

# RESEARCH ROUNDUP

I B R ' S Q U A R T E R L Y N E W S L E T T E R

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## Conceptual and practical aspects of transferring research to practice

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*IBR Director*

The research-to-practice articles in the JSAT Special Issue explore how evidence-based research findings transfer into real world settings.

[Dr. Barry Brown](#) and I recently served as Guest Editors for a Special Issue of *Journal of Substance Abuse Treatment* (Vol. 22, Number 4) devoted to research on the *process* of moving evidence-based treatment innovations into real-world settings. This process of understanding how new treatment technologies find their way into clinical practice has been an important focal point of National Institute on Drug Abuse (NIDA) research for many years (the agency has funded three large technology transfer grants since 1989). JSAT Editor **Dr. Thomas McLellan**, in his introduction to the Special Issue, highlights several of the basic scientific discoveries that have had tremendous impact on the treatment of addictions (such as brain studies of receptor cells and the identification of genetic markers for alcohol and drug dependence). These discoveries, as he points out, paved the way for the development of medications and therapies that now offer greater choices for the effective treatment of substance use disorders. The articles chosen for this issue build on this foundation, offering both a conceptual and practical explora-

tion of the challenge of transferring research to practice. Complete abstracts of these articles begin on Page 3.

In addition, in this issue of *Research Roundup* we provide a case example of effective technology transfer that resulted from our training initiative last year in conjunction with the Northwest Frontier Addiction Technology Transfer Center (NFATTC; see IBR's [Research Roundup, Volume 11, Nos. 3-4, Fall-Winter 2001-02](#) for a full report on this conference). For one particular agency, staff participation in workshops on *Cognitive Mapping* and *Induction Strategies* became the impetus for the development and integration of a successful **Motivation Program** that incorporates the *Downward Spiral* board game and other evidence-based cognitive tools introduced by the trainers. ■

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**Presentations at IBR Web site:** *Transferring Research to Practice* PowerPoint® presentations are available to view in [Presentations](#), at [www.ibr.tcu.edu](http://www.ibr.tcu.edu).

# “Take the Ball and Run” — Technology Transfer of Cognitive Strategies

In the article by [Drs. Dansereau](#) and [Dees](#) in the JSAT Special Issue (*Mapping Training: The Transfer of a Cognitive Technology for Improving Counseling*), the authors discuss lessons learned from years of training counselors to use cognitive tools. They outline several core objectives for designing training workshops that encourage transfer, including helping participants feel comfortable with new techniques and competent about the rationale for using them, offering ideas for integrating new techniques into ongoing counseling activities, encouraging participants to tailor materials to suit their program’s needs, and encouraging participants to share new techniques with fellow-counselors and administrators.

The NFATTC “Research to Practice” conference held in Federal Way, WA in April 2001 featured two workshops for counselors on how to use cognitive enhancements designed to enhance client motivation and engagement in treatment. These cognitive tools included node-link mapping, a representational technique for facilitating communication and problem solving, as well as a variety of structured exercises and activities to encourage clients to think about their drug-using behaviors and develop goals for recovery (e.g., *Downward Spiral* board game; *Tower of Strengths* and *Thought Team* activities).

As reported by the authors, the workshop design appeared suc-

cessful in providing counselors with the confidence, skills, and commitment to encourage at least a trial implementation of some of these interventions. Indeed, about 87% of counselors responding to the follow-up questionnaire said they had used mapping and other ideas from the training in the months following the workshop. There also was evidence (based on post-conference requests for the board game and manuals) that some agencies were incorporating aspects of the training into their day-to-day treatment activities. And in the case of one agency, ideas from the training were used to create a new intervention for court-mandated clients prone to recidivism and in need of extra help with motivation and treatment engagement.

