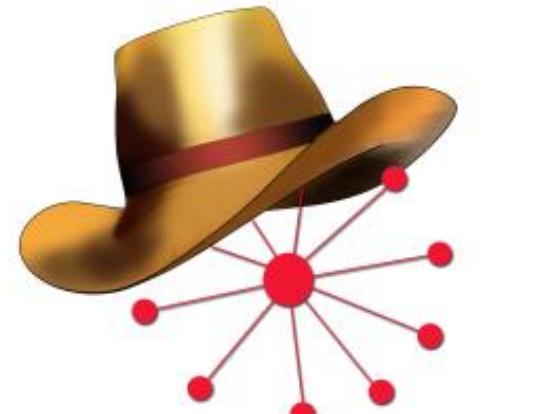


# Outcomes and Lessons Learned: Disseminating Contingency Management and Motivational Interviewing in Substance Abuse Treatment Programs



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## INTRODUCTION

The National Institute on Drug Abuse (NIDA) National Drug Abuse Treatment Clinical Trials Network (CTN) was created to address the research-practice gap and has a two-fold mission: (1) improve the quality of drug abuse treatment throughout the country by conducting multi-site clinical trials and (2) ensure research results are transferred to providers and patients. This transfer to providers requires proactive dissemination efforts which will, in turn, improve patient outcomes. To address the CTN's second mission, the Texas Node of NIDA's CTN collaborated with local Community Treatment Programs (CTPs) to disseminate the evidence-based treatments of contingency management and Motivational Interviewing.

Contingency management (CM) uses behavioral principles to reinforce the occurrence of a targeted behavior. It has been successfully used to increase abstinence, engagement in recovery-related activities, and treatment attendance (e.g., Budney, Higgins, Radonovich, & Novy, 2000; Petry, Peirce, Stitzer, Blaine, Roll, Cohen, et al., 2005; Prendergast, et al., 2006; Stitzer & Petry, 2006). Motivational Interviewing (MI; Miller and Rollnick, 2002) is a client-centered, directive method for enhancing intrinsic motivation to change by resolving ambivalence and has been efficaciously applied to a variety of populations and presenting problems (e.g., Hettema, Steele, & Miller, 2004; Rubak, Sandbaek, Lauritzen, & Christensen, 2005).

## METHODS

CTPs selected intervention(s) to implement after learning about them in a half-day informational workshop. Texas Node Trainers closely collaborated with CTPs to plan, design, implement, and evaluate the intervention in real-world conditions.

**Design.** Pre-post designs were used, clients were not randomized to condition, all clients were eligible, and data routinely collected by the CTP was used to evaluate outcomes. In accordance with the exempt IRB status, outcomes were assessed using de-identified, group-level data.

**Contingency Management.** Two CTPs gathered the necessary funding (Site 1: grant funding CSAT TI-16284; Site 2: community donations) to provide tangible reinforcers. Both CTPs targeted adult outpatient group attendance, elicited client ideas about low-cost incentives, facilitated client and staff buy-in with planning and training activities, and worked with the Trainer to devise suitable reinforcement schedules. A CM advocate/CTP staff member was identified as the primary leader on-site. The Trainer provided close supervision during the first half of the intervention and as needed throughout the remainder of the intervention phase.

**Contingency Management Analyses.** Data were examined with the *C* statistic (Young, 1941; Tryon, 1982), an omnibus statistic for small sample time-series that evaluates variability in successive data points relative to changes in slope from one experimental phase to another and tests the null hypothesis that the data are random.

**Motivational Interviewing.** Three CTPs implemented MI to decrease discharges against medical advice (AMA). Front-line staff received 2 days of MI training conducted by a member of the Motivational Interviewing Network of Trainers which focused on general principles of MI and its application to discharges AMA. An MI Advocate/CTP staff member was trained on supervision strategies. The Trainer and staff had weekly group supervision the first 4 weeks of the intervention. The MI Advocate then assumed primary supervision but the Trainer was available via phone as needed throughout the final 8 weeks of the intervention.

