INTEGRATED EVALUATION METHODS: A GUIDE FOR SUBSTANCE ABUSE TREATMENT KNOWLEDGE-GENERATING ACTIVITIES

Revised July 1999

NEDTAC

CSAT Center for Substance Abuse Treatment SAMHSA

CALIBER ASSOCIATES

INTEGRATED EVALUATION METHODS

A GUIDE FOR SUBSTANCE ABUSE TREATMENT KNOWLEDGE-GENERATING ACTIVITIES

Prepared by:
Patricia Devine

Caliber Associates
10530 Rosenhaven Street, Suite 400
Fairfax, VA 22030

Revised July 1999

This document was produced by the Center for Substance Abuse Treatment, Department of Health and Human Services, Caliber/NEDTAC Contract No. 270-94-0001 and is being made available through Caliber/NEDS Contract No. 270-97-7016.

CSAT
Center for Substance Abuse Treatment
SAMHSA

TABLE OF CONTENTS

TABLE OF CONTENTS (CONTINUED)

Page

TABLE OF CONTENTS (CONTINUED)

Page

FOREWORD

Over the last 10 years the Center for Substance Abuse Treatment (CSAT) has accumulated a great deal of experience in substance abuse treatment evaluation implemented through coordinating centers, cross-site efforts, and national studies. The importance and value of integrating ongoing evaluation activity into a system for treating substance abuse problems is widely recognized. Also widely recognized, however, is that current evaluation-generated knowledge and practice are often under-utilized, due in part to the lack of an integrated approach to capturing information with which to measure and improve treatment effectiveness, efficiency, and performance. CSAT recognizes that such an integrated evaluation approach will more effectively support current and future knowledge-generating activities.

Based on a decade of evaluation experience, CSAT has developed the Integrated Evaluation Methods (IEM) Package, a series of conceptual and methodological applications, including concept papers, technical assistance materials, and analytic tools, to enhance CSAT-funded evaluation activities. Products in the IEM Package are organized within an evaluation framework constructed on the basis of accumulated experiences among internationally known treatment service evaluation professionals. Thus, the framework is based upon evaluation strategies, structures and approaches appropriate for substance abuse treatment evaluators and providers. The framework follows a standard set of evaluation activities: planning, selecting a design, developing data requirements and collection instruments, collecting and analyzing the data, and reporting the evaluation findings. (A summary description of the IEM Package is contained in Appendix A to this document.)

This concept paper and its companion documents, *Self-Adjusting Treatment Evaluation Model; Building Team Capability to Fully Implement and Utilize the Self-Adjusting Treatment Evaluation Model; Adding "Value" to CSAT Demonstrations*; *Performance Measurement for Substance Abuse Treatment Services*, and *Client Levels of Functioning as a Component of Substance Abuse Treatment Services Evaluation* present state-of-the-art conceptual models addressing issues related to coordination of treatment and evaluation activities, and integration of clinical, performance and evaluation information. Specifically, this concept paper summarizes lessons learned from CSAT evaluation activities; identifies evaluation concepts and methods necessary to address the lessons learned; and describes an overarching evaluation framework and integrated evaluation approach to provide a foundation for future evaluation planning activities.

Sharon Bishop
Project Director
NEDTAC

ACKNOWLEDGMENTS

This paper, together with the companion documents listed in Appendix A (the Integrated Evaluation Methods Package), was developed for CSAT by the National Evaluation Data and Technical Assistance Center (NEDTAC) under the guidance and direction of Ron Smith, Ph.D., Program Evaluation Branch, Office of Evaluation, Scientific Analysis, and Synthesis (OESAS). Dr. Herman Diesenhaus, former Team Leader, Scientific Analysis Team, OESAS, contributed many concepts that have been incorporated into this document. Charlene Lewis, Ph.D., former Deputy Director, OESAS, supported this and other associated efforts, with the result that state-of-the-art evaluation concepts were incorporated into many of CSAT's and SAMHSA's evaluation initiatives. Jerry Jaffe, M.D., former Director, OESAS, also contributed his breadth of experience in the substance abuse treatment and evaluation fields and his dedication to high quality treatment services evaluation and provided the national level leadership necessary for CSAT to promulgate these activities. We also thank the Expert Panel members listed in Appendix C, who reviewed the concepts and overall framework presented in this series of documents.

Caliber Associates was the prime contractor for NEDTAC in partnership with Computech, Inc.; the Lewin Group; Capital Consulting Corporation; the Center for Substance Abuse Research (CESAR), University of Maryland; the Alcohol Research Group (ARG), Public Health Institute; the Drug Abuse Research Center (DARC), University of California, Los Angeles; and the Urban Institute. Many people within the NEDTAC team contributed to this effort. Patricia Devine was responsible for the conceptual overview and writing of the paper under the guidance and direction of Dr. Smith. Stephanie Bullman, Richard Finkbiner, Doug Fountain, Melody Moore, Marsha Morahan, and Harriet Perrine of Caliber Associates, and Henrick Harwood of the Lewin Group contributed by reviewing draft versions and providing conceptual and editorial input. Many thanks are also due to Donna Caudill, Erica Gordon Sorohan, and Robin Walthour, who provided comments and suggestions for graphics and text and helped to ensure a final product of high quality.

I. INTRODUCTION

This document describes an integrated evaluation methods (IEM) approach and its genesis. Therefore, this document summarizes CSAT evaluation activities and the lessons learned from these activities, identifies the evaluation concepts and methods necessary to address the evaluation lessons learned, and provides an evaluation framework as the foundation for the integrated evaluation methods. The CSAT evaluation framework was constructed on the basis of accumulated experiences among nationally and internationally known treatment service evaluation professionals. This paper (and the IEM package) reflects and incorporates these experiences, gained over the past decade.

1. DEVELOPMENT OF THE INTEGRATED EVALUATION METHODOLOGY DOCUMENT

Since its inception, the Substance Abuse and Mental Health Services Administration (SAMHSA) Center for Substance Abuse Treatment (CSAT) has provided Federal leadership to improve substance abuse treatment accessibility, quality, effectiveness, and efficiency. CSAT's mission and associated activities have evolved from a services support orientation to a knowledge-generating and performance assessment orientation. This evolution is evident in the current SAMHSA policy on evaluation as well as the CSAT approach to evaluation and embodied in the IEM (Marsh et al., 1996).

CSAT initially (FY 1990-91) focused on enhancing treatment services directly and employed national evaluations to determine treatment efficacy and impact. The national evaluations used a sample of CSAT-funded treatment providers and clients which precluded the generalizability of precise evaluation information to all treatment approaches and populations. Likewise, the national evaluations did not allow for analyses that addressed the treatment services delivered by each treatment provider.

CSAT then funded local process (FY 1992) and outcomes (FY 1993) evaluations at CSAT-funded treatment sites so as to increase the utility of the evaluation information for local treatment service providers. Local evaluations proved insufficient to fully assess these sites. Furthermore, local evaluation findings could not be generalized at the national level. Therefore, in FY 1995, CSAT initiated multi-/cross-site evaluations, in addition to local process and outcome evaluations, for CSAT treatment providers in order to provide both program level and site-

specific evaluation findings.[1] Because of the diversity among CSAT programs and among the treatment approaches used in the substance abuse treatment field, the cross-site approach also was insufficient to address national treatment issues. In FY 1996, the CSAT focus shifted again to knowledge development and application (KD&A) activities. The KD&As develop and test innovative exemplary treatment approaches and practices wherein the primary grant-funded activities are clinical trials and national evaluations rather than service provision.

The national, cross-site, and local evaluation experiences provided CSAT with numerous opportunities to acquire experience about different approaches to evaluating CSAT programs, various evaluation methods to assess substance abuse treatment services, and an array of evaluation implementation strategies within the substance abuse treatment milieu. These evaluation lessons identified the need for:

- Increased coordination and collaboration within and among all participating organizations
- More systematic planning for knowledge-generating activities
- Clearer specifications in knowledge-generating activities announcements and statements of work
- Integrated evaluation methods and tools
- Measures, data and data collection procedures and tools, applicable to all CSAT knowledge-generating efforts
- A comprehensive evaluation strategy that involves methods development and testing, national evaluation studies, program evaluations, multi-site and cross-site analyses, and local process and outcome evaluations
- Analytic strategies across KD&A study sites within a program and across KD&A programs.

These evaluation lessons also provided CSAT with the opportunity to develop a series of conceptual and methodological applications to enhance and coordinate CSAT-funded evaluation activities. CSAT now recognizes a need for integrated evaluation methodologies, which incorporate these conceptual and methodological applications, to support current and future

[1] CSAT supports both multi-site and cross-site evaluations. For an operational definition of these two approaches, see Section 1.3: Multi-site/Cross-site Evaluations.

knowledge-generating activities. The rationale for this approach and how it is being operationalized is presented in this paper.

2. HOW THIS PAPER IS ORGANIZED

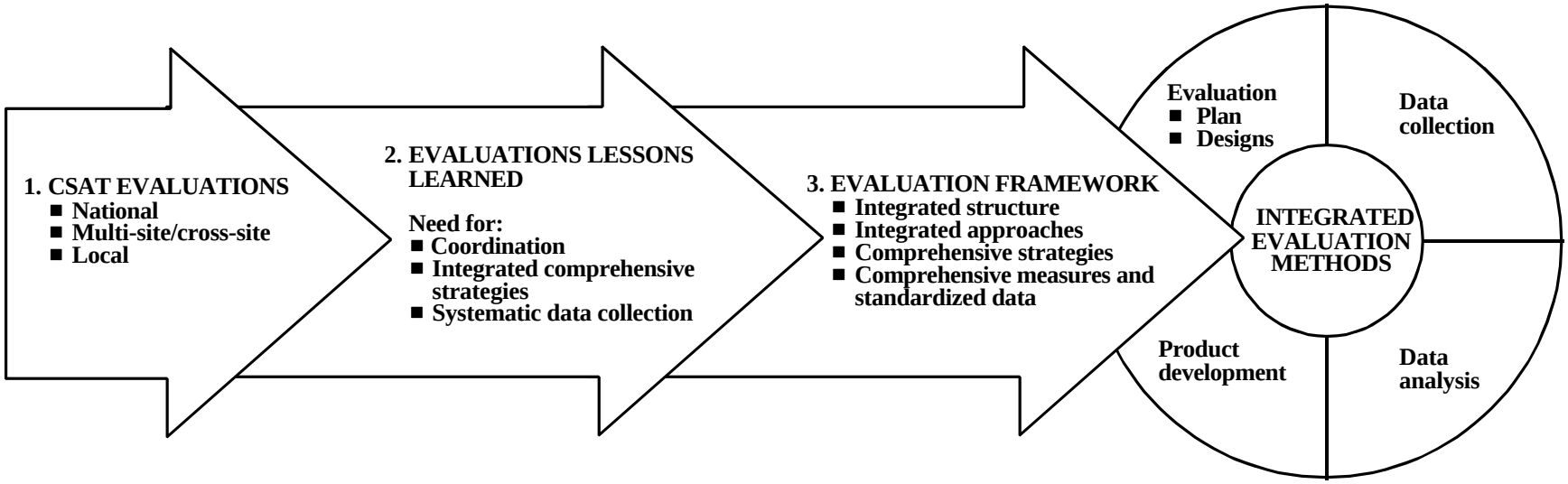
The underlying developmental process for the integrated evaluation methods approach is graphically depicted in Exhibit I-1. As indicated, the CSAT evaluations identified lessons learned which provided the impetus for adapting existing and developing new evaluation methods and tools. The evaluation methods and tools constitute an evaluation framework which provides the foundation for an integrated evaluation methods package.

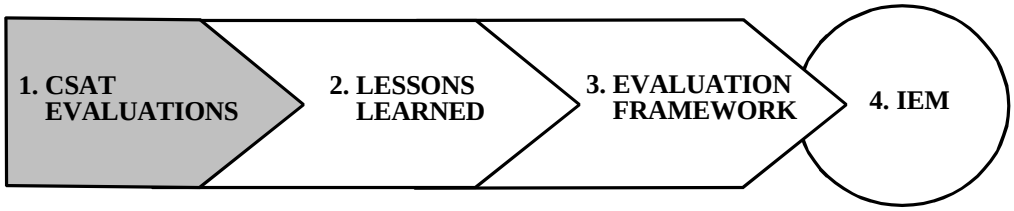
This document contains five sections:

- **The Introduction** which provides background information on the development of the CSAT approach to substance abuse treatment evaluation
- **A summary of the various evaluation approaches** CSAT has used over the last decade including national, local, and cross-site/multi-site evaluations and knowledge-generating activities
- **Lessons learned** from these various evaluation approaches which provide insights and knowledge about applying evaluation methods within the substance abuse treatment environment
- **A substance abuse treatment evaluation framework** which provides a logical structure for the analytic concepts developed in response to lessons learned from previous CSAT evaluation approaches
- **Integrated evaluation methods approach** which describes the evaluation methods, procedures and tools and their interrelationships.

The collection of evaluation concepts, methods, and tools described in this document has been developed to support CSAT-funded national substance abuse treatment evaluations and knowledge-generating activities. The integration of these components within an integrated evaluation methods package is designed to ensure that future evaluations are structured to support SAMHSA knowledge-generating goals and policies. Appendix A contains a summary description of the IEM Package. Documents comprising the IEM Package are being made available at the Caliber Associates NEDS contract web site at http://neds.calib.com.

EXHIBIT I-1
DEVELOPMENT OF INTEGRATED EVALUATION METHODS PACKAGE





II. CSAT EVALUATION ACTIVITIES

Evaluation is the systematic application of social research procedures to assess the design, implementation, and utility of social intervention programs; in other words, evaluators use social research methodologies to judge and improve the ways in which human service policies are developed and human service programs are conducted (Rossi, Freeman, 1993). Hence, evaluation is used at both the policy and treatment operations levels.

CSAT recognizes the value of evaluation for the treatment improvement and identification and adoption of exemplary practices mission as demonstrated by the fact that CSAT treatment service demonstrations have always included evaluations, although the approach to evaluation has evolved over time. Between FY 1990 and FY 1998, the differences in CSAT evaluations have been more in the structure, focus, and scope of the evaluation rather than in the presence or absence of the evaluation.

Between FY 1990 and 1998, CSAT used four approaches to evaluating substance abuse treatment services:

- National evaluations which collect provider and client information from a sample of grant funded local implementation sites across several CSAT program areas
- Local evaluations which focus on the specific grant activity at the treatment implementation site
- Multi-/cross-site evaluations which include all local implementation sites within one CSAT program area
- Knowledge development and application (KD&A) activities which rigorously examine various treatment models and approximate traditional clinical trials.

The local evaluations and the multi-/cross-site evaluations involved significant funding of treatment services, with lesser funding levels for the evaluation component. The national evaluations and KD&As involve significant funding of the evaluation activities, with limited funding of direct services.

No single approach provided all of the information needed to evaluate exemplary practices and improve substance abuse treatment. Even so, each of these evaluation approaches has provided knowledge about the performance of the CSAT-funded activities which are operating within local communities, and about the impact of those activities on the services offered and the clients served. Each of these evaluation approaches also has provided knowledge about the strengths and limitations of specific evaluation strategies and about the factors that enhance and the factors that impede evaluation implementation.

Since the focus of this discussion is on the evaluation process rather than on the evaluation results, lessons learned about how to successfully conduct CSAT evaluations are most germane. By strengthening the evaluation process, CSAT will enhance future evaluation results and be better able to answer with more certainty such questions as: What types of substance abuse treatment are most effective for whom and at what cost? Therefore, the following paragraphs briefly describe the CSAT evaluation approaches listed above so as to provide a context for the lessons learned from these evaluation approaches.

1. NATIONAL EVALUATIONS

The initial CSAT evaluation approach was to fund local treatment services and to separately fund a national treatment outcome study. The National Treatment Improvement Evaluation Study (NTIES) was a Congressionally-mandated five-year study designed to answer questions about the effectiveness of treatment services supported by CSAT. To demonstrate the value of comprehensive treatment, CSAT established three major demonstration program areas and made 157 multi-year treatment enhancement awards across 47 states and several territorial areas during FY 1990-1991. The recipients of these awards were not a representative sample of all treatment units, since they focused on serving large cities, minority populations, and other special populations (e.g., criminal justice populations).

NTIES was designed to answer the following questions about the treatment services supported by CSAT:

- What treatment improvements were deployed? What is the evidence that improved treatment services yielded effective results?
- How were CSAT funds used? How many and what kind of treatment services and clients were affected by the CSAT-funded activities?

NTIES used a two-level study design. The first level focused on the service aspects of treatment including treatment orientation, number of clients served, budget, staffing distribution, and specific use of CSAT funds in all service delivery units (SDUs) eligible to receive CSAT grant support. The second level focused on client outcomes and collected data at treatment entry, treatment exit and approximately 12 months following treatment exit for all clients enrolled in 10 percent of the level one SDUs. Details of the methodology and evaluation results are provided in the full NTIES report (NORC, 1997).

The national evaluation of the CSAT FY 1990 and 1991 programs has provided important information about the provision of substance abuse treatment, including treatment modalities, staffing, and services. NTIES also provided a very comprehensive data set about clients who entered treatment in the FY 1990-91 time frame and about the impact of substance abuse treatment on these clients' behaviors 12 months following treatment exit. The SDU data and client demographic and outcomes data are still vital to addressing substance abuse treatment effectiveness questions about specific populations and treatment services that were included in the NTIES database. NTIES data collection ended in 1995.

The utility of the NTIES data had three major limitations, however. First, a large national evaluation with longitudinal follow-up data collection, by definition, requires an extensive amount of time. For CSAT, the seven years (1990 - 1997) needed for NTIES development, implementation, completion, analysis, and reporting precluded addressing treatment service performance and outcome questions during the operation of the activities included in the evaluation. Second, because of the NTIES sampling of SDUs and clients for the in-depth data collection, the national evaluation approach had limited operational utility for the local substance abuse treatment providers. There were insufficient resources to do treatment site specific analysis. Third, new knowledge-generating activities initiated by CSAT after NTIES was undertaken (those initiated in FY 1992 through FY 1996) could not be incorporated within NTIES and still maintain the study's integrity.

CSAT also funded special emphasis evaluations including The Evaluation of Job Corps Drug Treatment Enrichment Project (DTEP), The D.C. Superior Court Intervention Program, and D.C. Initiative. DTEP was designed to provided CSAT and the Office of Job Corps with information about the costs and benefits of providing substance abuse treatment services to a residential program for adolescents. The D.C. Superior Court Intervention Program was a unique random assignment study that looked at drug treatment services provided to a criminal justice population. In addition, the study provided a cost-benefit analysis for three categories of beneficiaries: the criminal justice system, the public, and the defendant. The D.C. Initiative

conducted a follow-up study to an experiment designed to test the efficacy of providing enhanced or standard therapeutic community treatment. The study compared clients from two treatment approaches on drug use, criminal activity, and employment status and addressed limitations of prior research through random assignment, higher follow-up rates, and objective measures of drug use and criminal history.

