

# NEDS

NATIONAL EVALUATION DATA SERVICES

## **PROFILE OF CLINICIANS IN THE NATIONAL TREATMENT IMPROVEMENT EVALUATION STUDY (NTIES)**

**August 2001**

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## PROFILE OF CLINICIANS IN THE NATIONAL TREATMENT IMPROVEMENT EVALUATION STUDY (NTIES)

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## FOREWORD

The Center for Substance Abuse Treatment (CSAT) works to improve the lives of those affected by alcohol and other substance abuse and, through treatment, to reduce the ill effects of substance abuse on individuals, families, communities, and society at large. Thus, one important mission of CSAT is to expand the knowledge about and the availability of effective substance abuse treatment and recovery services. To aid in accomplishing that mission, CSAT continues to invest significant resources in the development and acquisition of high quality data about substance abuse treatment services, clients, and outcomes. Sound scientific analysis of these data provides evidence upon which to base answers to questions about what kinds of treatment are most effective for what groups of clients, and about which treatment approaches are cost-effective methods for curbing addiction and addiction-related behaviors.

In support of these efforts, the Program Evaluation Branch (PEB) of CSAT established the National Evaluation Data Services (NEDS) contract to provide a wide array of data management and scientific support services across various programmatic and evaluation activities and to mine existing data whose potential has not been fully explored. Essentially, NEDS is a pioneering effort for CSAT in that the Center previously had no mechanism established to pull together databases for broad analytic purposes or to house databases produced under a wide array of activities. One of the specific objectives of the NEDS project is to provide CSAT with a flexible analytic capability to use existing data to address policy-relevant questions about substance abuse treatment. This report has been produced in pursuit of that objective.

In order to contribute to the limited body of literature and knowledge about the substance abuse treatment workforce, this report presents a profile of the characteristics of more than 800 clinicians who participated in the National Treatment Improvement Evaluation Study (NTIES). Clinicians profiled in this analysis worked in largely metropolitan, publicly-funded treatment programs, providing services to largely minority and special population clients. This report describes clinician demographics, experience, training, credentials, service rankings, and salaries, based on data from clinicians and from directors of the service delivery units where they worked.

Sharon Bishop  
Project Director  
National Evaluation Data Services

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# EXECUTIVE SUMMARY

## 1. INTRODUCTION

Within the field of substance abuse treatment, relatively little is known about the workforce providing substance abuse treatment services, and yet it is the ultimate responsibility of this workforce to work directly with individuals suffering from addictive disorders and to support their individual growth and recovery. Several factors make analysis of substance abuse treatment workforce issues difficult, and they are reflected in the limitations of the available literature. As noted by the Workforce Panel of the National Treatment Plan Initiative (Substance Abuse and Mental Health Services Administration [SAMHSA], 2000), there is still no current national, common workforce data set or repository of substance abuse treatment workforce data. Another challenge is that the substance abuse treatment workforce consists of multiple professional disciplines, with treatment staff operating across both public and private sectors in the context of varied treatment modalities. In addition, there is no established training or educational curriculum on substance abuse and addictive disorders that is common across professional disciplines, nor is there a uniform system for credentialing substance abuse treatment staff.

The purpose of this analysis is to contribute to the small body of existing knowledge about the substance abuse treatment workforce by providing a descriptive profile of clinicians working in publicly-funded substance abuse treatment facilities that participated in the National Treatment Improvement Evaluation Study (NTIES). For the purposes of this analysis, “clinicians” were defined as individuals who directly provided substance abuse treatment services to clients, including: licensed clinical social workers (LCSWs), licensed clinical psychologists, nurse practitioners, licensed medical practitioners (including medical doctors and physician assistants), certified addictions counselors (CACs), and direct service providers who hold other licenses.

## 2. METHODS

Data used for this analysis were from the National Treatment Improvement Evaluation Study (NTIES). Two data sets were used, clinician data from the NTIES Clinician Form (NCF) administered in 1993 and 1994, and data from the directors of the Service Delivery Units (SDUs) where the clinicians worked, the NTIES Baseline Administrative Report (NBAR) administered in 1993. There were 825 clinicians in the analysis sample, and 65 SDU directors in the administrative sample.

Descriptive statistics, including frequency distributions and cross-tabulations, were the primary techniques used to analyze the clinician and administrative data to answer the analytic questions. Cross-tabulations were used to compare multilevel categorical variables within each treatment modality. Significance testing techniques included Chi-square analyses, the Kruskal-Wallis test, a non-parametric one-way analysis of variance technique, and ANOVA.

### **3. RESULTS**

Based on clinician data, staff in the demonstration programs funded by CSAT grants and included in the NTIES sample were predominately female and racially and ethnically diverse, with half of the clinicians being white and half composed of clinicians who were black, of “other” race, Native American, and Asian/Pacific Islanders. The average age of clinicians was 42, and the majority had college educations. Age and education findings were similar to those reported in other studies (NAADAC, 1995; Lewin & NORC, 2000), however, the clinicians who participated in NTIES were more racially/ethnically diverse than clinicians in those studies, possibly due to the location and target populations of the treatment facilities in which they worked, and CSAT’s emphasis on cultural sensitivity and competency among treatment providers.

Overall, the average number of years in clinical practice among clinicians who participated in NTIES was 6.2 years, although the average number of years in clinical practice was significantly higher for men than for women. Understandably, the average amount of experience increased with age. Clinicians working in methadone facilities had significantly more years of experience than those working in all other treatment modalities.

Most clinicians had participated in drug/alcohol training in the past year, which was consistent with CSAT’s emphasis on staff training. A significantly larger proportion of men than women had received past-year alcohol/drug training. Also, a significantly smaller proportion of clinicians with less education (a high school diploma/GED or less) had received training in the past year than clinicians with more education, possibly due to requirements for professional credentialing, and/or as a result of their employment through the CSAT demonstration grants.

Of the clinicians who specified a type of credential, most were CACs, followed by LCSWs and licensed nurse practitioners. Few clinicians were either licensed medical practitioners or licensed clinical psychologists. Clinician credentials were associated with gender, in that all nurse practitioners and the majority of LCSWs were women, while significantly more licensed psychologists, CACs, and licensed medical practitioners were male.

Race was also significantly associated with type of clinician. The large majority of LCSWs were white, as were licensed medical practitioners and CACs. In contrast, the majority of nurse practitioners were black.

For all clinicians, the four services most frequently ranked among the top three in importance to substance abuse treatment included counseling to help clients gain control of self-damaging behavior, improving self-esteem, providing medical services, and providing legal and other information about drugs and alcohol. There were some variations in the pattern of service rankings by clinician credentials, but there were few differences in the rankings by gender, age, race/ethnicity or treatment modality.

SDU directors provided average hourly wage information for each of 11 types of clinicians. Salaries ranged from \$9 per hour for Bachelor's-level counselors and "other therapists" to \$50 per hour for psychiatrists. Average hourly wages (based on wages paid in 1993) were consistent with education levels, with the higher salaries primarily among clinicians with medical and psychology degrees. Wages were lower among clinicians in NTIES than the 1994 salaries reported for counselors of similar education in the NAADAC (1995) study.

#### **4. SUMMARY AND IMPLICATIONS**

Given the importance of those who deliver treatment services to the treatment outcomes of clients, the lack of knowledge about clinicians leaves a large gap in the knowledge base in the areas of treatment services, effectiveness, efficacy, efficiency, and treatment capacity. This analysis is one of few to attempt to describe some of the clinician characteristics and staffing patterns across treatment modalities. The importance of understanding clinicians and staffing patterns in the context of treatment modality was illustrated in this analysis, with clinician gender, race/ethnicity, education and years of experience all differing significantly by treatment modality.

Treatment provider directors and administrators need additional knowledge on optimum staffing patterns for the types of treatment they deliver. In general, the lack of consistency in items across both clinician and provider services data has limited the field's knowledge about the treatment workforce. The development of data collection instruments that can be used at both the clinician and the provider level could better inform providers about the mix of staff needed to meet the needs of clients in different treatment modalities, and along with comparable client data, could also support analyses of the effects of programmatic factors, as well as clinician characteristics, on client treatment outcomes.

Another potentially beneficial avenue for research, is to examine differences in clinician credentials and clinician training by treatment modality, which could not be assessed in this analysis due to insufficient data. Since professional disciplines and credential do not always equate with the tasks performed by clinicians, an important area for future research is to examine the work roles of clinicians in their treatment settings in addition to their professional disciplines. Information on staff demographics and staffing patterns could also better inform studies on clinician and client matching within treatment facilities. Beyond these potential avenues for research, new types of data such as data on staff turnover, job satisfaction, stress, and changes in job requirements and responsibilities over time could benefit providers who seek to maintain quality staff.

Given the large gap in knowledge about the clinical staff in the substance abuse treatment field, a comprehensive and nationally representative study of the current treatment workforce in both the public and private sectors is indicated. Such a study could address major gaps in knowledge about the treatment workforce identified by the National Treatment Plan workforce panel and by the field. A national study could collect and assess common workforce data on a multitude of issues where there are known knowledge gaps, including clinician demographics, professional disciplines, credentials, training, years of experience, staff functional roles and responsibilities, treatment orientation and treatment services provided, types of client populations served and client caseload, and knowledge about staff who are themselves in recovery. Factors that affect the treatment workforce could also be assessed, including such information as staffing patterns by treatment modality, staff salaries, job satisfaction, stress, changes in job requirements and responsibilities, factors affecting turnover, and opportunities for career advancement within the field. Given the current lack of knowledge about the substance abuse treatment workforce, such a national study could make an enormous contribution to the field by filling immediate knowledge gaps.

An interesting paradox among the clinicians in the NTIES study was that clinicians with less education than their colleagues had received less drug/alcohol training in the past year than clinicians with more education. This may be due to higher educational requirements among clinicians who are in the process of becoming credentialed, or who are seeking to maintain their credentials. The increasing trend toward credentialing may mean that scarce training resources will tend to be directed toward those who have or seek credentialing, rather than toward treatment staff with the least education (e.g., high school diploma, GED or less).

A potentially fruitful and valuable area for future investigation is in the assessment of the value of different treatment services by clinicians. In this analysis, clinicians ranked four of

twelve possible treatment services as being among the top three in importance to substance abuse treatment. There was more variation in service rankings by clinician credentials than by gender, race/ethnicity, or treatment modality. This suggests that clinicians may primarily view the value of different treatment services in the context of their professional training and credentials.

## **I. INTRODUCTION**

## I. INTRODUCTION

Within the field of substance abuse treatment, relatively little is known about the workforce providing substance abuse treatment services, and yet it is the ultimate responsibility of this workforce to work directly with individuals suffering from addictive disorders and to support their individual growth and recovery. A panel tasked with addressing workforce issues in the development of the National Treatment Plan (NTP) Initiative (Substance Abuse and Mental Health Services Administration [SAMHSA], 2000) concluded that a lack of adequate quantitative workforce data constrains efforts to analyze and address identified problems in the workforce, hampers policy debates focused specifically on workforce issues, and hinders attempts to analyze workforce supply and demand in any meaningful way. The focus of this technical report is to address some of the gaps in knowledge about the substance abuse treatment workforce by profiling clinical staff from the National Treatment Improvement Evaluation Study (NTIES).

This chapter presents an overview of selected research relevant to the substance abuse treatment workforce, including research on treatment staff demographics, education issues, credentialing, job satisfaction and salaries. The purpose and parameters of the analyses presented in this report are described, and the chapter concludes with an overview of the organization of this report.

### 1. OVERVIEW OF RELEVANT RESEARCH

Several factors which make analysis of substance abuse treatment workforce issues difficult are reflected in the limitations of the available literature. As noted by the NTP Workforce Panel (SAMHSA, 2000), there is still no current national, common workforce data set or repository of substance abuse treatment workforce data. Another challenge is that the substance abuse treatment workforce consists of multiple professional disciplines, with treatment staff operating across both public and private sectors in the context of varied treatment modalities. Additionally, there is no established training or educational curriculum on substance abuse and addictive disorders that is common across professional disciplines, nor is there a uniform system for credentialing substance abuse treatment staff. In response to the lack of common training and credentialing across disciplines CSAT implemented the Addiction Technology Transfer Center (ATTC) initiative to promote knowledge transfer.

