What Will it Take to Implement Evidence-Based Practices Statewide

Adolescent Substance Abuse Treatment Statewide Coordination Project

Prepared for
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Introduction

This paper is based on a literature review conducted on the costs of transitioning evidence based programs and practices (EBPs) into adolescent substance abuse treatment agencies. Literature regarding transitioning of evidence-based programs and practices into adult substance abuse treatment was also examined so as to expand the narrow field of available adolescent treatment research. Although the kind of programs and approaches for adolescent substance abuse treatment is different than adult programs and approaches, the evidence-based program and practice transition process is similar.

Research has been conducted on cost-benefits of a particular evidence-based program or approach and on the cost of an evidence-based treatment program, but not on the actual costs of the process of implementing an evidence-based program or practice into a substance abuse treatment agency from its initial stages of choosing an evidence-based program or practice through its transitioning into a permanent, i.e., adopted, program of the agency. This paper provides a brief overview of the progress that substance abuse researchers and practitioners have made in translating evidence-based program and practice research into “every day” substance abuse treatment practice, the factors that have been found to facilitate its transfer, some of the transition processes where costs need to be considered by the substance abuse treatment system, and finally, research–derived recommendations to support treatment providers in their quest to provide the best treatment available for their clients.
Researchers in the substance abuse treatment field have devoted several decades to finding the most efficacious approaches and interventions to treat those with substance abuse and dependence problems. In turn, many of these efficacious treatment approaches have been through diffusion or translational research studies to test their effectiveness within community based clinical practice, yet diffusion of even the most well-tested of these interventions has been slow (Compton, 2006; Ginexi & Hilton, 2006; Gold, Glynn, & Mueser, 2006; Sterling & Weisner; 2006; Chaffin & Friedrich, 2004; National Institute on Drug Abuse, 2004).

The Institute of Medicine’s (IOM) seminal book, “Bridging the Gap between Practice and Research” (Lamb et al., 1998) articulated the need to speed the adoption of effective treatments by closing the gap between the day to day substance abuse treatment practitioners and the researchers promoting the use of scientifically proven effective practices and programs. The book also described the structural, financial, educational, and public policy barriers in closing that gap. The question of how to facilitate transfer of that research into clinical practice has been a federal research priority over the past decade and much work has been done in the area of translation research regarding effective programs and practices (Rawson, 2006).

The federal government through its Substance Abuse and Mental Health Services Administration’s (SAMHSA) Center for Substance Abuse Treatment (CSAT) and the National Institutes of Health (NIH) has funded a number of important programs and research studies to facilitate the transfer of researched based practices and programs into community-based substance abuse treatment settings, e.g., CSAT’s Practice Improvement Collaborative (PIC), the Addiction Technology Transfer Centers (ATTC), and the National Institute on Drug Abuse’s (NIDA) Clinical Trials Network (CTN). Clearinghouses and repositories have been created to disseminate information about effective programs in the fields of substance abuse prevention and treatment, delinquency and violence prevention, and juvenile justice treatment programs making program information easily accessible to policy makers, administrators, clinicians, and
Background

consumers, e.g., Substance Abuse and Mental Health Services Administration’s National Repository of Effective Programs and Practices (NREPP), RAND Corporation’s Promising Practices Network, University of Colorado’s Center for the Study of Prevention of Violence’s Colorado Blue Prints of Model Programs, and Office of Juvenile Justice and Delinquency Prevention’s Model Programs.