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## CONTINGENCY MANAGEMENT

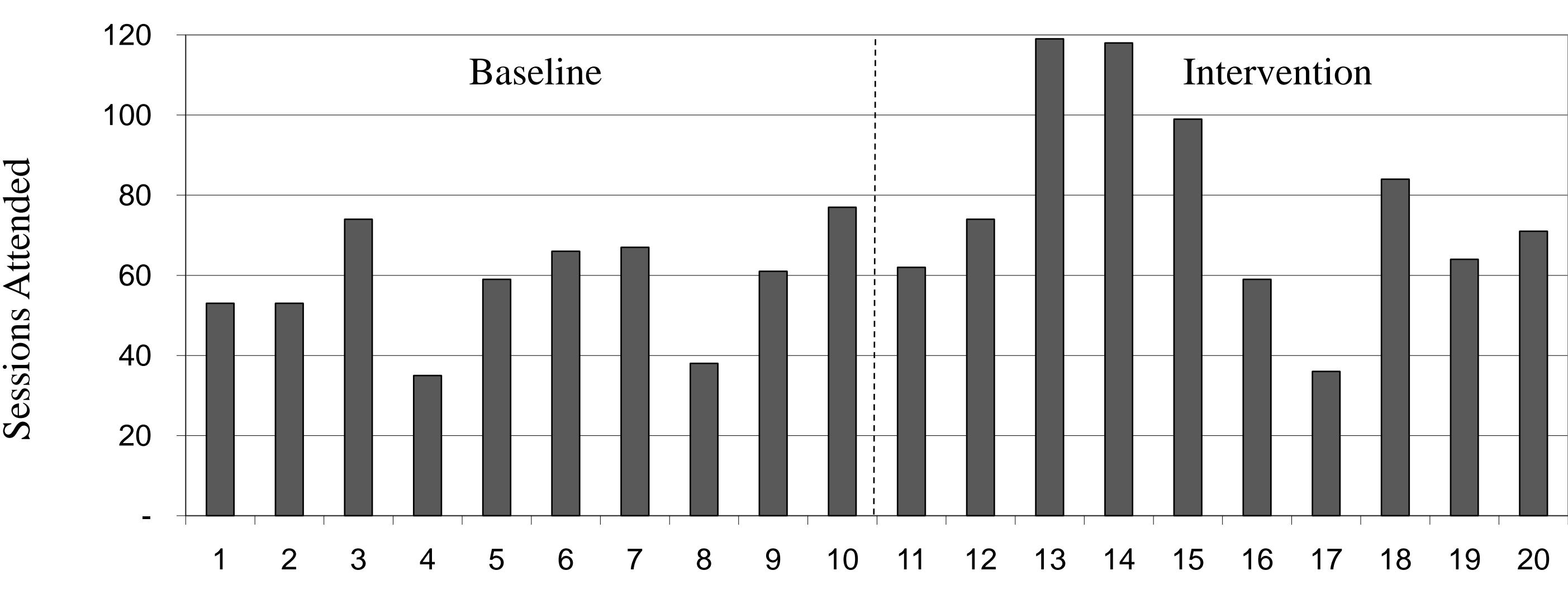
**Site 1** was a 4-month outpatient Methamphetamine Treatment Program (MTP) for adults. The "fishbowl" technique (Petry, 2000; Petry & Simcic, 2002) of variable reinforcement was used. Clients attending all groups within a given day drew a slip from a fishbowl during the last group. Chances of winning were inversely related to the prize's value: 50% of slips stated "Good job! Try again"; the remainder were \$5, \$15, or \$50 gift cards. Number of slips drawn escalated with consecutive attendance and reset with absence and on Mondays.

**Results.** Baseline attendance was random ( $Z = -0.770, p > .05$ ). The intervention phase added to the baseline was significant ( $Z = 1.786, p < .05$ ), indicating changes in group attendance occurred between the baseline and intervention phases. Visual inspection of the intervention phase data indicates attendance increased during the first 4 weeks, then decreased, and increased again near the end of the intervention (see Fig. 1). Total cost: ~\$3120.

**Site 2** was an adult outpatient program providing treatment for all substance use disorders. The fishbowl method was not appropriate due to too few prizes. Clients deposited a ticket with their name in a prize bowl after each group attended. Number of deposited tickets escalated with consecutive attendance and reset with absence and on Mondays. Prize drawings occurred in group every other Friday. The prize to be awarded was identified prior to drawing. Prizes' total value: ~\$1840.