Because of these constraints and the dearth of comprehensive national data to support workforce studies, much of the available literature is limited in scope. Consequently, empirical findings reported here may present one portion of the panorama of workforce issues, but they can not describe the status of the workforce in the national substance abuse treatment field as a

whole. Nonetheless, they do help to illustrate specific workforce issues, and to partially address some of the gaps in existing knowledge about the treatment workforce. In order to provide a context for the analyses presented in this report, the following sections identify some of the significant issues for the substance abuse treatment workforce, focusing on demographics, education and credentialing issues, salaries and job satisfaction among substance abuse treatment staff.

## **1.1 Demographics of Substance Abuse Treatment Staff**

While there are no comprehensive studies of the demographic composition of the national treatment workforce, the National Association of Alcohol and Drug Abuse Counselors (NAADAC) conducted an income study in 1995 that included information on 1994 incomes and on selected characteristics of the counselors among its membership across the United States (NAADAC, 1995). These counselors worked in local, State and Federal programs, private programs, and hospital-based programs. The study collected data by written questionnaire, with a 71 percent response rate from an original sample of 763 members. Based on responses to questionnaires from a total sample of 540 randomly selected members of NAADAC's approximately 17,000 members, more than half of the alcohol and drug abuse counselors (58%) were female, and the average survey respondent was 48 years old. The large majority (86%) of alcohol and drug abuse counselors in this sample were Caucasian, while much smaller proportions were African American (5%), Hispanic (3%), Asian (1%), Native American (1%) and of other race/ethnicity (3%). Most (71%) of the counselors had four-year (or higher) college degrees. More than half (53%) of the NAADAC survey respondents were nationally certified (e.g., nationally certified addiction counselors, or some other credential), and 79 percent were certified by the State in which they worked, typically in the area of alcoholism and drug abuse counseling (combined). Among the NAADAC respondents, more than half (58%) of the counselors indicated that they themselves were in recovery from alcoholism or some other addiction.

A more broadly representative sample of substance abuse treatment clinicians is described in a recent report prepared for CSAT on the need for information products and services by substance abuse treatment providers (Lewin Group and National Opinion Research Center, 2000). Telephone survey data were collected from 355 clinicians from a nationally representative sample of treatment providers (drawn from the 1997 Uniform Facilities Data Set). These clinicians worked in residential, outpatient and methadone treatment modalities. Demographic data from this representative sample (reported as weighted estimates) revealed that the majority of clinicians (69%) were female, and two-thirds (66%) were in the 40-59 age range,

with most clinicians (36%) in their 40s. White (non-Hispanic) clinicians comprised 75 percent of the treatment staff. Black clinicians accounted for 10 percent, Hispanic clinicians accounted for 11 percent of those working in substance abuse treatment facilities, and the remaining 4 percent were of “other” race/ethnicity. Among the clinicians surveyed, half (50%) had a Master’s degree, and an additional 2 percent had Ph.D.s or M.D.s. Slightly more than one-third (37%) of the clinicians had Associate or Bachelor’s degrees. One in 10 (10%) had educational levels equal to or lower than high school graduates.

Additional descriptive data from the survey revealed that more than half (57%) of the clinicians identified themselves as counselors, and one-fifth (20%) as social workers. About 1 in 10 (11%) said their backgrounds were in other mental health fields, with much smaller proportions identifying themselves as psychologists (3%), physician assistant/nurse (3%), other health care provider (4%) or of other training or education backgrounds (1%). Among these clinicians, nearly half (46%) were certified, and an additional 31 percent were in the process of becoming certified.

Another way of looking at treatment staff characteristics is to examine staffing patterns and the mix of education and professional disciplines in different treatment modalities. For example, Calsyn et al. (1990) examined the staffing patterns of American methadone maintenance treatment facilities. From 1987 to 1988, the investigators sent surveys to the directors of all methadone maintenance clinics listed in the National Directory of Drug Abuse and Alcohol Treatment Programs. Based on responses from the directors of 324 clinics, the investigators found that, nationwide, medical staff accounted for 44 percent of the staffing (including 27% nurses, 13% physicians, and 4% nurse practitioners/physician assistants), and that counseling staff, including MSWs, accounted for 49 percent of staff in methadone maintenance clinics. Psychologists (4%) and pharmacists (3%) comprised a small percentage of the staff. The primary conclusion from this study was that staffing for the typical methadone maintenance clinic was nearly evenly divided between medical and counseling personnel, suggesting a focus on the medication dispensing and medical aspects of methadone maintenance treatment, especially among proprietary clinics. The staffing pattern for methadone clinics would, therefore, likely differ from those of other treatment modalities, such as outpatient and inpatient treatment modalities. In general, the variations in client populations across different treatment modalities can impact the types of clinicians needed to provide treatment.

Taken together, the demographic patterns in these studies suggest that the treatment workforce is largely female, mostly white, with an average age in the mid-40s. Clinicians are also fairly well educated, with a large proportion holding college or postgraduate degrees.

Among the studies presented, the majority of treatment staff were either certified or becoming certified.

## **1.2 Education and Credentialing Issues Among Substance Abuse Treatment Staff**

The substance abuse treatment workforce is composed of practitioners from many fields, including physicians, psychologists, nurses, social workers, counselors, marriage and family therapists, paraprofessional counselors, individuals recovering from addiction, clergy and others involved in client interventions. This wide variety of professional disciplines is associated with corresponding variation in the educational levels among different treatment staff in the workforce, partly due to the different educational requirements of each profession.

Higher levels of education, however, are not always associated with advanced knowledge or skills among substance abuse treatment staff. For example, researchers have noted that, in general, nursing school curricula provide limited education on the addictive process, consisting mainly of definitions and descriptions of phenomena rather than preparation in assessment and intervention skills (Murphy, Scott, & Mandel, 1996). Similarly, the literature on substance abuse education for physicians suggests that more substance abuse topics should be incorporated into medical school curricula, as most physicians do not properly diagnose alcohol, tobacco and other drug abuse due to a lack of clinical integration of training (Fang, Applegate, et al., 1998). Additionally, among counselor education programs at the graduate school level, there is little consensus regarding competencies, content areas, or priorities that should be included in substance abuse curricula (Morgan & Toloczko, 1997).

Issues such as these led the Workforce Panel of the National Treatment Plan Initiative (SAMHSA, 2000) to recommend that core curricula be developed and disseminated for the education of addiction counselors based on the Center for Substance Abuse Treatment's (CSAT) *Addiction Counseling Competencies: The Knowledge, Skills and Attitudes of Professional Practice* (U.S. Department of Health and Human Services, 1998). The panel further recommended that this comprehensive, evidence-based curriculum be included at all levels of education and training for health and human services providers, appropriate to their scope of practice.

Certification and licensure are the most commonly used methods of credentialing substance abuse counselors. However, as with education, there is currently no uniformity in the certification and licensure of substance abuse treatment staff. Clinicians may be credentialed by one of two national professional organizations, the National Association of Alcohol and Drug

Abuse Counselors (NAADAC), and the International Certification Reciprocity Alcohol/Consortium and Other Drug Abuse (ICRC/AODA) (Evans & Hohenshil, 1997). Most States require substance abuse treatment staff to be credentialed, although there is no current uniform standard of credentialing across States (National Addiction Technology Transfer Center, 1999.) In addition, there are credentialing processes within professions that vary. Staff in other professional disciplines, such as nurses, social workers or physicians, are credentialed by their own disciplines or professional bodies, and/or by the State, although they may also apply for specialty credentials in substance abuse treatment. For example, although credentialed in their own professional field, practitioners such as registered nurses, psychologists, social workers and psychiatrists, can obtain a specialty credential in addiction. For other disciplines that do not offer credentials in addiction, practitioners can obtain a credential as an addiction counselor (SAMHSA, 2000).

In recognition of these factors, the NTP Workforce Panel (SAMHSA, 2000) identified a compelling need to integrate the variety of approaches to substance abuse counselor credentialing that currently exist, and urged that a unified approach for credentialing be developed and implemented nationwide. One attempt to make counselor credentialing uniform has been proposed by the ICRC/AODA. This is a voluntary membership organization of credentialing bodies that awards administrative reciprocity to counselors who have fulfilled the licensure requirements of its members. To be eligible for this certification, the substance abuse counselor candidate must demonstrate 6,000 hours of supervised polydrug-alcohol counseling experience, 270 clock hours of education, with 135 of those hours in counseling and 135 in substance abuse, and a supervised practicum with 300 hours of training. Currently, 39 States, the District of Columbia, and the United States Air Force, Army, and Navy are members of ICRC/AODA (ICRC/AODA, 2001). The increasing trend toward credentialing, and the requirements of managed care are issues that will continue to impact substance abuse treatment staff and providers.

### **1.3 Salaries and Job Satisfaction**

Salary is a substantial issue for the substance abuse treatment workforce. It is generally acknowledged that salaries for substance abuse treatment counselors are low compared to other professions (Gustafson, 1991; SAMHSA, 2000; Abbott, Walker & Otero, 1995). Gustafson (1991) reports that the low salaries paid to substance abuse workers directly impact recruitment, retention, or both, as the best counselors seek jobs outside of substance abuse. This leaves the field with less skilled counselors who may work in substance abuse to gain experience and training to improve their skills, and who may, in turn, move on to other agencies which reap the benefits of their experience. Many substance abuse counselors leave within a year or two for

jobs in government or other social service agencies with significantly better salaries. According to the National Association of Alcohol and Drug Abuse Counselors' *Income and Compensation Study of Alcohol and Drug Counseling Professionals 1995*, the median 1994 annual income of the 495 NAADAC counselors who provided income information was \$29,775, and the average annual income was \$32,033.

The issue of job satisfaction among substance abuse counselors has rarely been addressed in the literature, but one study, which included satisfaction with compensation, is enlightening. Evans and Hohenshil (1997) conducted a survey on job satisfaction among substance abuse counselors certified in Virginia. Job satisfaction was assessed using the Minnesota Satisfaction Questionnaire, a 20-scale instrument on aspects of work and work environments. Based on responses from 231 counselors, the respondents had a general satisfaction score that indicated that, as a group, the counselors were "very satisfied" with their jobs. Participants were most satisfied with the opportunity to be of help to others and least satisfied with compensation and advancement. Despite the high level of satisfaction with their positions, a high proportion (76%) of the substance abuse counselors indicated that they planned to leave their position in the next five years and of those, 18 percent planned to leave the field of substance abuse counseling altogether.

## **2. PURPOSE AND PARAMETERS OF THE PRESENT ANALYSIS**

The purpose of this analysis is to contribute to the small body of existing knowledge about the substance abuse treatment workforce by providing a descriptive profile of clinicians working in publicly-funded substance abuse treatment facilities that participated in the National Treatment Improvement Evaluation Study (NTIES). NTIES was conducted by the National Opinion Research Center (NORC) for the Center for Substance Abuse Treatment (CSAT) to evaluate the effectiveness of comprehensive treatment services provided by CSAT-sponsored demonstration projects. The NTIES project collected longitudinal data (1993-1995) from purposive samples of substance abuse treatment clients drawn from service delivery units (SDUs),<sup>1</sup> as well as data from substance abuse treatment staff and from SDU directors. For a detailed description of the NTIES study, see the appendix to this report.

The present analysis extends prior NTIES work by examining characteristics of more than 800 clinicians in the NTIES workforce sample. The NTIES dataset provides ample data for analysis of the characteristics of clinicians who worked in largely metropolitan, publicly funded

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<sup>1</sup> An SDU is defined by CSAT as a single site providing a single level of care (NORC, 1997). The classification of level of care is based on three parameters: facility type (e.g., hospital etc.); intensity of care (e.g., 24-hour, etc.); and type of service (e.g., outpatient, etc.) (Caliber Associates, 1999).

treatment settings providing service to largely minority and special populations (NORC, 1997). Data from the clinicians participating in NTIES provides a unique opportunity to profile a large sample of clinicians in the substance abuse treatment field, and to examine treatment staff characteristics of interest to the field, including clinician demographics, experience and training. In addition to these topics, data from SDU directors in NTIES allows analyses of staff demographics, training and credentials, and staff salaries. The NTIES data also permit analyses of many of these topics by treatment modality, providing an opportunity to conduct basic comparisons of staff across different treatment modalities. Since the NTIES sample included clients receiving treatment in large, metropolitan, publicly-funded facilities and was largely drawn from minority and special populations, the findings may best be generalizable to similar samples, and less comparable to clients across the nation's treatment system as a whole.