These special emphasis evaluations provided advantages and limitations that were similar to the NTIES. Namely, these evaluations identified knowledge about the relative effectiveness of substance abuse treatment and/or treatment approaches for distinct populations and these evaluations accumulated comprehensive data sets about treatment and comparison cohorts. Limitations included insufficient timeliness for policy development (due to up-front design efforts and follow-up data collection) and limited utility for local sites participating in the evaluations (particularly, the DTEP study).

2. LOCAL EVALUATIONS

To address the limitations of the national evaluation approach, CSAT supported local process evaluations beginning in FY 1991 and local process and outcomes evaluations beginning in FY 1992. The intention was to supplement the large national evaluation with more in-depth evaluations focused on a specific SDU within an individual community or provider. These local evaluations have varied widely within CSAT program areas as well as across program areas, however. Differences are associated with the amount of resources allocated for local evaluations as well as with the objectives and types of the local evaluations.

The amount of resources allocated to the local evaluations has had an impact on the evaluation comprehensiveness and quality. Resource levels determined the extent to which local evaluations are able to: (1) comprehensively collect information about the substance abuse treatment services and the clients; (2) incorporate control or comparison groups within the evaluation design; and (3) collect follow-up data to support outcome analyses.

The types of local evaluations and the local evaluation designs within and across CSAT program areas have varied and have included one or more of the following:

- Process evaluations which measured treatment service implementation within local sites

- Client based evaluations which monitored client flows and services received, primarily using pre- post- designs and no comparison or control group

- Outcome evaluations using quasi-experimental designs which included comparison groups, follow-up data collection and the analysis of treatment outcomes and impacts

- Intensive local research efforts which pooled multiple research dollars (including CSAT grant dollars) to test specific hypotheses about specialized treatment approaches and/or distinctive populations (e.g., psycho-social development of infants within a CSAT Pregnant and Postpartum Women's program).

Some treatment sites performed process evaluations but no outcome evaluations. Some treatment sites performed outcome evaluations without doing a process evaluation, which made interpreting the outcome data less informative than desired.

In general, the local evaluations provided site-specific information about substance abuse treatment implementation, treatment clients and client flows, and, in some cases, substance abuse treatment effectiveness. Local substance abuse treatment implementation and the organizational and administrative barriers to full implementation were documented, to varying degrees, by many of the local process evaluations. Few local evaluations fully reported demographic characteristics, treatment experiences, treatment exit status (e.g., completion of treatment plan), and planned versus actual lengths of stay for all clients treated by the evaluated SDU. Local evaluations that used an experimental or quasi-experimental design, including follow-up data collection, reported treatment outcomes and treatment effectiveness findings. There were very few local evaluations that were sufficiently resourced for this level of evaluation rigor, however.

CSAT has been working to combine the findings from local evaluations so as to better determine the overall effectiveness of specific CSAT demonstration programs as well as the overall effectiveness of substance abuse treatment services. The value of the local evaluation findings for these purposes, however, has been limited. Essentially, knowledge gained from local evaluations could not be combined, meaningfully, to address program, policy, or research questions at the national level. Local evaluation findings could not be synthesized due to the variations among local evaluation objectives, designs, methods, measures, time frames, data collection points, sample sizes, analyses performed, and report structure. In addition, local evaluation findings did not generalize to the total populations within a given geographic location or CSAT program area and, therefore, were not informative outside of the local context. Consequently, CSAT continually pursues efforts to generate program evaluation information which is more global in terms of its application and interpretation.

3. MULTI-SITE/CROSS-SITE EVALUATIONS

CSAT has employed multi-site and cross-site evaluation strategies to assess program-wide implementation, treatment outcomes, and costs. A review of the methodological literature and professional discussions among NIDA researchers suggested that the terms "multi-site" and "cross-site" are used inter-changeably within the evaluation field and that differences between these approaches are associated with the operational definitions. Due to the analytic purposes of the cross-site approach, CSAT operationalized the cross-site evaluation as a prospective evaluation which analyzed common sets of data collected across multiple local sites using the same treatment protocol, to answer national evaluation questions. Multi-site evaluation methods were used for CSAT programs which used different treatment protocols within one or more treatment sites.

Each multi-site/cross-site evaluation included a local evaluation which focused on collecting and analyzing in-depth treatment services data and client data. Local evaluations also addressed specific treatment service characteristics and/or client populations which are unique to the locale. Cross-site evaluation activities included: developing a common set of measures at referral, intake, in-treatment, treatment exit, and follow-up; data on the cost of providing the treatment services; developing a common database; and analyzing process and outcome variables to determine whether statistically and clinically significant treatment outcomes and impacts are realized at the CSAT program level.

The multi-site/cross-site evaluation approach, by design, attempted to combine the advantages of the in-depth local evaluations with the advantages of a program-level evaluation by generating comparable local evaluation data which could then be pooled to answer national evaluation questions at the CSAT program area level. Implicit in this approach, however, are the same limitations experienced by earlier CSAT national and local evaluations. Specific limitations included:

- Prolonged design and planning phases, post-award, due to limited cross-site specifications in funding announcements
- Unanticipated reluctance among geographically and programmatically diverse CSAT treatment providers to embrace the systematic multi-site/cross-site evaluation approach

- Unanticipated barriers to collecting comparable SDU and client data from disparate local SDU operations and local evaluators who are using different data sources, data collection instruments, and data collection reference points

- Unanticipated challenges to standardizing data quality control procedures among multiple data collectors across data collection sites

- Insufficient planning for and implementing follow-up data collection requirements resulting in additional delays to obtaining follow-up data.

In short, the CSAT multi-site/cross-site evaluations are generating knowledge about the CSAT-funded activities included in the cross-site efforts. The multi-site/cross-site evaluation approach, however, has not sufficiently addressed CSAT's need for timely or comprehensive knowledge across program areas which is directly applicable to improving the provision of substance abuse treatment services.

4. KNOWLEDGE-GENERATING ACTIVITIES

Technically, all CSAT evaluation activities currently support knowledge development objectives and, to the extent that this knowledge is useful to other programs, these evaluations also support knowledge application activities. Beginning in FY 1996, the CSAT KD&A mission, however, reflects specifically a shift in the CSAT role away from supporting the provision of direct services with a small evaluation component to one of supporting the rigorous evaluation of treatment models to include clinical trials.

While there are differences across the new KD&As (FY 1996 and beyond), these programs have similar characteristics, including:

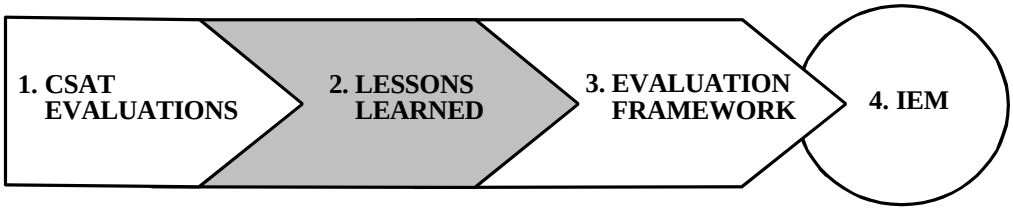
- Pre-designed study specifications which guide the entire effort

- Study sites which provide the clinical interventions or local data collection support or both and, thus far, coordinating centers that conduct multi-site/cross-site activities

- Steering committees which include representatives from the Federal agencies, coordinating centers, and study sites.

Several of the KD&As are designed to accommodate specific limitations of the multi-site/cross-site evaluation approach in that the standardization of the evaluation measures, data, and data collection activities within a program area are specifically incorporated within the terms and

conditions of the grants. The challenges of combining data across cross-site activities remains, due to the absence of core data specifications across CSAT KD&A program areas. In the absence of an overarching approach to evaluation across the KD&A efforts, the ability to compile data within national data sets that is sufficient to address the multitude of analytic issues that characterize substance abuse treatment evaluation will be limited, if even possible. Other lessons that have been learned from the accumulation of CSAT treatment evaluation experiences, not directly addressed by the KD&A structure, are described below.



III. LESSONS LEARNED

Over the last decade, CSAT has made a significant investment in generating knowledge about the effectiveness and efficiency of substance abuse treatment through its evaluations and KD&A efforts. Rather than providing the results of these evaluations, however, the purpose here is to summarize the lessons learned from designing and implementing these evaluations.

Several types of evaluation lessons predominate in the CSAT experiences, thus far, including the need to:

- Coordinate the roles and activities of the evaluation sponsors, evaluators and service providers including the linkage of treatment evaluation with clinical practices
- Design evaluations which assess all treatment components and provide detailed study goals, evaluation design requirements, sample size specifications, data points and data requirements, as well as expected evaluation products prior to grant awards
- Ensure rigorous and consistent provider assessments through coordinated, comprehensive evaluations which accommodate all outcomes and cost analysis requirements
- Provide an overarching approach that facilitates the integration of data across evaluation activities and program areas.

The following paragraphs summarize types of lessons learned from CSAT evaluations so as to provide a foundation for future evaluation planning activities.

1. NEED FOR COORDINATION

The field of substance abuse treatment has been evolving over the past 30 years, and today, substance abuse treatment services are extremely diverse with intermingled philosophies and modalities. During this time period, the evaluation of substance abuse treatment has employed traditional research models whereby the evaluator has been separate from the provision of treatment services. The CSAT evaluation philosophy however has evolved to address treatment services diversity and to encourage the integration of evaluation and treatment

operations. CSAT evaluations, by definition, involve multiple organizational units and numerous professional staff. Coordination among Federal sponsors and evaluation activities and the coordination of evaluation findings and treatment provider operations is essential. Lessons learned about functional and subject matter coordination are mentioned below.

Increasing coordination for evaluation planning and implementation. Historically, CSAT-funded treatment and evaluation activities have not been conducted using a fully integrated process, since each organizational function contains highly specialized expertise with distinct roles and responsibilities. For knowledge-generating activities, however, close coordination of treatment services provision and evaluation planning and implementation greatly enhances the efficiency of these activities. Specifically, the coordinated specification of treatment theories and the components which address these theories (such as designs, data collection and reporting, and timeframes) increases the overall potential yield of these efforts. Coordination enhances the integration of the treatment approaches and the data collected about the interventions, across efforts. The integration of treatment, evaluation and data collection activities across organizational entities supports broad-based analyses which, in turn, strengthens the quality and credibility of the overall planning, implementation, and evaluation efforts (Patton, 1987).

Increasing linkages between treatment evaluation and clinical practice. Knowledge about substance abuse treatment has grown rapidly through research and program evaluations but the incorporation of this knowledge into treatment services has not. The knowledge-generating activities are designed to address this issue and ensure ongoing knowledge application. The integration of research and evaluation findings within the planning, implementation, and operations of substance abuse treatment is critical to ensuring that newly developed theories, newly tested methods, and documented exemplary treatment practices are available for the benefit of the clients served and those who manage or provide those services (National Institute on Alcohol Abuse and Alcoholism, 1991; National Institute on Drug Abuse, 1998).

2. NEED FOR COMPREHENSIVE AND COMPARABLE EVALUATION STRATEGIES

Given the complex, multi-faceted nature of substance abuse, substance dependency, and substance abuse treatment, substantial variation exists within and across treatment settings, and among philosophies and modalities. Yet, few research and evaluation studies precisely define the treatment domain, and even fewer compile evidence of the unique and/or interactive effects of these variables on clients. Moreover, the complexity of treatment processes coupled with the

complexities of human behavior complicate further attempts to identify and measure specific treatment components and their results. Measures of treatment philosophy, modality, intensity, services, and staff characteristics must be considered in relation to population characteristics and dependency diagnoses (Institute of Medicine, 1990).

In addition, substance abuse treatment evaluations must be coordinated and, whenever possible, integrated. Given the complexities in treatment and dependency patterns, it is necessary to rigorously and systematically evaluate problem- and population-specific interventions. Innovative treatment approaches are usually (given costs and other resources) limited to a finite population in any given effort. But, since scientific evidence of substance abuse treatment effects requires numerous observations, it is important to increase the number of observations (clients) so as to extend the generalizability of individual treatment evaluations. Increasing comparability among data sets across study sites and program areas, and increasing the number of observations within data sets, leads to increasingly generalizability among evaluation findings.

Furthermore, the generalizability of evaluation findings is greatly enhanced by the number of clients who participate in the innovative treatment and the standardization of treatment and evaluation protocols used across treatment sites. Within this context, the most pressing need for standardization is the specification and collection of similar information about treatment services and clients. Similar information about different treatment approaches among different populations makes it possible to address the broad knowledge and national policy questions about treatment effectiveness, treatment efficiency and treatment replicability (Anglin & Hser, 1992).

3. NEED FOR SYSTEMATIC COLLECTION OF TREATMENT, COST AND CLIENT INFORMATION

Prior evaluation efforts have collected extensive information about either the implementation of the intervention or about the clients who received intervention services. Few evaluations collected both intervention and client data systematically which then could be linked together during analysis, and even fewer collected cost and performance data systematically which could be incorporated within the overall analysis. Also, the systematic collection of client follow-up data, which is essential to determining treatment outcomes, has received even less emphasis (Pietrzak et al., 1990).

The systematic collection of treatment, cost and client data requires: (1) efficient use of resources: collecting data on one segment of treatment provides minimal additional insight into the entire treatment experience; therefore collecting comprehensive treatment, cost and client data, including follow-up data for a requisite sample of clients, is a more efficient use of resources; and (2) sufficient technologies and measures: standardized, reliable measures for service delivery unit variables, clinical components of treatment, treatment costs and client outcomes are essential (Longbaugh et al., 1993).

The CSAT evaluation efforts have confronted many of the coordination, comparability, methodological and technical issues. As a result of these experiences, CSAT evaluations have included developmental components and produced or enhanced the following:

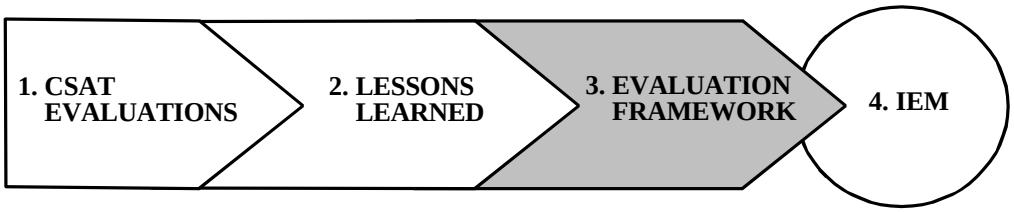
- An approach to evaluation that facilitates continuous knowledge development and treatment services improvement
- Conceptual designs for coordination among treatment and evaluation activities, cost analysis, and performance measurement
- Measurements for service delivery units and clinical components and quantifying and linking these measures to client outcomes
- Standardized approaches to specifying information needs including evaluation measures, variables, definitions and corresponding instrumentation
- Automated data collection and management tools
- Models for systems, services, clinician and client data analyses and reporting
- Follow-up data collection activities.

The integration of these concepts, measures, methods and tools is the subject of this document. The next section provides the evaluation framework for the integrated evaluation methods approach.

4. NEED FOR OVERARCHING APPROACH TO DATA INTEGRATION

CSAT evaluation activities between 1990 and 1998 resulted in invaluable lessons learned about substance abuse treatment services, about evaluation methodologies, and about implementation of sound evaluation methods for CSAT treatment demonstrations. A resounding

lesson learned from the eight years of CSAT experience is that there is a serious gap in the comparability of substance abuse treatment services, clinician, cost, and client outcome data, among local study sites, and across CSAT program activities. This lesson leads to the conclusion that CSAT needs to provide an overarching approach that facilitates the integration of data across evaluation activities and among CSAT programs. The need for data comparability and integration has been clearly identified by CSAT-sponsored evaluators and is well-grounded in the professional literature, as the earlier literature citations suggest. This need also has been identified by the CSAT-convened panels of nationally renowned substance abuse treatment researchers and evaluators.



IV. SUBSTANCE ABUSE TREATMENT EVALUATION FRAMEWORK

The lessons learned from prior CSAT evaluation activities are directly relevant to current and future knowledge-generating activities. All such efforts will require coordination among sponsors and study sites; integration of evaluation and clinical practices; interrelational evaluation approaches and methods; comprehensive data collection and analyses across programmatic efforts; and products that appeal to a broad audience and range of consumers (policy makers, treatment managers, clinicians, evaluators, and the general public).