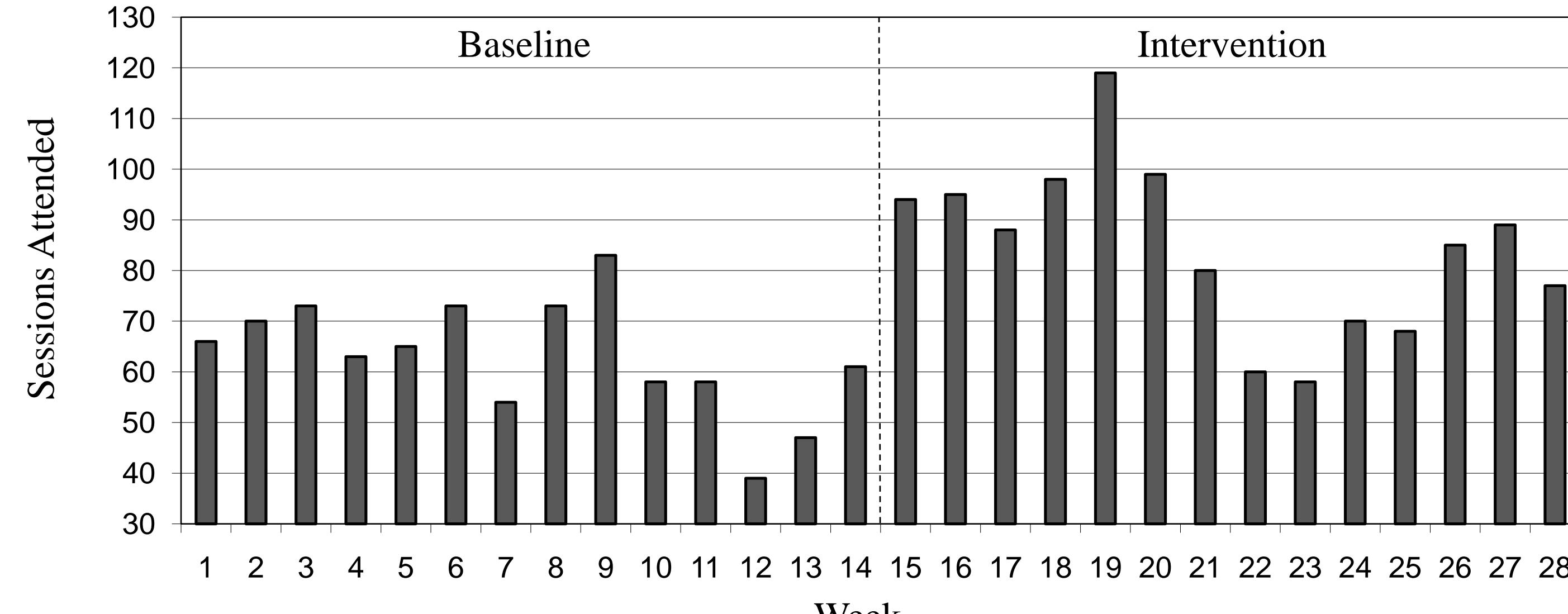
**Results.** Baseline attendance was random ( $Z = 1.208, p > .05$ ). The intervention phase added to the baseline was significant ( $Z = 3.406, p < .05$ ), indicating changes in attendance occurred between baseline and intervention phases. Visual inspection of the intervention phase data indicates attendance sharply increased during the first 5 weeks, then decreased, and increased again near the end of the intervention (see Fig. 2).

Fig. 1. Site 1 Outpatient Group Attendance Before and After Contingency Management



*Note.* The acudetox group, usually available several times each week, was not offered in weeks 11, 12, and 17 due to instructor absence.

Fig. 2. Site 2 Outpatient Group Attendance Before and After Contingency Management