The key analysis questions addressed in this report are:

- What were the demographic characteristics of the substance abuse treatment workforce sample?
- What were the education and experience levels of the workforce sample, and what types of training did they receive?
- What were the professional disciplines and credentials of the workforce sample?
- What were the salary levels of the workforce sample?
- Were there differences in clinician characteristics and staffing patterns by treatment modality?

To address these analytic questions, data from two primary sources were used in this analysis: self-report questionnaire data from the clinicians, and questionnaire data from directors of the SDUs where those clinicians worked. These data sources are described in the Methods chapter.

### **3. ORGANIZATION OF THE REPORT**

This chapter has provided an overview of prior research related to workforce issues among substance abuse treatment staff, and the analytic questions examined in the present analysis. Chapter II, Methods, describes the analytic approach, methods and statistical procedures used in the analysis. Analytic results are provided in Chapter III, and a summary of findings and their implications for policy, practice and future research are provided in Chapter IV.

## **II. METHODS**

## II. METHODS

This chapter provides an overview of data used in this analysis and the analytic methods used to answer the analysis questions presented in the Introduction. We define “clinicians” for the purposes of this analysis, provide an overview of the National Treatment Improvement Evaluation Study (NTIES), and describe the clinician and administrative data sets and samples used in this analysis. The statistical techniques used for this analysis are described in the section on analysis methods.

### 1. DATA USED FOR THIS ANALYSIS

Data used for this analysis were from the National Treatment Improvement Study (NTIES). The study and the two data sets used are described in the following sections. For the purposes of this report, clinicians are defined and grouped in the categories originally developed in NTIES. For this analysis “clinicians” are individuals who directly provided substance abuse treatment services to clients, including:

- # Licensed clinical social workers (LCSWs)
- # Licensed clinical psychologists
- # Nurse practitioners
- # Licensed medical practitioners (including medical doctors and physician assistants)
- # Certified addictions counselors (CACs)
- # Direct service providers who hold other licenses.

Throughout this report, the term “clinicians” will refer to these substance abuse treatment staff from the workforce sample that participated in NTIES. Treatment services included activities such as counseling, group facilitation, case management, intake and assessment, treatment planning and discharge planning.

#### 1.1 Overview of the NTIES Data

To provide some context for this analysis, it is useful to know that the NTIES study focused on treatment populations in facilities that received funding from CSAT through three demonstration programs: Target Cities, Critical Populations, and Incarcerated and Non-incarcerated Criminal Justice programs. Consequently, these programs were largely located in urban centers, providing treatment services to predominately minority populations (NORC, 1977). For a more detailed description of the NTIES, see the appendix to this report. Three levels of data were collected in NTIES:

- 
- # Client-level information
  - # Clinician-level information collected from clinicians and other providers of CSAT-sponsored substance abuse treatment
  - # SDU-level administrative information from SDU directors or administrators, including information about the clinicians and other staff at the SDU.

Although substantial analyses of client-level data, especially related to treatment outcomes, have been reported from NTIES, relatively little analysis of the treatment workforce has been done. This analysis was designed to contribute to the literature that describes characteristics of the treatment workforce by providing a descriptive profile of those clinicians who treated clients in the NTIES sample. This analysis used information about clinicians from two sources: information supplied directly by the clinicians themselves (“clinician data”), and information supplied by the SDU directors/administrators in the facilities where the clinicians worked (“administrative data”).

## 1.2 Clinician Data

Directors of NTIES service delivery units (SDUs) were asked to coordinate completion of the NTIES Clinician Form (NCF) by “clinical staff who were presently practicing at the facility” (NTIES Final Report, 1997). The clinician data used for this analysis were from the written NCF questionnaires administered to different clinicians in September 1993 and November 1994. Two waves of survey administration occurred, targeting different SDUs in each wave. In the first wave, 744 clinicians completed the questionnaire and in the second, an additional 499 clinicians completed the questionnaire, yielding a total of 1,243 clinicians.

Because this analysis required treatment modality information, 81 clinicians whose data did not contain modality information were excluded. In addition, further analysis revealed that some of the clinicians had completed the questionnaire twice by mistakenly participating in both waves of the survey administration. After removing the duplicate records, the final sample size of clinicians for this analysis was 825. The number of clinicians providing data within each treatment modality was:

- # Methadone (n=105)
- # Outpatient non-methadone (n=288)
- # Short-term residential (n=94)
- # Long-term residential (n=153)
- # Correctional (n=185).

The clinician sample includes clinicians from one SDU that was later dropped from the NTIES study. They were included in this analysis because they had completed baseline questionnaires prior to being dropped. The sample of SDUs and clinicians in this data set is representative of the populations of clinicians who treated NTIES clients. Because of the sample design, these data were not weighted for geographical clustering effects. Questionnaire items were used to assess clinician demographics (gender, race/ethnicity, age and education), years of experience, training experiences, professional disciplines, credentials and rankings of treatment services. For some of these measures, there were low response rates, and those are noted in the results.

### **1.3 Administrative Data**

While the data set offered information about the clinicians treating NTIES clients, those clinicians worked in the context of SDUs for which administrative data about treatment staff were also available. The SDU-level analysis employed administrative data from a baseline questionnaire, the NTIES Baseline Administrative Report (NBAR), administered to SDU directors in June 1993. These data were obtained from the directors of the final NTIES sample of 65 SDUs that delivered treatment services to NTIES clients. The number of directors providing data within each treatment modality was:

- # Methadone (n=6)
- # Outpatient non-methadone (n=28)
- # Short-term residential (n=6)
- # Long-term residential (n=15)
- # Correctional (n=10).

NBAR questionnaire items were used to examine the demographics (gender, race/ethnicity, age and education), training, credentials, and salaries of the clinicians in the SDUs, as reported by SDU directors. Information supplied by the directors pertained to the SDU staff as a whole, not only to the clinicians who participated in NTIES and completed the baseline questionnaire. Therefore, there is not necessarily a direct correspondence between the director data and the clinician data from the same SDUs.

## **2. ANALYSIS METHODS**

Descriptive statistics, including frequency distributions and cross-tabulations, were the primary techniques used to analyze the clinician and administrative data to answer the analytic questions. Cross-tabulations were used to compare multi-level categorical variables within treatment modality. Significance testing techniques included Chi-square analyses, the Kruskal-

Wallis test, a non-parametric one-way analysis of variance technique, and ANOVA. Unless otherwise noted in this report, significance tests are based on Chi-square analyses.

### **III. RESULTS**

### **III. RESULTS**

This chapter presents analytic results from clinician self-report data and administrative data reported by service delivery unit (SDU) directors. Results of the analyses of the clinician dataset are presented in the following sections:

- # Demographics
- # Experience and training
- # Professional disciplines and credentials
- # Service priorities.

The first three sections describe the clinicians. The fourth section, service priorities, presents the results of clinician priority ranking of treatment services. Due to different response rates for different questionnaire items, the number of cases for the analyses vary. Results are provided for total samples, and to examine whether there are differences in clinicians and staffing patterns in different SDUs, results are also presented by modality. Modality analysis is important because the types of services offered and the types of staff required vary across treatment modalities. For example, in methadone treatment there are few services offered beyond providing the treatment doses of methadone medication to clients, and staffing requirements will consequently differ from those of non-methadone outpatient and residential modalities.

#### **1. DEMOGRAPHICS**

Clinician-reported demographic characteristics from the NCF questionnaire included gender, race/ethnicity, age and education. The total analysis sample included 825 clinicians, distributed across treatment modalities as follows:

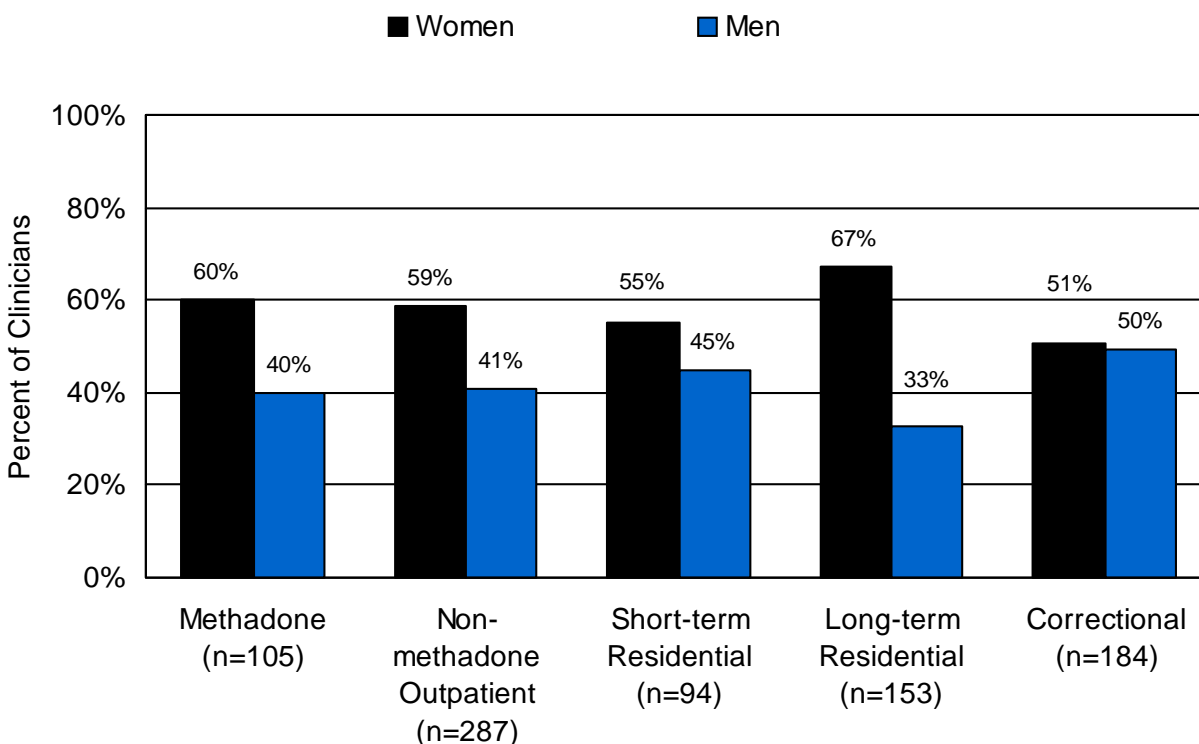
- # Methadone (12%)
- # Non-methadone outpatient (34%)
- # Short-term residential (11%)
- # Long-term residential (18%)
- # Correctional (25%).

Nearly half (46%) of the clinicians in this analysis worked in outpatient settings (methadone and non-methadone outpatient). Clinicians working in residential settings accounted for another 29 percent of clinicians. The remaining 25 percent provided treatment in correctional settings.

## 1.1 Gender

More than half (58%) of the total sample of clinicians were female. As shown in Exhibit III-1, women comprised the majority of clinicians in every modality of treatment. The largest gender difference was in the long-term residential modality, with women comprising slightly more than two-thirds (67%) of clinicians. Men and women were the most evenly represented in the correctional and the short-term residential modalities, with women comprising 51 percent of clinicians in the correctional modality, and 55 percent in the short-term residential modality. Gender differences by modality were statistically significant ( $p < .05$ ).