The conceptual and methodological products from prior CSAT evaluations provide an analytic framework which makes sense of the complexities inherent in substance abuse treatment evaluation and provides an analysis strategy for moving forward. The CSAT evaluation framework is presented in Exhibit IV-1 and includes:

- Evaluation structures and processes which address treatment/evaluation coordination issues and the need to integrate substance abuse treatment funding, delivery, monitoring, evaluation data collection and analysis, and production of evaluation products

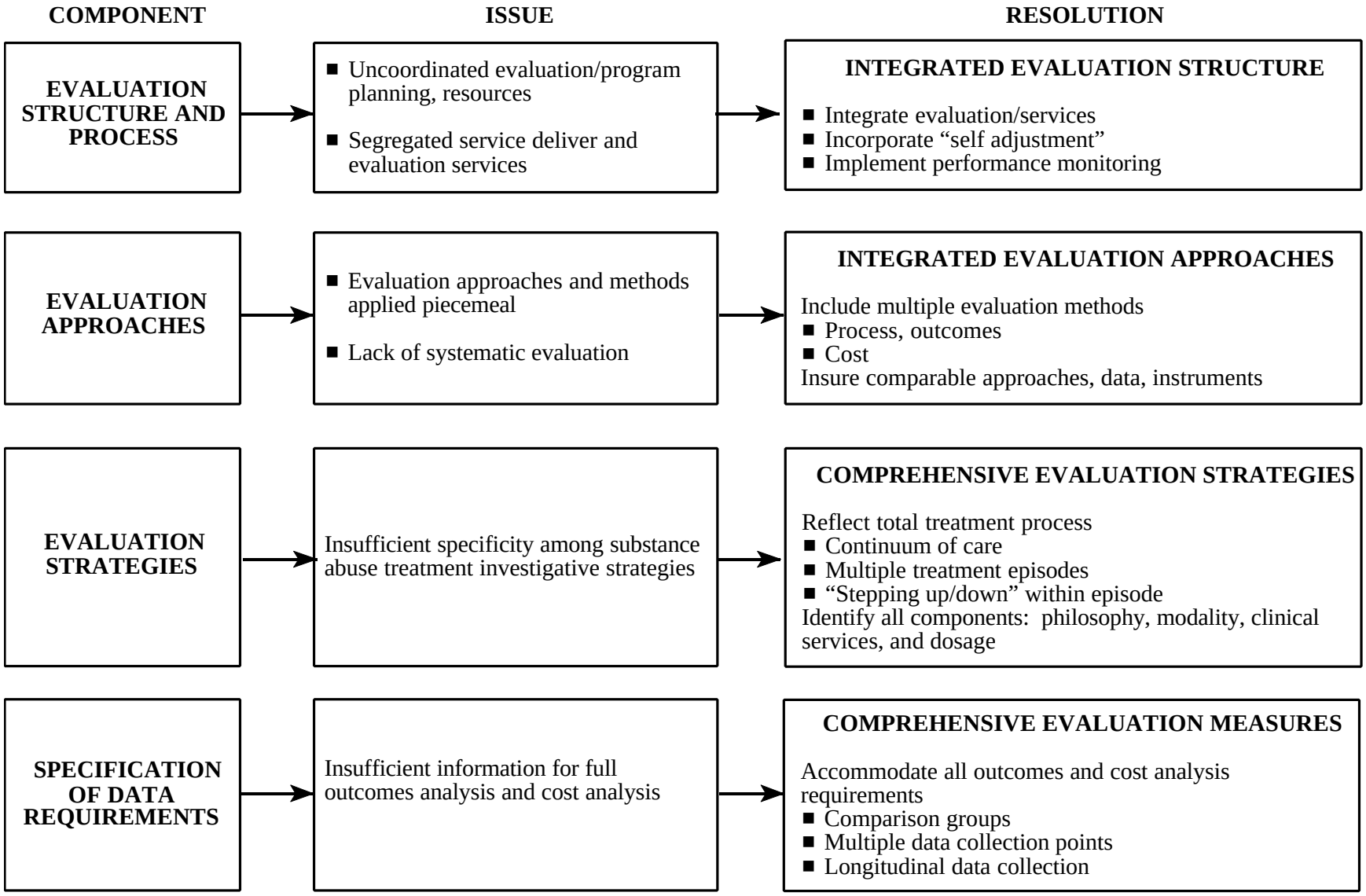
- Evaluation approaches which are interrelated and comprehensive to fully address the complexities of substance abuse treatment and the need for measures of substance abuse treatment efficacy and efficiency

- Evaluation strategies which take into account all of the realities of clinical services and client treatment experiences; strategies are needed to assist researchers and evaluators to disentangle the components within the "black box"

- Specification of evaluation data necessary to adequately support the full inventory of evaluation measures and the full range of analytic techniques.

Each of these analytic framework components is further described below.

EXHIBIT IV-1
CSAT EVALUATION ANALYTIC FRAMEWORK



1. EVALUATION STRUCTURE AND PROCESS

The importance and value of integrating ongoing evaluation activities within a system for treating substance abuse problems is widely recognized by CSAT, evaluators and providers alike. Also widely recognized, however, is that current knowledge and state-of-the-art approaches are often underutilized for adjusting and improving treatment systems as well as provider treatment services (Guba et al., 1989). Specifically, it is recognized that:

- The quality and quantity of evaluation information needs improvement
- Training and technical assistance on evaluation are needed to support service providers
- A shared sense of evaluation direction and priorities are needed among Federal and state staff, evaluators and service providers
- Federal agencies can provide leadership in the substance abuse treatment field by promulgating state-of-the-art evaluation concepts, approaches and tools.

To begin addressing these needs, CSAT developed a self-adjusting treatment evaluation model which provides a framework for integrating evaluation within treatment planning, management, operations and service delivery. Through cycles of feedback and adjustment, this multi-disciplinary approach continuously incorporates knowledge gained from evaluation activities within the substance abuse treatment system or at a specific treatment site so as to improve client services (Devine et al., 1999).

A related CSAT developmental effort resulted in the capacity building model for teams made up of Federal sponsors, evaluators, treatment providers and other staff involved with the provision and/or evaluation of services. This CSAT tailored approach to team building was designed to assist Federal sponsors and treatment providers in building organizational structures, skills, behaviors and attitudes so as to successfully integrate the self-adjusting evaluation lessons within day-to-day management and service provision activities. To successfully use the model, all team members must work together and incorporate an understanding of sound evaluation principles; participate in planning and implementing evaluation components; collect and learn from new information, and implement and manage change in response to the new information (Moore et al. 1999).

Thirdly, CSAT presented a performance measurement model which provides tools and processes for measuring treatment outcomes and ensuring the ability to compare outcome measures across programs or against a standard that uses severity of client substance abuse as the analytic construct. This model will also support the use of performance measurement data by individual treatment providers to assess and monitor their own performance against pooled performance measurement data (Harwood et al., 1998).

Taken together, these conceptual models and corresponding tools provide a firm foundation for establishing an evaluation structure and process among the Federal sponsors, evaluators and substance abuse treatment providers. These conceptual tools significantly address the issues of coordinating treatment and evaluation planning, implementation, and operations and the issues of integrating clinical, performance and evaluation information.

2. EVALUATION APPROACHES

The professional and academic fields of evaluation research have been evolving over the past two decades and are increasingly operationalizing the associated scientific and applied concepts. Major evaluation concepts include:

- **Process evaluation**—evaluation activities related to an assessment of a treatment provider's operations; increasingly becoming synonymous with an assessment of the degree of conformity to the design (also termed: implementation evaluation).

- **Impact or outcomes evaluation**—evaluation of whether and to what extent a treatment approach or bundle of services causes changes in the desired direction among the target population.

- **Cost analysis**—the identification and analysis of all resources needed for a treatment provider's operations; studies of the relationship between treatment costs and treatment outcomes, with both costs and outcomes expressed in monetary terms (Rossi et al., 1993).

Evaluation professionals recognize the need for including all of these approaches when designing and implementing evaluation studies; public recognition, particularly with respect to funding complex evaluations, lags somewhat behind (Patton, 1987). The accumulation of CSAT evaluation experiences however fully supports the need to include the full range of evaluation approaches and the need to fully coordinate and integrate these approaches. The most recently stated CSAT goals further emphasize this need; CSAT aims to identify exemplary treatment practices that are cost efficient approaches to substance abuse treatment for populations with

problems of dependency and to assess the replicability of these treatment approaches (Steckler et al., 1992).

All of the national, and multi-site/cross-site evaluations directed by CSAT's Program Evaluation Branch included process, impact, and cost analyses, and whenever possible, cost efficiency and cost benefit analyses. CSAT learned, however, that inclusion of these approaches is complex. Complexities emanate from the lack of standard definitions for substance abuse treatment services, expected client outcomes and cost components. Also, CSAT learned that the technical expertise needed to accommodate these evaluation approaches rarely rests with one professional evaluator who has both the breadth of treatment services and evaluation experience and the in-depth qualitative, statistical, economic, and cost analysis skills. Hence, CSAT uses evaluation teams to support its evaluation activities.

To address the challenges of incorporating process, outcomes and cost analyses within the national evaluation efforts, CSAT sponsored the development of the concept paper: *Adding "Value" to CSAT Demonstrations: The What, How and Why of Cost Analysis* and further tested the application of The Uniform System of Accounts and Cost Reporting for Substance Abuse Providers. The concept paper recognizes that rapid and dramatic changes are being made to the management, delivery and financing of substance abuse treatment services and that these changes place significant demands on publicly funded treatment systems as well as the services provided at treatment sites. To meet these challenges, meaningful evaluations must incorporate cost analysis along with process and outcome evaluations. The concept paper provides the rationale for this position and demonstrates the adoption and application of the Uniform System of Accounts and Cost Reporting for Substance Abuse Providers (Capital Consulting Corporation, 1993, 1998; Harwood et al., 1998).

Within this area, CSAT also developed a standard approach to developing evaluation plans which include process, outcomes and cost analysis and a standardized assessment protocol for reviewing evaluation proposals developed under the CSAT auspices. These models for evaluation planning were instrumental in furthering CSAT's goal of providing essential standardization across evaluation activities at local study implementation sites.

3. EVALUATION STRATEGIES TO FULLY CAPTURE TREATMENT EXPERIENCES

CSAT has always recognized that substance abuse treatment is an evolving field of clinical, rehabilitative and social interventions and that the evaluation of substance abuse

treatment requires an in-depth analysis of the range of treatment services both within and across treatment providers. CSAT also has recognized that the evaluation of substance abuse treatment services is confronted by multiple complexities, including:

- Substance abuse/dependency is associated with interrelated physical, biological, psychological, genetic, societal causes and variant medical diagnoses
- Substance abuse treatment encompasses multiple, overlapping and interrelated interventions related to treatment philosophies, modalities, therapies, models, and delivery mechanisms and staff
- Substance abuse patterns and treatment service patterns vary by geographic location, population characteristics, and socio-economic conditions (Wellisch et al., 1991).

From the beginning, CSAT determined that service provider analysis must be conducted at the level of the ***service delivery unit***—a single treatment modality provided at a single site (NORC, 1997). As further evidence of client treatment experiences emerged, CSAT recognized the following concepts and their implication for substance abuse treatment evaluation:

- **Treatment episodes—**typically clients enter and exit treatment programs multiple times; this recognition reshaped CSAT's concept of treatment **discharge** as an end point for treatment experiences and as a starting point for follow-up data collection and the measurement of treatment outcomes and impacts.
- **Treatment "bundles"—**complementary to the SDU measurement concept is the fact that treatment episodes frequently involve a **continuum of care** from detoxification to aftercare and that treatment clients may receive a "bundle" of services from several SDUs during one treatment episode.

A fuller description of these treatment experience concepts and the implication for substance abuse treatment evaluation is provided below.

3.1 Defining the Service Delivery Unit

CSAT is interested in determining which types and combinations of treatment yield the best outcomes for specific populations and/or individuals with differing substance dependencies, demographic characteristics and/or treatment histories and experiences. Therefore, CSAT is guiding evaluations away from the view of treatment as a "black box" toward the scientific identification and measurement of treatment service components, treatment dosage, and

treatment experiences (Anglin & Hser, 1992; NORC, 1997; Saxe & Shusterman, 1991). To this end, CSAT is working to standardize the identification of and subsequent data collection about treatment modality, philosophy, setting, services provided, treatment organization, and clinical and staff characteristics and the interrelational impacts of these variables on client behaviors, attitudes and outcomes.

This approach has resulted in CSAT's creation of the Service Delivery Unit (SDU) concept and the operationalization of the concept with data specifications and definitions (NORC, 1997). An SDU is defined as a single site offering a single treatment modality. The SDU is one of the independent variables in an analysis of the impact of substance abuse treatment on treatment clients. While the client is the unit of analysis, the SDU is the unit of comparison.

Inclusion of the SDU approach within substance abuse treatment evaluation is designed to continue the refinement of evaluations that attempt to answer the question: Which types of substance abuse treatment are most effective for a given population? This approach must be supplemented by client-specific treatment information. Substance abuse treatment providers may or may not provide all of the services associated with each SDU, to the same degree, to all of the clients who enter these SDUs. Collection of treatment experiences and "dosages" per client therefore is the most accurate and reliable approach to addressing the treatment effectiveness issue.

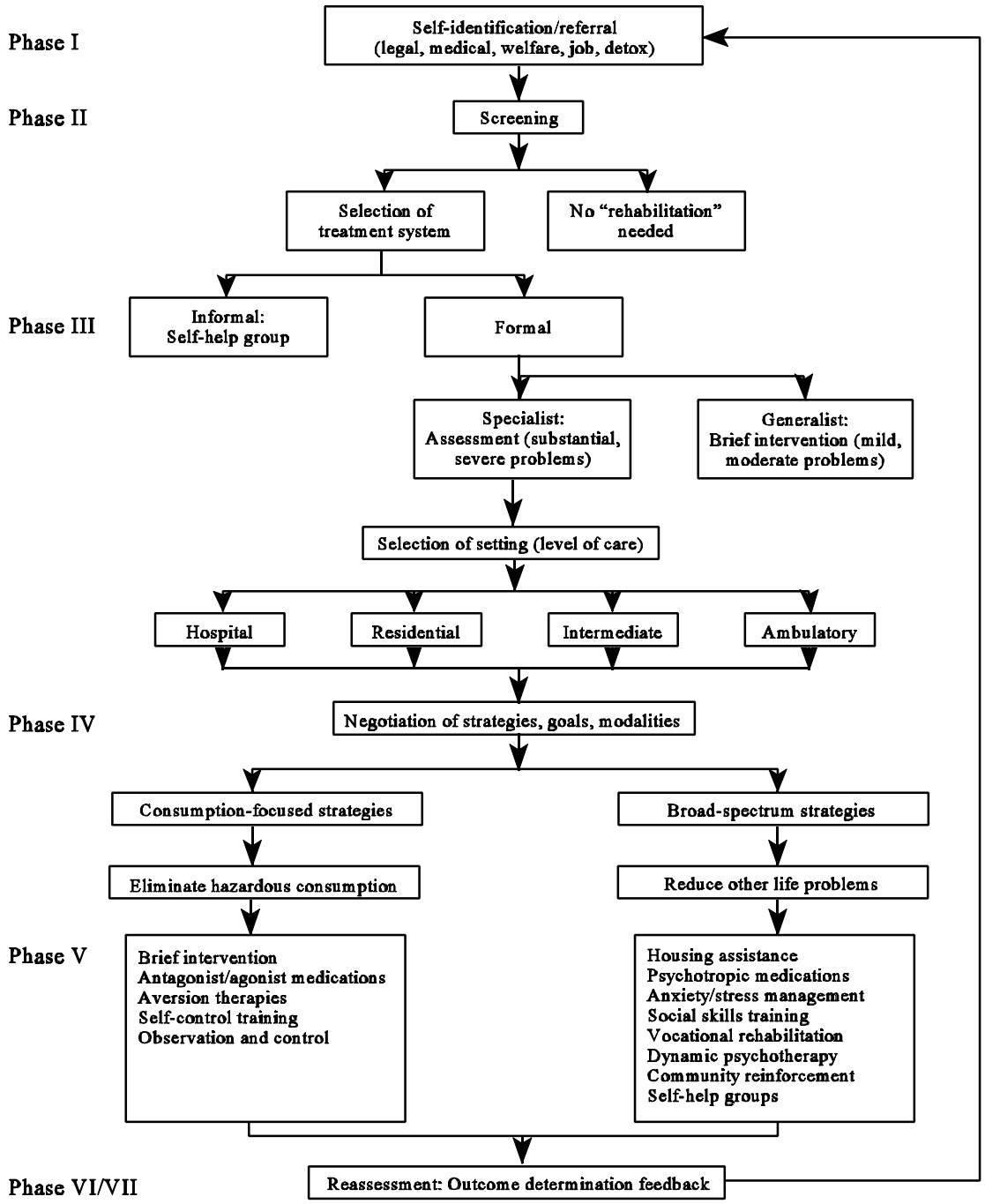
3.2 Defining Treatment Episodes

CSAT has always recognized that substance abuse treatment and recovery is a process of inter-related diagnostic, treatment, and assessment/reassessment experiences. In the mid-1990's, CSAT adopted a substance abuse treatment model which provides a conceptual framework for understanding substance abuse treatment experiences and processes. This model, presented in Exhibit IV-2, graphically depicts the following treatment planning and selection phases:

- Phase I: Identification—involves determining an individual's substance abuse problem and the severity (mild, moderate, severe)

- Phase II: Triage Referral—involves active referral to the appropriate treatment approach, where appropriateness is determined through mutual exploration with clients of their perceptions, needs, and desires for the type of treatment and setting

EXHIBIT IV-2
MATCHING TREATMENT SETTINGS, STRATEGIES, GOALS, AND MODALITIES[1]



[1]Adapted from: W.R. Miller (Matching Individuals With Interventions) and the model developed by the IOM Committee for the Study of Treatment and Rehabilitation of Alcoholism and Alcohol Abuse.

- Phase III: Treatment Entry—involves the treatment provider's response to clients' immediate needs

- Phase IV: Initial Treatment Processes—involves implementing specific procedures to prevent treatment drop-out and to provide preparatory treatment experiences to relieve symptoms and to ensure motivation to continue treatment

- Phase V: Goals and Methods Selection—involves working with the client to collaboratively develop long range treatment plans

- Phase VI: Treatment Maintenance and Monitoring—involves regular review of progress toward goals, determining whether specific treatment methods are being adequately carried out, and redefining the goals and methods when necessary

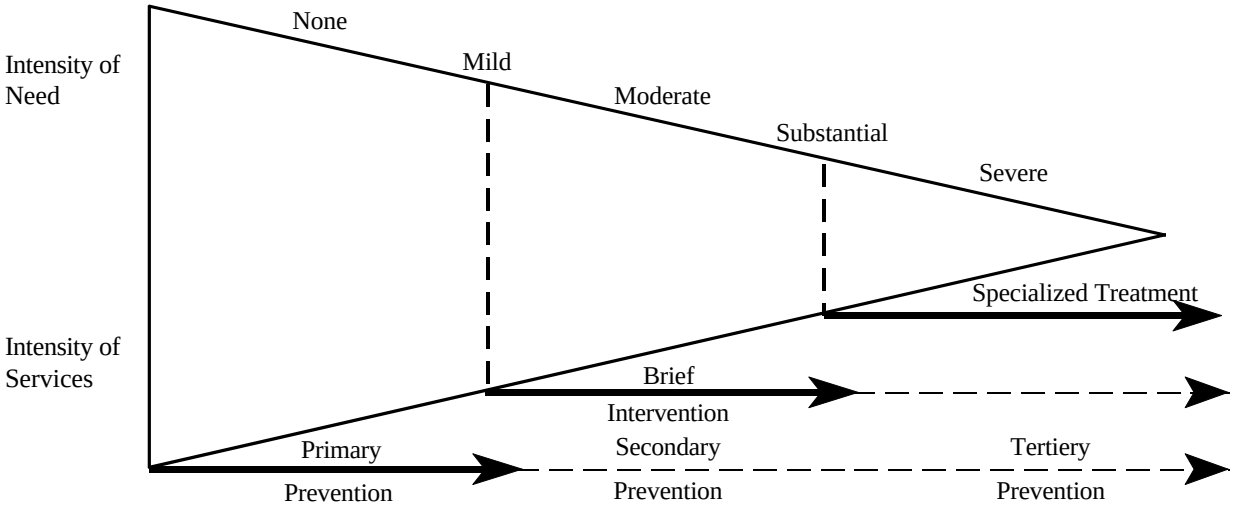
- Phase VII: Termination and Follow-up—involves assessment of gains achieved and maintained, with an end to formal treatment occurring when the goals are reached (Diesenhaus, 1995).

