

# INTEGRATED EVALUATION METHODS



## A GUIDE TO PROCESS EVALUATION OF SUBSTANCE ABUSE TREATMENT SERVICES

July 1999

**NEDTAC**

**CSAT**  
Center for Substance  
Abuse Treatment  
SAMHSA

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## 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 by treatment providers and by CSAT. 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 treatment outcomes and improve the treatment process. CSAT recognizes that such an integrated evaluation approach will more effectively support its 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 the Appendix to this document.)

This document, along with its two companion documents, *Using Logic Models in Substance Abuse Treatment Evaluations* and *A Guide to Selecting an Outcome Evaluation Design for Substance Abuse Treatment Evaluations* is aimed at supporting the design stage of the evaluation process. Specifically, this document supports the development of a process evaluation design, which in turn supports CSAT's preference for the integration of process and outcome evaluation approaches. Taken together, these documents are intended to assist substance abuse treatment professionals to plan and conduct scientifically valid, and therefore meaningful, evaluation activities.

Sharon Bishop  
Project Director  
National Evaluation Data and Technical Assistance Center

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# I. INTRODUCTION

The Center for Substance Abuse Treatment (CSAT) supports the integration of ongoing evaluation within substance abuse treatment activities so as to demonstrate treatment service effectiveness and to improve treatment services and their outcomes. To this end, CSAT recommends the use of state-of-the-art evaluation methods and tools in planning, designing, and implementing treatment services evaluations. This document discusses one of these methods: applying process evaluation to knowledge-generating activities.

This document contains five chapters: (1) an introduction that provides a context for the development and use of the process evaluation document; (2) an overview of process evaluation including purposes and applications; (3) a description of process evaluation plans appropriate for knowledge-generating activities; (4) guidance for developing process evaluation products; and (5) a sample process evaluation work plan. The following paragraphs present the introduction to the document.

## 1. CONTEXT FOR THE PROCESS EVALUATION DOCUMENT

CSAT's major evaluation goals are to: (1) increase knowledge about substance abuse treatment services; (2) improve treatment services by applying knowledge gained through demonstrations and knowledge development and application (KD&A) activities; and (3) develop substance abuse treatment analysis databases. To meet these goals, CSAT has been sponsoring KD&A initiatives including activities which focus on homelessness, marijuana use and treatment, managed care, women and violence, and opioid treatment as well as the replicability of treatment services, exemplary treatment approaches (i.e., methamphetamine), and the identification of best practices for targeted populations (i.e., exemplary adolescent treatment).

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

- **Planning the evaluation**, which includes 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 evaluation questions, measurement approach, and generalizability of findings
- **Developing the data requirements**, which flow from the evaluation questions and measures and include: service delivery unit (SDU), clinician, cost, and client data

- **Developing data collection instruments**, which are based on the data requirements and are developed or selected from a standard inventory of instrumentation
- **Collecting the data**, which includes the development of data management processes and tools including quality control procedures, and collecting the data
- **Analyzing the data**, which usually involves multiple levels of comparison and is governed by an analysis plan and intended products and target audience(s)
- **Reporting the evaluation findings**, which includes evaluation knowledge dissemination and application within the field.

CSAT has directed the development of evaluation concepts, tools, and technical assistance materials to support these evaluation tasks, which are summarized in Exhibit I to the Appendix and are available at <http://neds.calib.com>. As shown, this document, *A Guide to Process Evaluation of Substance Abuse Treatment Services*, has been designed to support the second stage in the evaluation process: selecting the evaluation design. A full discussion of the CSAT evaluation framework and the other evaluation concepts, tools, and technical assistance materials is presented in the concept paper *Integrated Evaluation Methods (IEM): A Guide for Substance Abuse Treatment Knowledge Generating Activities*.

## 2. EVALUATION DESIGNS

Substance abuse treatment evaluation is the formal and systematic process for collecting, analyzing, and interpreting data so as to determine the merit, worth, and value of the substance abuse treatment services. In most cases, the primary purpose of substance abuse treatment service evaluation is to demonstrate the utility of the services. Evaluators must support the treatment service by demonstrating its ability to produce the desired outcomes (Dehar, Casswell, & Duignan, 1993). Within this context, evaluation involves the collection of data about a treatment service's characteristics, activities, and outcomes.

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 generically 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 and Freeman, 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; Steckler et al., 1992). The accumulation of 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 substance dependence and to assess the replicability and sustainability of these treatment approaches.

Historically, all of the national and multi-site/cross-site evaluations directed by CSAT’s Program Evaluation Branch (PEB) included process, impact, and cost 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. Therefore, CSAT sponsored the development of the integrated evaluation methods and technical assistance materials to address the challenges of incorporating process, outcome, and cost analyses within an evaluation effort—be it a “local”/single site, multi-site/cross-site, or national evaluation. This document, together with the technical assistance materials entitled: (1) *A Guide to Selecting an Outcome Evaluation Design for Substance Abuse Treatment Evaluations*; (2) *Using Logic Models in Substance Abuse Treatment Evaluation*; and (3) *A Guide to Substance Abuse Treatment Evaluation Data Analysis* are designed to assist local and national evaluators in conducting an evaluation that incorporates process evaluation, outcome evaluation, and cost analyses.

### 3. PURPOSE AND ORGANIZATION OF THIS DOCUMENT

The purpose of this document is to provide technical assistance for designing a process evaluation and utilizing process evaluation methods in knowledge-generating treatment service

evaluations. Specifically, this document defines process evaluation purposes and their applications and describes the major components of process evaluation plans and process evaluation products. This technical assistance document concludes with a sample work plan for conducting a process evaluation.

This document contains five sections:

- Introduction
- Process evaluation overview
- Process evaluation plans
- Process evaluation products
- Sample process evaluation work plan.

In addition, a summary description of the integrated evaluation methods framework is included in the Appendix to this document.

## II. PROCESS EVALUATION OVERVIEW

Process evaluation is critically important to assessing the effectiveness of substance abuse treatment services. Process evaluation provides three critical functions; process evaluation (1) informs treatment service development; (2) determines if treatment services have been implemented as designed and provides vital information to inform future replication of CSAT substance abuse treatment services; and (3) supports outcome evaluation by assisting with outcome evaluation design and analysis. Since process evaluation methods rely primarily on qualitative data collection and analysis, conducting process evaluations is labor-intensive requiring extensive “on-site” work. Therefore, process evaluation methods are most often employed in single site evaluations. Process evaluation methods also contribute substantially to multi-site evaluations, however. The purpose of this chapter is to provide a description of the purposes of process evaluation and the application of process evaluation to single site and multi-site substance abuse treatment knowledge-generating activities.

### 1. PROCESS EVALUATION: DEFINITION AND PURPOSES

There are several definitions for process evaluation in the evaluation literature. Process evaluation has been defined as a method for determining how a substance abuse treatment service achieves or fails to achieve outcomes. Process evaluation also has been defined as a technique for comparing treatment service plans to actual treatment service operations to assess treatment service implementation. Further, process evaluation is defined as a mechanism for improving treatment service performance by identifying operational strengths and weaknesses and specific treatment service components that influence outcomes (Dehar, Casswell, & Duignan, 1993; Browne & Wildavsky, 1987).

Typically, a process evaluation is designed to address all of these purposes. Process evaluation involves describing and assessing substance abuse treatment service activities and materials during treatment service development, checking the appropriateness of approaches and procedures used during implementation of treatment service activities, and documenting actual treatment service operations to determine the degree to which they resemble treatment service goals (Muraskin, 1995).

The use of process evaluation necessitates a move from thinking of evaluation as an “end” to thinking of evaluation as part of substance abuse treatment planning and management (Shadish, Cook, & Leviton, 1991; Devine et al., revised 1999). Process evaluation should begin in the treatment service planning stage and continue into implementation, providing continuous feedback of information relevant to treatment service planning and operations. This involves a

collaborative working relationship between the evaluator and substance abuse treatment service staff (Dehar, Casswell, & Duignan, 1987; Devine et al., revised 1999). Process evaluation methods primarily are used in:

- **Formative evaluation**—examining substance abuse treatment service development and providing feedback to treatment service planners
- **Implementation evaluation**—monitoring the operations and performance and comparing treatment services, once implemented, with the treatment service design
- **Evaluation outcome interpretation**—clarifying and interpreting outcome evaluation results.

A more detailed description of each of these purposes of process evaluation follows.

### 1.1 Formative Evaluation

Process evaluation is often equated with formative evaluation in the evaluation literature because they both provide information useful in substance abuse treatment service development and improvement. The primary objective of formative evaluation is to improve and refine treatment service operations and procedures on an ongoing basis, rather than waiting for a pre-determined amount of time (i.e., one year) and retrospectively make decisions about whether the treatment service is effective. The evaluator becomes involved in creating a more successful treatment service by providing input at the early stages of treatment planning and development. In this context, process evaluation facilitates clear thinking and planning because the treatment service must be specified in detail, from the beginning of the planning stage. Formative evaluation activities include:

- Developing and refining the treatment service model, objectives, and strategies
- Reviewing relevant literature
- Conducting needs assessments
- Piloting treatment service interventions
- Obtaining feedback from treatment service clients

- Assessing initial treatment service effects
- Developing evaluation systems to include the routine collection of evaluation data.

Formative evaluation activities change the notion of the evaluator as a neutral, detached observer. Instead, the evaluator works closely with the substance abuse treatment personnel to influence treatment service planning, development, and implementation (Dehar, Casswell, & Duignan 1993). Evaluators must become familiar with multiple aspects of the treatment service, providing personnel with information and insights to assist in improving the service. As a result, revisions may be made in treatment service organization, management, staffing, and activities (Herman, Morris, & Fitz-Gibbon, 1987).

## **1.2 Implementation Evaluation**

The primary objective of implementation evaluation is to determine the extent to which a substance abuse treatment service has been implemented in conformance with its original design and intent. Broadly stated, implementation evaluation addresses the question: “What services were provided to whom and at what cost?” Like formative evaluation, implementation evaluation focuses on treatment service processes and dynamics; this evaluation approach is used to monitor treatment service operations and service delivery systems as they develop and mature over time. Implementation evaluation documents the problems that are encountered in operationalizing a treatment service, the effect of unique environmental conditions on treatment service implementation, and the ways in which the resulting treatment service conforms and/or deviates from initial plans and expectations (Herman, Morris, & Fitz-Gibbon, 1987).

Implementation evaluation is conducted in recognition of the reality that until a treatment service is sufficiently in operation, there is little value in attempting to assess its impact and effectiveness. Thus, implementation evaluation constitutes a critical preliminary step to determining a substance abuse treatment service’s evaluability, with the fundamental question being whether or not an evaluation is likely to result in a fair test of the intended treatment service. Unless a treatment service is described and its delivery measured through the process of implementation evaluation, outcome evaluations may be attempting to assess a service that was not delivered or was different than those intended by the treatment service developers (Schdeirer, 1994). Treatment service efforts may be ineffectual, misunderstood, or misinterpreted because what was actually implemented failed to match what was described in the original treatment service design. Without knowledge of the degree of treatment service implementation, it is not possible to determine whether the service fails to show impacts because of a failure in treatment

service design or a failure to implement the treatment service as designed (Dehar, Casswell, & Duignan, 1993).

Implementation evaluation also provides feedback on the quality of ongoing service delivery by elucidating the internal dynamics of treatment service operations. In this context, there are two key aspects of implementation evaluation: the extent of implementation and the scope of implementation. The extent of implementation refers to the number of treatment service activities delivered, while the scope refers to the number of treatment service clients and their characteristics. For implementation evaluation, data are collected on the intensity and duration of treatment service activities, client participation rates, client characteristics, client perceptions and resources used (Rossi & Freeman, 1993; Harrell, Hatry, Rossman, Roth & Sabol, 1996).

Implementation evaluation efforts have become more institutionalized, with evaluators becoming more accepted by treatment service staff. Computerized management information systems (MIS) have helped to promote the convergence of treatment service management and implementation evaluation. Evaluators share findings with treatment service staff and collaborate in treatment service improvements. This “self-adjusting” treatment evaluation model creates a feedback loop in which evaluators help treatment service providers incorporate evaluation findings within treatment service delivery, and service providers help evaluators understand treatment service objectives (Rossi & Freeman, 1993; Devine et al., revised 1999).

### **1.3 Evaluation Outcome Interpretation**

Process evaluation supports outcomes analysis by providing insight and programmatic understanding about which specific treatment service components and specific client characteristics, separately or in combination, contributed to specific treatment service outcomes. Process evaluation helps to explain a lack of treatment service outcomes, as well, by identifying factors that may have interfered with the treatment service having the desired effect. In essence, if the treatment service was implemented as designed and the expected outcomes were realized, the process evaluation assists in identifying and interpreting factors that contribute to specific outcomes. If, however, the treatment service was implemented as designed and the anticipated client outcomes were not realized, the process evaluation assists in determining the validity (or limitations) of the theoretical foundation for the treatment service design. When used for this purpose, process evaluation findings are used in combination with outcome evaluation findings during the overall evaluation analysis.

## 2. PROCESS EVALUATION APPLICATIONS

The description of process evaluation, thus far, reflects a relatively generic evaluation approach for a single site substance abuse treatment service. Knowledge-generating substance abuse treatment services however are designed in accordance with several different study models and require evaluation at the study site and at the cross-site or multi-site levels. The following paragraphs describe basic knowledge-generating study models followed by a description of the process evaluation as applied to single sites and to cross-site/multi-site evaluation efforts.

### 2.1 Knowledge-Generating Study Models

Current and future knowledge-generating activities have been designed based on one of three basic study models, which include:

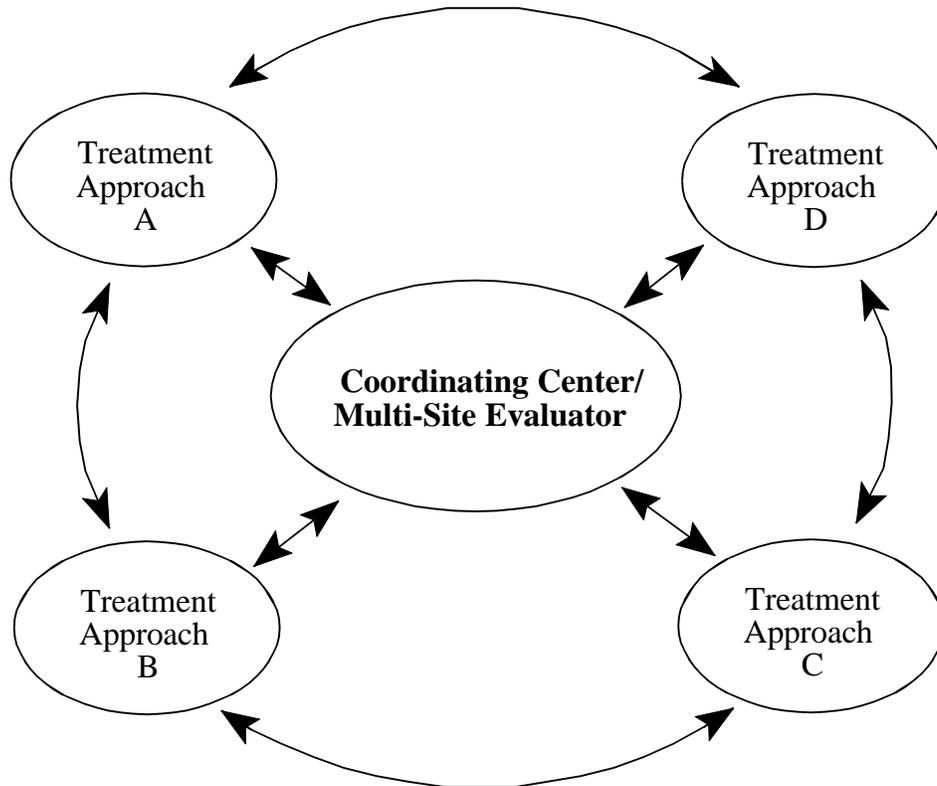
- Traditional comparison study
- An innovative treatment approach compared to a standard treatment approach
- New treatment interventions and an assessment of the impact on existing systems.

Each of these models is described below.

The traditional comparison study model requires the participating study sites to implement different treatment services which are then compared, one to the other, so as to identify the most effective approach for a specific substance abuse problem. The coordinating center or multi-site evaluator (which also may be a study site) is responsible for comparing the treatment services to each other and determining the most effective approach. The treatment populations usually have the same characteristics (i.e., adults) and/or substance abusing problems. A schematic drawing of this model is presented in Exhibit II-1.

An example of this study model is the FY 1996 CSAT *Cooperative Agreements for a Multi-site Study of the Effectiveness of Brief Treatment for Cannabis (Marijuana) Dependency (Short Title: Cannabis Dependence Treatment)*. In this example, multiple treatment sites were selected, each with different treatment approaches; each study site has responsibility, at its own site, for data collection, data analysis, and report preparation. The coordinating center is responsible for developing, maintaining, and analyzing a multi-site data set and reporting the results of the multi-site study.

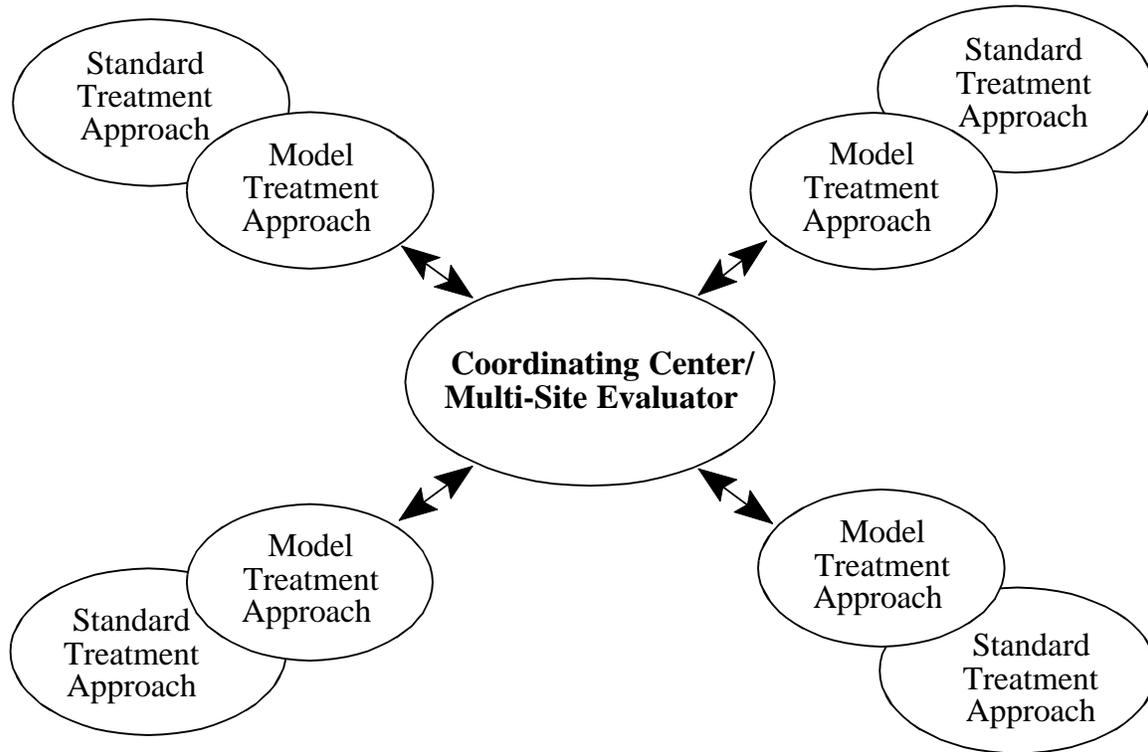
**EXHIBIT II-1  
KNOWLEDGE-GENERATING STUDY MODEL:  
TRADITIONAL COMPARISON STUDY**



The second knowledge-generating study model involves the adoption of the same (innovative) treatment approach by multiple study sites. The innovative treatment approach is compared with an existing treatment approach at the study site level. The coordinating center or multi-site evaluator then conducts the multi-site evaluation. This knowledge-generating study model is schematically diagramed in Exhibit II-2.