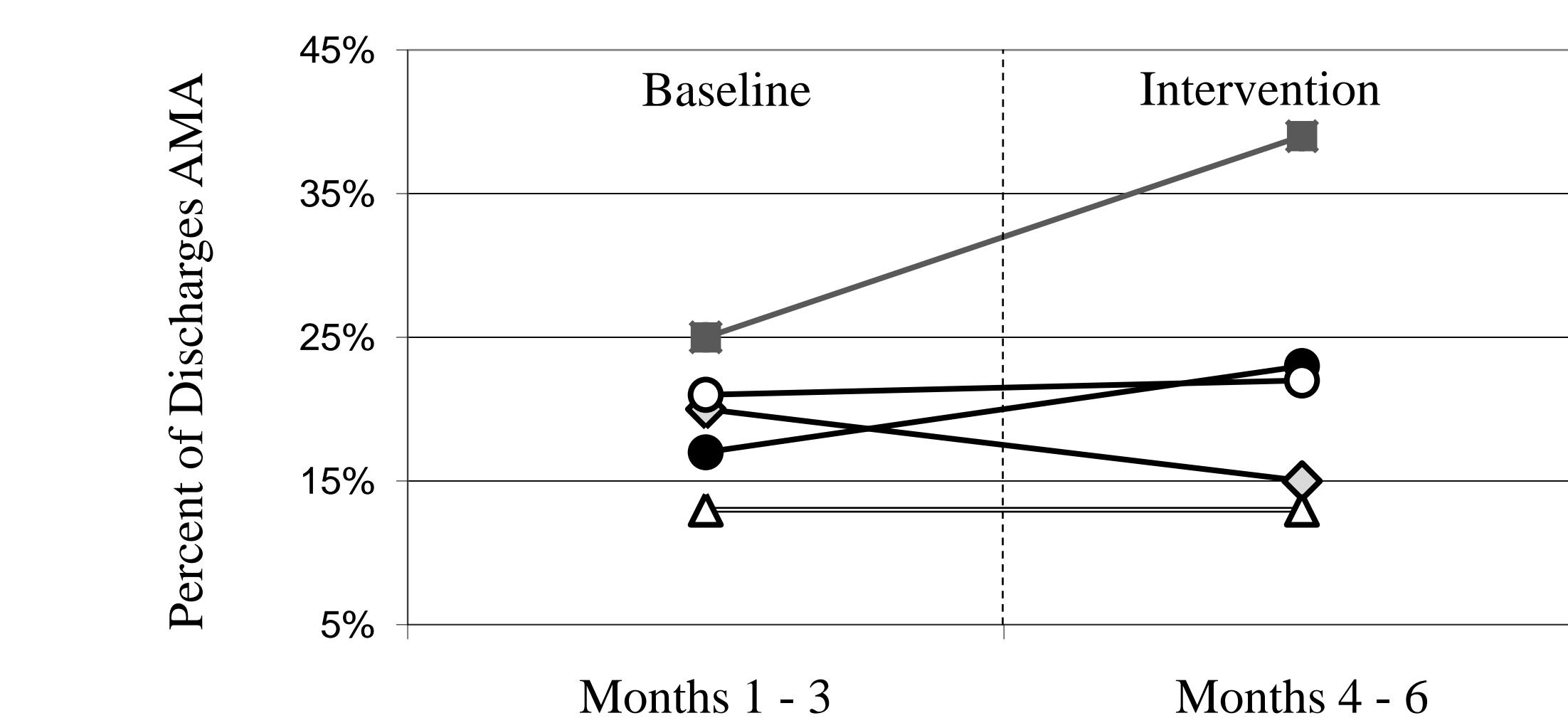


## MOTIVATIONAL INTERVIEWING

Three CTPs implemented MI to help offset discharges AMA from residential treatment programs treating adolescents, women, and men with all substance use disorders. Once a client identified him or herself as desiring to discharge AMA, any available clinician trained in MI was notified to meet with the client prior to discharging. The intention was to respond to the client's concerns in an MI-consistent fashion, with the ultimate goal of helping increase the client's motivation to complete treatment.

**Results.** The intervention was not effective in reducing discharges AMA (see Fig. 3). Effectiveness of MI training, as determined by ratings of recorded clinician sessions, could not be evaluated due to too few submitted recordings.

Fig. 3. Discharges Against Medical Advice Before and After Motivational Interviewing for AMA



## DISCUSSION

*Contingency Management* had similar attendance results at both sites.

- Attendance during intervention phase followed a similar fluctuating pattern at both sites.
- Site 2's attendance fluctuations coincide with implementation difficulties and resolution of them; no explanations for Site 1. A more controlled ABCA design study showed similar fluctuations (Petry, 2001).

*Motivational Interviewing* did not reduce discharges AMA in a variety of programs.

- Discharges occurred more after hours and did not match shifts of MI-trained staff.
- MI training effectiveness could not be evaluated due to insufficient data. Clinicians resisted recording sessions for rating by an "outsider."

## LESSONS LEARNED

- Success of collaborative process was likely partly due to:
  - existing relationships between researchers and clinicians
  - fitting the EBT to the clinics' unique characteristics
  - free training
  - lack of rigorous research design
- Do everything to overcome supervision barriers, especially when an "outside" supervisor is needed initially to learn new clinical skills.
- Supervise early, on-site, and after protocol changes. No change is too small, no procedure is too simple to be supervised/observed.
- Expect delays every step of the way.
- Explore every "what if" angle when planning and modifying the intervention.
- Be prepared for both positive *and* negative client reactions. Include clients when possible.
- Projects were successful because additional dissemination is happening:
  - One CTP now trying CM in its adolescent program;
  - 3 CTPs received a Robert Wood Johnson grant to implement EBTs. CTPs requested MI training for *all* staff, not just clinicians, based on their experiences above.