From the aforementioned research to practice efforts, the substance abuse treatment field has learned a great deal about the factors that facilitate substance abuse treatment program transfer and adoption of effective practices, but even with this concerted effort, the diffusion of effective substance abuse treatment interventions into the “every day” clinical setting has been minimal (Rawson, 2006; Bradley et al., 2004; National Institute on Drug Abuse, 2004; Sloboda & Schildhaus, 2002; Henggeler, Pickrel, & Brondino, 1999). It has been shown that evidence-based programs and practices take time to develop and mature. A maturation period after startup to overcome initial barriers and fine tune the intervention is needed. Some researchers have suggested that diffusion of even the most successful interventions rarely exceeds 1% of the target populations (Ginexi & Hilton, 2006). Others have found that it takes at least a year for a new program to be imbedded into an organization (Bradley et al., 2004; Orwin, 2000). The Institute of Medicine estimated that it may require about 17 years for a new technology to make its way into widespread clinical use in medicine (Chaffin and Friedrich et al., 2004). Although the Institute of Medicine was referring to the field of medicine, the timeframe estimated for a substance abuse treatment organization to adopt a new program or practice needs to go well beyond a few months of training that may often be considered sufficient by implementers to transfer a new intervention into practice (Amodeo et al., 2006). The National Institute on Drug Abuse Blue Ribbon Task Force Report on Health Services Research (National Institute on Drug Abuse, 2004) recognizes the need for further research regarding evidence-based program and practice transfer into clinical practice including research concentrating on organizational and financing issues and the National Institute on Drug Abuse Clinical Trials Network is continuing its translation of research findings into clinical practice that will in the future provide the field with further information about transferring research into clinical settings.
In a review of various program implementation attempts in mental health, social services, juvenile justice, education, early childhood education, employment services, and substance abuse prevention and treatment, the review concluded that “implementation is synonymous with coordinated change at system, organization, program, and practice levels.” (Ginexi & Hilton, 2006, p. 343). This concept of coordinated change at the organization, program, and practice levels became crystallized in the 1950’s through Everett Rogers’ diffusion of innovations theory and which became widely accepted into a variety of social science disciplines (Rogers, 1995). The extensive behavioral health research literature on diffusion (that encompasses and is often used interchangeably with other processes of technology transfer, dissemination, transportability, adoption, translation, uptake, etc.) is replete with guidance, lessons learned, and recommendations regarding the required elements, principles, and steps needed to implement a new practice. The Addiction Technology Transfer Centers’ “The Change Book: A Blueprint for Technology Transfer” provides a clear guide, to help key stakeholders at all levels of the substance abuse prevention and treatment system, on how to institute the required change processes in order to implement a new technology (scientific knowledge) into their organizations.

What was expressed in “The Change Book” and by the diffusion research literature in general, is that there are a number of well-known and complex factors and mechanisms that need to be considered, planned for, and then implemented in order for evidence-based programs and practices to be transferred and adopted. These factors include: identifying a clear need for the selected evidence-based program or practice (relevancy); having the continuous support of leadership and influential opinion leaders at all levels of the treatment system, having a vision and an adequate supply of receptive, skilled and trainable program implementers and supervisors; opportunities for staff and client input and feedback; choosing evidence-based programs and practices that are acceptable to staff and clients; assessing organizational climate/context (organizational readiness); having incentives for evidence-based program and practice
adoption and for its competent use; embracing a philosophy of care; ongoing
evaluation; and importantly; having stable financing including sufficiency and
sustainability of resources (e.g., equipment, personnel, and training) (Carroll &
Rounsaville, 2007; Amodeo et al., 2006; Compton, 2006; D’Ambrosio, Laws, & Gabriel.,
2006; Ginexi & Hilton, 2006; Gold, et al., 2006; Rohrbach, Grana, Sussman & Valente,
2006; Flay et al., 2005; Chaffin & Friedrich, 2004); Bradley et al., 2004; Iowa Practice
Improvement Collaborative Project, 2003; Liddle et al., 2002; Robbins, Bachrach, &
Szapocznik, 2002; Goldman et al., 2001; Hoagwood, Burns, Kiser, Ringelsen, &
Schoenwald, 2001; Schoenwald & Hoagwood, 2001; Addiction Technology Transfer
Centers, 2000).

Timing of the technology transfer is also an important facilitator. For example, the
technology transfer is ready for application but the need has not evolved to justify
implementation; or the reverse is true in that the problem the practitioner faces outpaces
the research (Ginexi & Hilton, 2006). Finally, direct and personal contact and
collaboration between researchers and practitioners is important to the transfer process
(Liddle et al. 2002; Schoenwald & Hoagwood, 2001, ATTC, 2000).