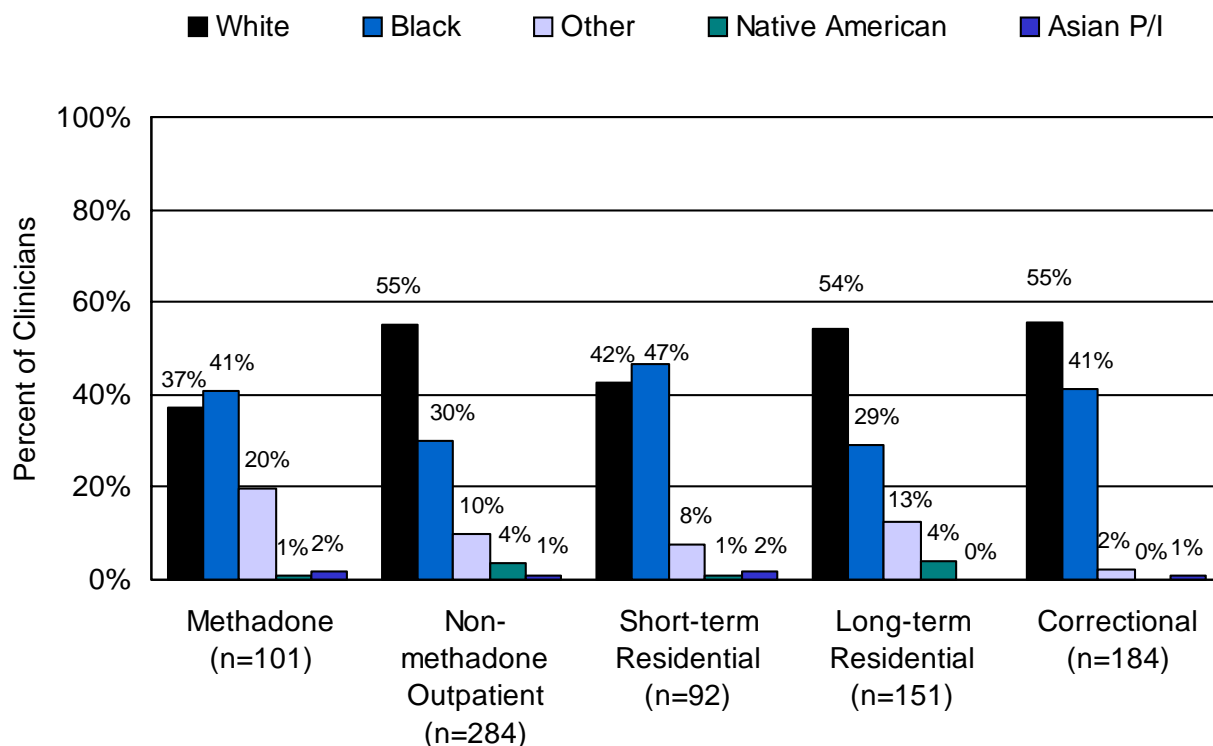
**EXHIBIT III-1**  
**CLINICIAN GENDER BY MODALITY**  
(n=823)



## 1.2 Race/Ethnicity

The term race/ethnicity is used here to be consistent with results reported in the original NTIES study. Based on self-report, the majority of clinicians (51%) in the total analysis sample were white, more than one-third (36%) were black, and 10 percent were of “other race” (“other race” does not include Native American or Asian/Pacific Islander). Very small proportions of the clinicians were Native American (2%) or Asian/Pacific Islander (1%). Clinician race/ethnicity by modality is presented in Exhibit III-2.

**EXHIBIT III-2**  
**CLINICIAN RACE/ETHNICITY BY MODALITY**  
**(n = 812)**



There were significant differences in the racial distribution of clinicians by treatment modality ( $p < .01$ ). Although black clinicians comprised slightly more than one-third (36%) of all clinicians, they represented the highest proportion of clinicians in the short-term residential (47%) and methadone treatment (41%) modalities. White clinicians comprised the largest racial group in the non-methadone outpatient (55%), long-term residential (54%), and correctional

(55%) modalities. Clinicians of “other” races represented the third largest group of clinicians in all modalities (10%). “Other” race clinicians were represented in higher proportions in the methadone (20%) and long-term residential (13%) modalities, and least represented in correctional (2%) facilities. Native Americans and Asian/Pacific Islanders were the least represented racial groups in all modalities, together comprising no more than five percent of all clinicians within any modality.

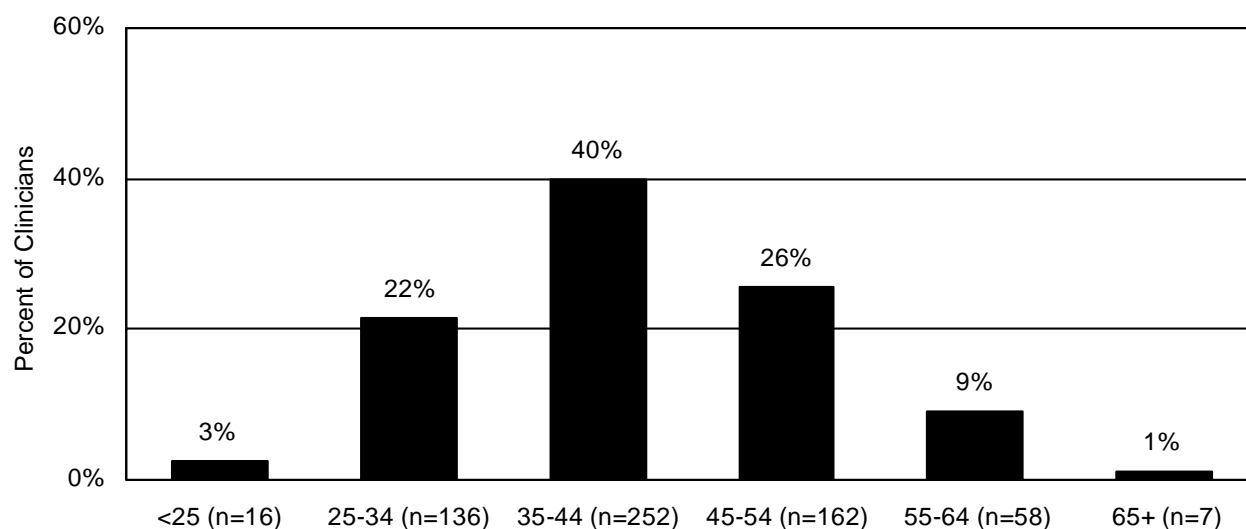
Clinicians were not asked whether they were Hispanic, but rather whether they had a Spanish-speaking background, and if so, they were asked to specify a type of Spanish-speaking background (Mexican, Puerto Rican, Cuban or other Spanish-speaking). Overall, 11 percent of clinicians identified themselves as having a Spanish-speaking background. The distribution of these 87 clinicians by modality was nearly identical to the pattern among the 79 clinicians who reported themselves to be of “other race.” As with “other race” clinicians, more of the clinicians working in methadone (19%) and long-term residential (13%) facilities had Spanish-speaking backgrounds than in other modalities. Correctional facilities had the smallest percentage of clinicians with Spanish-speaking backgrounds (4%). This suggests there may have been substantial overlap in the two groups. These differences in the proportion of clinicians with Spanish-speaking backgrounds across modalities were also statistically significant ( $p < .01$ ).

Of the 87 clinicians with Spanish-speaking backgrounds, 82 answered specific questions about country of ethnic origin. Among these clinicians, 45 percent reported they were of Mexican background, 29 percent Puerto Rican, 9 percent Cuban, and 31 percent indicated “other Spanish-speaking” background. These percentages do not total to 100 percent because respondents could indicate more than one type of background.

### **1.3 Age**

Clinician ages ranged from 22 to 81 years, with an average age of 42 years among the 631 who reported their age. The percent of clinicians by age group is presented in Exhibit III-3. Together, clinicians in the 35-44 age group (40%) and 45-54 age group (26%) comprised two-thirds (66%) of all clinicians. Clinicians from 25 to 34 years of age accounted for about one-fifth (22%) of the clinicians. Approximately 1 in 10 clinicians (9%) were ages 55 to 64. Clinicians under age 25 (3%) and over age 65 (1%) constituted a very small proportion. This age distribution pattern among clinicians was consistent across modalities, with very little variation.

**EXHIBIT III-3**  
**CLINICIAN AGE**  
**(n= 631)**



#### 1.4 Education

In this section, we describe the education of clinicians in the total sample and present results of analyses of clinician education by gender, race, and modality. The analyses presented here are based on clinician reports of the highest level of school they completed.

Clinicians were well educated in comparison to the general population. Of the 817 clients who reported their education, 29 percent held graduate degrees. Combined, clinicians with a Bachelor's (17%) or a Bachelor's with additional post-graduate work (9%) accounted for one-fourth (26%) of the clinicians. Also combined, those who completed a 2-year degree (13%) or some college work (23%) comprised an additional 36 percent of clinicians. The remaining 9 percent had a high school degree/GED or less education. The relatively high education levels among these clinicians may reflect education requirements for credentialing in the substance abuse treatment field.

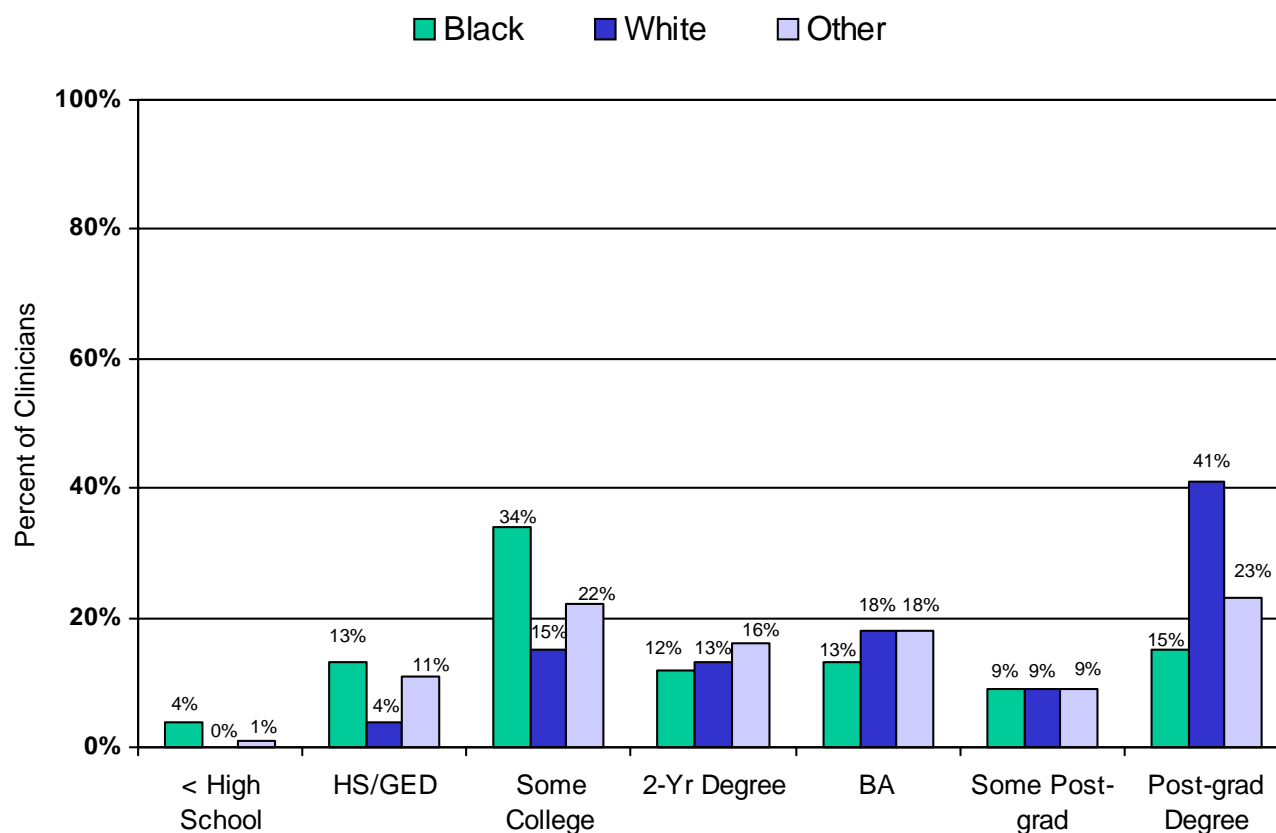
There were no significant differences by gender among the clinicians who reported their education. A comparison of clinician education by gender is presented in Exhibit III-4. The

pattern of education levels by gender was similar, with equal proportions of men and women having less than a bachelor's degree (45%), and having college degrees from 2-year to post-graduate (55%). Though not significant, the largest difference in education level between men and women was among those with post-graduate degree with about one-third of men (34%) and about one-fourth (26%) of women having post-graduate degrees.