An example of this study model is the FY 1998 CSAT *Cooperative Agreements for Replication of Effective Treatment for Methamphetamine Dependence and Improvement of Cost-effectiveness of Treatment (Short Title: Methamphetamine Treatment)*. This knowledge-generating activity aims to replicate the MATRIX treatment model in multiple sites and to

**EXHIBIT II-2  
KNOWLEDGE-GENERATING STUDY MODEL:  
COMPARISON OF A MODEL TO EXISTING SERVICES**

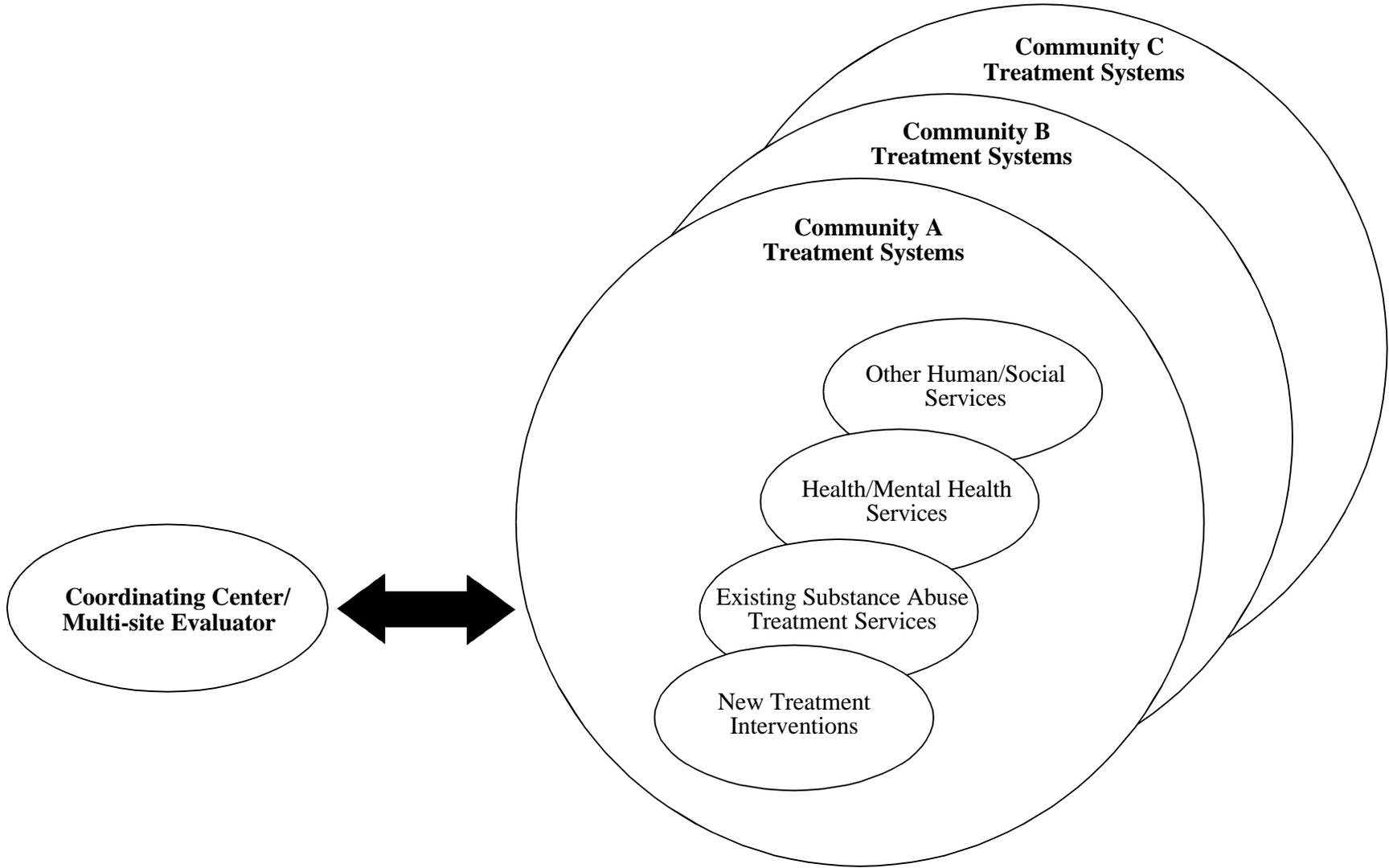


compare the MATRIX model, as implemented by the study sites, to existing treatment at each site. The coordinating center is responsible for a cross-site process and outcome evaluation of the MATRIX model replication.

The third knowledge-generating study model involves the design and implementation of new treatment components and an examination of systems changes that result from the new treatment components. Here, systems integration is the concept under study. A schematic diagram of this study model is presented in Exhibit II-3.

The FY SAMHSA *Cooperative Agreement to Study Women with Alcohol, Drug Abuse and Mental Health Disorders Who Have Histories of Violence* (Short Title: *Women and Violence*) approximates this study model. The idea for the Women and Violence program is to

**EXHIBIT II-3**  
**KNOWLEDGE-GENERATING STUDY MODEL:**  
**NEW TREATMENT INTERVENTIONS AND SYSTEMS CHANGE**



assess the degree of systems integration among substance abuse treatment and mental health services for women who have a history of abuse at each study site (community), determine the service gaps, and implement new services to fill these gaps. The role of the coordinating center or multi-site evaluator is to conduct a cross-site process evaluation, outcome evaluation, and cost analysis.

Process evaluations are needed by each of these knowledge-generating study models for use by the study sites and the coordinating centers/multi-site evaluators. The following paragraphs describe the application of process evaluation methods to these two levels of evaluation (single site and cross- or multi-site).

## **2.2 Single Site and Multi-site Process Evaluations**

The application of process evaluation methods to a single substance abuse treatment service or a single study site and to knowledge-generating activities that have been implemented within multiple sites are described below.

### **Using Process Evaluation for Single Site Treatment Service**

Conducting a process evaluation is crucial to a comprehensive evaluation of a single site knowledge-generating treatment service evaluation. Process evaluation applications and their relationship to the design and implementation of the knowledge-generating substance abuse treatment service are summarized in Exhibit II-4. As shown, process evaluation methods are applied throughout the life span of a substance abuse treatment service that has been implemented in a single study site.

Beginning with the treatment service design and development phase, the process evaluation supports the treatment service by providing an independent assessment of the community and client needs, the theoretical foundation of the treatment service, and the adequacy and appropriateness of the available resources for implementing and operating the service. Additionally, the process evaluation, during this phase, ensures that the treatment service design includes clearly articulated, measurable, and appropriate goals and objectives.

As the treatment service is implemented, the process evaluation determines the fidelity of the treatment service to its original design by documenting and assessing organizational and staffing arrangements, the extent to which clients represent the target population, client outreach

**EXHIBIT II-4  
PURPOSES FOR PROCESS EVALUATION**

**KNOWLEDGE-  
GENERATING  
TREATMENT  
SERVICE  
PHASES**

<b>TREATMENT SERVICE DESIGN</b>
<ul style="list-style-type: none"> <li>■ Theory(s)</li> <li>■ Population(s)</li> <li>■ Environment</li> <li>■ Linkages with community</li> <li>■ Resource planning</li> <li>■ Goals and objectives</li> </ul>

<b>IMPLEMENTATION</b>
<ul style="list-style-type: none"> <li>■ Client outreach</li> <li>■ Intake/assessment</li> <li>■ Organization, management, staffing</li> <li>■ Treatment components</li> <li>■ Support services</li> <li>■ Continuing care/aftercare</li> </ul>

<b>TREATMENT SERVICE COMPLETION</b>
<ul style="list-style-type: none"> <li>■ Client status at treatment exit</li> <li>■ Client status at follow-up</li> </ul>

**PROCESS  
EVALUATION  
PURPOSES  
AND  
APPLICATIONS**

<b>FORMATIVE EVALUATION</b>
<ul style="list-style-type: none"> <li>■ Community needs assessments</li> <li>■ Theoretical literature review</li> <li>■ Resource assessment</li> <li>■ Assessment of goals and objectives</li> </ul>

<b>IMPLEMENTATION EVALUATION</b>
<p>Document:</p> <ul style="list-style-type: none"> <li>■ Organization, staffing</li> <li>■ Treatment components</li> <li>■ Client characteristics</li> <li>■ Client flows</li> </ul> <p>Assess:</p> <ul style="list-style-type: none"> <li>■ Implementation processes</li> <li>■ Factors that supported/impeded implementation</li> </ul> <p>Compare treatment services as implemented with design</p>

<b>SUPPORT FOR OUTCOME EVALUATION</b>
<p>Characteristics of:</p> <ul style="list-style-type: none"> <li>■ Specific treatment components</li> <li>■ Clients</li> </ul> <p>Factors that influenced implementation</p> <p>Environmental factors</p>



and client flows, and substance abuse treatment service components. In addition, the process evaluation identifies factors that supported and factors that impeded successful implementation. This information is essential to policy makers for treatment services being considered for replication within different communities and/or for different target populations.

During the analysis of client outcome data, the process evaluation provides important contextual information for interpreting the outcome analysis results. When outcomes are different than expected, the process evaluation assists the analysts in determining if the treatment service or some other factor(s) contributed to the different-than-expected outcomes.

Each of the three knowledge-generating study models described above requires the application of single site process evaluation methods. For the traditional comparison study model, an implementation evaluation should be conducted for each treatment approach. The results of this evaluation can be used by the local study site to assess fidelity to the treatment design and to assist in analyzing outcome data. For the cross-site evaluation, the results of each single site evaluation will provide the basis of comparison across approaches and will inform the cross-site outcome analysis.

The comparison of a model treatment approach (e.g., MATRIX) to existing services requires extensive process evaluation so as to: (1) determine the fidelity of the model to its design; (2) provide the foundation for the comparison of the model treatment services to existing services; and (3) inform the outcome analysis.

The new treatment interventions and systems change program model requires a formative evaluation to: (1) identify treatment service gaps and (2) provide a baseline “snap shot” of the treatment service systems prior to the introduction of new interventions. Then, implementation evaluation methods are needed both to assess the new intervention and to assess change among the treatment services that comprise the “system.”

### **Using Process Evaluation for Multiple Treatment Service Sites**

Process evaluation methods are as essential to multi-site evaluations as they are to single site evaluations. In fact, a process evaluation should be conducted for every treatment service site, whether the treatment service is part of a single site or multi-site knowledge-generating effort. Historically, CSAT supported “local” evaluators who had responsibility for conducting the site-specific process evaluation. For knowledge development and knowledge application

activities, the roles and responsibilities of the evaluator for conducting site-specific process evaluation are the same.

In-depth process evaluations for each site in a multi-site knowledge-generating activity are important. Given that implementing a single treatment design within multiple treatment sites is a major goal of many knowledge-generating activities, the probability of site variability in treatment designs, target groups, implementation schedules, and local “stakeholder” requirements is high. Therefore, the use of process evaluation methods to identify and control for these site-specific variations is even more important to the knowledge-generating goals than to the in-depth single site evaluation. The application of process evaluation methods within a hypothetical multi-site study are summarized below.

**Site Variability of Treatment Service Design.** Many of the knowledge-generating efforts aim to implement the same treatment service within multiple sites. Inevitably, the treatment service will vary by site, if only because the local environments differ. A multi-site evaluation in which treatment services vary by site poses potential evaluation difficulties especially for outcomes analysis and interpretation. Extensive differences in treatment services across sites could potentially transform the evaluation into multiple site-specific evaluations (i.e., case studies). Moreover, observed differences in outcomes among the treatment sites may be caused by treatment service differences (to include differences in quality of care) or by target population differences, unique features of the sites or a combination of the two. Applying process evaluation methods during implementation and during outcome analysis will inform stakeholders about the role of the site, target populations, and treatment service similarities and differences thereby controlling for site variability during the outcome analysis.

**Target Group Variability.** Many substance abuse treatment services require a hierarchy of treatment service interventions that simultaneously target several overlapping groups including individuals and their families. Some individuals may receive several treatment components while others receive only one. Process evaluation methods will assist in identifying client groups and the types and intensity of services received, across the groups receiving services as well as across the multiple sites.

**Staggered Implementation Schedules.** Many of the study sites will have different starting points and different implementation timetables for establishing their treatment services. This varied implementation schedule has two evaluation implications:

- Assessing the impact of the intervention on different populations within different communities will have to be done over time looking for changes or deviations in trends
- Assessing the impact of the intervention on these trends across sites must take into account differences in implementation schedules.

Given the varied implementation schedules, sites will achieve different results in treatment goals (e.g., reduced substance use) within the same time periods. The process evaluation will determine the baseline level of implementation of the treatment services and assess the effects of varying levels of service implementation over time on the outcome measures.

**Interventions that Vary in Degree of Specification.** In a traditional multi-site evaluation, well-specified interventions are reproduced with fidelity in each site. In some knowledge-generating studies, an implementation process involves an intervention that is adapted to fit the needs and environment within each site or evolves based on lessons learned from previous evaluations. Therefore, it is fully possible that some evaluation studies will include a mix of well-specified and evolving treatment approaches. Process evaluation designs are a critical component of an integrated multi-site evaluation and allow for measuring the degree to which an intervention has been strictly implemented and interventions which are evolving. Process evaluation questions can assist in accommodating these differences. The measurement techniques must be sufficiently sensitive to fully describe differing levels of treatment specification and evolution, yet general enough to make comparisons across sites.

**Multiple, Interrelated Interventions.** Knowledge-generating treatment services may be designed to provide a continuum of care that includes multiple interventions across numerous modalities (e.g., detoxification, residential treatment, out-patient treatment, continuing and aftercare). When multiple sites are included in the evaluation, the complexities created by interrelated interventions are magnified. Process evaluation methods ensure a comprehensive examination of the entire treatment experience, including the interactive and interrelated effects of its components.

**Multiple, Diverse Stakeholders.** Knowledge-generating substance abuse treatment services are implemented within diverse communities and treatment settings involving multiple funding sources and target populations. All of these groups represent different stakeholders for the single site and multi-site evaluations. Process evaluation methods are needed to take into

account all of these perspectives and to build credibility and confidence with all of the involved groups.

In summary, the benefits of process evaluation for multi-site evaluations of knowledge-generating substance abuse treatment services include:

- An ability to assess the degree to which the treatment service results can be generalized across communities
- An ability to assess the degree to which the substance abuse treatment results for some subgroups are independent of community characteristics
- An ability to determine the degree to which the substance abuse treatment service outcomes for some subgroups are dependent on community characteristics.

It is extremely important, therefore, to include process evaluation as part of a multi-site evaluation design.

### **3. CONCLUSION**

In conclusion, it should be recognized that program evaluation and evaluation research are methodologically complex, technically challenging subjects. Indeed, there is a large body of relevant literature on social research, research methods, evaluation research, social statistics, and cost-benefit analysis. There also is continuing debate in public, private, and academic sectors concerning evaluation methodologies and establishing cause-and-effect relationships in the social and management sciences.

The preceding pages attempt to demonstrate that process evaluation is both an art and a science. Determining what to assess and how is extremely challenging. Therefore, to assist the formation of a process evaluation plan and the implementation of this plan, the next chapter provides detailed guidance for planning and conducting single site and multi-site process evaluations.

Although the evaluation methods and materials presented in the next chapter are grounded in the literature and accepted evaluation principles, these methods and materials are, of necessity, both more simplistic and more pragmatic than the literature. The objective of this document is to provide a practical evaluation approach which will yield reliable data and useful information for decision-making and for knowledge development and application.

### III. PROCESS EVALUATION PLAN

The purpose of the knowledge-generating substance abuse treatment service evaluation is to determine the degree to which the treatment service goals were met, and the extent to which the treatment service activities served to improve substance abuse treatment service effectiveness. The evaluations should provide valid and reliable information on the cost, effectiveness, and impact of each treatment activity as well as a comparison of the relative merits of all innovations tested. The evaluation results should enable treatment managers to make sound decisions concerning future utilization of the substance abuse treatment services tested as well as support the dissemination of knowledge to the field.

The material in this chapter is intended to support the design and implementation of a knowledge-generating substance abuse treatment process evaluation. There are two important points to be made at the outset, however. First, the evaluation of a substance abuse treatment service must necessarily be tailored to the knowledge-generating goals; the specific methods used for evaluation must be related to the specific nature of the treatment services tested by the knowledge-generating activity. There is no standard evaluation methodology which can be used with all types of substance abuse treatment services in all types of environments. What is presented in this chapter is a set of guidelines and recommended approaches to evaluating treatment services, including specific tools, materials, and techniques **as examples** which may be applicable in some situations or with some treatment services. It is the evaluation team's responsibility to design the evaluation and to develop the instruments and techniques which will be used to gather and analyze evaluation data appropriate for each knowledge-generating activity.

Second, tailoring a process evaluation to a treatment service requires a specific plan. The evaluation plan determines the overall evaluation parameters including the design, the data collection plan, and the analysis plan. In short, the evaluation plan lays out how the evaluation will assess whether the expected results were achieved. The evaluation plan should include the process and the outcome evaluation designs and activities. The *Integrated Evaluation Methods (IEM) Package* technical assistance materials describe the process evaluation plans and the outcome evaluation plans in two documents, however. Therefore the reader should consult the companion IEM document—*A Guide to Selecting an Outcome Evaluation Design for Substance Abuse Treatment Evaluations*. The reader is cautioned that the overall evaluation plan must include a process evaluation that is fully integrated with the outcome evaluation.

This chapter presents a guide to designing and conducting process evaluations for knowledge-generating substance abuse treatment services and is organized, as follows:

- Evaluation plan and framework
- Evaluation data collection
- Evaluation data analysis.

A schematic diagram of the material included in this chapter is presented in Exhibit III-1. As shown, each evaluation activity should be conducted, in parallel, for the process and the outcome evaluation. As previously stated, however, the text in this chapter focuses on the process evaluation, only.