## The Motivation Program

The Motivation Program developed by staff at Pioneer Center North (PCN) in Sedro Woolley, Washington (a treatment program operated by Pioneer Human Services of Seattle) targets clients who are having a difficult time conforming to the demands of treatment. PCN has an average census of 120 clients who have been court-ordered to 60 days of residential treatment. Many of them have a long history of prior treatment “failures.” In fact, according to the clinical services director, a large number of residents have been in and out of treatment at PCN several times

before. Finding an effective strategy for dealing with client recidivism was a high priority for staff.

The seeds for the Motivation Program began to take root around a game table set up as part of the *Induction Strategies* workshop at the NFATTC conference. To address the objective of creating comfort with a new technique or intervention, Don Dansereau and his training staff encouraged participants to actually play several rounds of the *Downward Spiral* board game before discussing its applications with clients. The game, which requires players to draw cards and discuss an array of scenarios and serious consequences related to drug use as they move across the board, is an instant hit with treatment professionals who readily see its potential usefulness with clients. At the end of the workshop, the game sets used for the demonstration were raffled off among the participants. Those not lucky enough to win one were provided with an instruction manual for creating the game board and pieces on their own. A clinician with PCN was the winner of a game board. Returning to work, he introduced it to other agency counselors and soon heads were together and ideas were flowing around the notion of using the game as the centerpiece of a strong motivation program at PCN.

In addition to the *Downward Spiral* board game, other tech-

See **Technology Transfer**, page 5.

# Special Issue Abstracts

## *Journal of Substance Abuse Treatment*

### Volume 22, Number 4

#### **A Conceptual Framework for Transferring Research to Practice**

*(Dwayne Simpson, TCU)* – Systematic evaluations of efforts to transfer research-based interventions and procedures into general practice at community drug treatment programs have been limited. However, practical experiences as well as results from studies of technology transfer and organizational behavior in related fields provide a basis for proposing a heuristic model of key factors that influence this process. The successful completion of four stages of activity typically involved in program change – exposure, adoption, implementation, and practice of new interventions – appear to be influenced by several organizational considerations (e.g., institutional readiness for change, resources, and climate) as well as staff attributes. Assessment instruments for measuring organizational functioning (based on ratings aggregated for staff and patients in a program) are introduced, along with preliminary evidence for their validity. A better conceptual understanding of the process of program change and common barriers that may be encountered is needed for effectively transferring research to practice.

#### **Measuring Patient Attributes and Engagement in Treatment**

*(George Joe, Kirk Broome, Grace Rowan-Szal, & Dwayne Simpson, TCU)* – Brief but comprehensive instruments measuring patient motivation, psychosocial functioning, treatment process, social network support, and services received are needed for monitoring drug abuse treatment delivery and patient progress. Combining this information across patients within a program also provides useful indicators about institutional composition and functioning. Consequently, the same assessment tools can be used to identify areas where treatment protocols need to be changed, and to monitor improvements following such changes. The TCU Client Evaluation of Self and Treatment (CEST) is a 144-item self-rating instrument that includes 16 scales measuring patient functioning and treatment perceptions. Psychometric properties (including reliability and construct validity) of the scales are examined in this paper, based on patient samples drawn from 87 programs that participated in a series of staff training workshops. Acceptable reliabilities (.70 or above) were generally reported, and construct validity was also. Prediction analyses were conducted using selected scales from each measurement domain to illustrate their sensitivity to treatment program contexts.

#### **Assessing Organizational Readiness for Change**

*(Wayne Lehman, Jack Greener, & Dwayne Simpson, TCU)* – A comprehensive assessment of organizational functioning and readiness for change (ORC) was developed based on a conceptual model and previous findings on transferring research to practice. It focuses on motivation and personality attributes of program leaders and staff, institutional resources, and organizational climate as an important first step in understanding organizational factors that are related to implementing new technologies into a program. This paper describes the rationale and structure of the ORC and shows that it has acceptable psychometric properties. Results of surveys of over 500 treatment personnel from more than 100 treatment units support its construct validity on the basis of agreement between management and staff on several ORC dimensions, relationships between staff organizational climate dimensions and patient engagement in treatment, and associations of agency resources and climate with organizational stability. Overall, these results indicate that the ORC can contribute to the study of organizational change and technology transfer by identifying functional barriers involved.