The absence of the factors that facilitate transfer, implementation, and adoption also
constitute the barriers that impede transfer, implementation, and adoption, e.g., lack of
vision, leadership, staff buy-in, philosophy of care; lack of system, organization,
program and/or practice’s readiness to change; lack of stable financing (see Exhibit 1).
Other barriers noted in the research literature include lack of parity between substance
abuse treatment and physical and mental health services payments (i.e., addiction is a
chronic, relapsing disorder like diabetes and hypertension); lack of public and private
insurers to provide reimbursement for evidence-based programs and practices (that
often call for longer treatment duration) because they typically favor short treatment
episodes; and costs of evidence-based program and practice implementation
(discussed later in this paper) (Carroll & Rounsaville, 2007; Amodeo et al., 2006;
D’Ambrosio, et al., 2006; Ginexi & Hilton, 2006; Gold, et al., 2006; Rohrbach et al.,
2006; Flay et al., 2005; Chaffin & Friedrich, 2004); Bradley et al., 2004; Iowa PIC
Project, 2003; Liddle et al., 2002; Robbins et al., 2002; Goldman et al., 2001; Hoagwood
et al., 2001; Schoenwald & Hoagwood, 2001; ATTC 2000). Given this list of complex implementation facilitators and barriers, it is understandable that the transfer, implementation, and adoption of evidence-based programs and practices into clinical practice can be easily derailed, even if the evidence-based program or practice is highly regarded and even if the change process is supported by federal grants and expertise is provided by researchers. Thus it is not surprising that the evidence-based program and practice transfer process is occurring at such a slow pace.

### Exhibit 1
Factors That Facilitate Transfer, Implementation, and Adoption of Evidence-Based Programs and Practices

<table>
<thead>
<tr>
<th>Barrier Type</th>
<th>Barrier(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Organizational</td>
<td>Vision, leadership, staff buy-in, and philosophy of care.</td>
</tr>
<tr>
<td>Systemic and organizational</td>
<td>Readiness to change by system, organization, program, and/or practice.</td>
</tr>
<tr>
<td>Financial</td>
<td>Stable financing.</td>
</tr>
<tr>
<td></td>
<td>Parity between substance abuse treatment and physical and mental health services payments.</td>
</tr>
<tr>
<td></td>
<td>Public and private insurance that will provide reimbursement for EBPs with longer treatment durations.</td>
</tr>
<tr>
<td></td>
<td>Provision of sufficient funding to cover costs of EBP implementation.</td>
</tr>
</tbody>
</table>
Practice diffusion requires full-scale organizational change that must be backed by substantial resources (Bradley et al., 2004). The substance abuse treatment field is still in need of guidance on how to implement and fully adopt an evidence-based program or practice, and an important piece of that guidance is to know what it will actually take in money and human resources to do so. Without implementation cost information, it is difficult for substance abuse treatment administrators at the system, organization, program, and practice levels to propose and budget for this change process (Ginexi & Hilton, 2006; Flay et al., 2005).

The amount of money and other resources it takes to support the transition to adopt and use one or more evidence-based programs and practices is currently unknown as little research has been conducted in this area (Ginexi & Hilton, 2006). Research has been conducted on the cost of specific treatment services such as the cost of urinalysis and client intake (Anderson, Bowland, Cartwright, and Bassin, 1998) and the cost of a treatment episode per person (see Exhibit 2). Some evidence-based program and practice developers have made their program implementation costs available via the diffusion networks mentioned previously, which may include information about the cost of training, consultation, and evaluation, but this information appears to be more available for substance abuse prevention programs rather than treatment programs and does not take into account other implementation costs.
### Exhibit 2

**Evidence-Based Program Cost Examples**

<table>
<thead>
<tr>
<th>EBP</th>
<th>Description</th>
<th>Program Costs</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Functional Family Therapy</strong> (&lt;br&gt;(Blue Prints Model Programs))</td>
<td>Outcome-driven prevention/intervention program for youth, ages 11–18, with maladaptive, acting out behaviors and related syndromes.</td>
<td>$1,600–$5,000 for an average of 12 home visits/family. Costs vary; dependent on cost of labor.</td>
</tr>
<tr>
<td><strong>Multisystemic Therapy</strong> (&lt;br&gt;(Blue Prints Model Programs))</td>
<td>Intensive family-and community based treatment that addresses the multiple determinants of serious antisocial behavior in juvenile offenders, ages 12–17.</td>
<td>$4,500 per youth. Treatment duration based on 60 hours of contact over 4 months. Frequency &amp; duration of sessions determined by family need.</td>
</tr>
<tr>
<td><strong>Multidimensional Treatment Foster Care</strong> (&lt;br&gt;(Blue Prints Model Programs))</td>
<td>Community families are recruited, trained, and closely supervised to provide MTFC placed adolescents with treatment and intensive supervision.</td>
<td>$3,900 per month per youth. Average length of stay is 7 months.</td>
</tr>
<tr>
<td><strong>Brief Strategic Family Therapy</strong> (&lt;br&gt;(Robins et al., 2002))</td>
<td>Structural family systems framework is used to improve youth’s behavior problems by improving family interactions that are presumed to be directly related to the child’s symptoms.</td>
<td>Training costs: $4,000/therapist for 3 day workshops over 3 months.</td>
</tr>
</tbody>
</table>