## **1. EVALUATION PLAN**

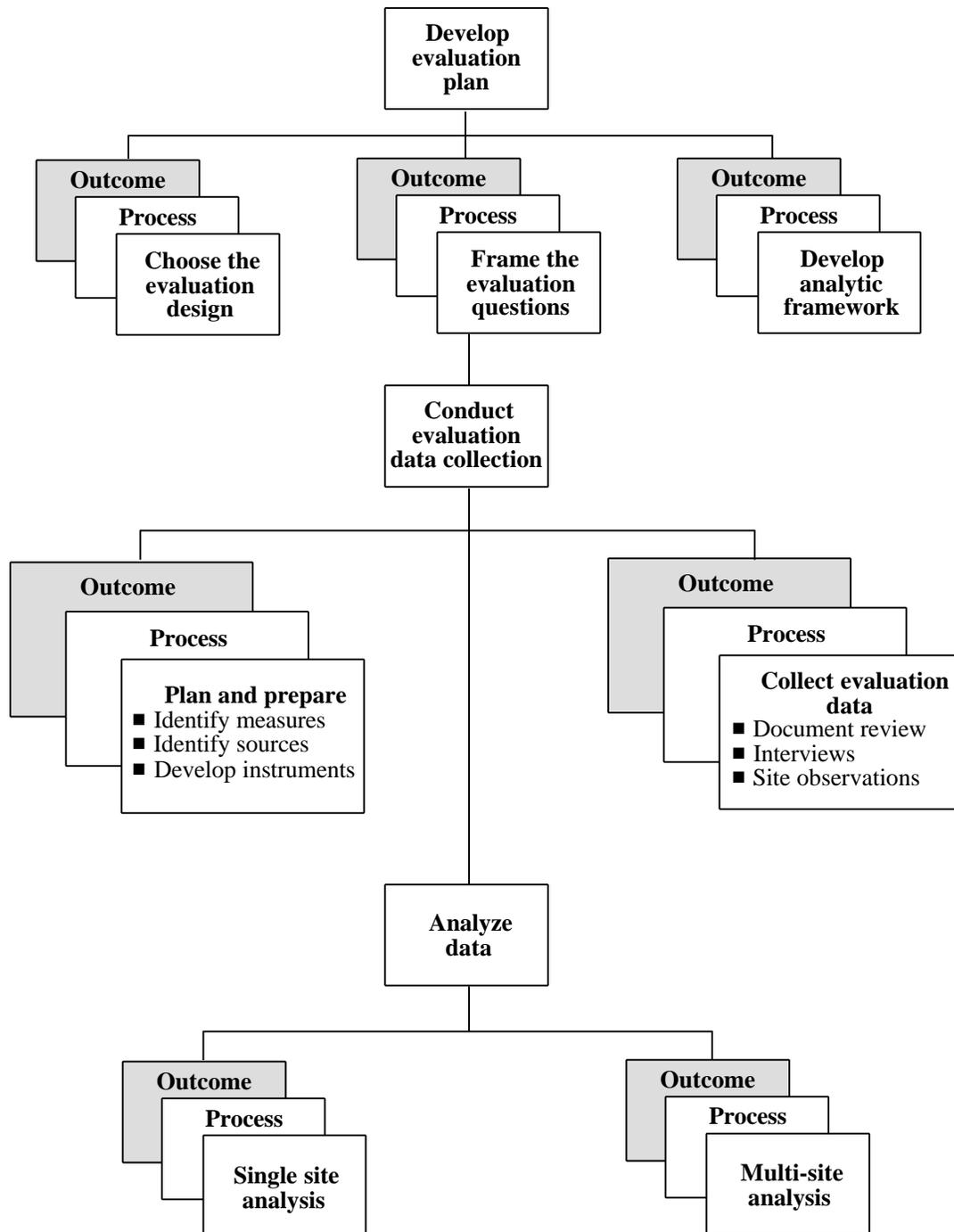
The first step in the evaluation process is the development of the evaluation plan. The purpose of the evaluation plan is to provide structure and guidance to the evaluation effort and to ensure that the results obtained from the evaluation are valid, reliable, credible, and useful to decision makers and the field. The evaluation plan also can be called a detailed evaluation design and essentially involves developing the process evaluation framework, identifying the key evaluation questions and evaluation measures, and developing an evaluation analytic framework.

Comprehensive process evaluation plans involve very elaborate evaluation designs which specify precisely all of the variables to be measured, how each variable will be measured, all of the data collection instruments to be used, specific data collection methods and procedures, and detailed analysis plans. At a minimum, components of the process evaluation plan should include the following:

- Overall evaluation design
- Key evaluation questions
- Analytic framework.

These are discussed in sub-sections which follow. Specific data requirements, data collection methods and instruments, and data analysis approaches are also part of the planning activity but are discussed in their respective sections later in this chapter.

**EXHIBIT III-1  
ROADMAP FOR KNOWLEDGE-GENERATING PROGRAM EVALUATION**



## 1.1 Overall Evaluation Design

The discussion of evaluation designs for outcome evaluations is highly technical and exacting and focuses on the application of scientifically-based experimental or quasi-experimental design components within the substance abuse treatment milieu. Given that the primary purpose of the process evaluation is to document, understand, and explain complex clinical, organizational, and environmental factors, the process evaluation design is of necessity more open and flexible. Even so, the measures to be extracted from the process evaluation for inclusion in the outcomes analysis need to be precise.

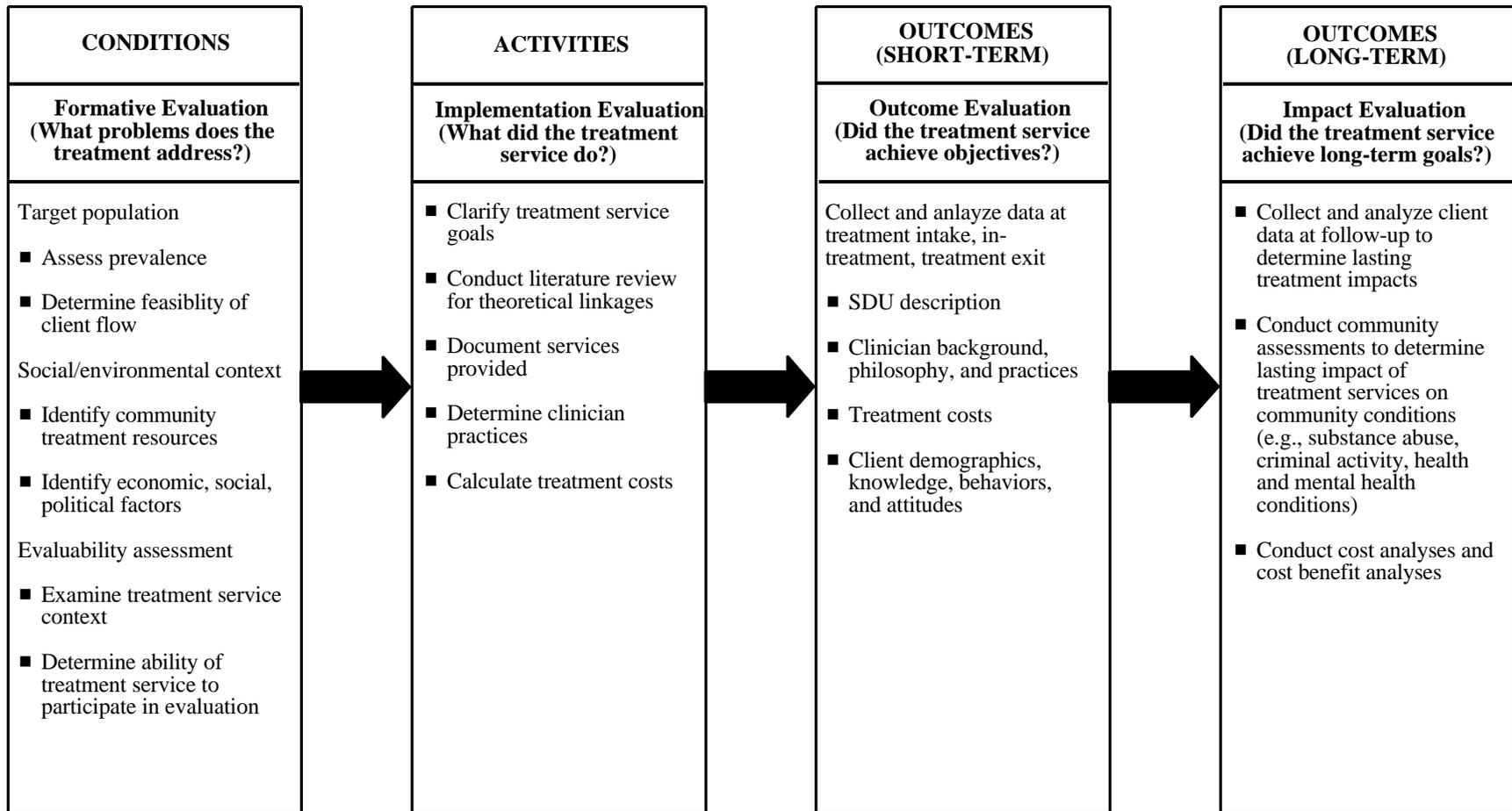
The process evaluation design for substance abuse treatment services should incorporate multiple strategies, however. First, formative process designs typically are inductive and make use of qualitative evaluation methods, interviews and observations, and collect data not immediately amenable to quantitative analysis. Second, implementation evaluation incorporates more rigorous designs to include deductive and quantitative elements. For knowledge-generating efforts, process evaluations treat the study activity as a natural experiment which test pre-specified hypotheses. The evaluator assembles an array of data to determine whether one set of hypotheses are better supported than any rival explanations of the outcomes (Yin, 1989).

The first step in developing the process evaluation design is to create logic models for the substance abuse treatment services, and if multiple sites are included in the evaluation, for the treatment services across study sites. Logic models are descriptive, graphic representations of how a treatment service is supposed to work. They include a succinct, logical series of statements that link the problem(s) that the treatment service is trying to address, how the treatment service will address the problem(s), and what the expected results will be (Kumpfer et al., 1993). The logic models developed at this phase of the evaluation design development process provide the hypothesized linkages that will be tested in order to determine if the knowledge-generating treatment service works as it is suppose to. (For a fuller discussion of logic models, see *Using Logic Models in Substance Abuse Treatment Evaluation*.)

An example of a logic model for the evaluation of a knowledge-generating substance abuse treatment service is presented in Exhibit III-2. As shown, the evaluation should be designed to determine:

- What problems does the treatment service address?
- What treatment services are provided?

## EXHIBIT III-2 SAMPLE LOGIC MODEL FOR EVALUATION OF KNOWLEDGE-GENERATING SUBSTANCE ABUSE TREATMENT SERVICES



- If new services or additional service components were added, were the services implemented as planned?
- Which of the treatment service objectives were achieved?
- Which of the treatment service long-term goals were achieved?

As indicated, the process evaluation design focuses on the context and organizational conditions of the substance abuse treatment service and the treatment service components. The outcome evaluation design focuses on the treatment service outcomes and impacts. As has been stressed throughout this document, however, the process and outcome evaluations continuously inform each other.

A multi-site evaluation logic model will assume this same structure and same type of measures. The multi-site evaluation will include a “roll-up” of the community, target populations, treatment services, and outcome and impact measures at the more general level as demonstrated in Exhibit III-3.

## 1.2 Key Evaluation Questions

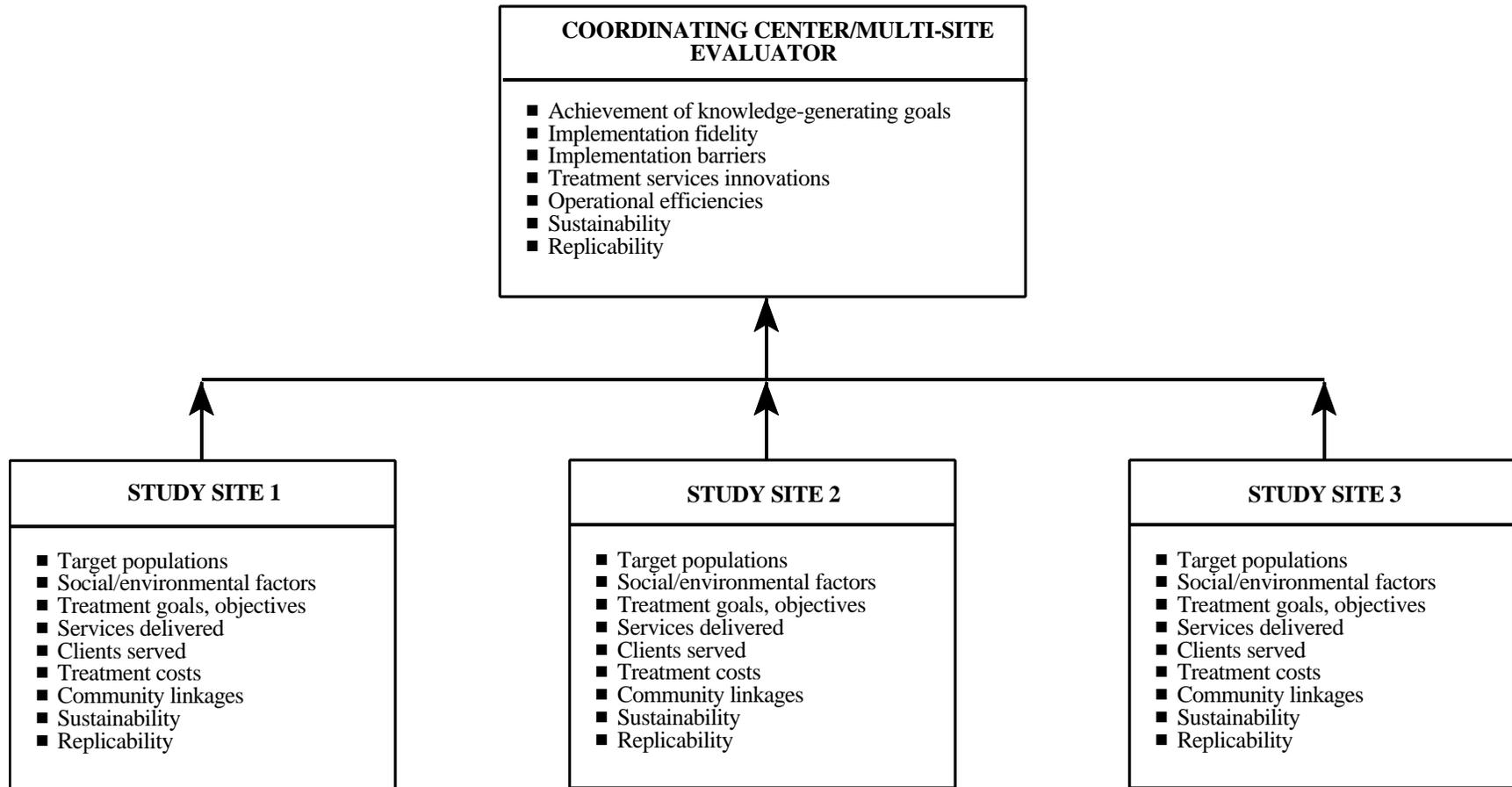
The key questions to be addressed by the process evaluation are the major building block in the development of the detailed evaluation design or evaluation plan. It is these questions which determine not only what evaluation data are to be collected but how the data are to be analyzed. As such, the key evaluation questions serve to direct the entire evaluation effort. The success of the process evaluation can itself be assessed by the extent to which the evaluation questions were sufficiently comprehensive as well as fully and thoroughly answered by the evaluation results.

There are two steps to ensuring that the process evaluation design includes a comprehensive list of appropriately targeted evaluation questions:

- Specification of evaluation objectives and corresponding evaluation questions that are directly related to the knowledge-generating goals
- Development of evaluation questions that mirror the knowledge-generating treatment service design and implementation.

Each approach is briefly described and illustrated, below.

### EXHIBIT III-3 LOGIC MODEL FOR MULTI-SITE ANALYSIS



## Step 1: Deriving Questions from Knowledge-Generating Goals

As previously stated, one of the primary purposes of substance abuse treatment service evaluations is to determine the degree to which the treatment service goals were met. Therefore, an evaluation approach based on the goal model, which defines program effectiveness as the extent to which the program attains its goals, is an appropriate evaluation strategy for substance abuse treatment service evaluations (Rossi & Freeman, 1993; Chen, 1990; Pietrzak et al., 1990).

Goals for knowledge-generating activities are initially specified by the funding agency. For example, the SAMHSA FY 1997 Guide for Applicants (GFA) *Cooperative Agreements for a Multi-site Study of the Effectiveness of Treatment for Cannabis (Marijuana) Dependent Youth (Short Title: Cannabis Youth Treatments)* specifies two goals:

- Test the relative effectiveness and cost effectiveness of a variety of interventions targeted at reducing/eliminating marijuana abuse and dependency in adolescents
- Provide validated models of these interventions to the treatment field.

The *Cannabis Youth Treatments* GFA further specifies discrete study questions:

- Are there existing interventions for cannabis abusing adolescents that produce good outcomes both during treatment and for significant periods of time post-treatment?
- Are there differential levels of effectiveness (in terms of post-treatment outcomes) among the models of intervention?
- Are successful interventions, (in terms of decreased drug use) associated with better cognition/academic performance or social functioning?
- What are the costs and cost-effectiveness associated with treatments and outcomes?
- Is there a relationship between types and costs of treatment services and outcomes?

The GFA's goals and study questions form the foundation of the evaluation design by providing logical relationships between the statements of the GFA goals, study questions, and the evaluation objectives.

This process is graphically illustrated in Exhibit III-4. This example demonstrates the relationship between the first GFA goal and three of the GFA study questions. The example

### EXHIBIT III-4 SAMPLE EVALUATION OBJECTIVES BASED ON GFA GOALS

**GFA: Cooperative Agreements for a Multi-site Study of the Effectiveness of Treatment for Cannabis (Marijuana) Dependent Youth**

GFA GOAL	GFA STUDY QUESTIONS	EVALUATION OBJECTIVES
<p>1. To test the relative effectiveness and cost effectiveness of the variety of interventions targeted at reducing/eliminating marijuana abuse and dependency among adolescents</p>	<p>1.1 Are there existing interventions for cannabis abusing adolescents that produce good outcomes both during treatment and for significant periods of time post treatment?</p>	<ul style="list-style-type: none"> <li>■ Identify theoretical relationships among adolescent marijuana dependency and effective treatment</li> <li>■ Identify existing treatment services being used to treat adolescents who are marijuana dependent</li> <li>■ Identify existing interventions that could serve as models for CSAT program</li> <li>■ Document existing intervention models' implementation</li> <li>■ Measure outcomes both during treatment and post-treatment</li> </ul>
	<p>1.2 Are there differential levels of effectiveness (in terms of post-treatment outcomes) among intervention models? If so, for which sub-populations do the interventions appear to be most effective? Do adolescent girls respond differently to specific models than boys?</p>	<ul style="list-style-type: none"> <li>■ Document components of intervention models</li> <li>■ Identify sub-populations of adolescents</li> <li>■ Assess impact of specific models on sub-populations</li> <li>■ Compare levels of effectiveness for sub-populations</li> <li>■ Measure intervention outcomes for girls versus boys</li> </ul>
	<p>1.3 Is there a relationship between types and costs of treatment services and outcomes?</p>	<ul style="list-style-type: none"> <li>■ Document types of treatment services and specific components (units)</li> <li>■ Calculate unit costs of treatment services</li> <li>■ Assess relationship between treatment costs and outcomes (cost benefit)</li> <li>■ Determine replicability of cost beneficial intervention models</li> </ul>

further demonstrates the development of specific evaluation objectives that are designed to ensure the responsiveness of the evaluation to the knowledge-generating framework and ensure that the evaluation will provide the information required by the study questions. The specification of evaluation objectives should be done in consultation with relevant stakeholders to continually ensure that the evaluation design is on the right track.