<b>EXHIBIT III-4 CLINICIAN EDUCATION BY GENDER (n=816)</b>		
<b>Education</b>	<b>Male % (n=340)</b>	<b>Female % (n=476)</b>
< High school (n=11)	2	1
High school/GED (n=67)	8	8
Some college (n=185)	24	22
2-Year degree (n=104)	11	14
BA (n=137)	14	19
Some postgraduate (n=74)	8	10
Postgraduate (n=238)	34	26
<b>TOTAL</b>	<b>100</b>	<b>100</b>

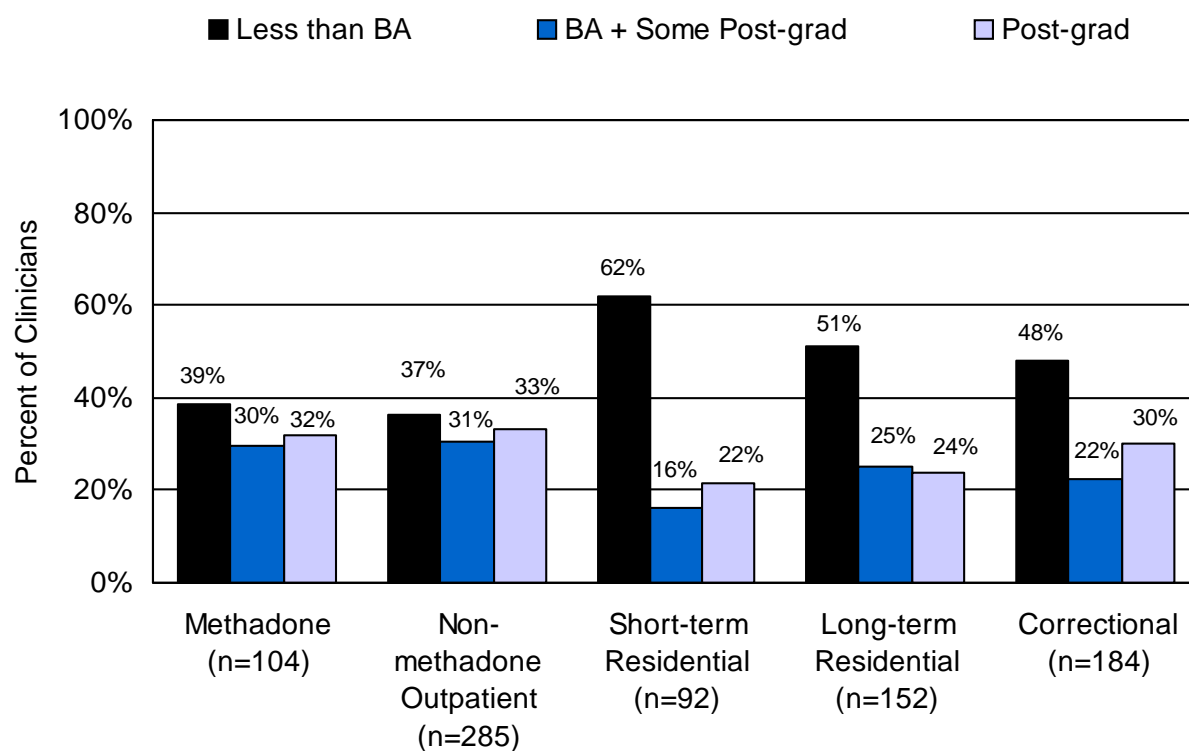
Race/ethnicity was significantly associated with clinician education ( $p < .01$ ). As shown in Exhibit III-5, black clinicians comprised the largest proportion (combined) among those with less than a 2-year college degree (51%), compared to white (19%) and "other race" (34%) clinicians. Among clinicians with a 2-year to a post-graduate degree (combined), the largest proportion was white clinicians (81%). Two-thirds (66%) of clinicians of "other race" and about half (49%) of black clinicians held college degrees. The largest differences were among clinicians with post-graduate degrees, with a larger proportion of white clinicians (41%) than black (15%) or other (23%) clinicians holding post-graduate degrees.

**EXHIBIT III-5**  
**CLINICIAN EDUCATION BY RACE/ETHNICITY**  
**(N=805)**



As with gender and race, education was significantly associated with treatment modality ( $p < .01$ ). As shown in Exhibit III-6, the education levels of clinicians working in the outpatient modalities (methadone and non-methadone) were fairly evenly distributed among those who had less than a Bachelor's degree, a Bachelor's with some graduate study, and a post-graduate degree. The pattern was different for residential and correctional modalities, where the largest proportion of clinicians were those with less than a Bachelor's (short-term residential, 62%; long-term residential, 51%; and correctional, 48%). Clinicians working in non-methadone outpatient facilities had the most even distribution of educational levels (37% less than Bachelor's, 31% with Bachelor's and Bachelor's with some post-graduate work, and 33% with post-graduate degree).

**EXHIBIT III-6**  
**CLINICIAN EDUCATION BY MODALITY**  
**(n=817)**



## 2. EXPERIENCE AND TRAINING

In addition to demographics, the experience and training of clinicians are important factors for describing the treatment workforce. The following sections present an analysis of the years of experience among clinicians, and the training they received, including drug/alcohol specific training, and the types of training (e.g., in-service, university or college) they received.

### 2.1 Years of Experience

Clinicians were asked how many years they had been in clinical practice, providing service to alcohol or drug dependent clients. Overall, the average number of years in clinical practice was 6.2 years. There was an association between years of experience and clinician gender and age, as well as the modality in which the clinicians worked. There was no statistical

association between years in clinical practice and clinician's race. The average years of experience by modality are presented in Exhibit III-7. Because of heterogeneity of variance, we conducted the non-parametric equivalent of a one-way analysis of variance, the Kruskal-Wallis test, to assess clinician experience by gender, age, and modality. The analysis revealed that the average number of years in clinical practice was significantly ( $p < .01$ ) higher for men (7.3 years) than for women (5.4 years). Not surprisingly, there was a significant ( $p < .01$ ) relationship between experience and age, with the average amount of experience increasing with each age category. Bivariate correlation analysis revealed that age explains almost half (46%) of the variation in experience as measured by years in clinical practice ( $p < .01$ ).

The average years of clinician experience by modality are presented in Exhibit III-7. As with gender and age, there was a statistically significant difference ( $p < .05$ ) in experience by modality, with clinicians working in methadone facilities having significantly more experience (mean 7.8 years in clinical practice) than clinicians in all other modalities (means ranging from 5.6 to 6.2 years).

<b>EXHIBIT III-7 AVERAGE NUMBER OF YEARS OF EXPERIENCE FOR CLINICIAN BY MODALITY</b>	
<b>Modality</b>	<b>Average Years of Experience</b>
Methadone	7.8
Non-methadone outpatient	5.9
Short-term residential	6.2
Long-term residential	5.6
Correctional	6.2

## **2.2 Training**

Clinicians were asked about their training experiences in the past year, including whether or not they had received drug/alcohol-specific training. In addition, clinicians reported the types of training they received in the past year, including in-service sessions, university or college course-work, training at a professional conference, or an internship/residency program. Clinicians could have received more than one type of training.

The large majority of clinicians (86%) had received drug/alcohol-specific training in the year prior to taking the questionnaire. Of those, 83 percent reported they had received in-service

training, and nearly two-thirds (62%) had received training at a professional conference. About one-fourth (26%) of clinicians had received training at a college or university, and 1 in 10 (10%) had received training through an internship/residency.

The largest proportions of clinicians who had received drug/alcohol training in the past year were in long-term residential (93%), and outpatient non-methadone (88%) modalities. A large proportion of clinicians in the short-term residential (83%) modality, had also received drug/alcohol training. Fewer clinicians working in correctional facilities (75%), although still a majority, received drug/alcohol training than those in the other modalities.

Analysis of training by modality revealed no difference between modalities in terms of the percentage of clinicians having received the most frequently reported training type, in-service training. The second most common type of training was a training session at a professional conference (62%). Of the clinicians in the correctional modality who had received drug/alcohol training in the past year, most (77%) had received training at a professional conference, compared to less than half (48%) of clinicians in the short-term residential modality. Among those who had received drug/alcohol training in the past year, about two-thirds of clinicians in the outpatient non-methadone (65%) and the methadone modalities (64%), and one-half (50%) in the long-term residential modality had received training at a professional conference. Modality differences were significant ( $p < .01$ ).

Only 26 percent of clinicians reported receiving university or college coursework, and there were no significant differences by modality. Just over 1 in 10 (11%) of the clinicians participated in internship or residency programs. Those working in short-term residential facilities reported the most participation in internship/residency training (17%), and those in methadone facilities reported the least participation (3%). Internship/residency training was reported by 14 percent of clinicians in the long-term residential modality, 12 percent in the outpatient non-methadone modality, and 9 percent in the correctional modality. The differences in percentages between modalities were statistically significant ( $p < .05$ ).

To examine whether clinicians who had the least formal education might be those who received the most training, we compared education levels and training experience. On the contrary, a significantly smaller proportion ( $p < .01$ ) of the clinicians with less education had received training. A significantly smaller proportion of clinicians with a high school diploma/GED (42%) and with less than a high school diploma/GED (33%) had received drug/alcohol training in the past year than clinicians with some college (82%) to 2-year degrees (94%). Also, and not surprisingly, a significantly smaller proportion of the clinicians with a high school diploma or less had received training at professional conferences than clinicians with

more education, particularly clinicians with post-graduate degrees (79%;  $p < .01$ ). These results may be affected by the continuing education requirements for credentialing or the maintenance of professional licenses among clinicians.

There were also significant differences in training by gender. A significantly larger proportion of men (88%) than women (83%) had received all types of past-year drug/alcohol-specific training ( $p < .01$ ).

### 3. PROFESSIONAL DISCIPLINES AND CREDENTIALS

Clinicians reported whether they were licensed clinical social workers, licensed clinical psychologists, licensed nurse practitioners, licensed medical practitioners, certified addiction counselors (CACs) or if they held other licenses. Of the 519 clinicians who reported their credentials, the majority (59%) were professionals who reported they held “other” licenses. Of the remaining 41 percent, most (20%) were CACs. Licensed clinical social workers (LCSWs) comprised 8 percent and licensed nurse practitioners 7 percent of the credentialed clinicians. A very small proportion of the clinicians were either licensed medical practitioners (5%) or licensed clinical psychologists (1%).

Clinician credentials are presented by gender in Exhibit III-8. Although the majority of clinicians were female, there was an association between some of the clinician types and gender. All nurse practitioners and the majority of LCSWs (59%) were women. In contrast, more licensed psychologists (57%), CACs (52%), and licensed medical practitioners (73%) were male. The discipline by gender differences for nurse practitioners and licensed medical practitioners were significant ( $p < .01$ ).

<b>EXHIBIT III-8 CLINICIAN CREDENTIALS BY GENDER (n=519)</b>						
	<b>Licensed Clinical Social Worker (n=41) %</b>	<b>Licensed Psychologist (n=7) %</b>	<b>Nurse Practitioner (n=35) %</b>	<b>Licensed Medical Practitioner (n=26) %</b>	<b>Certified Addictions Counselor (n=104) %</b>	<b>Other License (n=296) %</b>
Male (n=198)	41	57	0	73	52	35
Female (n=321)	59	43	100	27	48	65
Total	100	100	100	100	100	100

Race was also associated with type of clinician. Compared to the other race/ethnicities, the large majority of LCSWs were white (71%), as were licensed medical practitioners (62%,  $p < .01$ ), and CACs (60%). In contrast, two-thirds of nurse practitioners were black (66%). Native Americans were represented only among certified addictions counselors (3%) and other licensed professionals (3%). Asians/Pacific Islanders were exclusively licensed medical practitioners (6 of 6 Asian/Pacific Islander clinicians who responded to both credential type and race questions).

Although most clinicians were between the ages of 35 and 54 years, there were differences in the age distributions between different types of clinicians. The most notable difference was the higher average age of licensed clinical psychologists (mean age 56 years), although this difference was not statistically significant, possibly due to the small sample size. Certified addictions counselors were, on average, significantly older than other clinicians (mean age 47 years,  $p < .01$ ).

An analysis of the 178 clinicians who reported having specific licenses (i.e., not including “other”) revealed that more LCSWs worked in non-methadone outpatient (49%) and long-term residential (27%) modalities than in other modalities. Only 7 clinicians were licensed clinical psychologists, and most of them (5) worked in non-methadone outpatient facilities. None worked in long-term residential or correctional modalities. Nurse practitioners worked in correctional facilities more (43%) than in other modalities. Compared to other clinicians, licensed medical practitioners (which could include physicians, physician’s assistants, registered nurses, etc.) more often worked in short-term residential (27%), non-methadone outpatient facilities (23%), and methadone facilities (23%), and less frequently in correctional facilities (15%), and long-term residential facilities (12%). Differences in clinician type by modality were not significant, possibly due to small number of clinicians.