Building on the above treatment model, CSAT further recognizes that substance abuse treatment and recovery may include multiple treatment experiences. Typically, individuals with substance dependency seek out and receive a series of treatment services over time. Empirical evidence which supports this understanding underscores CSAT's perspective that substance abuse treatment evaluation recognize each treatment experience as a treatment episode and that clients may participate in more than one treatment episode. From a evaluation design perspective, evaluators must be able to isolate treatment episodes per client when treatment is episodic and take into account these episodes when defining treatment exit and conducting follow-up data collection. Evaluators also must determine and then assess the combined effect of combining treatment episodes over time (Hubbard et al., 1989).

3.3 Defining Treatment Intensity

Substance abuse treatment providers, together with evaluators and researchers, must also identify the treatment intensity, as an important dimension of treatment dosage. A conceptual model for assessing the intensity of need and corresponding intensity of service is presented in Exhibit IV-3 on the following page. The model identifies five levels of need for substance abuse treatment, including: none, mild, moderate, substantial, and severe. For individuals who have no need for alcohol and other drug treatment, the appropriate service would be prevention. Individuals with mild to moderate substance abuse problems are candidates for brief

EXHIBIT IV-3
SUBSTANCE ABUSE NEED AND TREATMENT SERVICE INTENSITY



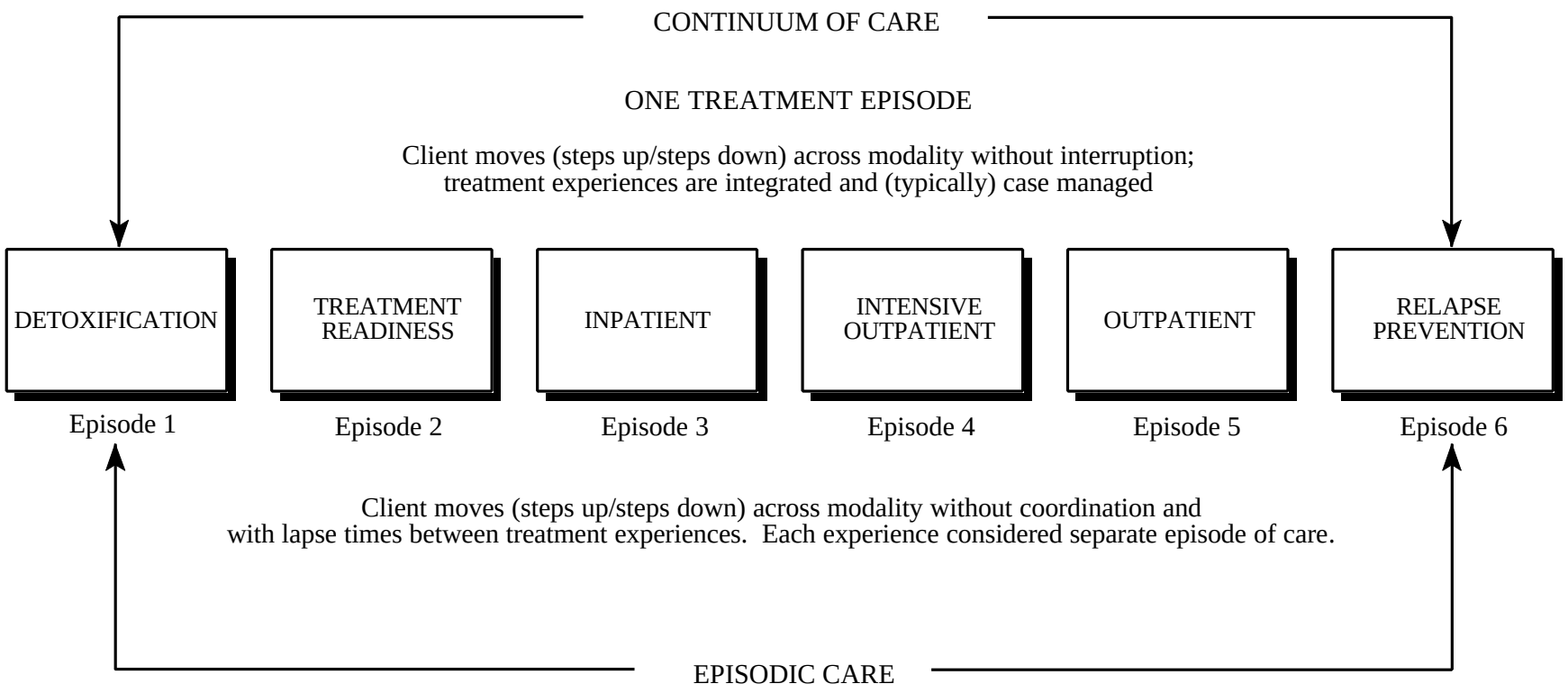
interventions. Individuals with substantial to severe problems are candidates for specialized substance abuse treatment (Diesenhaus, 1995).

3.4 Defining Treatment "Bundles"

The detailed measurement of a client's substance abuse treatment experiences also has relevance to the individual's treatment episodes. Substance abuse treatment has evolved and currently reflects the step-down (and step-up) model of substance abuse treatment, depending on client need. When this process is integrated in accordance with a treatment plan and there is no break in the treatment experiences, the approach is termed "continuum of care" and viewed as one treatment episode by clients, providers, treatment funders and evaluators. When clients move in and out of treatment and when there are elapse times between treatment experiences, the treatment is termed "episodic care" and each treatment experience is considered one treatment episode (Breslin, 1997). These concepts are graphically depicted in Exhibit IV-4.

CSAT evaluators must be able to identify "treatment bundles" which result from case managed stepping up or stepping down of treatment intensity. In practical terms, the recognition of episodic care and the recognition of treatment bundles necessitates the collection of SDU-specific treatment data by date of treatment entry and treatment exit. The collection of these data will support a continuum of care analysis at the client level (Landry, 1995).

EXHIBIT IV-4
SCHEMATIC PRESENTATIONS OF TREATMENT EPISODES, CONTINUUM OF CARE AND EPISODIC TREATMENT



4. SPECIFICATION OF DATA REQUIREMENTS

Thus far, the CSAT evaluation analytic model recognizes the need for and provides concepts, methods and tools to:

- Ensure fully coordinated substance abuse treatment efforts which integrate clinical and evaluation information to ensure continuous knowledge generation and treatment service improvement
- Support the full range of evaluation approaches including process, outcomes, cost analyses, and performance indexing to ensure comprehensive evaluation
- Disentangle and fully specify treatment experiences including continuum of care, treatment bundles and episodic care to ensure that treatment services evaluation examines the relationship between client outcomes and services received.

The evaluation framework also recognizes a fourth issue; namely, the need for comprehensive evaluation data to accommodate all treatment analysis requirements. A complete evaluation requires comprehensive treatment services, client and cost data; therefore, data issues underline all of the evaluation components, listed above (Moras, 1993). The contribution of CSAT's evaluation experiences to the analytic framework here is the provision of a data specification and data collection framework to guide future efforts. The CSAT data framework includes: (1) time frame for data collection activities, and (2) types of data necessary for comprehensive evaluations.

4.1 Types of Evaluation Measures and Data

CSAT national substance abuse treatment evaluation studies consistently required data collection for the various dimensions associated with substance abuse treatment including systems, service delivery unit, costs and clients/comparison groups. These dimensions are described below.

Systems level measures are essential if knowledge about the treatment field is to be meaningful. Systems measures capture information on the professional or community "system" within which the substance abuse treatment operates. The Criminal Justice Treatment Network program, for example, operates within the justice system, the treatment system and the broader community of public service systems. Similarly, the HIV Outreach program operates within the community "linkage" system—those agencies, particularly substance abuse treatment providers,

with whom the outreach program must establish working relationships to meet overall outreach and treatment access goals (Chen, 1990).

There is a growing literature on program evaluation that is based on the systems model (see Appendix D); this model presumes an integration of systems that directly or indirectly support substance abuse treatment. The model focuses the evaluation efforts on system-wide growth and survival including resource acquisition, environmental adaptation, and internal and external conflict resolution (Chen, 1990). Systems level measures may be inappropriate for evaluations which focus solely on individual treatment providers or treatment approaches for specific populations. Given the complexity of systems level evaluation, the current effort does not attempt to address this type of evaluation.

Service Delivery Unit measures are critical to evaluation of treatment services and include information about the provider's substance abuse treatment structure. The treatment structure shapes the clients' substance abuse treatment experiences within a specific episode of care. SDU measures include treatment services design, philosophy, setting, implementation experiences, target population, clients served, components of treatment services, assessments, case management, treatment approaches, referrals and continuing care (NORC, 1997).

Cost measures are essential to determining the efficiency of substance abuse treatment. One cornerstone of CSAT's evaluation strategy is that cost analysis receive much greater emphasis in the evaluation of substance abuse treatment operations and outcomes. A cost analysis component allows the substance abuse treatment field to more fully capitalize on the knowledge being generated about substance abuse treatment services and apply it to treatment operations. CSAT recognizes that the value of individual substance abuse treatment cost analyses would be greatly enhanced by the ability to pool locally collected cost data and develop a national perspective on the relationship between the cost of services and service outcomes. Therefore, CSAT advocates a common list of cost and financial data to be collected locally in support of national analyses (Harwood et al., 1998).

Clinical staff measures are critical to an understanding of treatment effectiveness since the clinical staff serve as the connection between the treatment services structure and the client's treatment services experience (Lettieri, 1992).

Client level measures are critical to an understanding of what types of treatment are best suited for a specific type of client. These measures include data on demographics and historical behavior; data on services actually received and length of stay, and data to support treatment

outcome measures. These measures fall within eight domains including demographic characteristics, substance use, juvenile/criminal justice involvement, mental health, physical health, education, employment, and social functioning. Client measures also include level of functioning and all treatment experiences including actual "dosages," treatment exit, reasons for treatment termination, and experiences with other social and support services (Babor & Frawley, undated).

Control or Comparison group(s) are essential to provide evidence that the treatment services have had an impact on the client behaviors. Control/comparison group(s) are designed to match the client group on all dimensions. The client level measures are used for the control/comparison group(s) and include all of the variables described above (Orwin, 1998).

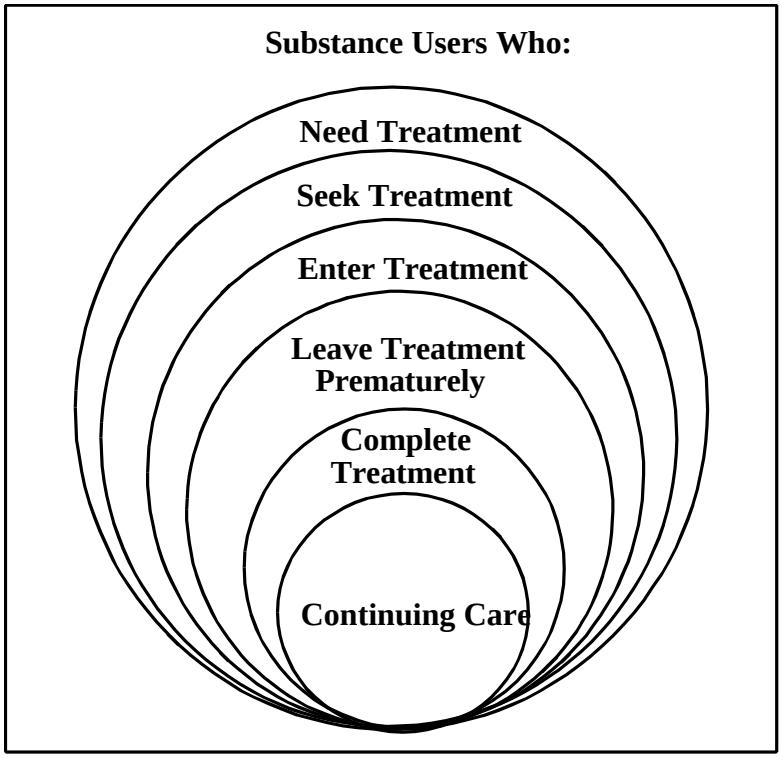
Building on the prior evaluation experiences, CSAT developed data lists which are included in the *Minimum Evaluation Data Set (MEDS)* for the service delivery unit, clinical staff, cost, and clients/comparison groups. The primary purpose of the MEDS is to assist CSAT-funded evaluations, in particular national evaluation studies, and knowledge-generating activities in planning and implementing comprehensive evaluations.

4.2 Data Collection Time Points

CSAT is interested in all aspects of treatment including treatment need, access, entry, participation and exit circumstances, and treatment outcome and impact. CSAT is committed to collecting client data for each of these treatment-related events: treatment referral; treatment services and dosage per client; treatment exit; continuing care; and follow-up.

Further, CSAT is interested in gathering information about the clients who do not complete the treatment "flow." Namely, clients who are referred but who do not seek treatment or are not accepted into treatment; clients who are accepted but do not complete treatment; and so on. Obtaining data on client flow at each juncture is critical to gaining insight into the need for and delivery of substance abuse treatment services. Exhibit IV-5 presents a diagram to demonstrate the "universe" of client data needed for each treatment episode.

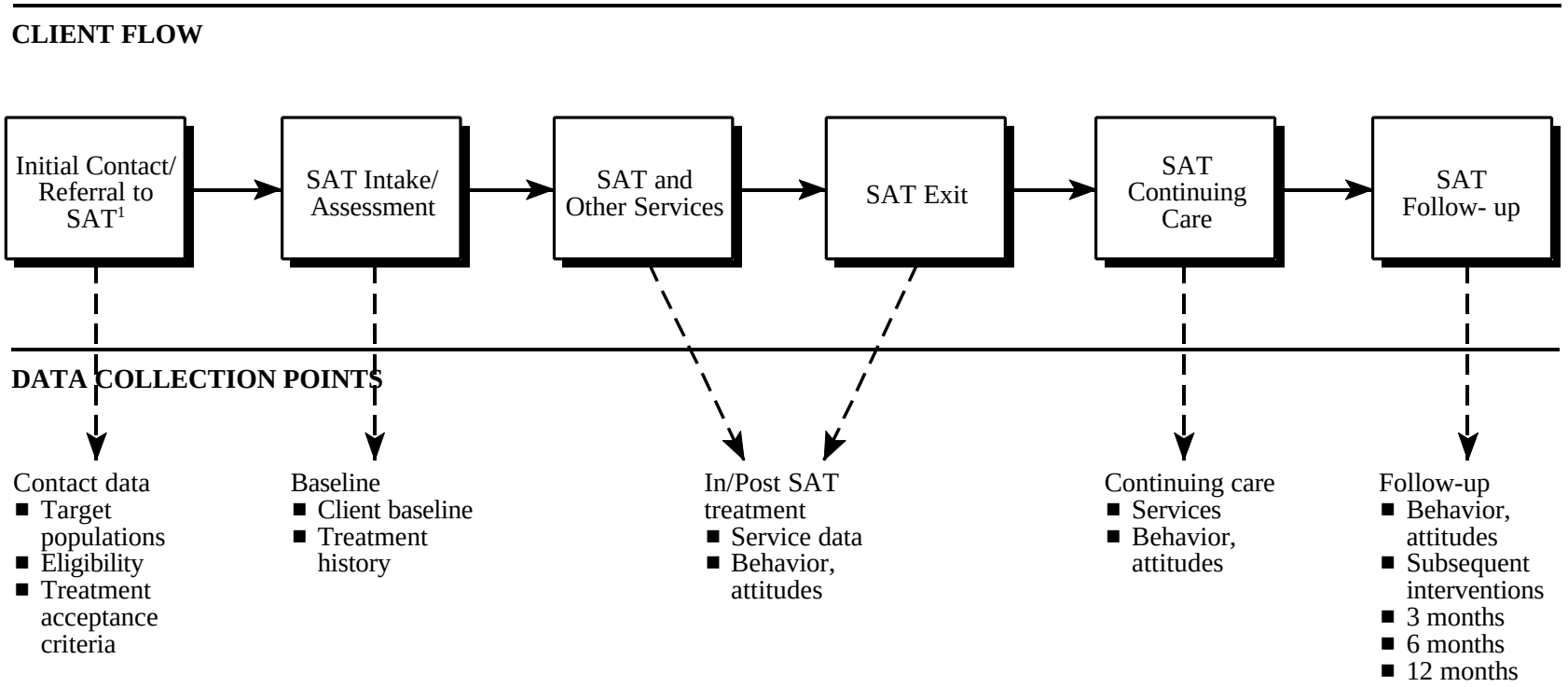
EXHIBIT IV-5
UNIVERSE OF CLIENT DATA PER TREATMENT EXPERIENCE



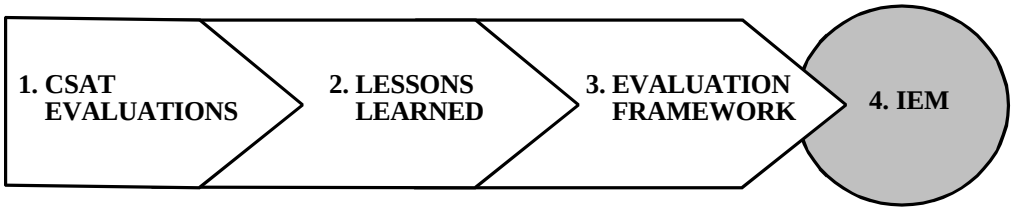
Individuals who abuse substances and who are referred to substance abuse treatment and become treatment clients engage in a process that is graphically illustrated in Exhibit IV-6. As displayed, clients typically come to treatment via a **referral** or a **contact** from within their community. To determine eligibility and need for treatment, potential clients participate in an intensive **intake assessment.** Depending on service availability, clients then **enter substance abuse treatment** where they receive services. When treatment is completed or when clients otherwise leave treatment, **treatment exit** marks the end of a treatment **episode.** Many substance abuse treatment programs also include **continuing care** which usually is designed to facilitate re-entry to the broader community. **Follow-up** data collection then occurs so as to determine the client outcomes and impact of the treatment experience(s).

In summary, this document recognizes that all data necessary to describe an episode of care are critical. Therefore, data have been specified at five analytic points: initial contact, treatment intake, within treatment, treatment exit, and follow-up.

EXHIBIT IV-6
CENTER FOR SUBSTANCE ABUSE TREATMENT
GENERIC CLIENT FLOW THROUGH EPISODE OF CARE AND DATA COLLECTION POINTS



[1]SAT = Substance Abuse Treatment



V. INTEGRATED EVALUATION METHODS (IEM)

The CSAT evaluation analytic framework was constructed on the basis of accumulated experiences in conducting national and multi-site/cross-site evaluations by nationally and internationally known treatment services evaluation professionals. These experiences demonstrate that fully evaluating substance abuse treatment services to determine the implementation processes, client treatment experiences, client outcomes, and treatment costs is essential, yet challenging.