What are some evidence-based program and practice transition or implementation costs that treatment agencies should consider? These costs should include all the costs a treatment organization would need to expend to fully adopt the evidence-based program or practice with fidelity. Many of the implementation factors and mechanisms contain multiple steps and activities that need to be identified and then carried out by a treatment agency. Each of these steps and activities has costs associated with them. For example, identifying a clear need for the selected evidence-based program or practice, having the support of leadership and influential opinion leaders at all levels of the treatment system, and having a vision and embracing the treatment philosophy will all take staff time to accomplish. The time involved to achieve these steps can be assigned a cost in terms of staff hours. Costs for other factors such as assessing
organizational readiness are more straightforward as these costs may be more readily calculated or may be already available from program researchers and developers.

Training of treatment agency staff is a central activity in the evidence-based program and practice transfer process. Staff (clinical, administrator, and clerical) training in the evidence-based program or practice and then supervising and monitoring the implementers are crucial transfer activities to plan and budget for. Training in a specific intervention often requires staff to acquire new skills. Setting performance criteria and documenting that all clinical staff meet those standards before delivering the new intervention is also important (Bellg et al., 2004). Some other important cost considerations may include: hiring sufficient and qualified staff required to carry out the intervention as intended; providing incentives to staff for their competency and skill in treatment delivery; allowing time for staff to acquire evidence-based program or practice certification or receive technical assistance or consultation with program developers; pay needed to cover staff while in training (and revenue lost when counselors are not seeing clients) as well as covering staff time needed to develop competency in the evidence-based program or practice; being able to financially sustain the evidence-based program or practice while acquiring client outcomes to see if the program is producing results; evaluating the program implementation process; having supervisory staff who can devote a sufficient amount of their time to supervising and monitoring staff’s adherence to the new intervention; and being able to support the staff time needed to make changes in existing practices that may be needed to support or otherwise integrate with the new intervention (Ginexi & Hilton, 2006; Flay et al., 2005; Bellg et al., 2004; Schoenwald & Hoagwood, 2001). Exhibit 3 summarizes the above stated evidence-based program and practice transition costs.
### Exhibit 3
Evidence-Based Program and Practice Transition/Implementation Cost Considerations

<table>
<thead>
<tr>
<th>Implementation Step</th>
<th>Cost/Resource</th>
</tr>
</thead>
<tbody>
<tr>
<td>Research EBP for “fit”</td>
<td>Sufficient staff time is needed to investigate, decide, and gather support for the EBP.</td>
</tr>
<tr>
<td>Organizational Readiness Assessment</td>
<td>Conducting an organizational readiness assessment is a key factor in ensuring that ALL staff (Board of Directors, Executive Director, program managers, clinical directors, clinical supervisors, and line staff) are ready, willing, and able to implement EBP.</td>
</tr>
<tr>
<td>Hiring qualified and sufficient numbers of staff</td>
<td>The EBP may require more staff (and more qualified staff) than the agency currently employs. To implement the EBP as intended, sufficient and skilled staff are crucial.</td>
</tr>
<tr>
<td>Thoroughly train and certify staff</td>
<td>Sufficient time is needed for staff (including administrative and supervisory staff) to be trained, certified, and gain adequate competency in what can be complex treatment approaches.</td>
</tr>
<tr>
<td>Setting staff performance criteria</td>
<td>With a new treatment/practice, changing staff performance criteria may be necessary. Documenting that staff meet these standards is also necessary.</td>
</tr>
<tr>
<td>Supervision and monitoring of staff</td>
<td>Supervisory staff need to be able to devote time necessary to oversee and mentor clinical staff to assure skill acquisition and treatment fidelity is occurring.</td>
</tr>
<tr>
<td>Provide incentives</td>
<td>Rewards for skilled and competent staff are necessary to improve morale and thus reduce staff turnover and retraining.</td>
</tr>
<tr>
<td>Sustaining EBP until adoption completed</td>
<td>Financially sustaining the EBP for a sufficient period of time will be necessary until client outcome data can be evaluated to determine if the EBP is producing the desired outcomes.</td>
</tr>
<tr>
<td>Evaluation</td>
<td>Conducting an evaluation of the implementation process as well as programmatic results are key to program improvement and EBP sustainability, including pre and post client evaluation.</td>
</tr>
</tbody>
</table>