#### **4. SERVICE PRIORITIES**

Clinicians were asked to rank 12 services in order of their perceived importance to substance abuse treatment. Treatment services were broadly defined, including activities that may not be considered treatment *per se*, such as participation in 12-step self-help programs, or the use of urinalysis or other drug testing. Most clinicians (97%) completed the service priority ranking section of the questionnaire. The frequency and percent of services ranked by all clinicians, calculated as among the top three of importance to substance abuse treatment, are presented in Exhibit III-9, from highest to lowest rankings.

<b>EXHIBIT III-9</b> <b>NUMBER AND PERCENT OF CLINICIAN RANKINGS OF</b> <b>SERVICES AMONG THE TOP THREE*</b> <b>(n=798)</b>		
	<b>n</b>	<b>%</b>
Control self-damaging behavior	502	63
Self-esteem	336	42
Medical services	301	38
Information about drugs/alcohol	295	37
Mental health services	203	26
Social environment	190	24
Participation in 12-step meetings	139	17
Everyday social/practical skills	139	17
Urinalysis or other drug testing	104	13
Spiritual counseling	67	9
Job training	51	6
Rewards/punishments for behavior	32	4

\* Clinicians ranked more than one service among their top three services.

For all clinicians, the four services most frequently ranked among the top three in importance to substance abuse treatment were:

- # Counseling to help clients gain control of self-damaging behavior (63%)
- # Improving the self-esteem of clients (42%)
- # Medical services such as physical examinations and treatment for illnesses or medical conditions (38%)
- # Legal and other information about drugs and alcohol (37%).

Fewer than one-third of clinicians ranked the remaining eight services among the top three of importance to substance abuse treatment. About one-fourth ranked mental health services (26%) and counseling to change the social environment (24%) among the top three services, while fewer than one-fifth ranked participation in 12-step meetings (17%), counseling in everyday social and practical skills (17%), and urinalysis or other drug testing (13%) among the top three services. Of all 12 services, spiritual counseling (9%), job training (6%) and rewards and punishments for behavior (4%) were ranked among the top three services of importance to substance abuse treatment by fewer than 10 percent of clinicians.

To determine whether service rankings differed by gender, race, age, modality, or clinician credentials, we examined rankings by each factor. Because these analyses were performed using cross-tabulations for each service by the additional factor (e.g., gender, race, etc.) the total sample sizes underlying each calculated percentage vary due to differing levels of response rates for each variable.

#### 4.1 Gender

As shown in Exhibit III-10, the overall pattern of clinician rankings of the top three services of importance among men and women were essentially the same as the rankings by all clinicians. Clinician rankings of services were largely similar between men and women, with significant differences in rankings for only 2 of the 12 services. Significantly more men (22%) than women (15%) ranked participation in 12-step meetings among the top three services of importance to substance abuse treatment ( $p < .05$ ), while significantly more women (29%) than men (20%) ranked mental health services among the top three of importance to substance abuse treatment ( $p < .01$ ).

<b>EXHIBIT III-10</b> <b>PERCENT OF CLINICIAN RANKINGS OF EACH SERVICE</b> <b>AMONG THE TOP THREE BY GENDER*</b> <b>(n=798)</b>		
	Male % (n=334)	Female % (n=468)
Control self-damaging behavior	65	62
Self-esteem	43	42
Medical services	35	40
Information about drugs/alcohol	38	36
Mental health services**	20	29
Social environment	21	26
Participation in 12-step meetings***	22	15
Everyday social/practical skills	17	18
Urinalysis or other drug testing	11	15
Spiritual counseling	10	7
Job training	7	6
Rewards/punishments for behavior	6	3

\* Clinicians ranked more than one service among their top three services. \*\* $p < .01$ . \*\*\* $p < .05$

## 4.2 Race/Ethnicity

The overall pattern of clinician rankings of the 12 services across race/ethnicity was similar to the pattern for all clinicians, as shown in Exhibit III-11. There were significant differences across race/ethnicity for only 3 of the 12 services. Although the number of Native American clinicians was small (18), significantly more of the Native American (72%) and white (69%) clinicians ranked counseling to help gain control of self-damaging behavior among their top three treatment service priorities than the remaining clinicians, especially black clinicians (55%;  $p < .01$ ). Native Americans also more often ranked the provision of drug and alcohol information (67%) among their top three services than other clinicians, particularly white (33%) and “other race” (30%) clinicians ( $p < .01$ ). By contrast, significantly more (21%) of the clinicians in the “other race” category ranked urinalysis or other drug testing among the top three services ( $p < .01$ ) than clinicians of other race/ethnicities, particularly Native Americans (6%) and Asian/Pacific Islanders (0%) who did not prioritize this service at all.

<b>EXHIBIT III-11</b> <b>PERCENT OF CLINICIAN RANKINGS OF EACH</b> <b>SERVICE AMONG THE TOP THREE BY RACE*</b> <b>(n=798)</b>					
	White %	Black %	Native American %	Asian/Pacific Islander %	Other %
Control self-damaging behavior **	69	55	72	56	61
Self-esteem	41	45	61	25	38
Medical services	38	36	28	38	42
Information about drugs/alcohol **	33	42	67	44	30
Mental health services	28	23	6	25	29
Social environment	25	21	22	25	26
Participation in 12-step meetings	20	16	17	13	14
Everyday social/practical skills	18	18	0	11	16
Urinalysis or other drug testing **	9	17	6	0	21
Spiritual counseling	6	11	22	13	10
Job training	5	9	6	0	4
Rewards/punishments for behavior	4	3	6	0	5

\* Clinicians ranked more than one service among their top three services. The total sample sizes underlying each calculated frequency vary due to different response rates for each service in the cross-tabulation. \*\* $p < .01$ .

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### 4.3 Age

We examined clinician rankings of treatment services by six age groups:

- # Less than 25
- # 25-34
- # 35-44
- # 45-54
- # 55-64
- # Over age 65.

With some variations, the ranking of service priorities across age groups was fairly similar and tended to follow the total rankings of all clinicians. There were no significant differences by age in service rankings for 9 of the 12 services. While noting that the numbers of clinicians less than age 25 (16) and those over age 65 (7) were the smallest of all age groups, there were significant differences between these and the remaining age groups for three services. Significantly more of the clinicians who were less than 25 (69%) ranked providing counseling to change social environments among the top three services than did clinicians of other age groups, particularly those ages 35-44 (22%) and 45-54 (24%;  $p < .05$ ). Significantly more (44%) clinicians under 25 years of age also ranked the provision of legal and other drug and alcohol information among the top three services than clinicians of other age groups, particularly those ages 25-34 years (24%) and over 65 years (14%;  $p < .05$ ). By contrast, no clinicians under 25 years of age ranked psychiatric and mental health services among the top three services, while clinicians over age 65 most frequently (43%) ranked this service among the top three ( $p < .01$ ).

### 4.4 Modality

With few variations, service rankings did not vary by clinicians across modalities, and rankings were similar to the pattern of rankings for all clinicians. The number of clinicians ranking each service, and the percent and total number of clinicians are presented by modality in Exhibit III-12. There were significant differences in the proportion of clinicians ranking 3 of the 12 services, although they were not among the highest ranked services.

Job training was ranked among the top three priorities by few clinicians (6%) overall, however, clinicians in correctional facilities ranked job training among their top three priorities more often (11%) than other clinicians, particularly those in long-term residential facilities (3%;  $p < .05$ ). Similarly, while 18 percent of clinicians ranked participation in 12-step meetings among the top three services, significantly more clinicians in the correctional modality (24%) ranked this

activity among the top three than clinicians in other modalities, particularly clinicians working in methadone facilities (10%,  $p < .01$ ). This difference is not surprising, since using methadone is not consistent with the abstinence requirements of 12-step programs.

Urinalysis and other drug/alcohol testing was ranked among the top three priorities by 13 percent of clinicians overall. Although the number of clinicians ranking this service was small (20 or fewer across modalities), significantly more clinicians working in methadone (20%) and short-term residential (19%) facilities ranked urinalysis among the top three services of importance to substance abuse treatment than clinicians working in outpatient (11%) and correctional facilities (5%;  $p < .01$ ).

<b>EXHIBIT III-12 PERCENT OF CLINICIAN RANKINGS OF EACH SERVICE AMONG THE TOP THREE BY MODALITY*</b>					
	<b>Methadone %</b>	<b>Non- Methadone Outpatient %</b>	<b>Short-term Residential %</b>	<b>Long-term Residential %</b>	<b>Correctional %</b>
Control self-damaging behavior	66	68	58	56	61
Self-esteem	54	39	38	46	39
Medical services	41	40	38	33	37
Information about drugs/alcohol	27	34	43	38	42
Mental health services	24	31	20	22	24
Social environment	26	26	19	25	21
Participation in 12-step meetings**	10	11	21	24	23
Everyday social/practical skills	10	16	14	20	23
Urinalysis or other drug testing**	20	11	19	17	5
Spiritual counseling	7	5	11	10	12
Job training***	6	6	6	3	11
Rewards/punishments for behavior	1	6	7	5	1

\*Clinicians ranked more than one service among their top three services. The total sample sizes underlying each calculated frequency vary due to different response rates for each service in the cross-tabulation. \*\* $p < .01$ . \*\*\* $p < .05$ .

## 4.5 Credentials

While there is similarity in the rankings of the four services most frequently ranked among the top three in importance to substance abuse treatment, there was more variation in the ranking of services by credentials than by gender, race, age, and modality. The number of clinicians ranking each service, the percentage and the total number of clinicians are presented by modality in Exhibit III-13. The four services most frequently ranked among the top three in importance by all clinicians were:

- # Counseling to control self-damaging behavior
- # Counseling to improve self-esteem
- # Medical services
- # Information about drugs and alcohol.

By comparison, of the four most frequently ranked services, LCSWs ranked counseling to improve the social environment (34%) in place of medical services (29%), and licensed psychologists ranked counseling to improve social and practical skills (29%) in place of medical services (14%). By contrast, CACs ranked 12-step participation (32%) among the four most frequently ranked services, slightly ahead of counseling to improve self-esteem (30%).

The pattern of rankings was also somewhat different for nurse practitioners and medical practitioners. Among the four services most frequently ranked among the top three of importance to substance abuse treatment, nurse practitioners rated counseling to improve the social environment (30%) more often than providing information about drugs/alcohol (21%). Not surprisingly, of all credential types, the highest ratings for medical services were among nurse practitioners (49%) and licensed medical practitioners (52%). Interestingly, licensed medical practitioners ranked mental health services (48%) higher than clinicians with any other credentials, including LCSWs (27%) and licensed clinical psychologists (14%). Medical practitioners were also the only group to rank mental health services among its top four services, rather than information about drugs and alcohol. With few exceptions, clinician rankings were consistent with their credentials and training.

<b>EXHIBIT III-13</b> <b>PERCENT OF CLINICIAN RANKINGS OF EACH SERVICE</b> <b>AMONG THE TOP THREE BY CREDENTIALS*</b> <b>(n=798)</b>						
	Licensed Clinical Social Worker %	Licensed Clinical Psychologist %	Licensed Practical Nurse %	Licensed Medical Practitioner %	Certified Addiction Counselor %	Other License %
Control self-damaging behavior	71	100	64	35	61	60
Self-esteem	53	71	36	26	30	40
Medical services	29	14	49	52	35	47
Information about drugs/alcohol	37	43	21	22	50	39
Mental health services	27	14	24	48	22	34
Social environment	34	0	30	26	13	22
Participation in 12-step meetings	10	14	12	22	32	14
Everyday social/practical skills	12	29	6	9	23	14
Urinalysis or other drug testing	17	0	6	26	15	15
Spiritual counseling	0	0	9	9	8	7
Job training	2	14	33	0	8	3
Rewards/punishments for behavior	5	0	3	0	1	2

\* Clinicians ranked more than one service among their top three services. The total sample sizes underlying each calculated frequency vary due to different response rates for each service in the cross-tabulation.