See **JSAT Abstracts**, next page.

## Adoption and Implementation of New Technologies in Substance Abuse Treatment

*(Paul Roman & Aaron Johnson, U of Georgia)* – In addition to clinical outcomes, understanding the adoption and implementation of new treatment interventions is essential. This analysis was designed to assess the predictive utility of organization-level features in understanding the adoption and implementation of new technologies in substance abuse treatment. Naltrexone, which was found to be in current use in 44% of a national sample of 400 private substance abuse treatment centers, was selected as an appropriate sample technology for study. Adoption of naltrexone is significantly related to both the treatment center's age and its administrative leadership. Naltrexone adoption is also significantly associated with the percentage of the center's caseload covered by managed care programs and by the percentage of relapsers represented in the caseload.

## Mapping Training: The Transfer of a Cognitive Technology for Improving Counseling

*(Don Dansereau & Sandra Dees, TCU)* – To provide information that will reduce the gap between research and practice, the transfer of a complex drug abuse counseling technology is examined. This technology, cognitive mapping, is a graphic tool shown to effectively facilitate communication and problem solving in group and individual counseling sessions.

Unlike some techniques, mapping requires substantial counselor time, effort, and expertise to learn and to use. This paper briefly describes the development and evolution of mapping and supporting research. It then focuses on efforts to develop mapping training that will facilitate use of this evidence-based technique in drug abuse treatment. Major training and transfer pitfalls are noted, and strategies for successful training are recommended.

## Transporting a Research-Based Adolescent Drug Treatment into Practice

*(Howard Liddle, Cynthia Rowe, Tanya Quille, Gayle Dakof, Dana Scott Mills, Eve Sakran, & Hector Biaggi, U of Miami Medical Center)* – This article describes the key ingredients and processes in transporting an empirically supported, research-developed family therapy for adolescent drug abusers, Multidimensional Family Therapy (MDFT), into an intensive day treatment program. Using the same systems change principles that guide this treatment approach, the technology transfer process has been from its inception a collaborative, multidimensional, systemic intervention aimed at changing organizational structures, and attitudinal and behavioral patterns with multiple staff members at several levels of the program. The article describes (1) the conceptual and empirical basis for these technology transfer efforts, (2) the technology being adapted and transferred, and (3) the critical events and processes that have

shaped the transfer of MDFT into this program. These processes and the outcomes to date are discussed through the lens of Simpson's organizational change model (this issue) and specify the implications of this experience for the expansion of current conceptualization of technology transfer.

## The Federal Role in Transferring Knowledge to Practice: A History and Perspective

*(Barry Brown, UNC-W, & Pat Flynn, TCU)* – The past 30 years have seen a focus on substance abuse research in association with the creation of Federal agencies specifically mandated to guide that effort. While research has been well supported and largely productive, there has been increasing concern with the slow pace of adoption of the findings from that research. The history of those efforts suggests a long-standing concern with knowledge development, and a continuing reliance on print media to achieve knowledge application. Nonetheless, evidence from other human service fields, and increasingly from the substance abuse field, indicates that interpersonal strategies are dramatically more effective in achieving the individual and organizational behavior change needed to achieve technology transfer. Argument is made that the Federal government remains the best if not only resource for promoting technology transfer. A paradigm is described to further Federal efforts in this area, and structural elements suggested for the achievement of technology transfer goals. ■



## Technology Transfer, continued from page 2.

niques introduced in the training such as *Tower of Strengths and Weekly Planner*, *Thought Team*, and node-link mapping were added to the Motivation Program. Once the materials were assembled, staff pilot tested the program with a sample of residents who had 3 or more previous court-ordered admissions to PCN. These residents gave it a high rating and after some fine-tuning the key components of the program were finalized.

