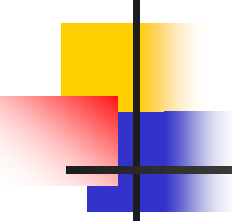
(Glasgow et al, AJP, 2003)



# Considerations

---

- What is to be gained?
- Does the organizational culture support adoption?
- Is training available?
- Is clinical supervision available?



# Ineffective Implementation Strategies

---

“...experimental studies indicate that dissemination of information does not result in positive implementation outcomes (changes in practitioner behavior) or intervention outcomes (benefits to consumers)”

(Fixsen et al, 2005)



# Opinion Leaders:

## A Key to Knowledge Adoption

---

- Identified by peers as respected for their knowledge in a particular area
- Trained in the use of an evidence-based curriculum
- They then train their peers and supervise the application of the curriculum
- Changes in counselor behaviors and attitudes are measured to determine the effectiveness of the implementation process

(Rugs D, Hills HA, Peters R, 2004 at [www.seekingsafety.org](http://www.seekingsafety.org))



# Key Ingredients

---

- Presenting information; instructions
- Demonstrations (live or taped)
- Practice key skills; behavior rehearsal
- Feedback on Practice
- Other reinforcing strategies; peer and organizational support

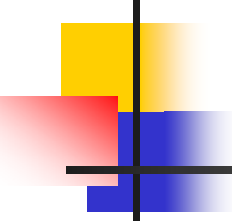
(Fixsen et al, 2005)



# Coaching

---

- Training and coaching are a continuous set of operations designed to produce changes
- Newly-learned behavior is crude compared to performance by a master practitioner
  - Such behavior is fragile and needs to be supported in the face of reactions of others
  - Such behavior is incomplete and will need to be shaped to be most functional in the service setting.

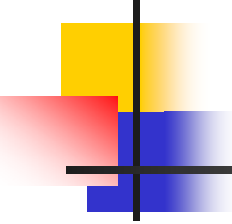


# Degrees of Implementation: Paper

---

- Policies and procedures are in place
- Makes it an official part of the structure
  - Can match formally adopted programs and operational routines
  - More prevalent when outside groups are monitoring compliance
  - Paperwork alone is not enough

(Dean Fixsen, 2005)



# Degrees of Implementation: Process

---

Putting new operating procedures in place:

- Conducting workshops
- Providing supervision
- Change information reporting forms
- New innovation-related language is adopted
- Is this functionally related to new practices or merely lip service?

(Dean Fixsen, 2005)



# Degrees of Implementation: Performance

---

Putting procedures and processes in place that are used with good effects for consumers.

- How to measure?
- Who will pay for the effort to measure?

(Dean Fixsen, 2005)

# DISSEMINATION MECHANISMS



---



# NIDA's Clinical Trials Network

---

- Mission: to improve the quality of drug abuse treatment using science as the vehicle
- 17 regional centers; over 100 treatment programs throughout the US
- Conduct multi-site trials to determine effectiveness in broad range of settings and populations
- Ensure transfer of research results

# National Drug Abuse Treatment Clinical Trials Network (CTN)





# CTN: Influence on Disseminating EBT's

---

- # trials completed
- # trials in process
- # published papers
- # papers accepted for publication
- Availability of manuals and other materials



# Addiction Technology Transfer Centers (CSAT)

---

The ATTC Network focuses on six areas of emphasis for improving addiction treatment:

- Enhancing cultural appropriateness
- Developing and disseminating tools
- Building a better workforce
- Advancing knowledge adoption
- Ongoing assessment and improvement
- Forging partnerships

([www.nattc.org](http://www.nattc.org))

# Addiction Technology Transfer Centers (ATTC's)





# What is NREPP?

---

- National Registry of Effective Programs and Practices
  - formerly the National Registry of Effective Prevention Programs
  - Part of science-to-service initiative
- Began in 1998 within SAMHSA's CSAP as a voluntary system for identifying & promoting interventions that are:
  - Well implemented
  - Thoroughly evaluated
  - Produce consistent positive and replicable results
  - Able to assist in dissemination and training efforts