## 5. ADMINISTRATIVE DATA

Service delivery unit (SDU) directors were asked questions about their staff as a whole, using the NTIES Baseline Administrative Report (NBAR) questionnaire. Their responses apply not only to the clinicians at the SDU who participated in NTIES, but to all the clinicians working at the SDU. In addition, there were variations in item wording and types of information collected across the clinician and director instruments. As a result, the description of SDU staff that

emerged from the NBAR data set did not always correspond to the profile of clinicians as produced by analyzing the data set derived from clinicians who completed the NTIES Clinician Form (NCF). For these reasons, the intent here is not to make a direct comparison of director and clinician responses, but primarily to provide some supplemental information about clinical staff from the directors' administrative perspective, and to provide some information such as the proportion of staff in recovery and clinician salary, that were not available from the clinician data. The following sections describe findings from SDU directors on staff demographics, training, credentials, and salaries.

## **5.1 Demographics**

SDU directors were asked to report whether more than half of their staff were male, were of racial/ethnic minorities, or were in recovery. These data are presented in Exhibit III-14. Based on responses from directors from the pool of 65 SDUs, few directors (23%) reported that more than half of their staff were male. The differences in staff gender composition between modalities were statistically significant ( $p < .05$ ). More of the directors of short-term residential (50%) and correctional facilities (44%) reported that more than half of their staff were male, than directors of methadone (20%), non-methadone outpatient (4%), and long-term residential (36%) modalities.

In contrast to gender, most of the SDU directors (55%) reported that more than half of their staff were racial/ethnic minorities. There was no significant difference in the reported racial composition between modalities.

Overall, one-third of the directors (33%) reported that more than half of the SDU staff were individuals in recovery. There were significant differences between modalities in terms of the percentage of staff who were in recovery ( $p < .01$ ). Correctional facilities directors most frequently reported that more than half of their staff were in recovery (78%). In the residential modalities, a higher proportion of directors reported that more than half of their staff were in recovery (short-term, 50% and long-term 57%) than did directors of the outpatient modalities (0% in methadone, and 11% in non-methadone).

<b>EXHIBIT III-14</b>					
<b>DIRECTOR REPORTS OF STAFF COMPOSITION BY</b>					
<b>GENDER, RACE/ETHNICITY AND RECOVERY STATUS BY MODALITY</b>					
<b>(n=65)</b>					
	<b>Methadone %</b>	<b>Non-methadone outpatient %</b>	<b>Short-term Residential %</b>	<b>Long-term Residential %</b>	<b>Correctional %</b>
More than half SDU staff are male (n = 61)**	20	4	50	36	44
More than half SDU staff are racial/ethnic minorities (n = 62)	60	57	67	64	22
More than half SDU staff are in recovery (n = 63)*	0	11	50	57	78

\* (p<.01) \*\* (p<.05)

## 5.2 Training

Directors were asked if any of their staff had received training in the past year. Exhibit III-15 presents the percentage of SDU directors reporting staff training by type of training. Of all 65 SDUs, 28 directors (43%) responded to questions about whether at least one of their staff members had received any external training in the past year, or received in-service training provided by external trainers. Of those 28, nearly all also reported that any staff had received training in workshops (93%) and conferences (93%). In-service training was provided by external trainers for staff at nearly two-thirds (64%) of the responding SDUs. Fewer directors reported that their staff had received formal training through local college or training programs (43%) and correspondence courses (4%). Internships were rare, providing training for staff at only 2 of the 28 responding SDUs (7%). “Other” types of training were received by some staff at five of the responding SDUs (18%). There were no statistical differences in training types between modalities.

<b>EXHIBIT III-15</b>	
<b>PERCENT OF SDU DIRECTORS REPORTING STAFF TRAINING BY TYPE OF TRAINING</b>	
<b>(n=28)</b>	
<b>Type of Training</b>	<b>Percent of Reporting SDU Directors</b>
Workshops	93
Conferences	93
In-service training	64
Formal coursework through local colleges or training programs	43
Other training	18
Internship	7
Formal coursework through correspondence courses	4

### **5.3 Credentials**

The NBAR asked SDU directors what percentage of their staff were full-time psychiatrists, registered nurses, psychologists, social workers, counselors (with Bachelor's degree) and non-degree counselors.

Of the responding SDU directors in each staff category, almost all reported employing at least one full-time counselor with a Bachelor's degree (91%). The second largest proportion was full-time counselor without a Bachelor's degree (86%). Two-thirds of the SDUs had at least one full-time social worker on staff (67%). In contrast, less than half of the directors who responded (47%) said they had at least one full-time registered nurse on staff. One-third of SDUs had a full-time psychologist on staff (33%), and none had at least one full-time psychiatrist on staff. It should be noted that many SDU directors did not answer the questions about their staff credential profile (responses ranged from 32 to 58 of the 65 SDUs). Due to the lack of data, a modality analysis was not performed.

### **5.4 Salaries**

SDU directors were asked for the average hourly wage for each of 11 types of clinicians. (Hourly wages were based on wages paid in 1993.) Average hourly wages by clinician credentials are presented in Exhibit III-16, from highest to lowest wages. Hourly wages were consistent with education levels, with the highest salaries among clinicians with advanced

medical and psychology degrees. Average hourly wages were lowest among counselors with Bachelor's degrees or less.

<b>EXHIBIT III-16</b>	
<b>DIRECTOR REPORTS OF CLINICIAN AVERAGE HOURLY WAGES BY CREDENTIAL TYPE</b>	
<b>(n=65)</b>	
<b>Credential Type (Number of Director Responses)</b>	<b>Average Hourly Wage</b>
Psychiatrist (n=33)	\$50
Psychologist (n=37)	\$37
Other M.D. (n=38)	\$29
Other medical (n=30)	\$16
Social worker (n=33)	\$14
Other professional (n=40)	\$14
Registered nurse (n=30)	\$12
Other licensed nurse (n=29)	\$12
Counselor with Bachelor's degree (n=57)	\$11
Counselor w/out Bachelors degree (n=48)	\$9
Other therapist (n=38)	\$9

We performed a one-way analysis of variance (ANOVA) for the average hourly wage of each type of clinician for those SDUs where more than half the staff of the SDU were males, and where more than half the staff of the SDU were minorities. The average hourly wage for other medical personnel (not psychiatrists or registered/licensed nurses) while not significantly different, was higher among SDUs whose staff were more than half male (\$23) compared to SDUs where males comprised less than half the staff (\$15). In contrast, at SDUs where more than half the staff were female, psychologists were on average paid more (\$43 per hour) than they were at SDUs where the majority of the staff were male (\$31).

There were also some wage differences at SDUs where the majority of the staff were racial/ethnic minorities compared to other SDUs. Counselors with no degree were paid, on average, significantly more per hour at SDUs where more than half the staff were minorities (\$10) than at other SDUs (\$7) ( $F = 4.8, p = .034$ ). Although not statistically significant, there was a large difference in average hourly wage for psychiatrists, with those at SDUs with over half minority staff having a lower hourly wage (\$37) than those in SDUs where less than half of

the staff were minority (\$63). An analysis of clinician wages by modality was not performed because the number of clinicians was not sufficient for the analysis.

The results of all of these analyses, while not representative of all clinicians in substance abuse treatment, may be reasonably representative of clinicians in publicly-funded, primarily urban treatment facilities that provided services to largely minority populations in the early to mid-1990s.

## **IV. SUMMARY AND IMPLICATIONS**

## **IV. SUMMARY AND IMPLICATIONS**

Substance abuse treatment clinicians play a crucial role on the front lines of treatment for individuals with addictive disorders. The analysis presented in this report has centered on profiling clinicians who participated in a national treatment study in order to contribute to the currently small body of knowledge about the substance abuse treatment work force. A summary of the analytic results and their implications for research, policy and practice are provided in this chapter.

### **1. SUMMARY**

The main results corresponding to analyses from the clinician and administrative datasets are summarized here by topics including demographics, experience and training, professional discipline and credentials, and administrative data. Implications of the results for research, policy and practice are presented in the following section.

#### **1.1 Demographics**

Treatment staff participating in NTIES were predominately female, and racially and ethnically diverse with about half of the clinicians being white and half comprised of clinicians who were black, of “other” race, Native American, and Asian/Pacific Islanders. The average age of clinicians was 42, and two-thirds of the clinicians were from 35 to 54 years of age. As a group, the majority of clinicians had college educations ranging from 2-year to post-graduate degrees. Education levels did not differ by gender, however there were significant differences in education by clinician race/ethnicity and by treatment modality. White clinicians comprised the largest proportion of those with college degrees, followed by clinicians of “other” race/ethnicity and black clinicians. There were significant differences in education by treatment modality, with education levels of clinicians working in outpatient modalities being fairly evenly distributed among those with less than a Bachelor’s degree, a Bachelor’s with some college and post-graduate degrees. By contrast, in residential and correctional modalities, the largest proportion of clinicians was among those with less than a Bachelor’s degree.

Generally, demographics of the treatment staff participating in NTIES were similar to those reported in other studies (NAADAC,1995; Lewin/NORC, 2000). In those studies, clinicians were predominately female, in their 40s, and similarly educated. However, the clinicians who participated in NTIES were more racially/ethnically diverse than clinicians in those studies, possibly due to the location and target populations of the treatment facilities in

which they worked, and possibly due to employment through the demonstration grants provided by CSAT.

## **1.2 Experience and Training**

Clinicians were asked how many years they had been in clinical practice, providing service to alcohol or drug dependent clients. Overall, the average number of years in clinical practice was 6.2 years. Years of experience was associated with clinician gender, age, and treatment modality, but not with race/ethnicity. The average number of years in clinical practice was significantly higher for men than for women. Understandably, there was a significant relationship between experience and age, with the average amount of experience increasing with age. Modality analysis showed that clinicians working in methadone facilities had significantly more years of experience than those working in all other treatment modalities.

Most clinicians had participated in drug/alcohol training in the past year. Perhaps not surprisingly, the types of training they received most were the less intensive and therefore less expensive types, such as in-service and conference training, compared to college or internship training. Although women comprised a larger proportion of clinicians than men, men had significantly more years of clinical experience than women, and a significantly larger proportion of men than women had received past-year alcohol/drug training. Also notable, a significantly smaller proportion of clinicians with less education (a high school diploma/GED or less) had received training in the past year than clinicians with more education, possibly due to requirements to obtain or maintain professional credentials, and/or as a result of their employment through the demonstration grants. There were no differences by modality in the percentage of clinicians who received the most frequent type of training, in-service training.

## **1.3 Professional Discipline and Credentials**

Clinicians reported whether they were licensed clinical social workers (LCSWs) licensed clinical psychologists, licensed nurse practitioners, licensed medical practitioners, certified addiction counselors (CACs) or if they held other licenses. The majority were professionals who reported they held "other" licenses. Of the remaining clinicians, most were CACs, followed by LCSWs and licensed nurse practitioners. A very small proportion of the clinicians were either licensed medical practitioners or licensed clinical psychologists.

Although the majority of clinicians were female, there was a significant association between clinician credentials and gender. All nurse practitioners and the majority of LCSWs

were women. In contrast, significantly more licensed psychologists, CACs, and licensed medical practitioners were male. Race was also significantly associated with type of clinician. The large majority of LCSWs were white, as were licensed medical practitioners and CACs. In contrast, the majority of nurse practitioners were black. Native Americans were represented only among certified addictions counselors and other licensed professionals. Asians/Pacific Islanders were almost exclusively licensed medical practitioners. Due to the small number of clinicians with credential information, differences in clinician credentials by modality could not be assessed.

For all clinicians, the four treatment services most frequently ranked among the top three in importance to substance abuse treatment included counseling to help clients gain control of self-damaging behavior, improving self-esteem, providing medical services, and providing legal and other information about drugs and alcohol. There were some variations in the pattern of service rankings by clinician credentials, but there were few significant differences for each of 12 services in the rankings based on gender, age, race/ethnicity or treatment modality.

#### **1.4 Administrative Data**

Administrative data were provided by directors from service delivery units (SDUs) in NTIES, and therefore the clinician samples described by directors, the questionnaire items and the analyses may not closely correspond to those of the clinicians. For example, demographic factors were determined by the percent of clinicians the directors assessed to be male, of racial/ethnic minorities and in recovery. Among the directors from 65 SDUs, few reported that more than half of their staff were male. In contrast, most of the SDU directors reported that more than half of their staff were racial/ethnic minorities. One-third of the directors reported that more than half of the staff at their SDU were individuals in recovery.