To successfully evaluate national programs which have been implemented among several program locations requires: (1) comprehensive evaluation methods; (2) comprehensive data collection from multiple sources to support the evaluation analyses; (3) careful coordination among the funders, treatment service providers and evaluators; and (4) thoughtful integration of evaluation findings within the clinical program (Monahan et al., 1996). As prior CSAT evaluators confronted these challenges, CSAT directed the development and application of analytic concepts, evaluation methods, and data collection tools to address each challenge. The prior CSAT evaluations not only provided the impetus for these developmental efforts but also provided a testing ground for new approaches and processes. Since each concept and tool was designed to resolve an evaluation challenge, each concept and tool was applied and then refined based on the application experiences. This paper and the IEM reflect and incorporate these experiences, gained over the last decade; this section describes the IEM.

The purpose of this section is to describe the IEM approach which integrates the previously developed evaluation concepts, methods, and tools within an evaluation structure which is informed by both the analytic framework described above and a generic treatment services evaluation process. This section begins with a description of the evaluation process, its interrelationship with the CSAT evaluation analytic framework, and its applicability to the national treatment services evaluations and to the knowledge-generating process. A description of the evaluation concepts, methods and tools is then presented in accordance with the integrated evaluation methods structure.

1. DEFINING THE EVALUATION PROCESS

As indicated earlier in this paper, treatment services evaluation is a specific type of applied social science research, and, as with any research, its execution involves following a standard set of tasks and activities (Pietrzak et al., 1990). These tasks are included in all types of evaluation and they generally occur in the following order:

- **Planning the evaluation**—the planning activities include **setting the evaluation goals and objectives** that determine the overall parameters of the evaluation; typically, the evaluation plan then lays out how the evaluation will assess whether the expected results were achieved; the evaluation plan incorporates the sponsor's philosophies and policies.

- **Specifying the evaluation questions and measures**—the evaluation questions are the apex of the evaluation and provide specific criteria which guide the evaluation and prescribe the evaluation measures, variables, data, data collection and data analysis.

- **Selecting the evaluation design**—the evaluation design sets forth the overall strategy for examining the evaluation questions, measurement, controls, validity and reliability, sample needed, design effects, and generalizability of findings. Treatment service design and evaluation conditions determine appropriate evaluation design selection**.**

- **Developing the study methodology and evaluation implementation—**this phase of the evaluation guides the selection of data collection methods and includes data collection procedures, data management systems, client confidentiality forms and data collection guides.

- **Developing the data requirements and instrumentation**—the data collection instruments are measuring devices used to collect information in a standardized, comparable format. The data requirements flow from the evaluation questions and measures. During this phase of the evaluation, the data requirements are organized by types of data including: systems level data, treatment service level and SDU data, clinical data, cost data, and client data. Data collection instruments are then developed or selected from a standard inventory of instrumentation. Also, during this phase, the client confidentiality procedures, data management systems, and data collection procedures are developed.

- **Analysis plan—**the analysis plan is dependent on the evaluation design, evaluation questions, the evaluation data collected, and the products the evaluation will produce. For CSAT evaluations, both process and outcome analyses are expected.

- **Collecting the data—**data collection will be initiated and completed during this phase of the evaluation; the data collection phase includes the development of data management processes and tools including quality control procedures.

- **Analyzing the data**—data analyses usually involve some if not all of the multiple levels of comparison and are governed by the analysis plan and intended products and target audience(s).

- **Reporting the evaluation findings**—reporting the evaluation results is equal in importance to the other evaluation processes since it is through the presentation and publication of evaluation findings that the knowledge gained from the evaluation can be disseminated and then applied within the full body of substance abuse treatment knowledge.

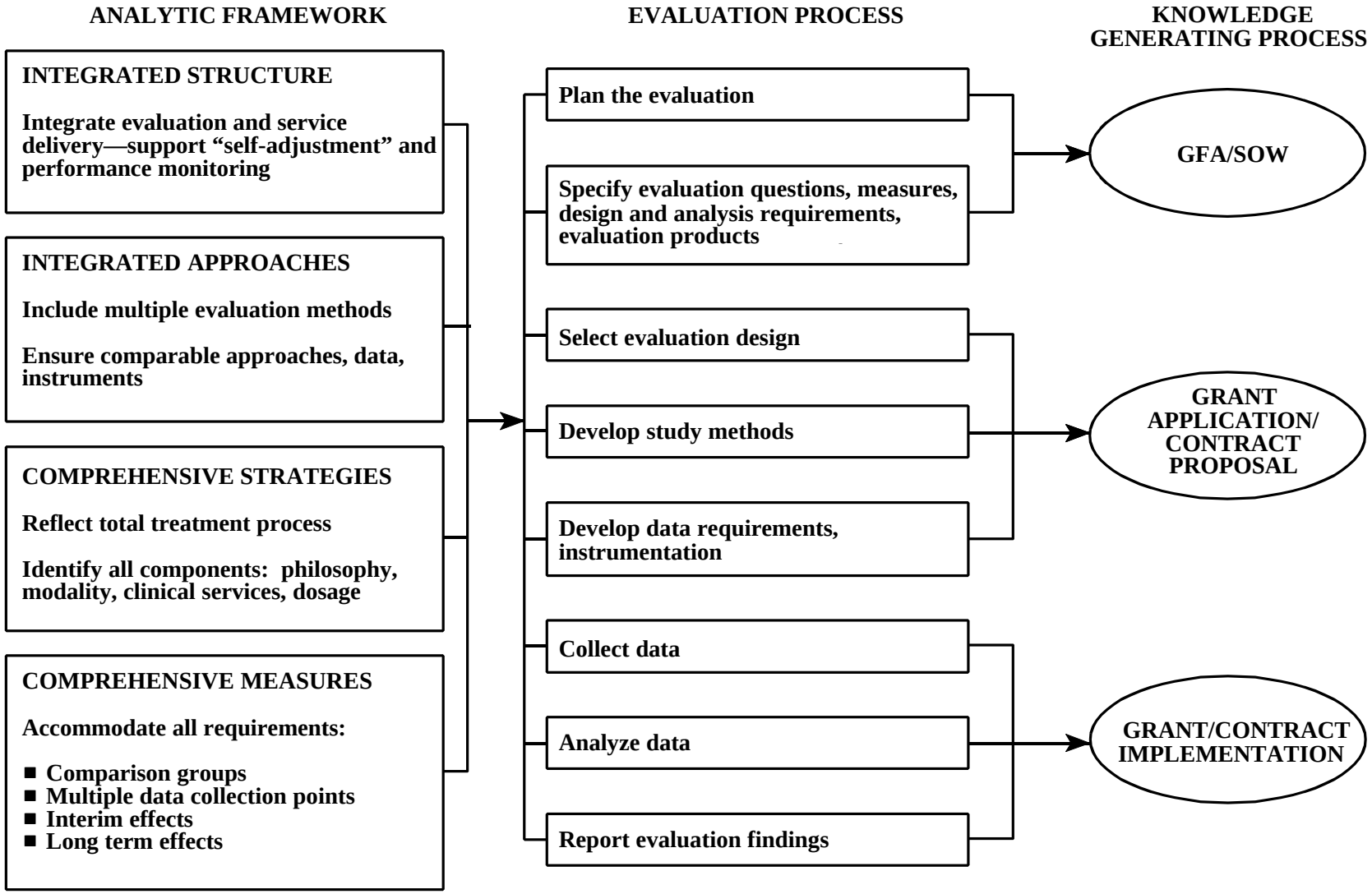
Most if not all of the components identified within this generic evaluation process are included in past, present and future CSAT national evaluation and knowledge-generating efforts. The purpose in laying out the evaluation process is to provide an evaluation model for incorporating the CSAT evaluation analytic concepts and the CSAT developed conceptual and methodological applications, as described below.

2. BUILDING THE INTEGRATED EVALUATION METHODS APPROACH

The CSAT evaluation framework provides a strong foundation for an integrated evaluation methods package to support CSAT knowledge-generating and application efforts. The interrelationships of this framework is provided in Exhibit V-1. As shown, the four components of the evaluation framework provide the foundation for tailoring the evaluation activities to the CSAT environment. The CSAT requirements for coordination, comprehensive evaluation approaches, evaluation strategies for the treatment services, and specified data requirements to support analyses have implications for each of the evaluation activities within the overall evaluation process.

A CSAT tailored evaluation plan and the specification of evaluation questions and measures forms the core of the steps associated with the Guidance for Application (GFA) for future knowledge-generating grant programs and Statements of Work (SOWs) for national evaluation studies. Grant applications and contract proposals will yield stronger and more productive evaluation implementation by using the concepts and tools associated with integrated evaluation designs, study methods, and data requirement specification. Finally, as CSAT project officers monitor the grant, cooperative agreement, and contract implementation, their activities will be enhanced by the CSAT-developed guidance on data collection, analysis, and reporting.

EXHIBIT V-1
INTEGRATED KNOWLEDGE GENERATING PROCESS



3. SPECIFYING THE INTEGRATED EVALUATION METHODS COMPONENTS

This section describes the specific components of the Integrated Evaluation Methods package. Each of the components of the package, including examples of the evaluation products developed by CSAT to assist in the implementation of the integrated approach, are described below.

3.1 Concepts to Support Evaluation Planning

CSAT has articulated an integrated approach to treatment evaluation and integrative methodologies, including building an evaluation team, applying state-of-the-art cost analysis and performance measurement and providing continuous feedback among program planners, providers and evaluators. Complete descriptions of these concepts and their integrative relationships are provided in the documents listed below:

- *Integrated Evaluation Methods (IEM)* integrates the concepts, processes, procedures, and tools developed in the concept papers listed below.

- The *Self-Adjusting Treatment Evaluation Model (SATEM)* provides a framework for evaluation activities to be integrated within planning, management, operation and service delivery activities.

- *Building Team Capability to Fully Implement and Utilize the Self-Adjusting Treatment Model* provides overall guidance to assist service providers in building an organizational capacity for integrating the SATEM.

- *Adding Value to CSAT Demonstrations: The What, How and Why of Cost Analysis* introduces tools and processes that enable the evaluation team to measure costs and to demonstrate the value of their services.

- *Performance Measurement for Substance Abuse Treatment* presents tools and processes for measuring treatment outcomes and ensuring the ability to compare outcome measures against a standard.

- *Client Levels of Functioning as a Component of Substance Abuse Treatment Services Evaluation* is a description of the rationale and methods for assessing client level of functioning and recommended core LOF data elements that could help to measure the effectiveness of treatment services received.

CSAT provides additional tools to support evaluation planning: the *Substance Abuse Treatment Evaluation Policy Notebook* and the *Substance Abuse Treatment Evaluation Resource Notebook*. The policy notebook describes Federal guidelines and SAMHSA policies that impact Federally sponsored evaluations. The resource notebook is a rich source of information to assist in evaluation planning activities.

3.2 Guidance for Selecting the Evaluation Design

Process evaluation describes substance abuse treatment providers, services, and procedures. CSAT advocates the integration of process and outcome evaluation approaches. A detailed process evaluation supports more in-depth analysis of (1) the complex interrelationships among the often enigmatic variables that affect treatment variables; (2) the association between service delivery components; and (3) anomalies in the treatment outcomes revealed by the outcome evaluation. In essence, outcomes cannot be fully explained without an understanding of the processes that yielded the outcomes (Judd, 1987). To support the development of a process evaluation design, CSAT developed a *Guide to Process Evaluation for Substance Abuse Treatment*.

Building on evaluation technologies developed previously, the CSAT logic model tool, *Using Logic Models in Substance Abuse Treatment Evaluations*, provides a description of the techniques, the variations of logic modeling in response to knowledge-generating GFA and SOW specifications, a review of the logic model literature, and several "how to" examples. The logic model document also describes a CSAT-developed tool entitled *Data Maps*. Data mapping aligns the program goals and objectives with the evaluation goals and objectives so as to specify the evaluation questions and the measures necessary to answer the questions and fulfill the evaluation goals and objectives.

The myriad of evaluation designs, which are grounded in the process of scientific inquiry, are only useful when applied appropriately. The availability of data, control and/or comparison groups, the timing of the evaluation, and the evaluation resources all influence the selection of the most appropriate evaluation design. To support this selection process, CSAT developed a technical assistance paper, *Guide to Selecting an Outcome Evaluation Design for Substance Abuse Treatment Evaluations*, which provides theoretical pinnings together with practical guidance for CSAT evaluations.

3.3 Developing Data Requirements

Based on experience gained through past evaluation efforts, CSAT recognized the need for a uniform and integrated set of data variables. Entitled the *Minimum Evaluation Data Set (MEDS),* the data lists include variables on treatment service structure, services available, clinical components, the costs of providing the services and clients. The client variables include eight domains: demographic characteristics, substance use, juvenile/criminal justice involvement, mental health, physical health, education, employment, and social functioning. The *MEDS* also articulates the CSAT evaluation approach, including:

- Levels of data to be collected including: systems, SDU, clinical, unit cost, and client outcome data
- Data collection time frames
- Service Delivery Unit concepts and data
- Treatment service bundles analysis
- Cost and financial data collection analysis.

Together, the *MEDS* components comprise the integration of essential CSAT evaluation philosophy, policies, concepts and procedures.

CSAT has developed an additional tool to assist in the evaluation of substance abuse treatment services, the *Substance Abuse Treatment Cost Analysis and Allocation Template (SATCAAT),* a document that provides a user manual to collect and analyze treatment costs by unit of service for an SDU. This document provides a conceptual overview of the cost components that are being assessed and sample cost templates for use in an evaluation.

3.4 Developing Data Collection Protocols and Instruments

CSAT has developed data collection tools to parallel the concepts and variables of the MEDS. Those tools are collected in a document entitled *Substance Abuse Treatment Services Evaluation Data Collection Instruments.* These tools include:

- Protection of Human Subjects
- Service Delivery Unit (SDU) Description

- Clinician Background and Practice Survey
- Cross-site Evaluation Protocol (Client), including Record Extraction Forms.

Automated data management systems and tools have been developed for previous CSAT evaluation efforts; these systems and tools, which include data quality control mechanisms, are available for adaption to future efforts.

3.5 Guidance for Follow-up Data Collection

CSAT developed manuals and strategies to support high quality follow-up data collection among hard-to-reach populations, including:

- *Staying In Touch: A Fieldwork Manual of Tracking Procedures for Locating Substance Abusers for Follow-up Studies*
- *Strategies for Follow-up Tracking of Juvenile, Homeless, and Criminal Justice System-Involved Substance Abusers: Overview and Bibliographies*

3.6 Analyzing the Data

Given the CSAT emphasis on SDUs, clinical components, costs and performance measurement and client outcomes, it is essential that CSAT sponsored evaluations include comparable analytic concepts, constructs, models, assumptions and statistical techniques. To assist the adoption of comparable analytic approaches, the *Guide to Substance Abuse Treatment Evaluation Data Analysis* was developed.

3.7 Reporting Evaluation Findings

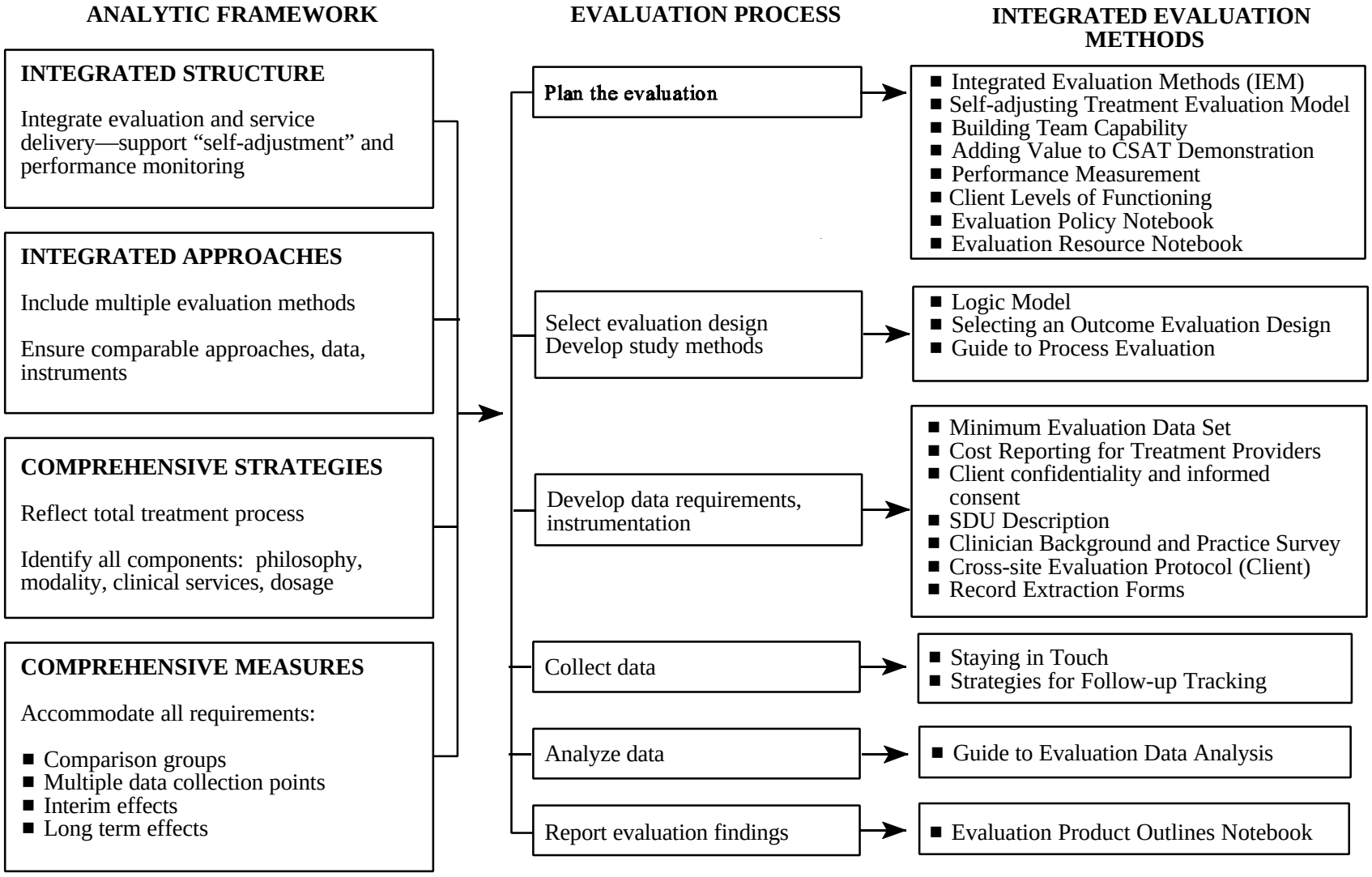
Given that a primary CSAT mission is the dissemination of substance abuse treatment knowledge, the reporting of evaluation findings must be appropriate to the audiences for these evaluation products. Therefore, CSAT developed a series of guides and templates for developing evaluation products for the following types of evaluation: process evaluation, outcome evaluation, cost analysis, performance measurement, replication studies, ethnographies, and case studies. These guides are collected in the document entitled *Substance Abuse Treatment Evaluation Product Outlines Notebook.* The guides include:

- Evaluation Plan Outline
- Interim Evaluation Report Outline
- Final Evaluation Report Outline
- Fact Sheet Template
- Evaluation Briefing Outline and Template
- Data Templates.