Once the stakeholders have agreed to the evaluation objective statements, the next step is to generate evaluation questions which should be concrete and directly linked to the knowledge-generating activity (Rossi, Freeman, & Lipsey, 1999). Sample evaluation objectives for the *Cannabis Youth Treatments* GFA that could be addressed by the process evaluation are presented in Exhibit III-5 along with corresponding sample process evaluation questions.

The reader is cautioned that the sample process evaluation objectives and questions are examples based on information contained in the GFA. The initial evaluation plan for the *Cannabis Youth Treatments* Program would be appropriately developed at this level of specificity. As the program is implemented, the evaluation objectives and evaluation questions will need to be adjusted to ensure that the objectives and questions are reality-based, reflecting any adjustments that were necessary during the time period between developing the GFA and awarding the grants or cooperative agreements, and between grant award and implementations.

## **Step 2: Deriving Questions to Describe Treatment Design and Implementation**

A second step to specifying the evaluation questions is to identify basic questions about the knowledge-generating treatment service design and implementation and then amplify the basic questions with increasingly detailed questions. This approach facilitates the identification of evaluation methods needed for each area of inquiry. A sample of six basic evaluation questions that illustrate this approach include:

- What was the design for the knowledge-generating substance abuse treatment service?
- How was the knowledge-generating substance abuse treatment service implemented and what were the results of the implementation?
- Who did the knowledge-generating substance abuse treatment service serve?
- What were the knowledge-generating substance abuse treatment service resource requirements and costs?

### EXHIBIT III-5 SAMPLE PROCESS EVALUATION QUESTIONS BASED ON EVALUATION OBJECTIVES

**GFA: Cooperative Agreements for a Multi-site Study of the Effectiveness of Treatment for Cannabis (Marijuana) Dependent Youth**

SAMPLE EVALUATION OBJECTIVES	SAMPLE PROCESS EVALUATION QUESTIONS
<ul style="list-style-type: none"> <li>■ Identify theoretical relationships among adolescent marijuana dependency and effective treatment</li> </ul>	<ul style="list-style-type: none"> <li>■ What underlying theory supports the treatment design for the target population?</li> <li>■ How are the treatment services related to the treatment service goals and objectives?</li> <li>■ How are the treatment service activities expected to produce the anticipated outcomes?</li> <li>■ What evidence of previous success or lack of success is available?</li> </ul>
<ul style="list-style-type: none"> <li>■ Identify existing treatment services being used to treat adolescents who are marijuana dependent</li> </ul>	<ul style="list-style-type: none"> <li>■ What treatment services are currently available for adolescents?</li> <li>■ What substance abuse problems are the treatment services designed to address?</li> <li>■ In what ways were the treatment services designed to specifically serve marijuana dependent adolescents?</li> <li>■ What are the characteristics of the adolescents, treatment services, outcomes?</li> </ul>
<ul style="list-style-type: none"> <li>■ Identify existing interventions that could serve as models for CSAT program</li> </ul>	<ul style="list-style-type: none"> <li>■ Among the treatment services identified, what are the characteristics of the treatment populations, treatment service organization/management/staffing, treatment service activities, lengths of stay, outcomes?</li> <li>■ Which of these treatment service models appear to have the most successful outcomes?</li> <li>■ Which of these treatment service models are potentially applicable to the CSAT program?</li> </ul>
<ul style="list-style-type: none"> <li>■ Document existing intervention models' implementation</li> </ul>	<ul style="list-style-type: none"> <li>■ When was the intervention model created? How long has it been operating?</li> <li>■ What was the implementation process?</li> <li>■ To what extent were the intervention models implemented in accordance with the treatment service design?</li> <li>■ What factors contributed to/impeded successful implementation?</li> </ul>

- What were the knowledge-generating substance abuse treatment service outcomes?
- What is the relationship between the knowledge-generating treatment service costs and outcomes?

The sample study questions are presented in Exhibit III-6. Sample secondary evaluation questions are presented for each of the basic questions together with an indicator of the primary evaluation method that would be employed for each area of inquiry.

In summary, process evaluation questions are designed to determine whether the substance abuse treatment service was fully implemented and, if so, whether it functioned or performed in the manner intended. The purpose of these questions is to establish a foundation or a backdrop against which the evaluation of other areas can be examined. If the substance abuse treatment service was not properly implemented, or simply did not work despite best efforts, the evaluation of outcomes, effectiveness, or impacts may be misleading. In fact, the other evaluation data (e.g., outcome, effectiveness) must be interpreted in light of the evaluation findings from the process evaluation. In addition, process data are essential for the development of recommendations concerning future sustainability of the substance abuse treatment service and its replicability to other communities and/or other target populations (Fitzpatrick, 1992).

A more detailed discussion of how to collect and analyze data based on the evaluation questions is provided in subsequent sections of this chapter. What is important at this stage in developing the evaluation plan is that the evaluation team identify at the outset what the key evaluation questions are for the process evaluation. These process-specific questions should reflect the sample lists provided, but should represent an additional level of detail based on the specific substance abuse treatment service being tested and/or evaluated. These questions will then provide the foundation for the development of the analytic framework to be used in the evaluation study.

### **1.3 Analytic Framework**

A third element of an evaluation plan is developing the framework for analysis. The analytic framework represents an initial draft (“first cut”) of the overall structure of the evaluation and how various components of the evaluation are interrelated. The analytic framework serves as a general roadmap for the evaluation and is further refined in the development of the data collection instruments and in the actual analysis of the data collected.

**EXHIBIT III-6**  
**SUBSTANCE ABUSE TREATMENT SERVICE EVALUATION QUESTIONS**

PRIMARY AND SECONDARY EVALUATION QUESTIONS	METHODS
<p><b>Q 1. What is the design for the knowledge-generating substance abuse treatment service?</b></p> <p>1.1 What is the context for the substance abuse treatment service?                      1.2 What were the origins of the treatment service?                      1.3 What is the treatment service rationale, goals, and objectives?                      1.4 What was the treatment service development process?</p>	<p>Process evaluation (formative)</p>
<p><b>Q 2. How was the knowledge-generating substance abuse treatment service implemented? How does the treatment service relate to the original design?</b></p> <p>2.1 What was the implementation process?                      2.2 How do clients gain access to the treatment service? What is the client flow?                      2.3 What are the linkages with the community and other agencies?                      2.4 What is the treatment service organization, staffing, and management?                      2.5 What are the substance abuse treatment service components?</p>	<p>Process evaluation (implementation)</p>
<p><b>Q3. Who did the knowledge-generating substance abuse treatment service serve?</b></p> <p>3.1 What are the characteristics of the target population?                      3.2 What are the characteristics of the treatment service clients?                      3.3 How do the treatment client characteristics compare with the target population?</p>	<p>Process evaluation (implementation)</p>
<p><b>Q4. What were the resource requirements and costs of the knowledge-generating substance abuse treatment service?</b></p> <p>4.1 What are the total operating costs for the facility? Major funding sources?                      4.2 What is the average SDU cost per client?                      4.3 What is the cost of service per treatment component per client?                      4.4 Is the budget sufficient to operate the treatment service, as designed?</p>	<p>Cost analysis</p>
<p><b>Q5. What were the knowledge-generating substance abuse treatment service outcomes?</b></p> <p>5.1 What are the retention and completion rates?                      5.2 What were the outcomes related to alcohol and drug use, social and family relationships, education and employment, health and mental health, criminal justice involvement, and other levels of functioning?</p>	<p>Outcome evaluation</p>
<p><b>Q6. What is the relationship between the costs and the outcomes of the knowledge-generating substance abuse treatment service?</b></p> <p>6.1 What are the monetary values of the treatment service outcomes?                      6.2 What is the relationship between the costs and the outcomes?                      6.3 Are there non-monetary costs and/or benefits which should be considered?                      6.4 What are the cost offsets of the outcomes from the substance abuse treatment services?                      6.5 What is the benefit-cost ratio of the substance abuse treatment service?</p>	<p>Cost effectiveness analysis</p>

A hypothetical analytic framework for a knowledge-generating substance abuse treatment service is graphically portrayed in Exhibit III-7. This example assumes several study characteristics. The first characteristic is that the substance abuse treatment service will be provided by study sites. The treatment service was designed based on an assessment of the social and environmental conditions, the target population needs, and the available resources. The treatment service was designed to provide outreach, community coordination, treatment planning/case management, and intake/assessment and treatment services.

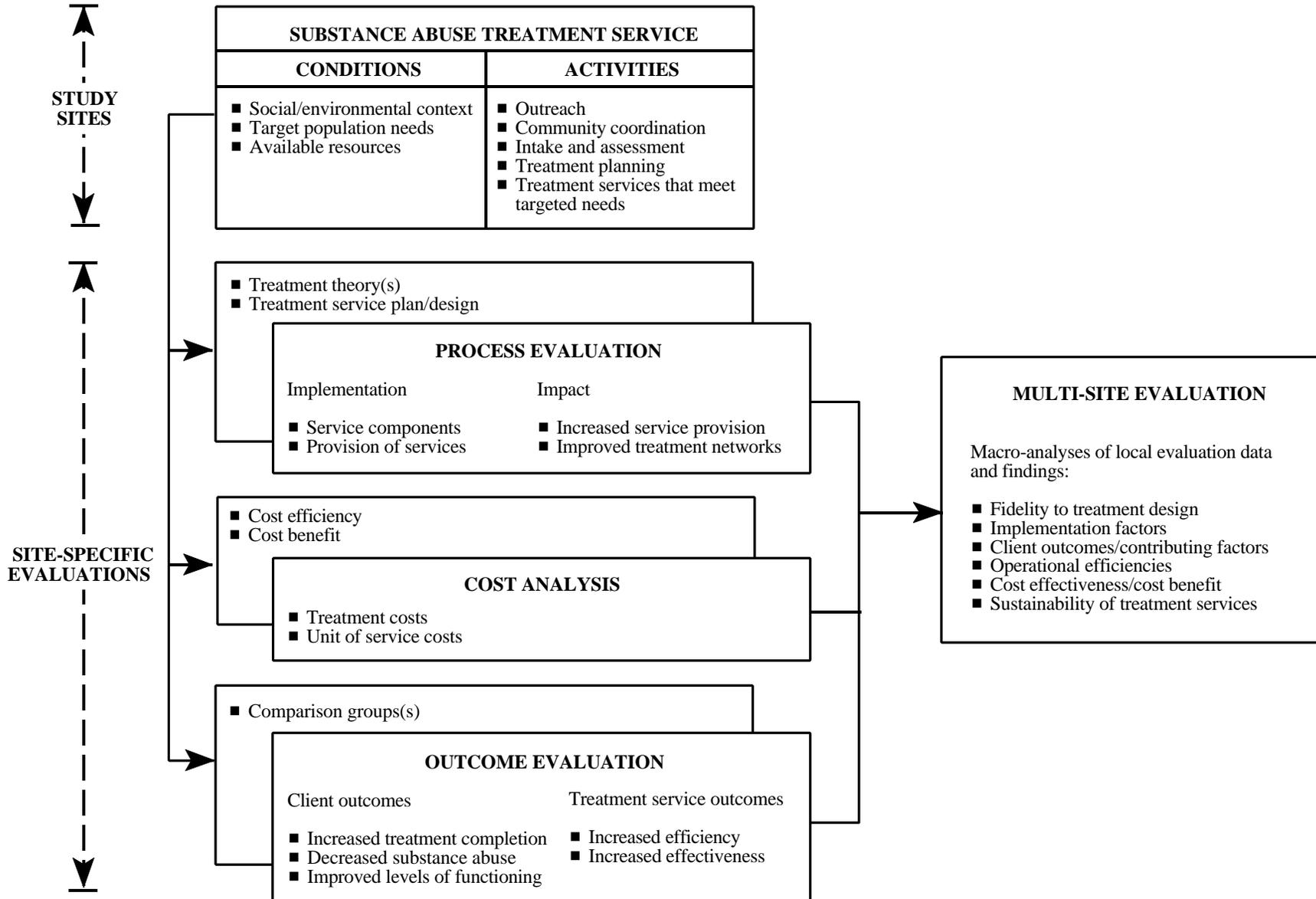
A second study characteristic is that each study site conducts a site-specific process evaluation. The process evaluation assesses the treatment service implementation by collecting information on the types of treatment services, and the provision of treatment services including clinician characteristics. The implementation assessment compares the treatment service as designed with the treatment service as implemented to determine design fidelity and to identify factors that supported and/or impeded successful implementation. The local process evaluation also assesses the impact of the specific treatment service on the provision of substance abuse treatment services within the broader community and/or for specific populations.

The site-specific evaluation also includes a treatment service cost analysis. The collection and analysis of treatment service costs is typically part of a process evaluation. CSAT has developed a comprehensive methodology for cost data collection and analysis and a complete package of materials is being prepared for local substance abuse treatment service use (Capital Consulting Corporation, 1999).

A third study characteristic is that each study site conducts an outcome evaluation that will be based on an experimental or quasi-experimental design and include comparison or control groups. The outcome evaluation will assess client outcomes (such as reduced substance use and improved levels of functioning) and treatment service outcomes such as operational efficiency.

Finally, the analytic framework includes a multi-site evaluation. The multi-site evaluation would accumulate the study site evaluation data and findings and determine treatment service fidelity, factors that supported and/or impeded implementation, client outcomes and contributing factors, operational efficiencies, and cost effectiveness/cost benefits across study sites, and the potential sustainability of the substance abuse treatment services at the community level.

### EXHIBIT III-7 SAMPLE ANALYTIC FRAMEWORK FOR KNOWLEDGE-GENERATING EVALUATIONS



## 2. EVALUATION DATA COLLECTION

The data collection process and procedures for the process evaluation are strictly governed by the key evaluation questions which were developed as part of the evaluation design. The primary objective of the process data collection effort is to collect valid, reliable data in comparable units or formats which, when analyzed, will answer the key evaluation questions. The three basic concepts of validity, reliability, and comparability are critical to the quality and credibility of the process evaluation findings. These concepts are defined as follows:

- **Validity** refers to the degree to which a measuring instrument detects true or actual differences among individuals or events rather than random errors; a measuring instrument is said to be valid when it actually measures what it intends to measure
- **Reliability** refers to the degree to which a data collection instrument will secure consistent results when used repeatedly and by different individuals; a measuring instrument is said to be reliable if it produces the same results when applied to the same situation by different individuals
- **Comparability** refers to the degree to which an instrument collects the same or similar data elements which can be later aggregated, combined, and compared as needed for the analysis (Suchman, 1967).

The evaluation team should be continually conscious of the requirements for data validity, reliability, and comparability throughout the data collection effort, from the careful structuring of the data collection instruments to the consistency of their utilization to the critical assessment of the quality of data being obtained.

The data collection effort is described below in terms of the following activities:

- Preparation and planning
- Local and multi-site data collection.

Relevant documents included in the IEM package are referenced, where appropriate.

### 2.1 Preparation and Planning

Preparation and planning for process evaluation data collection involves the identification of measures, variables, and data sources; the development of data collection instruments; and

detailed data collection plans and procedures. These activities are based on the key evaluation questions and the analytic framework discussed in the preceding section. There is, in fact, considerable overlap between the development of the process evaluation plan and preparation and planning for process data collection.

Data collection planning should occur with the development of treatment service recording and reporting forms and other evaluation forms to be used during implementation of the substance abuse treatment service. Some level of data collection planning also is required simply to develop the analytic framework. In very rigorous evaluation research, detailed data collection plans and instruments are developed in advance of implementation. Most grant-supported evaluations however are not authorized until after the grants and cooperative agreements are awarded and data collection instruments are developed after the fact. To address the lag time created by the grant cycle for evaluation planning and implementation, CSAT created the IEM package to provide guidance to GFA applicants. The IEM includes detailed specification of evaluation variables and corresponding data collection instruments. These documents are referenced in the following sections on identifying requisite data and data sources and developing data collection instruments and methods.

### **Identify Data Needed**

For each key process evaluation question, the evaluation team must identify all of the data needed to address that question, the specific sources for each data element, and the method to be used to collect each element. A planning matrix supports this process and a sample matrix is shown in Exhibit III-8. The sample matrix presented lists only a few potential evaluation questions within each major area of inquiry. The information in Exhibit III-8 demonstrates how each question involves several measures and how data for each measure may be drawn from more than one data source using more than one data collection method for each specific evaluation measure and source.

The next step is to operationalize each of the evaluation measures by determining the specific data elements and data definitions needed. A companion document entitled *Minimum Evaluation Data Set (MEDS)* provides the variables, response categories, and data definitions for each of the measures listed in Exhibit III-8. Recognizing the vital importance of standardizing the evaluation data collected within and across knowledge-generating efforts, the MEDS variables provide a foundation for evaluation and other knowledge-generating activities, whether Federal, state, or local.