- Identify effective, evidence-based programs and practices – including successful coalition efforts
- Receive – or be linked with - “implementation assistance” to implement a model program/practice
- Seek – or be linked with - “development assistance” to build a program or practice evidence-base



# Evolution of NREPP

---

- NREPP was expanded to include treatment (c. 2002)
- Well-respected, evidence-based treatment providers did not pass muster
- Federal Register notice inviting public comment on plans for expansion and use (August 26, 2005)
- Changes announced, based on public comments (March 14, 2006)
- Federal Register on SAMHSA's priorities for 2007 (June 30, 2006)

# Minimum Review

## Requirements (June 30, 2006)

---

- The intervention demonstrates one or more positive changes (outcomes) in mental health and/or substance use behavior among individuals, communities or populations.
- Intervention results have been published in a peer-reviewed publication or documented in a comprehensive evaluation report
- Documentation (e.g., manuals, process guides, tools, training materials) of the intervention and its proper implementation is available to the public to facilitate dissemination

(Federal Register/Vol 71, No. 126/Friday, June 30, 2006/Notices)



# Challenges & Perils

---



# Policy and Funding

---

- Policy makers misinterpreting research findings; drawing inappropriate conclusions
  - Example: buprenorphine (“transfer methadone pts to BPN and taper them off”)
  - Example: Feillin NEJM study 2006
- Funders adopting a “pick from this list” approach
- Achieving fidelity takes labor intensive supervision, and many states don’t fund supervision.

# \$1,000 Reward

Most doctors, dentists, pharmacists, medical equipment suppliers and other providers of Medi-Cal goods or services are committed to giving the finest care. Unfortunately, a few place profit before their patients. Help us protect California's most vulnerable people - its children, poor, elderly and disabled.



## If you can answer yes to any of the following...

- Have you been offered money or gifts to get any Medi-Cal services or goods?
- Have you received Medi-Cal services or goods that were unnecessary?
- Are you aware of a Medi-Cal provider who has billed for services not performed or goods not provided?



## You may be eligible for up to a \$1,000 reward.

We're offering up to \$1,000 for information leading to the arrest and conviction of providers of Medi-Cal goods or services who commit fraud.

## Report acts of health care fraud to:

Attorney General's Bureau of Medi-Cal Fraud & Elder Abuse Hotline:  
**(800) 722-0432**

or

Department of Health Services:  
**(800) 822-6222**

You may file a complaint online at:  
**[www.stopmedicalfraud.ca.gov](http://www.stopmedicalfraud.ca.gov)**





# Marketing

---

- Impostors
  - Distinguishing evidence from marketing
  - Presenting multiple anecdotes with no comparison or control groups as “proof”



# Research to Practice Issues

---

- Inadequate effectiveness studies
- Huge gaps in the research literature (s.g., group interventions, therapist variables)?
- High training fees for “proven” practices
- Fidelity vs cultural competence: What is the tradeoff between fidelity and the need to adapt interventions for specific populations? How can we make cultural adaptations and maintain the treatment effects?



# Infrastructure Development

---

- The existing infrastructure cannot handle the expectation for data collection
- Funders want data but do not want to pay the costs
- Data collected by funders is often not used to improve services
- Workforce crisis is a huge problem and an opportunity. Must supply resources for training.

# Stay Focused on Basic Principles



---

Maintain commitment to the principle of individualizing treatment

When an evidence-based treatment doesn't work for an individual, some staff members conclude that the problem is that the treatment isn't being implemented correctly, rather than examining the possibility that it does not fit the needs of the client.

Example from Dual Dx listserve: [dualdx.treatment.org](http://dualdx.treatment.org)

# CONCERNS

---

- Journals
  - Bias
  - Unqualified or careless reviewers
- Cochrane Report
  - Seen as gold standard, but only addresses certain types of studies
  - Capable of carelessness





# Is There Another Way?

---

- Fund programs to develop the infrastructure to examine how well they are doing with whom
- Draw on EBT's to improve in areas where there are problems
- Clarify realistic performance standards



Download Slides from:

---

[www.ebcrcp.org](http://www.ebcrcp.org)