4. INTEGRATED EVALUATION METHODS PACKAGE

Each of these concept papers, methods papers, procedures and tools is presented in a separate document which, taken together, constitutes the Integrated Evaluation Methods (IEM) Package. The IEM and its relationship to the analytic framework and evaluation process is graphically presented in Exhibit V-2.

EXHIBIT V-2
INTEGRATED EVALUATION METHODS AND THE EVALUATION FRAMEWORK AND PROCESS



REFERENCES

Anglin, M.D. & Hser, Y-I. (1992). *Outcome evaluation research for the fourth triennial report to Congress.* University of California, Los Angeles: Drug Abuse Research Center.

Babor, T.F. & Frawley, P.J. (Undated). *The use of data bases to study addiction services and treatment outcomes.* Unpublished manuscript. California Society of Addiction Medicine, San Francisco, CA.

Breslin, F.C., Sobell, S.L., Sobell, L.C., & Sobell, M.B. (1997). Alcohol treatment outcome methodology: State of the art, 1989-1993. *Addictive Behaviors*, 22. 145-155.

Capital Consulting Corporation. (1993). *Uniform system of accounting and cost reporting for substance abuse treatment providers*. Fairfax, VA: Capital Consulting Corporation.

Capital Consulting Corporation. (1998). *Measuring the cost of substance abuse treatment services: An overview*. Fairfax, VA: Capital Consulting Corporation.

Chen, H-T. (1990). *Theory-driven evaluations.* Newbury Park, CA: Sage Publications, Inc. 167-189.

Crowe, A.H. & Reeves, R. (1994). In A.H. Crowe & R. Reeves (Eds) *Treatment for alcohol and other drug abuse: Opportunities for coordination.* Rockville, MD: Center for Substance Abuse Treatment. 113-119.

*Devine, P., Christopherson, E., Bishop, S., Lowery, J., Moore, M. (revised 1999). *The self-adjusting treatment evaluation model.* Fairfax, VA: National Evaluation Data and Technical Assistance Center, Caliber Associates.

Diesenhaus, H.I. (1995). *History of the stages of treatment and recovery model*. Unpublished manuscript. Rockville, MD: Center for Substance Abuse Treatment

Fetterman, D.M., Kaftarian, S.J. & Wandersman, A. (1996) (Eds). *Empowerment evaluation: Knowledge and tools for self-assessment & accountability.* Thousand Oaks, CA: Sage Publications.

Guba, E.G. & Lincoln, Y.S. (1989). *Fourth generation evaluation.* Newbury Park, CA: Sage Publications.

*Harwood, H., et al. (revised 1999). *Adding value to CSAT demonstrations: The what, how, and why of cost analysis.* Fairfax, VA: National Evaluation Data and Technical Assistance Center, Caliber Associates.

* Items marked with an asterisk are being made available on the Caliber Associates' NEDS contract Web site at http://neds.calib.com.

*Harwood, H., Bazron, B., Fountain, D., et al. (revised 1999). *Performance measurement for substance abuse treatment.* Fairfax, VA: National Evaluation Data and Technical Assistance Center, Caliber Associates.

Hubbard, R.L., Mardsen, M.E., Rachal, J.V., Harwood, H.J., Cavanaugh, E.R. & Ginzburg, H.M. (revised 1999). *Drug abuse treatment: A national study of effectiveness.* Chapel Hill and London: University of North Carolina Press.

Institute of Medicine. (1990). *Broadening the base of treatment for alcohol problems.* Washington, D.C.: National Academy Press.

Landry, M.J. (1995). *Overview of addiction treatment effectiveness.* Rockville, MD: National Clearinghouse for Alcohol and Drug Information.

Lettieri, D. (1992). A primer of research strategies in alcoholism treatment assessment. In Allen, J. & Caldwell, F. (Eds.). *NIAAA treatment handbook series 3.* Rockville, MD: National Institute on Alcohol Abuse and Alcoholism.

Longbaugh, R. (1989). Recommended research priorities for the assessment of treatment outcomes. *Psychology of addictive behavior,* 2(3), 131-141.

Monahan, S.C. & Finney, J.W. (1996). Explaining abstinence rates following treatment for alcohol abuse: a quantitative synthesis of patient, research design, and treatment effects. *Addiction 91*. 787-805.

*Moore, M.D., Lowery, J. et al. (revised 1999). *Building team capability to fully implement and utilize the self-adjusting treatment evaluation model.* Fairfax, VA: National Evaluation Data and Technical Assistance Center, Caliber Associates.

Moras, K. (1993) Substance abuse research: Outcome measurements conundrums. In Onken, L.S., Blaine, J.D. & Boren, J.J. (Eds) *Behavioral treatments for drug abuse and dependence.* NIDA Research Monograph No. 137. Rockville: MD: National Institute on Drug Abuse. 217-248.

National Institute on Alcohol Abuse and Alcoholism. (1991). *Special focus: Linking alcoholism treatment research with clinical practice.* Rockville, MD: National Institutes of Health.

National Opinion Research Center. (1997). *The national treatment improvement evaluation study: Final report.* Rockville, MD: Center for Substance Abuse Treatment.

* Items marked with an asterisk are being made available on the Caliber Associates' NEDS contract Web site at http://neds.calib.com.

Orwin, R. G. (1998). *Evaluation designs: Interpretability and the need for random assignment.* CSAT Training Presentation. Fairfax, VA: National Evaluation Data and Technical Assistance Center, Caliber Associates.

Patton, M.Q. (1987). *Creative evaluation. Second Edition.* Newbury Park, CA: Sage Publications.

Pietrzak, J., Ramler, M., Renner, T., Ford, L., & Gilbert, N. (1990). *Practical program evaluation: Examples from child abuse prevention.* Newbury Park, CA: Sage Publications.

Rossi, P. H. & Freeman, H. E. (1993). *Evaluation: A systemic approach.* Newbury Park, CA: Sage Publications.

Saxe, L. & Shusterman, G. (1991). Drug treatment modalities: a taxonomy to aid development of services research. In Background Papers on Drug Abuse Financing and Services Research, Drug Abuse Services Research Series Number 1: 1-15. Rockville, MD: National Institute on Drug Abuse.

Steckler, A., McLeroy, K.R., Goodman, R.M., et al. (1992). Toward integrating qualitative and quantitative methods: An introduction. *Health Education Quarterly*, 19, 1-8.

Wellisch, J., Anglin, M.D., & Prendergast, M.L. (1991). *Treatment for drug dependent women.* DAIMP White Paper Series. Los Angeles: Drug Abuse Information and Monitoring Project. UCLA Drug Abuse Research Center.

APPENDIX A:
INTEGRATED EVALUATION METHODS PACKAGE:
A GUIDE FOR SUBSTANCE ABUSE TREATMENT KNOWLEDGE-GENERATING ACTIVITIES—EXECUTIVE SUMMARY

APPENDIX A:
INTEGRATED EVALUATION METHODS PACKAGE:
A GUIDE FOR SUBSTANCE ABUSE TREATMENT
KNOWLEDGE-GENERATING ACTIVITIES—EXECUTIVE SUMMARY

Since its inception, the Center for Substance Abuse Treatment (CSAT) has provided Federal leadership to improve substance abuse treatment accessibility, effectiveness, and efficiency. CSAT's mission and activities have evolved from directly supporting treatment services to supporting knowledge-generating activities. This evolution is evident in the current Substance Abuse and Mental Health Services Administration policy on evaluation as described in *Evaluation Policy*, SAMHSA, 1995.

The need for an integrated model of evaluation and planning at SAMHSA is presented in "Evaluation in the Substance Abuse and Mental Health Services Administration," *Evaluation and the Health Professions*, by Marsh, Jansen, Lewis, & Straw, 1996. CSAT also supports site-specific, cross-site, and national evaluations that have provided experience with a wide array of evaluation design and implementation methods. These experiences further supported the need for an integrated evaluation strategy and led to the development of a comprehensive set of evaluation products, including concept papers, technical assistance (TA) materials, and analytic tools. Collectively, these products are referred to as the Integrated Evaluation Methods (IEM) Package. The IEM Package organizes these products within an evaluation framework that is designed to support CSAT knowledge development and application goals. The evaluation framework itself was constructed on the basis of accumulated experiences among internationally known treatment service evaluation professionals. The IEM Package reflects and incorporates evaluation experiences gained over the past decade.

Evaluation Framework and the Integrated Evaluation Methods Package

National evaluation experiences have reinforced the fact that substance abuse treatment evaluation involves a standard set of tasks that generally occur in the following order:

- **Planning the evaluation/knowledge-generating activities**, which includes selecting the substance abuse treatment issue, identifying the theoretical foundation for the intervention, determining knowledge development program goals and implementation approach, and setting the evaluation goals and objectives that determine the overall parameters of the evaluation

- **Selecting the evaluation design**, which sets forth the overall strategy for establishing the process and outcome evaluation questions, measurement approach, and generalizability of findings

- **Developing the data requirements**, which flow from the evaluation questions and measures and include: SDU, clinician, cost, and client data

- **Developing data collection instruments**, which are based on the data requirements and are developed or selected from an integrated inventory of instrumentation

- **Collecting the data**, which includes developing data management processes and tools (including quality control procedures) and conducting the data collection activities

- **Analyzing the data**, which involves multiple levels of comparison and is governed by an analysis plan

- **Reporting the evaluation findings**, which includes evaluation knowledge dissemination and application within the field.

The evaluation process outlined above provided a framework for the development of products related to these evaluation concepts and methods. Taken together, those products comprise the IEM Package.

Integrated Evaluation Methods Products

CSAT requested the development of a series of evaluation concept papers, TA materials, and tools to support and operationalize each phase in the evaluation of substance abuse treatment knowledge-generating activities. These items are included in the IEM Package. The concept papers are based on theoretical evaluation research constructs that have been adapted to substance abuse treatment services evaluation and knowledge-generating activities. The concept papers primarily support the evaluation planning phase and address such topics as the self-adjusting treatment evaluation model, cost analyses, and performance measurement. The TA materials and tools include specific evaluation methods that have direct applicability to substance abuse treatment knowledge-generating activities. The concept papers and TA materials that constitute the IEM Package are listed and briefly described in Exhibit I.

EXHIBIT I
EVALUATION FRAMEWORK AND INTEGRATED EVALUATION METHODS PACKAGE

EVALUATION FRAMEWORK	INTEGRATED EVALUATION METHODS PRODUCTS
1. Planning the evaluation/ knowledge-generating activities	■ **Integrated Evaluation Methods: A Guide for Substance Abuse Treatment Knowledge Generating Activities:** Concept paper that describes the development of an evaluation framework, evaluation concepts, and TA materials to support the framework. ■ **Self-Adjusting Treatment Evaluation Model:** Concept paper that describes an approach for integrating evaluation findings within treatment operations so as to adjust and improve service delivery. ■ **Building Team Capability to Fully Implement and Utilize the Self-Adjusting Treatment Evaluation Model:** Concept paper to assist treatment providers in building capabilities to integrate the self-adjusting treatment model within day-to-day operations and service delivery. ■ **Adding "Value" to CSAT Demonstrations:** The What, How and Why of Cost Analysis: Concept paper on the need for and types of cost analyses for CSAT demonstrations and knowledge-generating activities. (The Lewin Group) ■ **Performance Measurement for Substance Abuse Treatment Services:** Concept paper about the increasing importance of provider performance measurement and analyses and an explanation of the case-mix adjustment methodology. ■ **Client Levels of Functioning as a Component of Substance Abuse Treatment Services Evaluation**: Description of the rationale and methods for assessing client level of functioning and recommended core LOF data elements that could help to measure the effectiveness of treatment services received. ■ **Substance Abuse Treatment Evaluation Policy Notebook:** These materials are aimed at facilitating understanding of the SAMHSA policy for evaluation and federal regulations on client confidentiality and assisting evaluators to meet CSAT evaluation requirements. ■ **Substance Abuse Treatment Evaluation Resource Notebook:** The notebook contains evaluation bibliographies and listings of organizations, hot lines, on-line data bases, and contact information for obtaining assistance in evaluating treatment services.
2. Selecting the evaluation design	■ **A Guide to Process Evaluation for Substance Abuse Treatment Services:** TA tool presenting purposes of process evaluation and the application of process evaluation methods to single site and multi-site treatment services. ■ **Using Logic Models in Substance Abuse Treatment Evaluations:** TA tool describing logic model purposes and techniques for designing and planning the evaluation of treatment services. ■ **A Guide to Selecting an Outcome Evaluation Design for Substance Abuse Treatment Evaluations:** TA tool describing overall strategies for developing evaluation questions, measurement, controls, validity/reliability, sampling, design effects, and generalizability of findings. (Battelle)

EXHIBIT I (CONTINUED)
EVALUATION FRAMEWORK AND INTEGRATED EVALUATION METHODS PACKAGE

EVALUATION FRAMEWORK	INTEGRATED EVALUATION METHODS PACKAGE
3. Developing data requirements	■ **Minimum Evaluation Data Set (MEDS): Core Data Lists:** TA tool for developing a uniform set of variables and response categories for the service delivery unit (SDU), clinician, cost, and client evaluation measures. ■ **Substance Abuse Treatment Cost Allocation and Analysis Template (SATCAAT):** User manual to analyze treatment costs by unit of service for an SDU. (Capital Consulting Corporation)
4. Developing data collection instruments	■ **Substance Abuse Treatment Services Evaluation Data Collection Instruments:** Data collection instruments that fully incorporate the MEDS and that have been field tested for validity and reliability, as follows: Service Delivery Unit (SDU) Description; Clinician Background and Practice Survey; protocols to collect Adult, Adolescent and Child (in treatment with parent) Client Data at Intake, During Treatment, at Treatment Discharge and Post Treatment; Adult and Adolescent Record Extraction forms; and a section on protection of human subjects and informed consent.
5. Collecting the data	■ **Staying In Touch: A Fieldwork Manual of Tracking Procedures for Locating Substance Abusers for Follow-up Studies (UCLA):** User manual to establish and implement client follow-up data collection systems and procedures. ■ **Strategies for Follow-up Tracking of Juvenile, Homeless, and Criminal Justice System-Involved Substance Abusers: Overview and Bibliographies, 1990-1998:** Description of tracking techniques used to increase response rates for follow-up interviews with homeless and juvenile/criminal justice involved substance abusers.
6. Analyzing the data	■ **A Guide to Substance Abuse Treatment Evaluation Data Analysis:** Recommended methods and procedures for analyzing process, SDU, clinician, cost, and client evaluation data.
7. Reporting the evaluation findings	■ **Substance Abuse Treatment Evaluation Product Outlines Notebook:** Compendium of outlines for evaluation products including evaluation plans, interim evaluation reports, final evaluation reports, replication studies, case studies, and ethnographies.

CSAT Evaluation "Stakeholders"

Evaluation "stakeholders" are individuals, groups, or organizations that have a significant interest in how well a program or activity functions. (See P.H. Rossi, H.E. Freeman, & M.W. Lipsey, *Evaluation: A Systematic Approach, 6th Edition*, 1999.) Within the context of the IEM Package, CSAT evaluation stakeholders include CSAT senior managers, CSAT project officers, and CSAT grantees and contractors including treatment service providers, coordinating centers, study sites, site-specific evaluators, and national evaluators.

Utility of the IEM Package for CSAT Evaluation Stakeholders

While the conceptual and TA materials were developed from the perspective of the site-specific and multi-site evaluator, the concepts and TA tools have important utility for CSAT managers, project officers, and treatment service providers. The stakeholder's position determines the perspective and utility of the IEM Package concepts and tools. For example, a CSAT senior manager can use the IEM Package to acquire a comprehensive evaluation context for planning and funding the knowledge-generating activities, the project officer can use the IEM Package to ensure that GFA/RFP applications are complete and include a full complement of design, execution, and product components, and the site-specific and multi-site evaluators can use the IEM Package to ensure that evaluation designs, data collection plans, data analyses, and product development have a consistent evaluation framework and compatible data across program areas. The suggested utility of the IEM Package for CSAT evaluation stakeholders is summarized in Exhibit II.