### EXHIBIT III-8

## PROCESS EVALUATION QUESTIONS, MEASURES, DATA SOURCES, DATA COLLECTION METHODS

PROCESS EVALUATION QUESTIONS	EVALUATION MEASURES/VARIABLES	PRIMARY DATA SOURCE	COLLECTION METHOD
<b>Q1. What is the design for the knowledge-generating substance abuse treatment service?</b>			
What is the context for the substance abuse treatment service?	<ul style="list-style-type: none"> <li>■ Funding sources</li> <li>■ Service delivery area</li> <li>■ Community economic characteristics</li> <li>■ Specific substance abuse problems</li> <li>■ Other related services in the area</li> </ul>	<ul style="list-style-type: none"> <li>■ Project director</li> <li>■ Community reps</li> <li>■ Needs assessment</li> </ul>	<ul style="list-style-type: none"> <li>■ Document review</li> <li>■ Interviews</li> <li>■ Literature review</li> <li>■ Needs assessment</li> </ul>
What were the origins of the treatment service?	<ul style="list-style-type: none"> <li>■ Description of previous, similar treatment services</li> <li>■ Evidence of previous service success</li> <li>■ Similarities, differences to previous service</li> <li>■ Needs assessment results</li> </ul>	<ul style="list-style-type: none"> <li>■ Project director</li> <li>■ Evaluation reports</li> </ul>	<ul style="list-style-type: none"> <li>■ Document review</li> <li>■ Interviews</li> <li>■ Literature review</li> <li>■ Needs assessment</li> </ul>
What is the treatment service rationale, goals, and objectives?	<ul style="list-style-type: none"> <li>■ Program/treatment theory</li> <li>■ Treatment service goals and objectives</li> <li>■ Target population characteristics</li> <li>■ Special needs of target populations</li> </ul>	<ul style="list-style-type: none"> <li>■ Treatment literature</li> <li>■ Project director</li> <li>■ Needs assessment</li> </ul>	<ul style="list-style-type: none"> <li>■ Document review</li> <li>■ Interviews</li> <li>■ Literature review</li> <li>■ Needs assessment</li> </ul>
What was the treatment service development process?	<ul style="list-style-type: none"> <li>■ Activities and staff involved in development process</li> <li>■ Treatment service design logic model</li> <li>■ Problems experienced and resolution</li> <li>■ Key decisions</li> </ul>	<ul style="list-style-type: none"> <li>■ Project director</li> <li>■ Other staff</li> </ul>	<ul style="list-style-type: none"> <li>■ Document review</li> <li>■ Interviews</li> </ul>
<b>Q2. How was the knowledge-generating substance abuse treatment service implemented? How does the treatment service relate to the original design?</b>			
What was the implementation process?	<ul style="list-style-type: none"> <li>■ Length of time treatment service in operation</li> <li>■ Implementation process</li> <li>■ Changes to treatment service design</li> <li>■ Factors that facilitated effective implementation</li> <li>■ Factors that impeded effective implementation</li> </ul>	<ul style="list-style-type: none"> <li>■ Project director</li> <li>■ Other staff</li> </ul>	<ul style="list-style-type: none"> <li>■ Document review</li> <li>■ Interviews</li> </ul>
How do clients gain access to the treatment service?	<ul style="list-style-type: none"> <li>■ Process that facilitates client access</li> <li>■ Description of Centralized Intake Unit (if applicable)</li> <li>■ Match between treatment slots and client needs</li> <li>■ Waiting lists--length of time</li> </ul>	<ul style="list-style-type: none"> <li>■ Project director</li> <li>■ Other staff</li> <li>■ Treatment records</li> </ul>	<ul style="list-style-type: none"> <li>■ Interviews</li> <li>■ Case file review</li> </ul>
What are the linkages with the community and other agencies?	<ul style="list-style-type: none"> <li>■ Relationships with other agencies</li> <li>■ Impact on treatment services of other agency relationships</li> <li>■ Client referrals and referral sources</li> </ul>	<ul style="list-style-type: none"> <li>■ Project director</li> <li>■ Other staff</li> <li>■ Community reps</li> </ul>	<ul style="list-style-type: none"> <li>■ Interviews</li> <li>■ Document review</li> </ul>

**EXHIBIT III-8 (CONTINUED)**

**PROCESS EVALUATION QUESTIONS, MEASURES, DATA SOURCES, DATA COLLECTION METHODS**

<b>PROCESS EVALUATION QUESTIONS</b>	<b>EVALUATION MEASURES/VARIABLES</b>	<b>PRIMARY DATA SOURCE</b>	<b>COLLECTION METHOD</b>
What is the treatment service organization, staffing, and management?	<ul style="list-style-type: none"> <li>■ Organizational structure</li> <li>■ Steering committee characteristics</li> <li>■ Treatment staff characteristics</li> <li>■ Staff development efforts</li> <li>■ Staff recruitment, turnover, vacancy rates</li> <li>■ Efforts to improve staff retention</li> <li>■ Staff morale</li> <li>■ Information flow within and outside the organization</li> <li>■ Management Information System</li> <li>■ Nature of information collected and uses</li> <li>■ Maintenance of wait lists</li> <li>■ Treatment quality assurance procedures</li> </ul>	<ul style="list-style-type: none"> <li>■ Implementation plan</li> <li>■ Project director</li> <li>■ Other staff</li> <li>■ QSRs</li> <li>■ Client records</li> </ul>	<ul style="list-style-type: none"> <li>■ Interviews</li> <li>■ Document review</li> </ul>
What are the treatment service components?	<ul style="list-style-type: none"> <li>■ Treatment service components</li> <li>■ Number of clients receiving specific treatment components</li> <li>■ Number and type of under-utilized services</li> <li>■ Number and type of over-utilized services</li> <li>■ Relationship of treatment services to goals and objectives</li> <li>■ Treatment services for children; collaterals</li> <li>■ Characteristics of treatment service components</li> <li>■ Process for treatment planning and exit</li> <li>■ Number and type of ancillary services</li> <li>■ Planned length of stay; actual length of stay</li> </ul>	<ul style="list-style-type: none"> <li>■ Implementation plan</li> <li>■ Project director</li> <li>■ Other staff</li> <li>■ Client records</li> </ul>	<ul style="list-style-type: none"> <li>■ Interviews</li> <li>■ Document review</li> </ul>
<b>Q3. Who did the knowledge-generating substance abuse treatment service serve?</b>			
What are the characteristics of the target population?	<ul style="list-style-type: none"> <li>■ Target population characteristics</li> <li>■ Characteristics of people seeking treatment</li> </ul>	<ul style="list-style-type: none"> <li>■ Referral forms</li> <li>■ Client records</li> </ul>	<ul style="list-style-type: none"> <li>■ Document review</li> <li>■ Record abstraction</li> </ul>
What are the characteristics of the treatment service clients?	<ul style="list-style-type: none"> <li>■ Client characteristics</li> <li>■ Numbers who enter, leave, complete treatment</li> </ul>	<ul style="list-style-type: none"> <li>■ Referral forms</li> <li>■ Client records</li> </ul>	<ul style="list-style-type: none"> <li>■ Document review</li> <li>■ Record abstraction</li> </ul>
How do the treatment service client characteristics compare with the target population?	<ul style="list-style-type: none"> <li>■ Comparison of target and treatment populations</li> </ul>	<ul style="list-style-type: none"> <li>■ Referral forms</li> <li>■ Client records</li> </ul>	<ul style="list-style-type: none"> <li>■ Document review</li> <li>■ Record abstraction</li> </ul>

There are six main types of measures and data variables central to all knowledge-generating evaluation activities: (1) systems level measures; (2) treatment service and service delivery unit measures; (3) cost measures; (4) clinician measures; (5) client measures; and (6) comparison/control group measures. Each of these types of measures is described below.

**System level measures** capture information on the substance abuse treatment service environment, community, and the treatment “system” within which the substance abuse treatment service operates. This information is critical to the process evaluation. Examples of system level measures include the community population and prevalence of substance abuse among this group; the social and environmental context for the treatment service including the employment, educational, justice and other related conditions; and the availability of treatment services and other related services, generally (Yin, 1993).

**A service delivery unit (SDU)** is defined as a single treatment site offering a single treatment modality. **SDU measures** include information about the specific substance abuse treatment service and also are critical to the process evaluation. SDU measures include treatment service design, philosophy, setting, implementation experiences, target population, clients served, components of treatment services, assessments, case management, treatment approaches, referrals, and continuing care (NORC, 1997).

**Clinician measures** are critical to understanding treatment effectiveness since the clinical staff serve as the connection between the treatment services structure and the client’s treatment services experience (Lettieri, 1992). Clinician measures are collected as part of the process evaluation data collection effort and include descriptive information about the clinical staff as well as the treatment philosophy and practices employed.

**Cost measures** capture SDU-specific information on budgets and expenditures and translate expenditures into unit cost of specific treatment service information. These measures are essential to supporting knowledge-generating evaluation strategies to determining the efficiency of substance abuse treatment services (Harwood et al., 1998). Cost measures are typically collected and analyzed as part of a process evaluation.

**Client and control or comparison group level measures** provide detailed evidence about the treatment service effects, outcomes, and impacts. Client level measures include data on demographics and historical behavior; data on services actually received and length of stay; and data to support treatment outcome measures. Client and control group measures also include

all treatment experiences including actual “dosages,” treatment exit, reasons for treatment termination, and experiences with other social and support services (Orwin, 1998). A full complement of data are needed for the comparison/control groups, including SDU, clinician, and cost, to fully understand differences in outcomes. Client and control group data primarily are used for the outcome evaluation.

The MEDS provides detailed lists of variables for the SDU, clinician, cost, and client measures. Systems level measures, those measures that are required by the process evaluation to assess social and political context and community conditions, are specific to individual systems and/or communities that contain the substance abuse treatment service, and must be fully tailored by individual evaluation teams.

### **Identify Data Sources**

There are basically six main sources or types of sources from whom process evaluation data are collected, including:

- Funding agency staff including managers and project officers for background information on the knowledge-generating activity’s development and current information on program implementation
- Funding agency documents, particularly GFAs, Requests for Proposals (RFPs), quarterly management reports, and other related documents for community, project development, and implementation data
- Substance abuse treatment service staff including treatment service directors, clinicians, and administrators for information about the community, treatment service design and implementation, SDU description, and clinician background and practice data
- Substance abuse treatment service reports and records; these sources have two separate purposes:
  - Reports, forms, and records containing financial information
  - Reports, forms, and case records containing treatment service information
- Substance abuse treatment service clients and comparison/control group members for all self-report client conditions at intake and treatment service experiences and client conditions during treatment, at treatment exit, and at follow-up

- Other information sources such as community and/or client descriptors contained in education, employment, and criminal activity reports and databases.

Most of these identified information sources are potential resources for both objective, quantitative data and qualitative or perception-based data. For the process evaluation, quantitative and qualitative data are equally important and have equivalent value but for different purposes. While the quantitative, objective data are essential to determining **what is**, the qualitative, perception-based data provide the foundation for understanding **why**, as in why a treatment service incorporated a specific design and why, when locally implemented, the treatment service deviated from the original design.

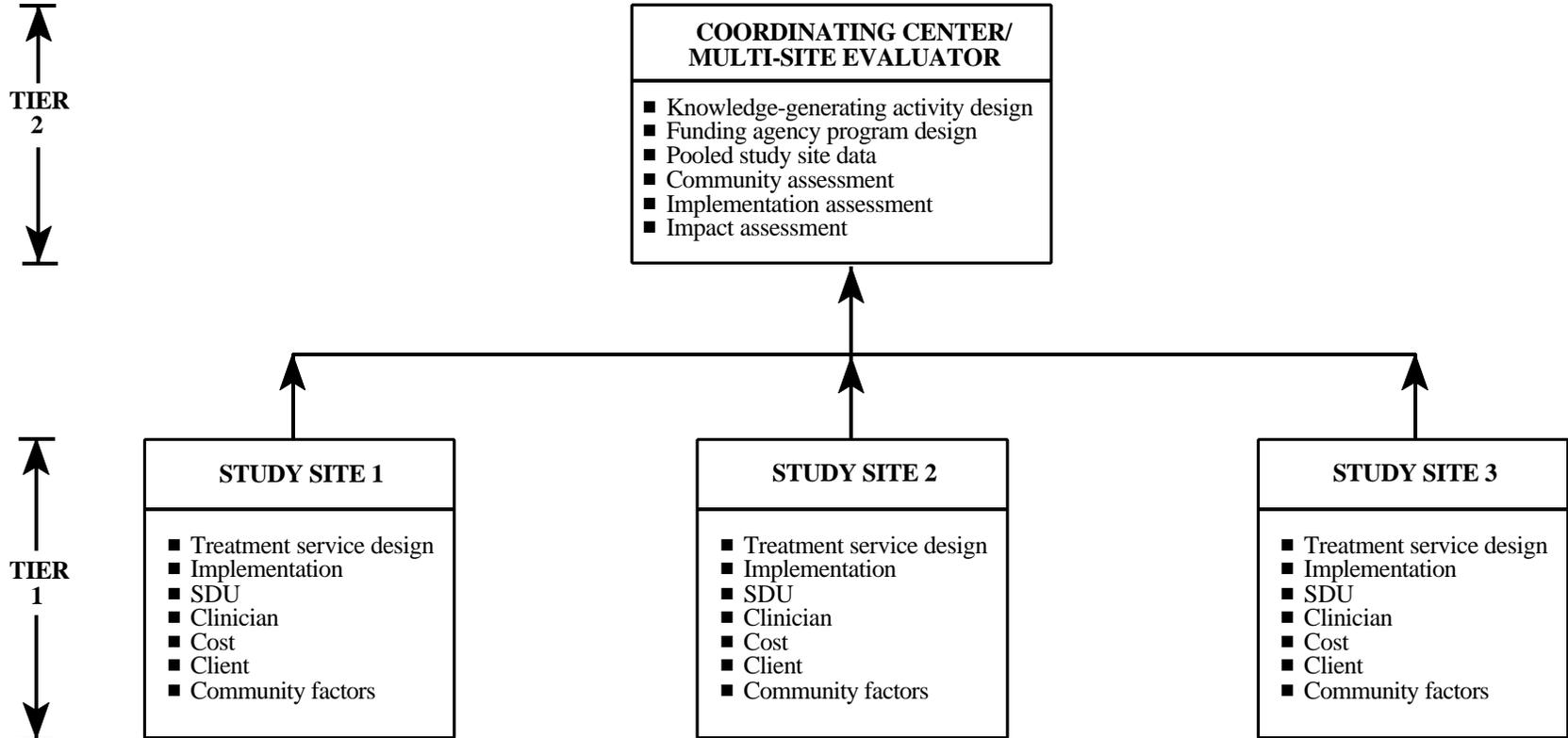
### **Develop Data Collection Instruments and Methods**

The type of data collection instruments to be used is determined by the source and the type of information to be collected as well as the data collection method. For most of the knowledge-generating activities, evaluation data are collected via a two tier process or model, as illustrated in Exhibit III-9.

Given that the process evaluation relies primarily on qualitative data, the most effective data collection method is for the evaluator to gain information through direct observation and inquiry using structured data collection protocols to ensure the data validity and reliability. Geographic location (physical distance) of the evaluator and the substance abuse treatment service provider may present challenges for on-site data collection, however, particularly for the coordinating center/multi-site evaluator. Hence, it is important for the treatment staff to be an integral part of the evaluation team. (See *Building Team Capability to Fully Implement and Utilize the Self-Adjusting Treatment Evaluation Model*.)

Therefore, the use of standardized data collection instruments for all of the service component measures (SDU), and the clinician, cost, and client measures and variables such as those included in the MEDS can be invaluable tools for single site and multi-site efforts. The MEDS data collection instruments were designed as survey instruments to be completed by the substance abuse treatment service staff with technical assistance provided locally and/or long-distance via the telephone. Each of these instruments is contained in the IEM document *Substance Abuse Treatment Services Evaluation Data Collection Instruments*, and is described briefly below.

### EXHIBIT III-9 DATA COLLECTION FRAMEWORK FOR KNOWLEDGE-GENERATING PROCESS EVALUATION



The **Service Delivery Unit Description Instrument** has been designed to:

- Describe SDU context and environment provided for client recovery and for staff work
- Classify and quantify the characteristic of treatment services and how they differ nationwide
- Analyze the relationship between SDU factors, client outcomes, costs, and therapeutic approaches.

The SDU instrument was designed to provide an identification of SDUs within treatment service organizations and data on the SDUs themselves. The identification process is intended to be completed by an organization director or overall project manager. The SDU information is intended to be provided by the SDU site directors or their designee. The collection of SDU information is designed as a two-step procedure for classifying, verifying, and describing SDUs:

- **Step 1—Service Delivery Unit Identification Form.** This screening form collects key information about the types of SDUs to which clients are referred.
- **Step 2—Service Delivery Unit Description.** This instrument collects information that describes and categorizes the service provided in a given SDU.

The **Clinician Background and Practice Survey Instrument** was designed to collect data to:

- Gain insight into clinician experiences and treatment approaches in substance abuse treatment SDUs
- Understand more about clinician backgrounds, their approach, and their work environment.

Ultimately, the goal of this effort is to equip evaluators, treatment provider managers, and decision makers with the necessary information to make recommendations for best practices and improvements in clinician factors, over time. The Clinician Background and Practice Survey Instrument was designed to be completed by substance abuse treatment service counselors, case managers, and other clinicians who are responsible for an active client caseload.

Included in the MEDS is a comprehensive set of financial variables, a cost data collection methodology, and a cost data analysis strategy. Treatment cost and financial data are critical components of the knowledge-generating activity in order to determine the efficiency of

treatment services. The collection of cost data and the development of cost estimates per unit of service will enable treatment service providers and evaluators to conduct simple cost analyses, cost effectiveness analyses, and/or cost benefit analyses. The objectives underlying this component of the MEDS include:

- Lay a foundation for understanding and projecting treatment costs
- Facilitate cost-benefit analysis and relative cost-effectiveness analysis
- Establish a standard basis for comparing the resources and inputs required by different SDUs, and their relative efficiency.

The collection of financial data is typically included in a substance abuse treatment service process evaluation.

Comprehensive client data collection instruments and the list of client variables are described in the MEDS and, given that these instruments are primarily designed for use in the outcome evaluation, the application of these instruments is discussed in the document *A Guide to Selecting an Outcome Evaluation Design for Substance Abuse Treatment Evaluations*.

Despite the comprehensive level of information contained in the MEDS and corresponding instruments, information about the context for the substance abuse treatment service, its design and development, and the implementation process are not fully reflected in these documents. For the process evaluation, it is necessary to supplement the instrumentation with two additional data collection tools: (1) structured interview guides and (2) observation check-lists. Each data collection tool is described below.

**Structured interview guides** are used during process evaluation data collection for interviewing key informants. The guides are structured to address the process evaluation questions and in anticipation of the analysis task. Separate interview guides are needed for:

- Funding agency staff who were involved in the design of the knowledge-generating activity and who are currently involved in monitoring these efforts
- Substance abuse treatment service staff to gain insight into the development and implementation processes and to identify factors that supported and/or impeded successful implementation

- Community representatives to acquire information about the community context for the substance abuse treatment service as well as the impact of the treatment service on the overall community treatment system
- Clients and family members to provide measures of behavioral change resulting from treatment and measures of satisfaction with the treatment service and identify opportunities for improvement.

To construct the guides, all requisite process evaluation information that is not otherwise available should be sorted by type of individual best suited to provide the information and then converted into questions and placed in a logical series or order for the interview.

Substance abuse treatment evaluators have experimented with the development of highly structured interview guides that would yield code-able qualitative information for transference into quantitative data and linked to client outcome analysis. This approach is being used for the CSAT Residential Women and Children/Pregnant and PostPartum Women (RWC/PPW) national cross-site evaluation, for example. The coding framework is still under development but a sample page of the structured interview guide is provided in Exhibit III-10, for illustrative purposes.

**Observation Recording Sheet.** The collection of data by observation is a critical component of process evaluation data collection. Observing substance abuse treatment service activities during a visit to the treatment service site is integral to a thorough process evaluation. The process evaluation team must capitalize on these opportunities by identifying, in advance, specific activities to be observed (such as a case management meeting) and then providing a semi-structured format for evaluation team members to record their observations. An example of a substance abuse treatment service observation recording sheet is provided in Exhibit III-11, following Exhibit III-10.