Diffusion does not occur spontaneously; it requires creating an infrastructure dedicated to translating the innovation (Bradley et al., 2004). The federal government has begun that infrastructure development through funding of Department of Health evidence-based program and practice substance abuse treatment research, clinical trials, and demonstration grants, but infrastructure at the state level to support the transfer and adoption of evidence-based programs and practices has yet to be developed.
The implications of these implementation cost issues has led researchers to recommend that some public policy changes at the state level need to occur in order to facilitate the transfer and adoption of evidence-based programs and practices into community based clinical practice. Research has shown that substance abuse treatment programs will adjust services to funding constraints, which greatly impacts the implementation fidelity of an evidence-based program or practice (Anderson et al., 1998). Thus stable financing, and sufficiency and sustainability of resources, are important issues that warrant state level involvement. It is suggested that states need to go beyond a stated interest or mandate that community based treatment organizations adopt evidence-based programs into their practice and move toward more concrete leadership, i.e., financial assistance to support transition and adoption processes (Bradley et al., 2004; Chaffin & Friedrich, 2004; Lehman, Goldman, Dixon, & Churchill, 2004; Goldman et al., 2001).

Actions the state could implement to foster evidence-based program transfer at the practice level include (Bradley et al., 2004; Chaffin & Friedrich, 2004; Lehman et al., 2004; Goldman et al., 2001):

- Plan for evidence-based program and practice sustainability from the start by creating a specific infrastructure with resources and expertise devoted to diffusion. Infrastructure is needed to provide assistance to both leaders and implementers to sustain changing practices and to change again when new practices emerge.

- Target specific funding of evidence-based programs and practices by providing start-up capitol to support treatment agencies in their transition from old practices to new evidence-based programs and practices. Policy makers and administrators need the tools to shift funding in a logical and incremental manner in order to offset opportunity costs associated with learning a new practice.
The State’s Role

- Change funding practices and abolish financing barriers, e.g., ensure that evidence-based programs and practices are fully covered by Medicaid and Medicare so the evidence-based program or practice can be delivered with fidelity. If the evidence-based program or practice is not implemented with fidelity, client outcomes will not support their continued use.

- Encourage and provide resources for rigorous evaluation at the treatment agency level. Achieving consistently positive outcomes is at the heart of the definition of an evidence-based program or practice. Positive outcomes will be difficult to achieve if implemented evidence-based programs and practices are not delivered with fidelity.

- Increase public awareness of evidence-based programs and practices as consumers can affect the demand for EBPs.

- Ensure that there are enough clinicians in the treatment system by providing incentives to attract qualified and skilled people, linking rewards to client outcomes, developing mechanisms for retraining the current workforce in evidence-based programs and practices and providing certification, and influencing the content of college training courses offered to new professionals and paraprofessionals.
In summary, the successful diffusion and adoption of evidence-based programs and practices statewide requires a collaborative effort among state and county agencies, treatment providers, technical assistance providers, researchers and evaluators, and private insurers. Implementation of evidence-based programs and practices necessitates cooperation and support among all entities to facilitate ample:

- Financing,
- Organizational readiness,
- Leadership,
- Training and technical assistance, and
- Ongoing evaluation and tracking of client outcomes.

With support and collaboration from each organizational level, the prospect of successfully implementing evidence-based programs and practices with fidelity becomes significantly more promising for treatment providers.


Center for the Study and Prevention of Violence. Blueprints Model Programs Fact Sheets on: Functional Family Therapy, Multisystemic Therapy, Multidimensional Treatment Foster Care, and Brief Strategic Family Therapy, http://www.colorado.edu/cspv/blueprints/promising/overview.html
References


References

Rawson, R. (2006). Bridges have been built: Is anyone using them? Presentation supported by the National Institute on Drug Abuse; Pacific Southwest Technology Transfer Center, United Nations Office of Drugs and Crime. University of CA, Los Angeles.