EXHIBIT II
UTILITY OF IEM PACKAGE FOR CSAT EVALUATION STAKEHOLDERS

STAKEHOLDERS	ROLES AND RESPONSIBILITIES	IEM PACKAGE UTILITY
SENIOR MANAGERS	■ Policy development ■ Issue identification for KD&As ■ Grant/contract funding decisions ■ Overall program management ■ Sustainability ■ Dissemination ■ Long-term strategic planning ■ Program designs ■ KA activities	■ Comprehensive evaluation framework ■ Comprehensive evaluation components ■ Roles and responsibilities for local/national evaluators as well as CSAT/grantee staffs ■ Guidance for evaluation designs and products ■ Standardized evaluation measures ■ Logic models for program and evaluation design
PROJECT OFFICERS	■ GFA/SOW development ■ Grant/contract application review ■ Grant/contract monitoring ■ Knowledge-generating products ■ Identification and replication of promising practices ■ Technical assistance assessment	■ Guidelines for high-quality evaluation designs (process and outcome) ■ Logic models for program and evaluation designs ■ List of evaluation measures with instrumentation ■ Guidelines for evaluation products
GRANTEES: STUDY SITES	■ Grant applications ■ Project development, implementation ■ Local evaluation management ■ Local evaluation coordination ■ Knowledge-generating product development	■ Evaluation plan outline ■ Process and outcomes evaluation designs ■ SDU, clinician, cost, and client measures ■ Roles and responsibilities for grantee provider/evaluator staff ■ Guidelines for evaluation products
GRANTEES: MULTI-SITE EVALUATORS	■ Grant applications ■ Comprehensive evaluation designs ■ Evaluation implementation: – Data collection – Data analysis – Reporting evaluation findings ■ Evaluation product development	■ Evaluation concepts ■ Logic models ■ Evaluation designs ■ Evaluation data requirements ■ Data collection instrumentation ■ Data collection process and procedures ■ Data analysis ■ Product development
NATIONAL EVALUATORS/ SERVICES RESEARCHERS	■ Contract applications ■ Comprehensive evaluation designs ■ Evaluation implementation: – Data collection – Data analysis – Reporting evaluation findings ■ Evaluation product development	■ Evaluation concepts ■ Logic models ■ Evaluation designs ■ Evaluation data requirements ■ Data collection instrumentation ■ Data collection process and procedures ■ Data analysis ■ Product development

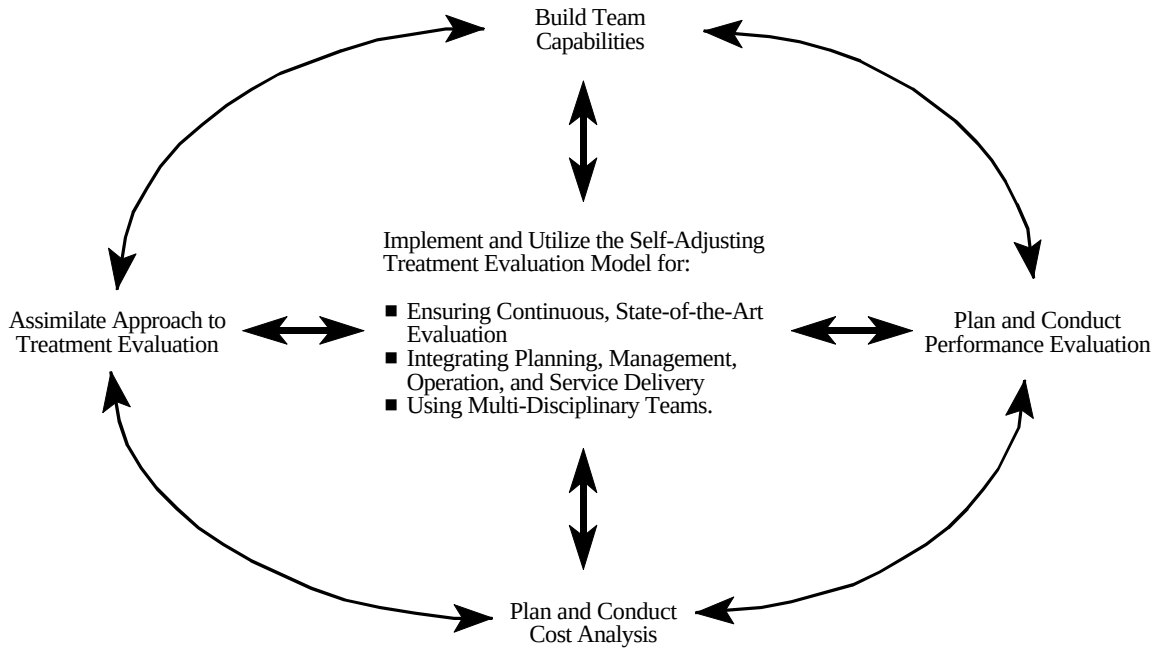
IEM products and other evaluation materials may be obtained from:
http://neds.calib.com

APPENDIX B:
EDITOR'S NOTE

EDITOR'S NOTE

This document is one of a series of papers that describe CSAT's approach to substance abuse treatment evaluation. The graphic below illustrates the continuous evaluation knowledge development and application process which characterizes CSAT's approach. At the core is the self-adjusting treatment evaluation model which is the foundation. The model integrates continuous, state-of-the-art evaluation with planning, management, operation, and service delivery within a multi-disciplinary learning community. Implementation of this model requires building of team capabilities, appropriate, state-of-the-art performance evaluation and cost analysis, and assimilation of CSAT's integrative approach to treatment evaluation and integrative methodologies. Each of these processes work together to ensure continuous improvement.

ENSURING CONTINUOUS EVALUATION KNOWLEDGE DEVELOPMENT AND APPLICATION



Substance abuse treatment providers are increasingly called upon to demonstrate that they are delivering appropriate services, that those services have the desired impact, and that the services justify the costs. An ongoing process of evaluation and systems/services improvement integrated into the day-to-day operation of treatment providers is needed to do so. In addition, the evaluation and improvement process requires a multi-disciplinary team that includes treatment personnel, evaluators, Federal and State agencies, advocacy groups, funding agencies, and the community. Building team capability is integral to this approach. Treatment staff must be involved in knowledge development and application (i.e., planning and implementing evaluation efforts, incorporating changes in response to new knowledge, and sharing of findings).

APPENDIX C:
LIST OF EVALUATION EXPERT PANEL MEMBERS

APPENDIX C:
LIST OF EVALUATION EXPERT PANEL MEMBERS

NAME	AFFILIATIONS & CREDENTIALS
Doug Anglin, Ph.D.	Director, UCLA Drug Abuse Research Center, Neuropsychiatric Institute, UCLA; Director, California Drug Abuse Information & Monitoring Project; Adjunct Associate Professor of Medical Psychology, Neuro-psychiatric Institute, UCLA.
Tom D'Aunno, Ph.D.	Director of Mental Health Services Research Training Program and Associate Professor, School of Social Service Administration, Faculty Associate, Center for Health Administration Studies, University of Chicago; PI, "Managed Care in Drug Abuse Treatment," "Drug Abuse Treatment System Survey," NIDA; Instructor, "Social Intervention: Policies & Programs," "Organizational Theory and Health Care Organizations," "Health Policy"; Editorial Board Member, Health Administration Press, Journal of Health and Social Behavior, Medical Care Review and Research; Member, Academy of Management, American Sociological Association.
Dan Griffith, Ph.D.	Supervising Clinical Psychologist, Northwestern Memorial Hospital, Chicago; Associate, the Lewin Group; Co-principal investigator on six-year NIDA project ot assess developmental outcomes and service needs of children exposed prenatally to cocaine and other drugs; Evaluation Consultant on U.S. Department of Education grant to Florida A&M University to develop materials and resources for teachers educating children prenatally exposed to alcohol and other drugs; Clinical Psychologist, Northwestern University Medical School and National Association for Perinatal Addiction Research and Education.
Patricia Harrison, Ph.D., LP	Licensed Psychologist; Minnesota Dept. of Human Services; Project Director, State Performance and Substance Abuse Treatment Outcome Pilot Studies (CSAT); P.D., Statewide Prevention Assessment (CSAP); P.D. , Statewide Treatment Demand and Needs Assessment Studies (CSAT); P.D., Implementation of Uniform Alcohol & Drug Abuse Data Collection Systems; P.D. Minnesota Treatment Accountability Plan; P.Co-D., Minnesota Student Survey, Dept. of Education.
Yin-Ing Hser, Ph.D.	Associate Director, UCLA Drug Abuse Research Group of NPI, UCLA; Adjunct Professor, Dept. of Psychiatry & Biobehavioral Sciences, University of California, UCLA; Co-PI, DATOS; Drug Abuse Epidemiology and Prevention Research Review Committee, NIDA; Co-PI, NEDTAC/CSAT; PI and Committee Member, NIDA; IT consultant for Dept. of Health, Republic of China, Taiwan; Scientific Expert for Commission on Alcoholism & Narcotics, and the Dangerous Drug Commission Joint Planning & Budget Committee, L.A. County Drug & Alcohol Program Administration Office.
Robert Hubbard, Ph.D.	Director, North Carolina Office, National Development & Research Institutes, Inc. (NDRI-NC); Principal Investigator/Project Director, DATOS; Founding Member of Board of Directors for Governor's Institute on Alcohol & Drug Abuse.
Michael Knox, Ph.D.	Licensed Psychologist; tenured (Distinguished Service) Professor, Dept. of Community Mental Health, Louis de la Parte Florida Mental Health Institute, and Professor of Medicine, Dept. of Internal Medicine, College of Medicine, University of South Florida; Director, USF Center for HIV Education & Research; University of South Florida; Professor, Dept. of Community & Family Health, and Dept. of Psychology, University of Florida.
Bill Luckey, Ph.D.	Senior Research Psychologist and Program Director of Substance Abuse Treatment Research, RTI; PI, Managed Care, Treatment/Service Patterns and Outcomes, NIAAA; PD, Methadone Treatment Quality Assurance System, NIDA.

NAME	AFFILIATIONS & CREDENTIALS
Mary Ellen Marsden, Ph.D.	Associate Research Professor, Institute for Health Policy, Brandeis University; Faculty Associate, NIAAA Training Grant on Alcohol Services Research; Adjunct Research Faculty, Brown University Center for Alcohol & Addiction Studies; Study Director, Five Alcohol & Other Drug Study Sites, Coordinating Center for Managed Care & Vulnerable Populations; Co-PI, Process & Outcome Evaluation of Correctional Substance Abuse Treatment; Co-PI, Massachusetts Substance Abuse Treatment Performance & Outcome Monitoring Pilot Study; Co-PI, Health & Performance of Military Women; Consultant, Revision of RWJ Chartbook on Substance Abuse.
Jane Maxwell	Director, Needs Assessment Department, Texas Commission on Alcohol and Drug Abuse.
Bruce Rounsaville	Director of Research, Division of Substance Abuse, Professor of Psychiatry, Department of Psychiatry, School of Medicine, Yale University.
Connie Weisner, Dr.P.H.	Senior Scientist, Alcohol Research Group, Western Consortium for Public Health; Adjunct Professor, Div. of Public Health Biology and Epidemiology, and Program Director/PI of NIAAA Program at School of Public Health, University of California at Berkeley; Adjunct Investigator, Evaluation of Alcohol & Drug Programs, Kaiser Foundation Research Institute; Member, Advisory Board of Alcohol & Drug Studies Program, University of California Extension; Editorial Board: Frontlines, Addiction Abstracts, International Research Monograph Series in the Addictions, Medical Care Research and Review; Member, Advisory Committee, NIDA Center for Community-Based Treatment Research Methods, RTI; Panel Member, Treatment Effectiveness and Outcome, NIAAA; Member, Advisory Board, National Treatment Evaluation, ONDCP; Member, WHO Expert Advisory Panel on Drug Dependence & Alcohol Problems.
Harry Wexler, Ph.D.	Founder/Executive Director, The Psychology Center (NY/CA); PI, "Evaluation of Amity Prison Therapeutic Community for Substance Abusers," NIDA/NDRI-NY/CA; SA/Consultant, Comprehensive Substance Abuse Programs for Correctional Populations, CSAT, (Illinois and South Carolina); Program Evaluator, "Comprehensive Residential Services for Substance-Abusing Women and Their Children," CSAT/NDRI-NY/CA; Co-Guest Editor, Drugs & Society; Consulting Editor, Journal of Criminal Justice; Adjunct Associate Professor, Medical Psychology, Neuropsychiatric Institute, University of California.
Ken Winters, Ph.D.	Senior Research Associate, Associate Professor, Dept. of Psychiatry, University of Minnesota; Instructor, "Assessment and Treatment of Adolescent Substance Abuse," for Addiction Research Foundation, American Psychological Association, Johnson Institute, etc.; PI, NIDA; PI, Walker Foundation; Investigator, CSAP; Investigator, NIDA; Reviewer: Addiction, Alcoholism-Clinical and Experimental Research, Drug & Alcohol Dependence, Journal of Child & Adolescent Substance Abuse, Journal of Studies on Alcohol, Psychology of Addictive Behaviors; CSAT, NIDA.
Eric Wish, Ph.D.	Director, Center for Substance Abuse Research (CESAR), University of Maryland; Associate Professor, Dept. of Criminology & Criminal Justice, University of Maryland.
Gary Zarkin	Program Director and Senior Economist, Center for Economics Research, Health and Human Resource Economics, Research Triangle Institute .

APPENDIX D:
SYSTEMS EVALUATION BIBLIOGRAPHY

APPENDIX D:
SYSTEMS EVALUATION BIBLIOGRAPHY

This bibliography focuses on the unique aspects of evaluating on a systems level and is broken up into subject headings illustrating those aspects.

Client-Treatment Matching

Anglin, M. D., Hser, Y. I., & McGlothlin W. H. (1987). Sex differences in addict careers. 2. Becoming addicted. *American Journal of Drug and Alcohol Abuse, 13*(1-2), 59-71.

Anglin, M. D., Hser, Y. I., & Booth, M. W. (1987). Sex differences in addict careers. 4. Treatment. *American Journal of Drug and Alcohol Abuse, 13*(3), 253-80.

Anglin, M. D., Ryan, T. M., Booth, M. W. , & Hser, Y. I. (1988, February). Ethnic differences in narcotics addiction. I. Characteristics of Chicano and Anglo methadone maintenance clients. *International Journal of the Addictions, 23*(2), 125-49.

Anglin, M. D., Booth M. W., Ryan, T. M., & Hser, Y. I. (1988, October). Ethnic differences in narcotics addiction. II. Chicano and Anglo addiction career patterns. *International Journal of the Addictions, 23*(10), 1011-27.

Blomqvist, J., & Holmberg, R. (1989). Appropriate treatment for each client: A research project aimed at an analysis of the grounds for treatment selection and at developing and evaluating a model for matching clients with treatment. *Proceedings of the 35th International Congress on Alcoholism and Drug Dependence.*

Hser, Y. I., Anglin, M. D., & McGlothlin, W. (1987). Sex differences in addict careers. 1. Initiation of use. *American Journal of Drug and Alcohol Abuse, 13*(1-2), 33-57.

Hser, Y. I., Anglin, M. D., & Booth, M. W. (1987). Sex differences in addict careers. 3. Addiction. *American Journal of Drug and Alcohol Abuse, 13*(3), 231-51.

Hser, Y. I. (1995). A referral system that matches drug users to treatment programs: Existing research and relevant issues. *Journal of Drug Issues,25*(1), 209-224.

Hser, Y. I., Anglin, M. D., & Liu, Y. (1990-91 September). A survival analysis of gender and ethnic differences in responsiveness to methadone maintenance treatment. Special Issue: Nonexperimental methods for studying addictions. *International Journal of the Addictions 25*(11A), 1295-1315.

Longshore, D., Hsieh, S. C., Anglin, M. D., & Annon, T. A. (1992, Fall). Ethnic patterns in drug abuse treatment utilization. *Journal of Mental Health Administration, 19*(3), 268-77.

Luborsky, L., Crits-Christoph, P., McLellan, A. T., Woody, G., Piper, W., Liberman, B., Imber, S., & Pilkonis, P. (1986, October). Do therapists vary much in their success? Findings from four outcome studies. *American Journal of Orthopsychiatry, 56*(4), 501-12.

McLellan, A. T., & Alterman, A. I. (1991). Patient treatment matching: a conceptual and methodological review with suggestions for future research. *NIDA Research Monograph, 106,* 114-35.

McLellan, A. T., Alterman, A. I., Metzger, D. S., Grissom, G. R., Woody, G. E., Luborsky, L., & O'Brien, C. P. (1994, Dec). Similarity of outcome predictors across opiate, cocaine, and alcohol treatments: Role of treatment services. *Journal of Consulting and Clinical Psychology 62*(6) 1141-58.

McLellan, A. T., Luborsky, L., Woody, G., & Goebl, L. (1988). Counselor differences in methadone treatment. *NIDA Research Monograph, 81,* 242-50.

McLellan, A. T., Luborsky, L., Woody, G. E., & O'Brien, C. P., (1980). An improved diagnostic evaluation instrument for substance abuse patients. The Addiction Severity Index. *Journal of Nervous and Mental Disease, 168,* 26-33.

McLellan, A. T., Woody, G. E., Luborsky, L., & Goehl, L. (1988, July). Is the counselor an "active ingredient" in substance abuse rehabilitation? An examination of treatment success among four counselors. *Journal of Nervous and Mental Disease, 176*(7), 423-30.

Mee-Lee, D. (1988). Instrument for treatment progress and matching: Recovery Attitude and Treatment Evaluator (RAATE). *Journal of Substance Abuse Treatment, 5*(3), 183-186.

Tarter, R. E. (1995, July-August). Rationale and method of client-treatment matching. *Counselor, The, 13*(4), 26-30.

Comorbidity

Alterman, A. I., McLellan, A. T., & Shifman, R. B. (1993, September). Do substance abuse patients with more psychopathology receive more treatment? *Journal of Nervous and Mental Disease, 181*(9), 576-82.

Anglin, M. D., Almog, I. J., Fisher, D. G., & Peters, K. R. (1989). Alcohol use by heroin addicts: evidence for an inverse relationship. A study of methadone maintenance and drug-free treatment samples. *American Journal of Drug and Alcohol Abuse, 15*(2), 191-207.

Anglin, M. D., & Brecht, M. L. (1987). AIDS virus exposure behavior in long-term addicts: a preliminary study. *NIDA Research Monograph, 76,* 200-6.

Anglin, M. D., Weisman, C. P., & Fisher, D. G. (1989, September). The MMPI profiles of narcotics addicts. I. A review of the literature. *International Journal of Addiction, 24*(9), 867-80.

Arndt, I. O., McLellan, A. T., Dorozynsky, L., Woody, G. E., & O'Brien, C. P. (1994, Mar). Desipramine treatment for cocaine dependence. Role of antisocial personality disorder. *Journal of Nervous and Mental Disease, 182*(3), 151-6.

Davis, R. F., Metzger, D. S., Meyers, K., McLellan, A. T., Mulvaney, F. D., Navaline, H. A., & Woody, G. E. (1995, January). Long-term changes in psychological symptomatology associated with HIV serostatus among male injecting drug users. *AIDS, 9*(1), 73-9.

Gerstley, L. J., Alterman, A. I., McLellan, A. T., & Woody, G. E. (1990, February). Antisocial personality disorder in patients with substance abuse disorders: A problematic diagnosis? *American Journal of Psychiatry, 147*(2), 173-8.

Grella, C. E., Anglin, M. D., & Wugalter, S. E. (1995, January). Cocaine and crack use and HIV risk behaviors among high-risk methadonemaintenance clients. *Drug and Alcohol Dependence, 37*(1), 15-21.

Hser, Y. I., Anglin, M. D., & Powers, K. (1990). Longitudinal patterns of alcohol use by narcotics addicts. *Recent Developments in Alcoholism, 8,* 145-71.

Hser, Y.I. (1993, June). Population estimates of intravenous drug users and HIV infection in Los Angeles County. *International Journal of the Addictions,28,* 695-709.

Khalsa, H.K., Kowalewski, M. R., Anglin, M. D., & Wang, J. (1992, Spring). HIV-related risk behaviors among cocaine users. *AIDS Education and Prevention, 4*(1), 71-83.