## 2.2 Process Evaluation Data Collection Activities

Addressing the hypotheses and evaluation questions in a comprehensive manner requires extensive data collection by the coordinating centers/multi-site evaluators and the study sites/ site-specific evaluators. Many of the data collection methods and activities are the same for the multi-site and site-specific evaluations; differences are associated with the roles and responsibilities of each evaluator. The coordinating center/multi-site evaluator has overall data collection coordination responsibility and is interested in collecting a breadth of process data that are comparable across sites. The study sites/site-specific evaluators have specific responsibilities

**EXHIBIT III-10**

**SAMPLE PAGE FROM STRUCTURED INTERVIEW GUIDE FOR CSAT RWC/PPW CROSS-SITE EVALUATION**

**10. COMMUNITY, LOCAL, AND STATE LINKAGES**

**10.1 “The following questions are about your relationships with other agencies, including state agencies, local or community agencies, or other agencies. Please tell us what kinds of routine communications occur, as well as ways in which your agencies collaborate.”** *When identifying the agency, communications, or collaboration please indicate all that apply.*

<b>AGENCY FUNCTION</b>	<b>1=State 2=Local/community 3=Other (specify) <u>Instruction:</u> (Please indicate all that apply)</b>  <b>AGENCY LEVEL</b>	<b>1=Meetings 2=Training 3=Phone conversations 4=Other (specify) <u>Instruction:</u> (Please indicate all that apply)</b>  <b>COMMUNICATION</b>	<b>SEE CODING SHEET FOR CODING CATEGORIES</b>  <b>COLLABORATION</b>	<b>Instruction: (Please indicate whether the communi- cation involves the RWC/PPW projects line staff, management staff or both.)</b>  <b><i>BE SURE TO INDICATE, BY NUMBER, TO WHICH AGENCY THE DESCRIPTION REFERS.</i></b>  <b>DESCRIPTION</b>
Substance abuse				
Education				
Health				
Mental Health				
Medical				
Courts/probation				
Daycare services				
Other children’s services				
Vocational				
Social services				
Other (specify)				

**EXHIBIT III-11  
SUGGESTED OBSERVATION CHECKLIST AND RECORDING SHEET**

**SUBSTANCE ABUSE TREATMENT SERVICE**

**OBSERVE THE FOLLOWING  
(changes, decisions, and sentinel  
events):**

**1. Staff Interactions**

- Clinical director and other staff
- Clinical director and other agencies

Frequency and type of interactions  
Presence/absence of cooperation  
Thoroughness  
Organization  
Leadership  
Level of attention to detail

**2. Staff Supervision**

- Meetings
- Staff interactions
- Supervisory reviews

Frequency  
Quality

**3. Facility**

- Condition
- Organization
- Staff/client interactions

Cleanliness, attractiveness  
Client flows  
Waiting room comfort  
Friendliness/compassion  
Frequency and type of interactions

<b>SAMPLE OBSERVATION RECORDING SHEET</b>			
<b>Observer:</b> _____		<b>Location:</b> _____	
		<b>Date:</b> _____	
<b>TIME</b>	<b>PERSON(S) OBSERVED</b>	<b>ACTIVITY</b>	<b>DESCRIPTION/COMMENTS</b>

to coordinate local data collection efforts with the coordinating center/multi-site evaluators and for collecting more detailed, site-specific process data. Data collection activities for the coordinating centers/multi-site evaluators and study sites/site-specific evaluators are described below.

## **Document Reviews**

GFAs and any pre-award concept papers and documents (including the terms and conditions of grant award), will serve both the coordinating centers/multi-site evaluators and the local study sites/site-specific evaluators as valuable sources of baseline information and existing treatment resources. These data can be compared with similar data collected at later stages in the process evaluation to assess change over time.

Process data to be extracted from these early documents include:

- Community characteristics
- Indicators of substance abuse problems within the target community
- Target population characteristics including projected census for the treatment service
- Description of pre-existing substance abuse treatment services (if applicable)
- Treatment service goals and objectives
- Organization, management, and staffing (current and proposed)
- Planned treatment service components and activities
- Substance abuse treatment service budgets and resources
- Study site evaluation plans including proposed staffing and budgets.

Coordinating centers/multi-site evaluators would use this information plus study site evaluation plans, logic models, evaluation capabilities, data quality indicators, and potential needs for technical assistance in their evaluability assessments. The use of a matrix or other structured format ensures that all relevant data from the treatment service documents are recorded accurately, and for the coordinating centers/multi-site evaluators, consistently across sites.

## **Collecting the Multi-site and Study Site Data**

Knowledge-generating activities that include a multi-site/site-specific evaluation organizational structure require two levels or tiers of process evaluation data collection (see Exhibit III-12):

- Tier 1 level data collection is managed by the site-specific evaluator and involves in-depth, site specific data collection
- Tier 2 level data collection is managed by the multi-site evaluator and involves in-breadth data collection related to the entire knowledge-generating effort.

These two tiers of data collection take place simultaneously and it is incumbent on all participating site-specific and multi-site evaluators to ensure that the data collection is carefully coordinated and that the data collected are comparable. The data collection process would be greatly facilitated by clear specification of the knowledge-generating design, evaluation data requirements, and data collection instruments within the GFA.

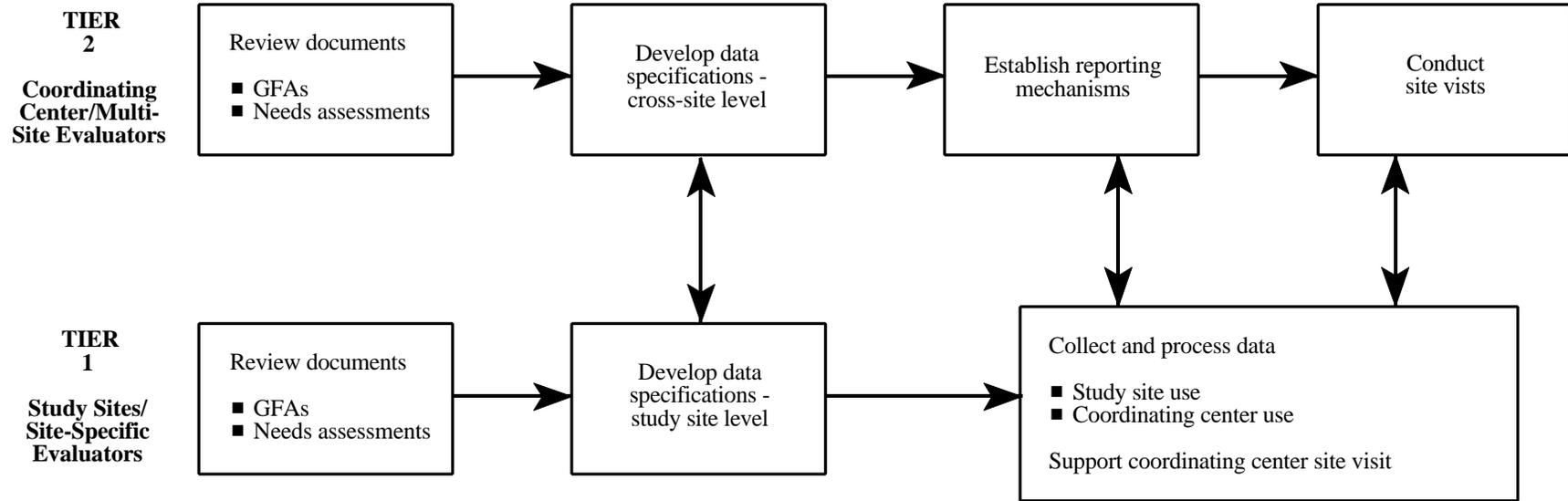
## **Multi-site and Study Site Data Specification**

All process data needed for multi-site analyses must be clearly specified by the multi-site evaluator in collaboration with the site-specific evaluators. The specification of data requirements should occur up-front, when the process evaluation is being designed and then revised, as needed, during the initial document review process. Instrument development and decisions about data collection methods should be done concurrently, with input from the multi-site and the site-specific evaluators to further ensure comparability and professional commitment from all who are involved with the data collection effort. This process does not preclude individual sites from including site specific process data in the study site data collection efforts. Rather, the multi-site evaluation data requirements are the core data requirements which can be supplemented by study site evaluators' additional requirements.

## **Process Evaluation Site Visits**

On-site data collection is a significant part of the process evaluation data collection effort because this is the primary means for obtaining the qualitative data needed to: (1) answer the process evaluation questions and (2) interpret the quantitative data collected for the cost analysis and the outcome evaluation. The site-specific evaluators will collect the majority of the process

### EXHIBIT III-12 DATA COLLECTION PROCESS FOR KNOWLEDGE-GENERATING PROCESS EVALUATION



evaluation data at the substance abuse treatment service location, and when appropriate, from other community data sources. The multi-site evaluators also will conduct on-site data collection but this activity may be limited to a baseline collection (at start-up) and then on an annual basis. The site visit procedures and data collection methods described below are similarly applicable to study site and to coordinating center/multi-site evaluation site visits. Differences will occur in the magnitude of the on-site work. (For example, site-specific evaluators may interview many more substance abuse treatment service staff, more frequently, over an extended period, than the coordinating center/multi-site evaluators.)

Care must be exercised when scheduling and conducting on-site data collection. The on-site work provides a critical opportunity for the evaluation team to form a strong working relationship with the treatment service staff and other community representatives. On-site data collection should be conducted as unobtrusively as possible; demonstrated sensitivity to the workings of the treatment site will assist in establishing the evaluator's credibility and ensure high levels of cooperation by the substance abuse treatment service staff. The site visit activities need to be carefully scheduled in consultation with the substance abuse treatment service director. The schedule should accommodate five one-on-one interviews per day as well as time for observation and record reviews. The care taken with scheduling provides ample "pay back" in terms of the efficiency in conducting the site visit. A sample site visit schedule is presented in Exhibit III-13.

The evaluation team needs to provide both an incoming briefing to the substance abuse treatment service director and staff and an outgoing briefing to the director and others, as appropriate. These briefings are both a courtesy and a good practice to ensure the full support of the treatment service director and the full cooperation of the staff. The incoming briefing needs to cover the purpose and format for the site visit, the schedule, and an overview of the data collection activities. The exit briefing to the director needs to provide general feedback on the site visit. The evaluation team however is strongly cautioned against providing findings or conclusions on the basis of un-analyzed data.

The types of on-site data collection methods employed by process evaluations generally include: (1) one-on-one interviews, (2) participant observations, (3) record abstractions, and (4) client interviews. Each is described briefly below.

**One-on-one interviews.** Based on the data required and sources identified, one-on-one interviews need to be conducted with the treatment services director, other senior managers (such

### EXHIBIT III-13 SAMPLE SITE VISIT SCHEDULE FOR PROCESS EVALUATION DATA COLLECTION

	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY
9:00 am	In-brief <ul style="list-style-type: none"> <li>■ Treatment Services Director</li> <li>■ All staff who will be interviewed</li> </ul>	Case Manager 2 interview	Support Services Manager interview	Observe staff meeting	Open (to obtain additional information, as needed)
10:30 am	Tour of facilities	Counselor 1 interview	Observe client	Client 1 interview	
11:00 am	Treatment Services Director interview	Counselor 2 interview	GED class	Client 2 interview	
12:00 noon	Lunch	Lunch	Lunch	Lunch	Lunch
1:00 pm	Clinical Director interview	Counselor 3 interview	Interviews with community representatives: <ul style="list-style-type: none"> <li>■ School</li> </ul>	Client 3 interview	Out-brief <ul style="list-style-type: none"> <li>■ Treatment Services Director</li> <li>■ Senior staff</li> <li>■ Clinical staff</li> </ul>
2:00 pm	Finance Director interview	Review case records	<ul style="list-style-type: none"> <li>■ Other treatment provider</li> </ul>	Review financial reports	
3:00 pm	Case Manager 1 interview	Review case records (continued)	<ul style="list-style-type: none"> <li>■ Other health services provider</li> </ul>	Review other management reports	
4:00 pm	Case Manager 2 interview	Observe case management meeting	<ul style="list-style-type: none"> <li>■ Law enforcement for drug use reduction</li> </ul>	Observe AA meeting	

as the clinical director), case managers, clinicians, and other staff who have direct client contact. Interviews should be conducted using a semi-structured interview guide with primarily open-ended questions. This approach elicits the greatest amount of “raw” data with the most objectivity. Core interview guides need to be developed and reviewed by the coordinating center and the funding agency. The core guides should then be tailored to specific staff according to their areas of responsibility.

**Participant observations.** As previously mentioned, observing the operations of the substance abuse treatment service during on-site data collection is invaluable. The utility of the data collected through observations is maximized if the process is planned and structured by observation recording forms. In addition to observing scheduled events (e.g., a case managers meeting), evaluators may identify during the staff interviews additional opportunities to observe treatment service activities and events. For example, the data collectors may learn about an adolescent AA meeting that is occurring during the site visit and the data collectors may ask to be invited to observe this event.

It should be noted that only formal observations can actually be subjected to analysis. That is, data must be systematically recorded and meet requirements for reliability and comparability before the data can be aggregated and analyzed. Informal (i.e., unrecorded) observations obtained through monitoring and technical assistance visits or the evaluation site visit are not analyzed **per se** but are useful in the understanding and interpretation of analyzed data.

**Record abstractions.** Client records, financial records, and other routine management reports also are invaluable sources of process evaluation data for two purposes. First, the substance abuse treatment service’s systems for recording and reporting essential management and clinical information need to be identified and reviewed. “Sanitized” copies of these recording and reporting forms need to be collected as additional information sources for assessing the treatment service organization and management practices. Second, data contained in these records and reports are essential to the overall data collection effort. For this purpose, record abstraction forms need to be developed to ensure that these data are collected, comparably.

**Client interviews.** It is frequently appropriate for the on-site data collectors to interview clients, either individually or in small focus groups. Clearly, clients are uniquely positioned to provide indications of satisfaction with the substance abuse treatment service. Also, clients have

their own perspectives on the organization, management, and staffing of a substance abuse treatment service as well as perspectives on the types, amount, and quality of the services provided and the services that need to be provided. Again, these interviews should not occur ad hoc but must be planned and structured with an interview protocol.

### **3. PROCESS EVALUATION DATA ANALYSIS**

The following paragraphs provide general guidance for the analysis of the data collected during the process evaluation and are organized within four sections: (1) overall guidance; (2) analysis of process evaluation data for the substance abuse treatment service; (3) multi-site analyses; and (4) developing process evaluation conclusions and recommendations. A more detailed description of the analysis for all components of the evaluation, including process, cost, and outcome, is provided in the companion document: *Guide to Substance Abuse Treatment Evaluation Data Analysis*.

#### **3.1 Overall Guidance for Process Evaluation Data Analysis**

Upon completion of the data collection task, the evaluation team will have acquired a mass of interview, objective, and observation data. These data must be sorted, compiled, aggregated, analyzed, and compared so as to answer the key evaluation questions and provide a basis for conclusions and recommendations for the substance abuse treatment being evaluated and the knowledge-generating treatment services being evaluated. The analytic framework developed as part of the process evaluation planning task serves as a general roadmap for the analysis task described in this section. Within the hierarchy of the analytic framework, analyses are conducted at the substance abuse treatment service (study site) level and the multi-site level. The process for the analysis task is essentially as follows:

- Organize and aggregate available data by type (interview, objective, observation) and by evaluation area (design, implementation, treatment service component descriptions, factors affecting outcomes)
- Analyze each data set (i.e., each type of data by each evaluation area) and develop findings for each
- Compare and contrast findings of the different data sets with each other
- Identify intervening variables or factors which may affect the findings obtained

- Develop overall findings for each evaluation area based on all types of data relevant to that area
- Consolidate and compare findings from different evaluation areas to develop an overview of the substance abuse treatment service per site.

The analysis for each evaluation area should specifically address the key evaluation questions which can be summarized, as follows:

- What was the design for the substance abuse treatment service? What factors (theory, community need, etc.) influenced the treatment service design? How was the target population identified? In what ways did the design address the target population needs?
- Was the substance abuse treatment service implemented successfully? Was it implemented so that it could operate as designed? Were staff properly trained and prepared? Were there any problems/events during implementation which may have affected the workings of the substance abuse treatment services?
- What factors affected implementation and in what ways? How was the treatment service design adjusted to accommodate these factors? What was the decision making process that led to these adjustments? What are the possible effects of these adjustments on expected substance abuse treatment service outcomes?

Guidance for the analysis of each evaluation area, and for the comparative analysis of all sites in the knowledge-generating effort is presented in the sub-sections that follow.

### **3.2 Analysis of Process Evaluation Data for the Substance Abuse Treatment Service**

The analysis of process evaluation data involves the following components:

- Descriptive analysis of implementation (i.e., what was done and how it was done?)
- Comparison of actual implementation against plan (i.e., what was intended to be done?)
- Assessment of whether and to what extent implementation was successful (i.e., did what was done work?)
- Analysis of factors causing or contributing to the degree of success achieved (i.e., why did it work or not work?).

The descriptive analysis should provide an accurate and concise picture of how the substance abuse treatment service was implemented. Particular attention should be given to any problems experienced during implementation, how the problems were handled, the extent to which the problems were corrected or overcome, and what overall impact, if any, the problems had on the implementation experience. For replication efforts, the degree to which the study sites mirrored the model being replicated should be assessed.

The comparison of actual implementation against the original design should result in the identification of variances, if any, among the design and actual implementation, and the factors causing the variations. This can be accomplished by comparing the components of the original design with corresponding evidence obtained from interview and observation data. It should be noted that variations between the design and actual treatment service as implemented are not intrinsically negative. Some elements of the design may not have worked, for example, or staff may have found a better way to implement the substance abuse treatment service during the implementation process.

The assessment of whether and to what extent implementation was successful requires a judgment from the evaluation team based on the data collected. To facilitate this assessment, the evaluation team needs to examine each of the process evaluation questions on the basis of the different data sets, consider or weigh the relative merits of the findings, and develop an overall finding for that question.

A sample worksheet for implementation analysis is shown in Exhibit III-14. As demonstrated by this sample worksheet, staff responses to individual questions asked during the staff interviews are recorded in the individual cells. The worksheet needs to accommodate a summary of the qualitative data per specific question. These summaries should then be combined with other “evidence” (obtained from community key informants or management reports, for example) to develop as comprehensive an answer as is possible to the individual evaluation questions.

When overall findings for each key question are developed, they must be compared with each other and the relative merits of each must be considered to develop the overall assessment of the success of implementation. It is entirely possible, for example, that some aspects of implementation were more or less successful than others, but the evaluation team must seek to develop the overall “bottom-line” on implementation which indicates whether the substance

**EXHIBIT III-14**  
**SAMPLE INTERVIEW CONTENT ANALYSIS GRID**

STAFF	IMPLEMENTATION PROCESS	CHANGES TO TREATMENT SERVICE DESIGN	DECISION-MAKING PROCESS	FACTORS THAT FACILITATED IMPLEMENTATION	FACTORS THAT IMPEDED IMPLEMENTATION
Director					
Clinical Director					
Financial/ Administrator					
Case Manager 1					
Case Manager 2					
Counselor 1					
Counselor 2					
Summary					

abuse treatment service essentially worked as intended or essentially did not. (The evaluation team needs to operationalize “success” up front, in the planning stage.)