The Motivation Program begins with the *Downward Spiral* game. Residents with identified motivational problems (based on multiple admissions to PCN) come together 3 times a week to play the game and participate in process groups.

**“One player, after hearing her game situation was that she participated in an armed robbery and was sent to jail, placed her head on the table and began to cry. No further explanation was needed as how this had impacted her life.”**

— Mike Roberts  
PHS Messenger Newsletter  
Volume 3, Issue 2

Discussions center on how the situations described in the game resemble their own real life experiences with the “downward spiral” of addiction. Participants also are required to keep journals and share them with their group members. In addition, over the course of the 3-week program, residents participate in *Team Building* and *Thought*

*Team* exercises and complete and discuss the *Tower of Strengths* workbook.

## Motivation Program Outcomes

Of the 48 residents assigned to take part in the Motivation Program to date, only 6 have failed to graduate. Those who complete the program advance to an alumni process group for the remainder of treatment. When residents leave treatment at PCN, they complete an exit survey that asks several questions about their perceptions of the value of the Motivation Program to the overall treatment experience. The average rating has been 4.7 (out of a possible 5). PCN is in the process of collecting follow-up data from residents in the Motivation Program to assess outcomes and long-term gains from participation.

Pioneer Human Services recently opened a new facility in eastern Washington (Pioneer Center East) and the Motivation Program was included as part of standard treatment based on its track record at PCN. At the new facility, all residents will be required to complete a portion of the Motivation Program, not just those with documented treatment failures. At admission, residents will be assigned to a *Downward Spiral* process group and these groups will meet several times a week to play the game and discuss its impact. Graduation to mainstream treatment will be based on motivation scores and program progress.

The creativity and initiative demonstrated by PCN represents an ideal outcome for technology transfer to clinical practice. As Dansereau and Dees point out in their article, the NFATTC workshop used training approaches that encouraged participants to develop a sense of comfort with and “ownership” of the transfer materials. This included allowing plenty of time for participant practice and discussion, promoting the set of cognitive tools as a “buffet” of techniques from which participants could freely choose, encouraging peer collaboration and support, and, last but not least, devoting time during the training for explicit implementation planning. In this case, 30 minutes at the end of the workshop was set aside for participants to think about how the new techniques they had just learned might fit into their programs and to brainstorm a detailed implementation plan. As is evidenced by the innovative Motivation Program developed at PCN, this training approach may be all that’s needed for some programs to “take the ball and run with it.”

For information about the **Motivation Program at Pioneer Human Services**, contact Judy Holman by e-mail at [judy.holman@p-h-s.com](mailto:judy.holman@p-h-s.com). ■



### More information at IBR Web site:

For other articles by Dr. Dansereau and team on cognitive tools, including the *Downward Spiral* and other cognitive strategies, see [Projects](#), [CETOP Project](#) at [www.ibr.tcu.edu](http://www.ibr.tcu.edu).

## What's New on the Web

### At the IBR site, <http://www.ibr.tcu.edu>

**New section coming:** The IBR Web site is being redesigned to streamline access and highlight integrated sets of materials — manuals, forms, findings. Watch for these upcoming **Resource Collections** on special topics.

**Newsletters:** The *Research Summaries* are being updated, beginning with the *Research Summary: Focus on Treatment Assessment*, which is available in PDF.

**Downloads** — This page provides a convenient, indexed list of all PDF files that can be downloaded from the IBR site.



### At the DATOS site, <http://www.datos.org>

**Adults, 5-Year Outcomes:** The *Archives of General Psychiatry* published a new 5-year DATOS outcome study based on adults treated for cocaine dependence that is summarized with text and charts.

**Publications:** An article from *Drug and Alcohol Findings* (Mike Ashton, Editor) that provides a comprehensive external review of DATOS research and policy implications is available to download in PDF.

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