Khalsa, H., Paredes, A., & Anglin, M. D. (1992). The role of alcohol in cocaine dependence. *Recent Developments in Alcoholism, 10,* 7-35.

Khalsa, H. K., Shaner, A., Anglin, M. D., & Wang, J. C. (1991, October). Prevalence of substance abuse in a psychiatric evaluation unit. *Drug and Alcohol Dependence, 28*(3), 215-23.

Longshore, D., Hsieh, S. C., & Anglin, M. D. (1992, Spring). AIDS knowledge and attitudes among injection drug users: the issue of reliability. *AIDS Education and Prevention, 4*(1), 29-40.

McKay, J. R., Alterman, A. I., McLellan, A. T., Snider, E. C., & O'Brien, C. P. (1995, February). Effect of random versus nonrandom assignment in a comparison of inpatient and day hospital rehabilitation for male alcoholics. *Journal Consult Clinical Psychology, 63*(1), 70-8.

McLellan, A. T., Arndt, I. O., Metzger, D. S., Woody, G. E., & O'Brien, C. P. (1993, April 21). The effects of psychosocial services in substance abuse treatment. *Journal of the American Medical Association, 269*(15), 1953-9.

Metzger, D. S., Woody, G. E., Druley, P., DePhillips, D. , Navaline, H., McLellan, A. T., & O'Brien, C. P. (1991). Psychiatric symptoms, high risk behaviors and HIV positivity among methadone patients. *NIDA Research Monograph, 105,* 490-1.

Metzger, D. S., Woody, G. E., McLellan, A. T., O'Brien, C. P., Druley, P., Navaline, H., DePhilippis, D., Stolley, P., & Abrutyn, E. (1993, September). Human immunodeficiency virus seroconversion among intravenous drug users in- and out-of-treatment: An 18-month prospective follow-up. *Journal of Acquired Immune Deficiency Syndromes, 6*(9) 1049-56.

O'Brien, C. P., McLellan, A. T., Alterman, A., & Childress, A. R. (1992). Psychotherapy for cocaine dependence. *Ciba Foundation Symposium, 166,* 207-16; discussion 216-23.

Ries, R. (1994). Assessment and treatment of patients with coexisting mental illness and alcohol and other drug abuse. *Treatment Improvement Protocol (TIP) Series, 9*. Rockville, MD: Center for Substance Abuse Treatment.

Shaner, A., Khalsa, M. E., Roberts, L., Wilkins, J., Anglin, D., & Hsieh, S. C. (1993, May). Unrecognized cocaine use among schizophrenic patients. *American Journal of Psychiatry, 150*(5), 758-62.

Solomon, J., Zimber, S., & Schollar, E. (1993). *Dual diagnosis: Evaluation, treatment, training, and program development.* New York: Plenum.

Stone, A. M., Greenstein, R. A., Gamble, G., & McLellan, A. T. (1993, February). Cocaine use by schizophrenic outpatients who receive depot neuroleptic medication. *Hospital and Community Psychiatry 44*(2) 176-7.

Wang, R. Y., Alterman, A. I., Searles, J. S., & McLellan, A. T. (1990, May). Alcohol abuse in patients with dilated cardiomyopathy. Laboratory vs clinical detection. *Archives of Internal Medicine, 150*(5), 1079-82.

Wang, R., Mallon, J., Alterman, A. I., & McLellan, A. T. (1987). Alcohol and dilated cardiomyopathy: incidence and correlation with clinical outcome. *Journal Substance Abuse Treatment, 4*(3-4), 209-13.

Watkins, K. E., Metzger, D., Woody, G., & McLellan, A. T. (1992). High-risk sexual behaviors of intravenous drug users in- and out-of-treatment: Implications for the spread of HIV infection. *American Journal of Drug and Alcohol Abuse, 18*(4), 389-98.

Watkins, K. E., Metzger, D., Woody, G., & McLellan, A. T. (1993, May). Determinants of condom use among intravenous drug users. *AIDS 7*(5), 719-23.

Weisman, C. P., Anglin, M. D., & Fisher, D. G. (1989, September). The MMPI profiles of narcotics addicts. II. Ethnic and criminal history effects. *International Journal of the Addictions, 24*(9), 881-96.

Woody, G. E., McLellan, A. T., Luborsky, L., & O'Brien, C. P. (1990). Psychotherapy and counseling for methadone-maintained opiate addicts: Results of research studies. *NIDA Research Monograph, 104,* 9-23.

Woody, G. E., McLellan, A. T., Luborsky, L., & O'Brien, C. P. (1987, May). Twelve-month follow-up of psychotherapy for opiate dependence [published erratum appears in Am J Psychiatry 1989 Dec;146(12):1651]. *American Journal of Psychiatry, 144*(5) 590-6.

Woody, G. E., McLellan, A. T., Luborsky, L., & O'Brien, C. P. (1995, September). Psychotherapy in community methadone programs: A validation study. *American Journal of Psychiatry, 152*(9), 1302-8.

Woody, G. E., McLellan, A. T., Luborsky, L., O'Brien, C. P., & Lubursky, L. [corrected to Luborsky L] (1986, September). Psychotherapy for substance abuse [published erratum appears in Psychiatry Clin North Am 1990 Mar;13(1):xiii] *Psychiatric Clinics of North America, 9*(3), 547-62.

Woody, G. E., McLellan, A. T., & O'Brien, C. P. (1990, April). Research on psychopathology and addiction: Treatment implications. *Drug and Alcohol Dependence, 25*(2) 121-3.

Woody, G. E., McLellan, A. T., O'Brien, C. P., & Luborsky, L. (1991). Addressing psychiatric comorbidity. *NIDA Research Monograph, 106,* 152-66.

Zanis, D. A., McLellan, A. T., Cnaan, R. A., & Randall, M. (1994, November-December). Reliability and validity of the Addiction Severity Index with a homeless sample. *Journal of Substance Abuse Treatment, 11*(6), 541-8.

Zanis, D. A., Metzger, D. S., & McLellan, A. T. (1994, September-October). Factors associated with employment among methadone patients. *Journal of Substance Abuse Treatment, 11*(5), 443-7.

Case Management

Cook, F. (1992). TASC: Case management models linking criminal justice and treatment. *NIDA Research Monograph,127,* 368-382.

Durell, J, Lechtenberg, B., Frances, R. J., & Corse, S. (1993, May). Intensive case management of persons with chronic mental illness who abuse substances. *Hospital and Community Psychiatry, 44* (5), 415-416, 428.

Graham, K, Timney, C. B., Bois, C. & Wedgerfield, K. (1995, November). Continuity of care in addictions treatment: The role of advocacy and coordination in case management. *American Journal of Drug and Alcohol Abuse, 21* (4), 433-451.

Hasson, A. L., Grella, C. E., Rawson, R., & Anglin, M. D. (1994, Winter). Case management within a methadone maintenance program. A research demonstration project for HIV risk reduction. *Journal of Case Management, 3*(4), 167-72.

Lewis, B. E. & Phelan, A. (1992). Health maintenance organizations and the treatment of substance abuse. *Journal of Ambulatory Care Management, 15*(1), 56-67.

McCarthy, E. P., Feldman, Z. T., & Lewis, B. F. (1992). Development and implementation of an interorganizational case management model for substance abusers. In R. S. Ashery (Ed.), *NIDA Monograph Series: No. 127. Progress and Issues in Case Management,* 331-349.

Rapp, R. C., Siegal, H. A., & Fisher, J. H. (1992). A strengths-based model of case management-advocacy: Adapting a mental health model to practice work with persons who have substance abuse problems. In R. S. Ashery (Ed.), *NIDA Monograph Series: No. 127. Progress and Issues in Case Management,* 79-91.

Willenbring, M. L. (1992). Integrating qualitative components in evaluation of case management. In R. S. Ashery (Ed.), *NIDA Monograph Series: No. 127. Progress and Issues in Case Management,* 223-250.

Woodward, A. (1992). Managed care and case management of substance abuse treatment. In R. S. Ashery (Ed.), *NIDA Monograph Series: No. 127. Progress and Issues in Case Management,* 34-53.

Criminal and Juvenile Justice

Anglin, M. D., & Hser, Y. I. (1991 Summer). Criminal justice and the drug-abusing offender: Policy issues of coerced treatment. *Behavioral Sciences & the Law, 9*(3), 243-267.

Aukerman, R. B., & McGarry, P. (1994). Combining substance abuse treatment with intermediate sanctions for adults in the criminal justice system. *Treatment Improvement Protocol (TIP) Series, 12*.

Brecht, M. L., & Anglin, M. D. (1990, April). Conditional factors of maturing out: Legal supervision and treatment. *International Journal of Addiction, 25*(4), 393-407.

Brecht, M. L., Anglin, M. D., & Wang, J. C. (1993). Treatment effectiveness for legally coerced versus voluntary methadone maintenance clients. *American Journal of Drug and Alcohol Abuse, 19*(1) 89-106.

Brecht, M. L., Hser, Y.I., & Anglin, M. D. (1990-91, September). A multimethod assessment of social intervention effects on narcotics use and property crime. Special Issue: Nonexperimental methods for studying addictions. *International Journal of the Addictions, 25*(11A), 1317-1340.

Brenna, D. (1992). Substance abuse services in juvenile justice: The Washington experience. In C. G. Leukefeld, & F. M. Tims (Eds.), *NIDA Research Monograph: No. 118. Drug Abuse Treatment in Prisons and Jails,* 99-109.

Bureau of Justice Assistance, DOJ. (1995). *State and local conference on violent crime and drug abuse: Reinforcing government and community partnerships.* Washington, DC: U.S Department of Justice.

Bureau of Justice Statistics, DOJ. (1992). *Drugs, crime, and the justice system. A national report from the Bureau of Justice Statistics* (No. NCJ-133652). Washington, DC: U. S. Government Printing Office.

Fiorentine, R., Hser, Y. I., & Auglin, M. D. (1994). Dabblers, dealers, stealers, and stealer-dealers: Criminal specialization among male narcotics users. American Sociological Association

Hser, Y. I., Chou, C. P., & Anglin, M. D. (1990, June). The criminality of female narcotics addicts: A causal modeling approach. *US Journal of Quantitative Criminology, 6*(2). 207-228.

Inciardi, J. A. (1994). Screening and assessment for alcohol and other drug abuse among adults in the criminal justice system. *Treatment Improvement Protocol (TIP) Series, 7.* Rockville, MD: Center for Substance Abuse Treatment.

Inciardi, J. A., Martin, S. S., Lockwood, D., Hooper, R. M. et al. (1992). Obstacles to the implementation and evaluation of drug treatment programs in correctional settings: Reviewing the Delaware KEY experience. In C. G. Leukefeld & F. M. Tims (Eds.), *NIDA Research Monograph Series: No. 118. Drug Abuse Treatment in Prisons and Jails,* 176-191.

Leukefeld, C. G., & Tims, F. M. (Eds). (1992). Drug abuse treatment in prisons and jails. *NIDA Research Monograph Series,118.*

Magura, S., Rosenblum, A., & Joseph, H. (1992). Evaluation of in-Jail methadone maintenance: preliminary results. In C. G. Leukefeld & F. M. Tims (Eds.), *NIDA Research Monograph Series: No. 118. Drug Abuse Treatment in Prisons and Jails,* 192-210.

McLellan, T., & Dembo, R. (1993). Screening and assessment of adolescents in juvenile justice settings. *Treatment of Improvement Protocol (TIP) Series, 3,* 39-47.

Powers, K., Hanssens, D. M., Hser, Y., & Anglin, M. D. (1991, June). Measuring the long-term effects of public policy: The case of narcotics use and property crime. *Management Science, 37* (6), 627-644.

Schonberg, S. K. (1993). Guidelines for the treatment of alcohol- and other drug- abusing adolescents. *Treatment Improvement Protocol (TIP) Series, 4,* 37-45.

Vigdal, G. L., & Stadler, D. W. (1992). Comprehensive system development in corrections for drug-abusing offenders: The Wisconsin Department of Corrections. In C. G. Leukefeld & F. M. Tims (Eds.), *NIDA Research Monograph Series: No. 118. Drug Abuse Treatment in Prisons and Jails,* 126-141.

Wish, E. D., O'Niel, J., & Baldau, V. (1990). Lost opportunity to combat AIDS: Drug abusers in the criminal justice system. In *NIDA Research Monograph Series: Vol. 93. AIDS and Intravenous Drug Use: Future Directions for Community-Based Prevention Research,* 187-209.

Ethnography

Adler, P. (1990). Ethnographic research on hidden populations: Penetrating the drug world. In E. Lambert (Ed.), *NIDA Research Monograph Series: No. 98. The Collection and Interpretation of Data from Hidden Populations,* 96-112

Feldman, H. W., & Aldrich, M. R. (1990). The role of ethnography in substance abuse research and public policy: Historical precedent and future. In E. Lambert (Ed.), *NIDA Research Monograph Series: No. 98. The Collection and Interpretation of Data from Hidden Populations,* 12-30.

Fritz, R. B. (1990). Computer analysis of qualitative data. In E. Lambert (Ed.), *NIDA Research Monograph Series: No. 98. The Collection and Interpretation of Data from Hidden Populations,* 58-79.

Goldstein, P. J., & Spunt, B. J. (1990). Ethnographic field stations. In E. Lambert (Ed.), *NIDA Research Monograph Series: No. 98. The Collection and Interpretation of Data from Hidden Populations,* 80-95.

Margolis, E. (1989). *Using Ethnography to Combat AIDS: The Theoretical Underpinnings of San Francisco's NIDA Demonstration.* Rockville, MD: National Institute on Drug Abuse.

Case Study

Collins, A. (1994, May-June). A successful strategy for handling substance abuse. *Journal of Health Care Benefits*, 57-59.

Cunningham, M. S. (1993). Evaluating alcohol and other drug abuse programs. In E. M. Freeman (Ed.), *Sage Sourcebooks for the Human Services Series: Vol. 4 Substance Abuse Treatment: A Family Systems Perspective.* (pp. 267-294). Newbury Park, CA: Sage.

Field, G. (1992). Oregon prison drug treatment programs. In C. G. Leukefeld & F. M. Tims (Eds.), *NIDA Research Monograph Series: No. 118. Drug Abuse Treatment in Prisons and Jails,* 142-155.

Goldstein, P. J., Spunt, B. J., Miller, T., & Bellucci, P. (1990). Ethnographic field stations. In E. Y. Lambert (Ed.), *NIDA Research Monograph Series: No. 98. The Collection and Interpretation of Data from Hidden Populations,* 80-95.

Greenfield, T. K., & Zimmerman, R. (Eds.). (1993). *Experiences with Community Action Projects: New Research in the Prevention of Alcohol and Other Drug Problems* (CSAP Prevention Monograph Series No. 14). Rockville, MD: Center for Substance Abuse Prevention.

Inciardi, J. A., Lockwood, D., & Martin, S. A. (1994). Therapeutic communities in corrections and work release: Some clinical policy considerations. In F. M. Tims, G. De Leon, & N. Jainchill (Eds.), *NIDA Research Monograph Series: No. 144. Therapeutic Community: Advances in Research and Application,* 259-267.

Muraskin, L. D. (1993). *Understanding evaluation: The way to better prevention programs.* Washington, DC: U.S. Government Printing Office.

National Institute on Drug Abuse. (1993). *How good is your drug treatment program? Overview and case study.* (NIH Publication No. 93-3608). Washington, DC: U. S. Government Printing Office.

Van Ryzin, G. G. (1995, June). Cluster analysis as a basis for purposive sampling of projects in case study evaluations. *Evaluation Practice, 16*(2), 109-119.

Winett, D. L., Mullen, R., Lowe, L. L., & Missakian, E. A. (1992). Amity Righturn: A demonstration drug abuse treatment program for inmates and parolees. In C. G. Leukefeld & F. M. Tims (Eds.), *NIDA Research Monograph Series: No. 118. Drug Abuse Treatment in Prisons and Jails,* 84-98.

Yin, R. K. (1993). Applications of case study research. *Applied Social Research Methods Series,34.* Newbury Park, CA: Sage Publications.

Yin, R. K. (1994, October). Discovering the future of the case study method in evaluation research. *Evaluation Practice, 15*(3), 283-290.

Multisite Evaluation

Guastello, S. J. & Guastello, D. D. (1991, Summer). How organizations differ: Implications for multisite program evaluation. *Multisite Evaluations: No. 50 New Directions for Program Evaluation* (pp. 71-81). Potomac, MD: American Evaluation Association.

Seltzer, M. H. (1994, June). Studying variation in program success. A multilevel modeling approach. *Evaluation Review: A Journal of Applied Social Research, 18*(3), 342-361.

Simpson, D. D. (1993). Drug treatment evaluation research in the United States. *Psychology of Addictive Behaviors, 7*(2), 120-128.

Skogan, W. G., & Lurigio, A. J. (1991, Summer). Multisite evaluations in criminal justice settings: Structural obstacles to success. *Multisite Evaluation: No. 50 New Directions for Program Evaluation* (pp. 83-96). Potomac, MD: American Evaluation Association.

Central Intake

Client Information System of New York City. (1994, May 16). Award-winning program matches clients, providers. *Alcoholism and Drug Abuse Week, 6*(20), 2.

Crews, C., Connolly, K., Bruett, M., Whitted, P., & Beckwith, N. (1986, Jan-Feb). Computerized central intake: Streamlining community health-care admissions. *Nurs Econ,4*(1), 31-36.

Cuvo, D., Hall, F., & Milder, G. R. (1988, Apr). Computerizing central intake: A means toward accountability. *Social Casework, 69*(4) 214-223.

Dorr, V., Zellers, L. R., Hernandez, S. R., & Chang, S. W. (1992, July20). Interagency dynamics: Establishing a collaborative early intervention resource center in San Francisco. *AIDS Weekly*, 4.

Drug strategy proposes 'Treatment Voucher' experiment for private programs. *The Alcoholism Report, 19*(7), 5.

Glaser, F. B. (1994, Nov-Dec). Slouching toward a systems approach to treatment. Symposium: Alcohol and Substance Abuse (1993, Greenville, North Carolina). *Alcohol, 11*(6), 467-470.

Focus Group

Krueger, R. A. (1994). *Focus groups: A practical guide for applied research.* Thousand Oaks, CA: Sage.

Morgan, D. L. (1993). *Successful focus groups: Advancing the state of the art.*Thousand Oaks, CA: Sage.

Race, K. E., Hotch, D. F., & Packer, T. (1990, Dec). Rehabilitation program evaluation. Use of focus groups to empower clients. *Evaluation Review: A Journal of Applied Social Research, 18*(6), 730-740.

The perspective offered in this document is solely that of the author(s) and does not reflect the policies or views of the Federal government, or any of its Departments or Agencies.