The last step in the implementation analysis is to identify and assess the factors which caused the results that were achieved. A critical part of the implementation analysis and of the overall process evaluation is for the team to determine **why** the substance abuse treatment service worked as it did. These factors may be either positive or negative. Causal factors may be intervening variables which disrupted the implementation process (e.g., staff turnover), or by-products of the implementation (e.g., continuing staff resistance to the treatment approach). It may be that the substance abuse treatment service was not thoroughly conceived and planned, or it may be that it was a good idea but inadequately executed. It is also possible that the substance abuse treatment service works, due to the support and efforts of the treatment services director and staff. The evaluation team’s analysis of these factors, in conjunction with the overall assessment and results from the analysis of other areas (such as the cost and outcome analyses) provides the subsequent judgment of treatment service success.

### **3.3 Multi-site Analyses**

With the completion of the analysis of the individual evaluations for the study sites, the multi-site evaluator is able to begin the final series of steps in the analysis process. These steps represent several forms of aggregate and comparative analyses and involve using the specific findings obtained from the individual analyses described above. The aggregate and comparative analysis of each substance abuse treatment service across all of the study sites is the definitive final analytic step for any given knowledge-generating process evaluation. In this step, the findings from each evaluation area are compared across study sites for the following purposes:

- Develop an overview of the evaluation area and the range of experiences or results which were obtained
- Identify similarities or differences in implementation and/or variance from a model
- Attempt to account for the differences which occurred and why they occurred
- Develop an aggregate assessment of the knowledge-generating effort’s viability, overall, and implications for individual treatment service sustainability and replicability.

It should be noted that the analysis of the process evaluation data will most accurately reflect the design and implementation processes and the results of these analyses must be incorporated within

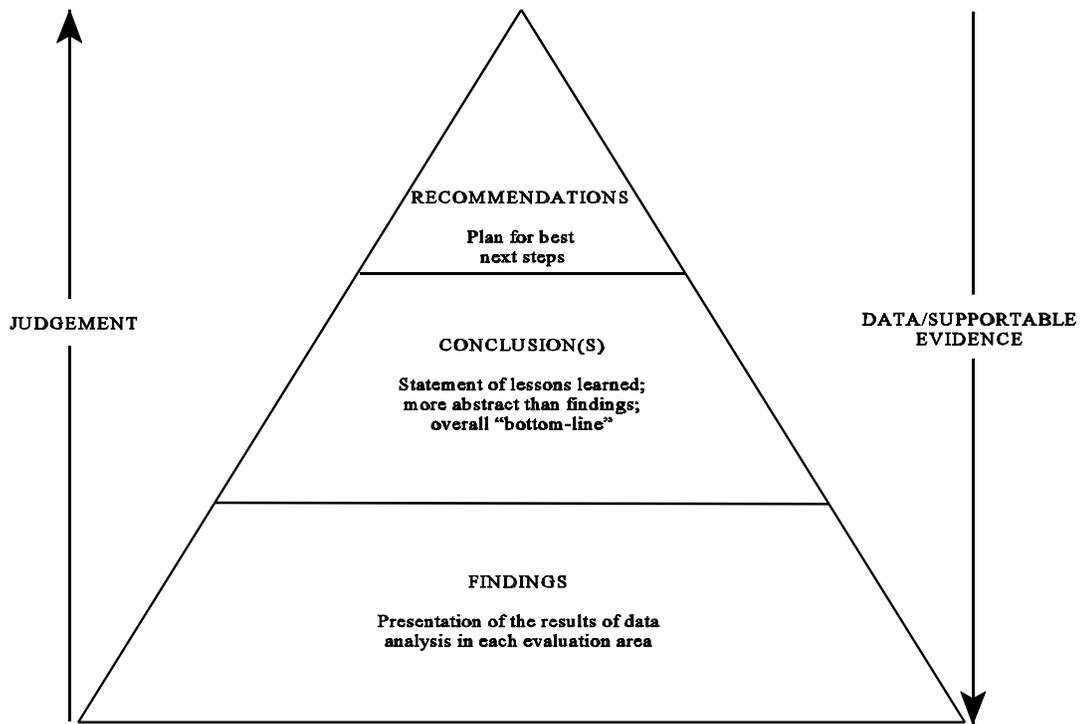
the other evaluation components. “Bottom line” assessments must include findings from the outcome and cost analyses.

### 3.4 Developing Conclusions and Recommendations

With the completion of the data analysis phase, the evaluation team is ready to develop conclusions and recommendations for each of the substance abuse treatment services evaluated and for the knowledge-generating activity, as a whole. Evaluation-based conclusions and recommendations are, in general, fairly straight-forward and emerge from the analyzed data and the judgment and insight of the evaluation team.

The relationships among findings, conclusions, and recommendations are shown graphically in Exhibit III-15. The pyramid illustrates that recommendations rest firmly on conclusions which, in turn, are solidly grounded in the findings which emerge from the analyzed data. Each represents a succeeding level of abstraction and requires increasing degrees of professional judgement.

**EXHIBIT III-15**  
**INTERRELATIONSHIP OF FINDINGS, CONCLUSIONS, RECOMMENDATIONS**



The **findings** represent the results obtained from the preceding data analysis phase. At the conclusion of data analysis, a set of findings is developed for each evaluation area, presenting the salient results obtained from the analysis and providing the back-up data and evidence which supports that result. For example:

- **Finding.** Clients receiving the innovative treatment service have higher levels of satisfaction with individual counseling than the control group clients receiving the standard treatment service.
- **Evidence/analyzed data.** Ninety-four percent of clients receiving the innovative service rated their levels of satisfaction with individual counseling as “high” compared to 46 percent of the control group clients.

Findings may be either simple, that is, based on a single set of data or piece of evidence, or complex, based on several sets of data. The findings can be used to develop action steps or improve the treatment services (see recommendations section, below).

**Conclusions** are more abstract than findings, representing the application of professional judgement and values in the interpretation of findings. To be valid, however, conclusions must be convincingly supported by the findings and the judgments which are applied should be logical, practical, and credible to other professionals including the treatment service staff. An example of a conclusion firmly supported by findings is:

- **Conclusion.** The use of the treatment service innovation for individual counseling was more effective than the standard treatment individual counseling.
- **Supporting findings:**
  - Innovative treatment service clients had higher levels of satisfaction with individual counseling than control clients
  - Innovation treatment service clients reported lower levels of post-treatment substance use than control clients
  - A higher proportion of innovation treatment service clients than control clients agreed or strongly agreed with the statement “individual counseling influenced my decision to abstain from substance use.”

**Recommendations** are developed on the basis of the conclusions. Using the insight and experience of the evaluation team, conclusions are translated into an action plan of recommendations, a prescription of next steps judged to be appropriate. The ultimate recommendation is whether the substance abuse treatment service was successful and should be continued as is or modified; a “go/no-go” decision on the basis of the findings. Using the example cited above, the innovative individual counseling service appears to be effective, and this conclusion supports a recommendation to continue the innovative counseling service.

## IV. PROCESS EVALUATION RESULTS

Evaluation processes and results need to be packaged to provide practical, useful products if evaluation activities are to have an impact on providing good quality treatment services. The following paragraphs summarize the types of products that can be developed from the results of process evaluation activities with specific guidance for developing the process evaluation report.

### 1. RANGE OF PROCESS EVALUATION PRODUCTS

There are three general applications for process evaluation methods: formative evaluation, implementation evaluation, and support for outcome analysis interpretation. There are several potential evaluation products that emanate from these applications.

When the process evaluation is initiated during the knowledge-generating activity design phase, the process evaluation methods could be used to help develop the program design and ensure its evaluability. Process evaluation products that should be developed during the program design phase include one or more of the following:

- Evaluability assessments—a pre-evaluation analysis that examines the context for the substance abuse treatment service and determines if the goals and objectives are clearly stated and that the treatment service is organizationally capable of generating data necessary for evaluation (Patton, 1996).
- Literature assessments that link substance abuse problems to clinical solutions based on theoretical relationships.
- Logic models—a descriptive, graphic representation of substance abuse treatment service programs and how they work (Kumfer et al., 1993); logic models are developed to demonstrate program components and their logical relationships. The program logic models provide a foundation for the evaluation logic models (Devine et al., 1999).
- Needs assessments—an evaluative study that answers questions about the social conditions a program is intended to address and the need for the program (Rossi, Freeman, & Lipsey, 1999). Needs assessments are conducted as part of the formative evaluation by the program designers or the evaluators.

Each of these processes and resulting evaluation products also are germane to study site implementation and it is appropriate for the study site evaluators to provide evaluability assessments, literature reviews, logic models, and/or local community needs assessments in advance of conducting the full process evaluation.

The process evaluation conducted once the treatment service is initiated is frequently labeled the “implementation evaluation” and this application of process evaluation methods is employed by knowledge-generating coordinating centers and study site evaluators. Specific products resulting from this phase of the process evaluation include:

- A formal assessment of implementation fidelity in light of the treatment service design and specific recommendations for the substance abuse treatment service to adopt the components more faithfully, as originally designed.
- Identification of factors that supported and factors that impeded implementation.
- Replicability assessment: in light of the implementation assessment and the factors that influenced implementation, the process evaluation provides an assessment of the conditions (population and community characteristics, implementation adjustments) needed for true replication of the substance abuse treatment service, as designed.
- Sustainability assessment: given that the process evaluation includes an assessment of the substance abuse treatment service within the context of the surrounding community and given that the evaluation determines the viability of the treatment service, findings from the process evaluation are useful to identifying and securing resources.

The process evaluation report is the principle product from this phase of the evaluation, however, and guidance for developing this report is described in the next section.

Finally, the outcome evaluation is dependent on the process evaluation for understanding and explaining the outcome findings. Specifically, the process evaluation supports the outcome analysis by anticipating that expected outcomes may not be realized due to anomalies in the treatment service design, the interpretation of the treatment service design, and/or the implementation fidelity. At this juncture, adjustments to the treatment service design and/or the treatment service’s implementation are probable so as to better ensure positive substance abuse treatment service outcomes (Judd, 1987).

The process evaluation also provides the context for the outcome analysis by furnishing detailed explanations of the substance abuse treatment service components and the treatment milieu. The process evaluation also identifies intervening circumstances that may interfere with or enhance the outcome results thereby under-stating or over-stating the substance abuse treatment service effectiveness (Scheirer, 1994). A frequently cited example pertains to the

client employment outcome measure. The employment opportunities within a community may have as great or greater influence on post-treatment employment rates despite the treatment service efforts to assist clients to obtain jobs. This example, while somewhat obvious, demonstrates the importance of the contextual information supplied by the process evaluation.

The packaging of the products listed above can assume various formats from diagrams for the logic models to annotated bibliographies for the literature reviews on treatment theory. The format most frequently used by process evaluations is a formal, written report. To ensure that the results of the knowledge-generating process evaluations are packaged comparably, an outline for the report, is described below.

## **2. PROCESS EVALUATION REPORT**

The process evaluation report represents the culmination of the process evaluation effort. The evaluation report is the primary final product of the process evaluation work. Its reception and use depend totally on the clarity of presentation, the comprehensive consideration of all relevant issues, the thoroughness of analysis, the validity of the conclusions, the reasonableness of the recommendations, and the accessibility (i.e., “reader friendliness”) of the document. The final report becomes an important conduit for knowledge application in the substance abuse treatment field.

The process evaluation report is organized primarily around the findings, conclusions, and recommendations that have been developed, since these represent the principal products of the process evaluation study. A report outline is presented in Exhibit IV-1 at the end of this chapter. The outline is logically sequential, taking the reader through a summarized version of the entire process evaluation study to ensure that the reader understands the theoretical, methodological, and factual underpinnings of the conclusions and recommendations.

Following a 2-3 page executive summary, the report begins with an overview of the knowledge-generating effort, including a description of the problem, the treatment service conceptual framework, and the evaluation conceptual framework and logic model(s). The second chapter provides a description of the process evaluation methods including the purpose and objectives, the process evaluation questions, the data collection as planned and as implemented, the data analysis as planned and as implemented, and a discussion of the rationale for changing the original process evaluation design and plan.

The third chapter provides the process evaluation findings including findings related to the substance abuse treatment service components, implementation, operations, costs, and an overall process evaluation assessment. The fourth chapter provides the conclusions and recommendations related to treatment service design, implementation, management and staffing, operations, and any other aspects of the treatment service. The final chapter (Chapter V) provides a status report on the evaluation budget. The appendices include data collection instruments and forms and other relevant materials of potential interest to the treatment service providers, funding agencies, and to the substance abuse treatment field.

# EXHIBIT IV-1

## PROCESS EVALUATION REPORT OUTLINE

### COVER PAGE

### TABLE OF CONTENTS

### FOREWORD

### ACKNOWLEDGMENTS

**EXECUTIVE SUMMARY**—A 2-3 page summary formatted and written like concise version of the full report. The executive summary should include the report's main points.

## I. BACKGROUND AND CONCEPTUAL FRAMEWORK

1. **Background of the problem**—Discuss the substance abuse, mental health, social, and medical problems addressed by the CSAT program. Include relevant literature and empirical data.

Reflect an understanding of the CSAT organizational structure for the KD&A or demonstration activities; this organization includes:

- CSAT KD&A or demonstration program refers to the total set of activities that are operated by CSAT staff; examples include: Cannabis Dependence Treatment; Adolescent Managed Care; Wrap Around Services; and Homelessness Prevention Project.
- Multi-site/cross-site evaluation refers to the evaluation activities conducted by coordinating centers and/or national evaluations; as implied, these activities include more than one study site.
- Study sites and local grantee activities refer to the evaluation or treatment services activities conducted at one local site.

2. **Programmatic conceptual framework**—Describe the psychological, behavioral, medical, and/or clinical treatment theory used to design the CSAT program as reflected in the Guide for Applicants (GFA) document. Identify the structure of the Knowledge Development and Application (KD&A) approach and its relationship to fulfilling the CSAT program goals. Link the CSAT program goals, KD&A approach and KD&A resources, to the client population characteristics, substance abusing and other behaviors, and expected outcomes. Discuss the expected KD&A impact on both the treatment services (or other intervention) and on the client population.
3. **Evaluation conceptual framework and logic model**—Describe the theory and logic model used to design the evaluation approach as reflected in the GFA and as adapted to this specific KD&A evaluation plan. Identify the overall evaluation approach and the role of a cross/multi-site evaluation and the role of local, site-specific evaluations. Identify the role of the evaluation described in this evaluation plan (e.g., coordinating center, site specific evaluation, other) and describe how this evaluation will be integrated with other, related evaluation efforts. Identify the CSAT requirements for the evaluation approach (e.g., process evaluation, outcome evaluation, cost analyses) and the CSAT requirements for the evaluation design (e.g., quasi-experimental with control groups); describe the relationship between: (1) the evaluation framework, approach, and design; (2) the KD&A intervention; and (3) the proposed evaluation products. Demonstrate the ways in which the evaluation plan will meet the overall CSAT program goals.

## II. PROCESS EVALUATION METHODOLOGIES

1. **Purpose and Objectives**—Specify what the process evaluation is intended to accomplish. (These sections can be extracted directly from the Evaluation Plan.)
2. **Process Evaluation Questions**<sup>1</sup>—Identify the specific process evaluation questions which are being addressed.
3. **Process Data Collection Plan and Implementation**

## EXHIBIT IV-1 (CONTINUED)

### PROCESS EVALUATION REPORT OUTLINE

- 3.1 Data Collection Conducted to Date**—Describe in detail the actual data collection activities implemented to date, including actual sources, methods, and instruments used as well as actual sample sizes obtained for each data source/ method.
  - 3.2 Changes from Original Data Collection Plan**—Describe any changes from the proposed data sources, methods, instruments, sampling methodology, and collection plan presented in the original Evaluation Plan and why the change was implemented.
  - 3.3 Data Collection Problems and Solutions**—Identify any data collection problems experienced as well as solutions used and/or proposed.
- 4. Process Analysis Plan and Implementation**
- 4.1 Analyses Conducted to Date**—Describe the actual analytic methods and techniques used to analyze data collected to date.
  - 4.2 Changes from Original Analysis Plan**—Describe any changes from the proposed analysis plan presented in the original Evaluation Plan and why the change was implemented.
  - 4.3 Data Analysis Problems and Solutions**—Identify any data analysis problems experienced as well as any solutions used and/or proposed.
- 5. Proposed Changes To The Process Evaluation Plan**—Identify any changes proposed for future process evaluation data collection and analysis, and the rationale for those changes.

### III. PROCESS EVALUATION FINDINGS

(The outline proposed for this chapter is illustrative; the actual outline should be based on the specific process evaluation questions.)

- 1. Substance Abuse Treatment Services Description Findings**—Using the Process Evaluation Questions as a guide, report the substance abuse treatment services description findings. Categories of Process Evaluation Questions that may be applicable to this section are listed below (see Section I for more information):
  - Treatment services background information
  - Treatment services organization, staffing, and management
  - Treatment services components
  - Target populations.
- 2. Substance Abuse Treatment Services Implementation Findings**
  - 2.1 Implementation of the Substance Abuse Treatment Services**—Describe the actual substance abuse treatment services implemented, including problems experienced and solutions employed.
  - 2.2 Changes in the Design for the Substance Abuse Treatment Services**—Describe any changes from the intended services and implementation plan and why the change was made.
  - 2.3 Factors Affecting Implementation**—Identify the factors contributing to or impeding successful implementation of the substance abuse treatment services.
- 3. Treatment Services Operations/Service Delivery Findings**—If applicable, present and compare baseline (pre-substance abuse treatment services) and post-substance abuse treatment services data, for comparable time periods, in the following areas:

## EXHIBIT IV-1 (CONTINUED)

### PROCESS EVALUATION REPORT OUTLINE

#### 3.1 Intakes, Assessments, Referrals, and Admissions

3.2 **Client Characteristics** (age, gender, ethnic group, pregnancy status for women, education/employment, alcohol/drug use, health status, etc.)

#### 3.3 Treatment Modalities and Services Provided to Clients; Referrals for Other Services

3.4 **Disposition of Clients Served** (e.g., drop-outs, administrative discharge, successful completion, etc.)

4. **Substance Abuse Treatment Services Cost Findings**—Present and compare budgeted versus actual costs of the treatment services and account for any variations which occurred; analyze cost per person served and cost per treatment completion.

5. **Overall Process Assessment Findings**—Provide an overall assessment of the implementation of the substance abuse treatment services and the impact on system operations and service delivery.

#### IV. CONCLUSIONS AND RECOMMENDATIONS

1. **Conclusions:** describe all conclusions that are supportable by the process data; conclusions may relate to the following:

1.1 **Design for Treatment Services:** the process evaluation may determine that the original design for the treatment services was inappropriate to the population and/or substance abuse problems

1.2 **Implementation:** the process evaluation may find that the design was appropriate but that the design was inadequately implemented.

1.3 **Treatment services management and staffing:** the process evaluation may identify shortcomings in the management arrangements and/or the staffing levels and/or patterns

1.4 **Treatment services operations:** the process evaluation may identify aspects of the treatment service operations that are inefficient and/or ineffective

1.5 **Other aspects of the treatment services:** other components such as outreach, referrals, treatment philosophies, treatment practices, targeted populations and facilities may be impeding the successful delivery of services

2. **Recommendations:** process evaluation recommendations should be organized according to the conclusions, be concrete and action-able, and reflect the implications of the treatment services for the outcomes evaluation. Recommendations should parallel all of the topics listed above.

V. **EVALUATION BUDGET STATUS**—Present a line item evaluation budget, by project year, and actual expenditures to date.

#### APPENDICES

- A. Process Data Collection Instruments and Forms
- B. Participant Protection, Informed Consent and Confidentiality
- C. Data Reliability, Validity and Security
- D. Client Data Tables
- E. Materials of Possible Interest to CSAT and the Field
- F. Other (e.g., single subject case studies, ethnographic reports)

## V. SAMPLE PROCESS EVALUATION WORK PLAN

This document, and the evaluation literature generally, stresses the need to begin the process evaluation concurrently with the knowledge-generating activities to receive maximum benefit from the process evaluation efforts. It is also clearly recognized, however, that the funding agency realities result in evaluation activities beginning after the effort is designed and simultaneously with the implementation phase. Therefore, the following description of a sample work plan begins with the implementation assessment component of the process evaluation.

The timing and schedule for the process evaluation, post-grant award, is critical. If the evaluation is conducted too early, the substance abuse treatment service may not be fully implemented and lessons learned about the implementation will be truncated. Conversely, if too much time elapses between implementation and evaluation, the information “trail” may be cold (i.e., staff perceptions of implementation events and rationale may alter with time). The goal therefore is to collect process evaluation data at appropriate points during implementation and to provide results to the funding agency, the substance abuse treatment service director, and to the outcome evaluation as the process evaluation data become available and are needed by these key process evaluation stakeholders. (Although described separately within the IEM package, it is assumed that the process evaluation and the outcome evaluation will be conducted concurrently by the same site-specific and multi-site evaluation teams.)

A sample process evaluation work plan and schedule is shown in Exhibit V-1. The work plan assumes a 12 month period; the basic structure of data collection and analysis will begin in Year 1 and continue through Year 2 and Year 3, for a three year grant program. (The process evaluation may be completed by the end of Year 2. Given the wide variability in the knowledge-generating activity’s schedules and structures, the sample work plan is offered as a guide and should be adapted to individual schedules, as appropriate.)

The sample work plan and schedule support two purposes. First, careful scheduling up-front, assists in ensuring that the complex tasks of establishing local and multi-site data specifications, and collecting large amounts of qualitative data will be fully coordinated for smooth execution. Second, since all grant agencies typically require grant-year-end interim (and then final) reports, an annual work plan and schedule will assist the evaluation teams in meeting these grant requirements.

The level of staff effort required to conduct the single site process evaluation will vary according to the size of the substance abuse treatment service and the complexity of the data to

### EXHIBIT V-1 SAMPLE WORK PLAN AND SCHEDULE FOR KD&A PROGRAM PROCESS EVALUATION

TASKS	MONTHS												
	1	2	3	4	5	6	7	8	9	10	11	12	
1. Develop Process Evaluation Plan 1.1 Develop multi-site evaluation plan (MSE) 1.2 Develop site-specific evaluation plan (SSE) 1.3 Submit plans for funding agency review and revise, as needed													
2. Prepare Single Site/Multi-site Data Specifications 2.1 Develop core list of process evaluation data (MSE) 2.2 Develop in-depth list of process evaluation data (SSE) 2.3 Establish mechanisms for transmitting local data to MSE													
3. Collect Single Site/Multi-site Process Evaluation Data 3.1 Conduct document reviews (MSE and SSE) 3.2 Conduct site visits/interviews (SSE) 3.3 Conduct multi-site site visits/interviews (MSE)													
4. Analyze Single Site/Multi-site Process Evaluation Data 4.1 Prepare data for analysis (MSE and SSE) 4.2 Analyze single site data (SSE) 4.3 Incorporate single site data with multi-site data (MSE) 4.4 Identify and communicate needs for corrective action, if necessary (MSE, SSE)													
5. Develop Interim (Year 1 and 2) and Final (Year 3) Reports 5.1 Develop draft reports (MSE, SSE) 5.2 Submit reports to funding agency for review and comment 5.3 Develop final version of interim/final report													

Note: MSE = Multi-site Evaluators; SSE = Site-specific Evaluators

be collected. The level of effort also will vary according to the different tasks being conducted. In general, an equivalent effort of two to four full-time-equivalents (FTEs) is a reasonable level of effort to assume. This level of effort will vary by the evaluation tasks with the on-site data collection requiring the most intensive staff time.

A process evaluation work plan and schedule, similar to the sample work plan offered here, should be developed to support the grant application. The work plan and schedule usefully support the budget submission and the anticipated timing of critical evaluation events. As such, the work plan and schedule become an invaluable management tool for both the funding agency and the evaluation team to track budgetary and work progress, identify barriers to completing tasks, as planned, and providing an overall framework for the evaluation activities. As the final component of the process evaluation planning process discussed in Chapter III, the work plan and schedule for the entire effort should be modified and submitted to the funding agency for concurrence.

## REFERENCES

- Browne, A., & Wildavsky, A. (1987). What should evaluation mean to implementation? In D.J. Palumbo (Ed.), The politics of program evaluation (pp. 146-172). Newbury Park, CA: Sage Publications.
- Capital Consulting Corporation. (1999). Substance abuse treatment cost analysis and allocation template. Fairfax, VA: Capital Consulting Corporation.
- Chen, H.T. (1990). Theory-driven evaluations. Newbury Park, CA: Sage Publications, Inc. 167-189.
- Dehar, M., Casswell, S., & Duignan, P. (1993). Formative and process evaluation of health promotion and disease prevention programs. Evaluation Review, 17(2), 204-220.
- Devine, P. (revised 1999). Integrated evaluation methods: A guide for substance abuse treatment knowledge-generating activities. Fairfax, VA: National Evaluation Data and Technical Assistance Center, Caliber Associates.
- Devine, P. (1999). A guide to process evaluation for substance abuse treatment services. Fairfax, VA: National Evaluation Data and Technical Assistance Center, Caliber Associates.
- Devine, P. (1999). Using logic models in substance abuse treatment evaluations. Fairfax, VA: National Evaluation Data and Technical Assistance Center, Caliber Associates.
- Devine, et al. (revised 1999). Self-adjusting treatment evaluation model. Fairfax, VA: National Evaluation Data and Technical Assistance Center, Caliber Associates.
- Fitz-Gibbon, C.T., & Morris, L.L. (1987). How to design a program evaluation. Newbury Park, CA: Sage Publications.
- Fitzpatrick, J.L. (1992). Problems in evaluation of treatment programs for drunk drivers: Goals and outcomes. Journal of Drug Issues, 22, 155-167.
- Harrell, A., Burt, M., Hatry, H., Rossman, S., Roth, J., & Sabol, W. (1996). Evaluation strategies for human services programs: A guide for policy makers and providers. Washington, DC: The Urban Institute.
- Harwood, H., Bazron, B., Fountain, D., Moore, M., Devine, P., Lowery, J., et al. (revised 1999). Performance measurement for substance abuse treatment providers and CSAT knowledge development and application. Fairfax, VA: National Evaluation Data and Technical Assistance Center.
- Herman, J.L., Morris, L.L., & Fitz-Gibbon, C.T. (1987). Evaluator's handbook. Newbury Park, CA: Sage Publications, Inc.

- Isaac, S., & Michael, W.B. (1990). Handbook in research and evaluation (2nd ed.). San Diego, CA: EDITS Publishers.
- Judd, C.M. (1987). Combining process and outcome evaluation. In M.M. Mark, & R.L. Shotland (Eds.), Multiple methods in program evaluation (pp. 23-41). San Francisco: Jossey-Bass.
- Kumpfer, K., Shur, G., Bunnell, K., Librett, J., & Millward, A. (1993). Measurements in prevention: A manual on selecting and using instruments to evaluate prevention programs. Rockville, MD: U.S. Department of Health and Human Services.
- 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 Clearinghouse for Alcohol and Drug Information.
- Moore, M. (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.
- Muraskin, L.D. (1993). Understanding evaluation: The way to better prevention programs. Rockville, MD: Westat.
- National Evaluation Data and Technical Assistance Center. (revised 1999). Minimum evaluation data set: Core data lists. Fairfax, VA: Caliber Associates.
- National Evaluation Data and Technical Assistance Center. (1999). Substance abuse treatment services evaluation data collection instruments. Fairfax, VA: Caliber Associates.
- National Opinion Research Center. (1997). National Treatment Improvement Evaluation Survey: Final Report.
- 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.
- Orwin, R.G., & Devine, P. (1999). A guide to selecting an outcome evaluation design for substance abuse treatment evaluations. Fairfax, VA: National Evaluation Data and Technical Assistance Center, Caliber Associates.
- Orwin, R.G., & Fountain, D. (1999). A guide to substance abuse treatment evaluation data analysis. Fairfax, VA: National Evaluation Data and Technical Assistance Center, Caliber Associates.
- Patton, M.Q. (1986). Utilization-focused evaluation. Newbury Park, CA: Sage Publications.

- Patton, M.Q. (1990). Qualitative evaluation and research methods (2nd ed.), Newbury Park, CA: Sage Publications.
- Patton, M.Q. (1997). Utilization-focused evaluation. Newbury Park, CA: Sage Publications, Inc.
- Pietrzak, J., Ramler, M., Renner, T., Ford, L., & Gilbert, N. (1990). Practical program evaluation: Examples from child abuse prevention. Newbury Park, CA: Sage Publications, Inc.
- Rossi, P.H. Freeman, H.E., & Lipsey, M.W. (1999). Evaluation: A systematic approach (6th ed.). Thousand Oaks, CA: Sage Publications, Inc.
- Rossi, P.H., & Freeman, H.E. (1993). Evaluation: A systematic approach. Newbury Park, CA: Sage Publications, Inc.
- Scheirer, M.A. (1994). Designing and using process evaluation. In J.S. Wholey, H.P. Hatry, & K.E. Newcomer (Eds.), Handbook of practical program evaluation (pp. 40-68). San Francisco: Jossey-Bass.
- Scriven, M. (1991). Evaluation thesaurus (4th ed.). Newbury Park, CA: Sage Publications.
- Shadish, W.R., Cook, T.D., & Leviton, L.C. (1991). Foundations of program evaluation: Theories of practice. Newbury Park, CA: Sage Publications.
- 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.
- Suchman, E.A. (1967). Evaluation research: Principles and practice in public services and social action programs. New York, NY: Russell Sage Foundation.
- Yin, R.K. (1993). Application of case study research. Applied Social Research Methods Series, 34. Newbury Park, CA: Sage Publications.

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

**APPENDIX:**  
**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
<p><b>1. Planning the evaluation/ knowledge-generating activities</b></p>	<ul style="list-style-type: none"> <li>■ <b>Integrated Evaluation Methods: A Guide for Substance Abuse Treatment Knowledge Generating Activities:</b> Concept paper that describes the development of an evaluation framework, evaluation concepts, and TA materials to support the framework.</li> <li>■ <b>Self-Adjusting Treatment Evaluation Model:</b> Concept paper that describes an approach for integrating evaluation findings within treatment operations so as to adjust and improve service delivery.</li> <li>■ <b>Building Team Capability to Fully Implement and Utilize the Self-Adjusting Treatment Evaluation Model:</b> Concept paper to assist treatment providers in building capabilities to integrate the self-adjusting treatment model within day-to-day operations and service delivery.</li> <li>■ <b>Adding “Value” to CSAT Demonstrations:</b> 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)</li> <li>■ <b>Performance Measurement for Substance Abuse Treatment Services:</b> Concept paper about the increasing importance of provider performance measurement and analyses and an explanation of the case-mix adjustment methodology.</li> <li>■ <b>Client Levels of Functioning as a Component of Substance Abuse Treatment Services Evaluation:</b> 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.</li> <li>■ <b>Substance Abuse Treatment Evaluation Policy Notebook:</b> 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.</li> <li>■ <b>Substance Abuse Treatment Evaluation Resource Notebook:</b> 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.</li> </ul>
<p><b>2. Selecting the evaluation design</b></p>	<ul style="list-style-type: none"> <li>■ <b>A Guide to Process Evaluation for Substance Abuse Treatment Services:</b> TA tool presenting purposes of process evaluation and the application of process evaluation methods to single site and multi-site treatment services.</li> <li>■ <b>Using Logic Models in Substance Abuse Treatment Evaluations:</b> TA tool describing logic model purposes and techniques for designing and planning the evaluation of treatment services.</li> <li>■ <b>A Guide to Selecting an Outcome Evaluation Design for Substance Abuse Treatment Evaluations:</b> TA tool describing overall strategies for developing evaluation questions, measurement, controls, validity/reliability, sampling, design effects, and generalizability of findings. (Battelle)</li> </ul>

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

EVALUATION FRAMEWORK	INTEGRATED EVALUATION METHODS PACKAGE
<b>3. Developing data requirements</b>	<ul style="list-style-type: none"> <li>■ <b>Minimum Evaluation Data Set (MEDS): Core Data Lists:</b> TA tool for developing a uniform set of variables and response categories for the service delivery unit (SDU), clinician, cost, and client evaluation measures.</li> <li>■ <b>Substance Abuse Treatment Cost Allocation and Analysis Template (SATCAAT):</b> User manual to analyze treatment costs by unit of service for an SDU. (Capital Consulting Corporation)</li> </ul>
<b>4. Developing data collection instruments</b>	<ul style="list-style-type: none"> <li>■ <b>Substance Abuse Treatment Services Evaluation Data Collection Instruments:</b> 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.</li> </ul>
<b>5. Collecting the data</b>	<ul style="list-style-type: none"> <li>■ <b>Staying In Touch: A Fieldwork Manual of Tracking Procedures for Locating Substance Abusers for Follow-up Studies (UCLA):</b> User manual to establish and implement client follow-up data collection systems and procedures.</li> <li>■ <b>Strategies for Follow-up Tracking of Juvenile, Homeless, and Criminal Justice System-Involved Substance Abusers: Overview and Bibliographies, 1990-1998:</b> Description of tracking techniques used to increase response rates for follow-up interviews with homeless and juvenile/criminal justice involved substance abusers.</li> </ul>
<b>6. Analyzing the data</b>	<ul style="list-style-type: none"> <li>■ <b>A Guide to Substance Abuse Treatment Evaluation Data Analysis:</b> Recommended methods and procedures for analyzing process, SDU, clinician, cost, and client evaluation data.</li> </ul>
<b>7. Reporting the evaluation findings</b>	<ul style="list-style-type: none"> <li>■ <b>Substance Abuse Treatment Evaluation Product Outlines Notebook:</b> Compendium of outlines for evaluation products including evaluation plans, interim evaluation reports, final evaluation reports, replication studies, case studies, and ethnographies.</li> </ul>

## **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
<b>SENIOR MANAGERS</b>	<ul style="list-style-type: none"> <li>■ Policy development</li> <li>■ Issue identification for KD&amp;As</li> <li>■ Grant/contract funding decisions</li> <li>■ Overall program management</li> <li>■ Sustainability</li> <li>■ Dissemination</li> <li>■ Long-term strategic planning</li> <li>■ Program designs</li> <li>■ KA activities</li> </ul>	<ul style="list-style-type: none"> <li>■ Comprehensive evaluation framework</li> <li>■ Comprehensive evaluation components</li> <li>■ Roles and responsibilities for local/national evaluators as well as CSAT/grantee staffs</li> <li>■ Guidance for evaluation designs and products</li> <li>■ Standardized evaluation measures</li> <li>■ Logic models for program and evaluation design</li> </ul>
<b>PROJECT OFFICERS</b>	<ul style="list-style-type: none"> <li>■ GFA/SOW development</li> <li>■ Grant/contract application review</li> <li>■ Grant/contract monitoring</li> <li>■ Knowledge-generating products</li> <li>■ Identification and replication of promising practices</li> <li>■ Technical assistance assessment</li> </ul>	<ul style="list-style-type: none"> <li>■ Guidelines for high-quality evaluation designs (process and outcome)</li> <li>■ Logic models for program and evaluation designs</li> <li>■ List of evaluation measures with instrumentation</li> <li>■ Guidelines for evaluation products</li> </ul>
<b>GRANTEES: STUDY SITES</b>	<ul style="list-style-type: none"> <li>■ Grant applications</li> <li>■ Project development, implementation</li> <li>■ Local evaluation management</li> <li>■ Local evaluation coordination</li> <li>■ Knowledge-generating product development</li> </ul>	<ul style="list-style-type: none"> <li>■ Evaluation plan outline</li> <li>■ Process and outcomes evaluation designs</li> <li>■ SDU, clinician, cost, and client measures</li> <li>■ Roles and responsibilities for grantee provider/evaluator staff</li> <li>■ Guidelines for evaluation products</li> </ul>
<b>GRANTEES: MULTI-SITE EVALUATORS</b>	<ul style="list-style-type: none"> <li>■ Grant applications</li> <li>■ Comprehensive evaluation designs</li> <li>■ Evaluation implementation:               <ul style="list-style-type: none"> <li>– Data collection</li> <li>– Data analysis</li> <li>– Reporting evaluation findings</li> </ul> </li> <li>■ Evaluation product development</li> </ul>	<ul style="list-style-type: none"> <li>■ Evaluation concepts</li> <li>■ Logic models</li> <li>■ Evaluation designs</li> <li>■ Evaluation data requirements</li> <li>■ Data collection instrumentation</li> <li>■ Data collection process and procedures</li> <li>■ Data analysis</li> <li>■ Product development</li> </ul>
<b>NATIONAL EVALUATORS/ SERVICES RESEARCHERS</b>	<ul style="list-style-type: none"> <li>■ Contract applications</li> <li>■ Comprehensive evaluation designs</li> <li>■ Evaluation implementation:               <ul style="list-style-type: none"> <li>– Data collection</li> <li>– Data analysis</li> <li>– Reporting evaluation findings</li> </ul> </li> <li>■ Evaluation product development</li> </ul>	<ul style="list-style-type: none"> <li>■ Evaluation concepts</li> <li>■ Logic models</li> <li>■ Evaluation designs</li> <li>■ Evaluation data requirements</li> <li>■ Data collection instrumentation</li> <li>■ Data collection process and procedures</li> <li>■ Data analysis</li> <li>■ Product development</li> </ul>

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

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