About half of the SDU directors responded to questions about staff training in the past year. Directors were asked whether at least one of their staff members had received any external training, or in-service training provided by external trainers in the past year. Nearly all of those who responded reported that any of their staff had received training in workshops and conferences. The majority of the directors indicated that in-service training was provided to staff by external trainers. Less than half of the directors reported that their staff had received formal training through local college or training programs. Internships were rare, providing training for staff at only two SDUs.

SDU directors were asked what percent of their staff were full-time psychiatrists, registered nurses, psychologists, social workers, counselors (with Bachelor's degrees) and non-

degree counselors. The most frequently reported types of staff were counselors with Bachelor's degrees followed by counselors without Bachelor's degrees. About two-thirds of the directors reported having full-time social workers on staff, while less than half had at least one full-time registered nurse on staff. These results were impacted by low response rates.

SDU directors provided average hourly wage information for each of 11 types of clinicians. Salaries ranged from \$9 per hour for Bachelor's counselors and "other therapists" to \$50 per hour for psychiatrists. Average hourly wages (based on wages paid in 1993) were consistent with education levels, with the higher salaries primarily among clinicians with medical and psychology degrees. Counselors with Bachelor's degrees or less had the lowest hourly wages, and these wages were lower than the 1994 salaries reported for counselors of similar education in the NAADAC (1995) study. These findings were impacted by low numbers, precluding an analysis by treatment modality.

## **2. IMPLICATIONS FOR RESEARCH, POLICY AND PRACTICE**

This section describes the implications of the results of this analysis for future research on the substance abuse treatment work force, as well as implications for policy and treatment practice.

### **2.1 Implications for Research**

Given the importance of those who deliver treatment services to the treatment outcomes of clients, the lack of knowledge about clinicians leaves a large gap in the knowledge base in the areas of treatment services, effectiveness, efficacy, efficiency, as well as treatment capacity. In all treatment settings, substance abuse treatment clinicians play a crucial role in the recovery of their clients, having a direct influence on client progress and treatment outcomes. While this analysis has contributed to knowledge describing characteristics of treatment staff, such as gender, race/ethnicity, age, education, training and professional disciplines, it is one of few to attempt to describe some of the clinician characteristics and staffing patterns across treatment modalities.

Different treatment modalities exist to provide services to a range of client populations with distinctive treatment needs. Methadone treatment, for example, focuses on opiate users who are predominately adults, and primarily provides therapeutic doses of methadone to clients with few additional services. Correctional facilities may provide treatment to incarcerated individuals who often have substance use disorders which may be associated in part with their illegal behavior. Clients in residential treatment may require a different array and intensity of treatment

services than clients in outpatient treatment, who may primarily receive counseling and community services. In the course of their recovery, clients may also move from one treatment modality to another. The importance of understanding clinicians and staffing patterns in the context of treatment modality was illustrated in this analysis, with clinician gender, race/ethnicity, education and years of experience all differing significantly by treatment modality. Clinician age was the only demographic factor that did not differ significantly by treatment modality. The field would benefit from additional study of staffing patterns by treatment modality, both to describe existing patterns and to examine changes in staffing patterns over time. For example, managed care has been implemented in the field since the NTIES data were collected, and likely has affected staffing patterns in substance abuse treatment facilities. In addition, policy changes and the increasing trend toward credentialing may impact staffing patterns by treatment modality.

Treatment provider directors and administrators need additional knowledge on optimum staffing patterns for the types of treatment they deliver. In general, the lack of consistency in items across both clinician and provider services data has limited the field's knowledge about the treatment work force. The development of data collection instruments that can be used at both the clinician and the provider level could better inform providers about the mix of staff needed to meet the needs of clients in different treatment modalities. Better instrumentation with comparable items at the client level could also support analyses of the effects of programmatic factors, as well as clinician characteristics, on client treatment outcomes.

Another potentially beneficial avenue for research, is to examine differences in clinician credentials and clinician training by treatment modality, which could not be assessed in this analysis due to insufficient data. Since professional disciplines and credentials do not always equate with the tasks performed by clinicians, an important area for future research is to examine the work roles of clinicians in their treatment settings in addition to their professional disciplines. Information on staff demographics and staffing patterns could also better inform studies on clinician and client matching within treatment facilities. Beyond these potential avenues for research, new types of data on substance abuse treatment staffing could benefit providers who seek to maintain quality staff. Studies could be conducted that would examine staff turnover, job satisfaction, stress, and changes in job requirements and responsibilities over time.

Given the large gap in knowledge about the clinical staff in the substance abuse treatment field, a comprehensive and nationally representative study of the current treatment work force in both the public and private sectors is indicated. Such a study could address major gaps in knowledge about the treatment work force identified by the National Treatment Plan work force

panel and by the field. A national study could collect and assess common work force data on a multitude of issues where there are known knowledge gaps, including clinician demographics, professional disciplines, credentials, training, years of experience, staff functional roles and responsibilities, treatment orientation and treatment services provided, types of client populations served and client caseload, and knowledge about staff who are themselves in recovery. Factors that affect the treatment work force could also be assessed, including such information as staffing patterns by treatment modality, staff salaries, job satisfaction, stress, changes in job requirements and responsibilities, factors affecting turnover, and opportunities for career advancement within the field. Given the current lack of knowledge about the substance abuse treatment work force, such a national study could make an enormous contribution to the field by filling immediate knowledge gaps.

There have been no recent national treatment effectiveness studies, nor is there one currently in progress. A new national treatment effectiveness study that incorporated a clinician study component could provide essential data on the role of clinicians in treatment. Data at the provider level, clinician level, and client level within the same study would permit an assessment of the relative effects of each on client outcomes and the cost of effective treatment for different client populations, while filling knowledge gaps about current program characteristics, clinical staff and client populations.

## **2.2 Implications for Policy**

An interesting paradox among the clinicians in the NTIES study was that clinicians with less education than their colleagues had received less drug/alcohol training in the past year than clinicians with more education. This may be due to higher educational requirements among clinicians who are in the process of becoming credentialed, or who are seeking to maintain their credentials. The increasing trend toward credentialing may mean that scarce training resources will tend to be directed toward those who have or seek credentialing, rather than toward treatment staff with the least education (e.g., high school diploma, GED or less). This raises issues about the role of provider-paid training and self-paid training. Salaries and career advancement are tied to education in such a way that clinicians with minimal education have the lowest salaries, while higher salaries are associated with higher education levels. Where training is self-paid, clinicians with little education and low salaries may encounter obstacles to increasing their education and training on their own. Provider-paid training and more targeted and innovative approaches to disseminating core substance abuse treatment knowledge to this group of practitioners may be required. The development of guidelines for allocating limited

training resources among staff might also help to assure that those with the least education not also be those who receive the least training.

### **2.3 Implications for Treatment Practice**

Preliminary knowledge about staffing patterns by modality has been provided in this analysis. Additional examination of staffing patterns could assist in developing benchmarks, helping treatment providers to assess the configuration of their own staff in comparison to similar treatment settings. Such information could also be useful for career planning for individuals intending to enter the substance abuse treatment field.

A potentially fruitful and valuable area for future investigation is in the assessment of the value of different treatment services by clinicians. Clinician views of the importance or value of different treatment services may affect their therapeutic approach, and consequently, treatment outcomes for clients. In this analysis, clinicians ranked four of twelve possible treatment services as being among the top three in importance to substance abuse treatment. The pattern of rankings was fairly consistent overall with differences for only a few services by clinician gender, race/ethnicity, treatment modality, or credentials. Of these factors, there was more variation in service rankings by clinician credentials than by the other factors. This suggests that clinicians may primarily view the value of different treatment services in the context of their professional training and credentials. Changes to make training for some disciplines more similar through shared core knowledge, or more distinctive through specialized knowledge may affect how clinicians rate the value of different treatment services.

Women comprised a larger proportion of clinicians than men in NTIES, however men had significantly more years of clinical experience than women, and a significantly larger proportion of men than women had received past-year alcohol/drug training. Also notable was the finding that a significantly smaller proportion of clinicians with less education (a high school diploma/GED or less) had received training in the past year than clinicians with more education. Taken together, these results suggest that providers may want to carefully assess the staff development needs of clinicians to make more informed education and training allocation decisions targeted to all staff according to their career development goals.

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**APPENDIX:**  
**DESCRIPTION OF THE NATIONAL TREATMENT IMPROVEMENT  
EVALUATION STUDY AND CENTER FOR SUBSTANCE ABUSE  
TREATMENT DEMONSTRATIONS (1990-1992)**

**APPENDIX**  
**DESCRIPTION OF THE NATIONAL TREATMENT IMPROVEMENT**  
**EVALUATION STUDY AND CENTER FOR SUBSTANCE ABUSE**  
**TREATMENT DEMONSTRATIONS (1990-1992)**

The National Treatment Improvement Evaluation Study (NTIES) was a national evaluation of the effectiveness of substance abuse treatment services delivered in comprehensive treatment demonstration programs supported by the Center for Substance Abuse Treatment (CSAT). The NTIES project collected longitudinal data between FY 1992 and FY 1995 on a purposive sample of clients in treatment programs receiving demonstration grant funding from CSAT. Client-level data were obtained at treatment intake, at treatment exit, and 12 months after treatment exit. Service delivery unit (SDU) administrative and clinician (SDU staff) data were obtained at two time points, one year apart.

**1. THE NTIES DESIGN**

The NTIES study design had two levels—an administrative or services component and a clinical treatment outcomes component.

**1.1 The Administrative/Services Component**

This study component was designed to assess how CSAT demonstration funds were used, what improvements in services were implemented at the program level, and what kind and how many programs and clients were affected by the demonstration awards. Four data collection instruments were used to gather administrative/services data: the NTIES Baseline Administration Report (NBAR), the NTIES Continuing Administrative Report (NCAR), the NTIES Exit Log, and the NTIES Clinician Form (NCF).

The unit of analysis for the administrative component was the SDU, defined by CSAT as a single site offering a single level of care. The classification of *level of care* is based on three parameters: facility type (e.g., hospital, etc.), intensity of care (e.g., 24-hour, etc.), and type of service (e.g., non-methadone outpatient, etc.). An SDU could be a stand-alone treatment provider or it could be one component of a multi-tiered treatment organization. For example, a large county mental health agency may be the *organization* within which the SDU is located. The organization may have multiple substance abuse treatment components, such as a county hospital and a county (ambulatory) mental health center. The county hospital may have multiple SDUs, such as an inpatient detoxification service, an non-methadone outpatient counseling service, and a hospital satellite center providing transitional care. In summary, the SDU provided

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NTIES evaluators with a stable, uniform level of comparison for examining service delivery issues.

A range of key clinician-specific data elements (within the administrative component) were assessed using the NTIES Clinician Form (NCF). The NCF items were an important adjunct to the facility (SDU)-level instruments. These items assessed clinician training, experience, client exposure, and service provision, and were completed by all counseling and clinical (medical and therapeutic) staff at the individual SDUs.

## 1.2 Clinical Treatment Outcomes Component

The unit of analysis for the clinical treatment outcomes component was individual client data. NTIES measured the clinical outcomes of treatment primarily through a “before/after” or “pre- to post-treatment” design. This method compares behaviors or other individual characteristics in the same participants, measured in similar ways, before and after an intervention.

Information about clients’ lives for the *before* period were obtained from the NTIES Research Intake Questionnaire (NRIQ), which was administered sometime during the clients’ first three weeks of treatment. The specific areas assessed included:

- Drug and alcohol use
- Employment
- Criminal justice involvement and criminal behaviors
- Living arrangements
- Mental and physical health.

Information about clients’ lives for the *after* period were obtained from the NTIES Post-discharge Assessment Questionnaire (NPAQ), with the same areas assessed at roughly 12 months post-treatment. Other client data sources included a treatment discharge interview (NTIES Treatment Experience Questionnaire, NTEQ), abstracted client records, urine drug screens collected at the time of the follow-up interview, and arrest reports from State databases.

## 1.3 The Outcome Analysis Sample

Between August 1993 and October 1994, research staff successfully enrolled 6,593 clients at 71 SDUs to participate in three waves of an in-person, computer-assisted data collection protocol. These SDUs were chosen from the universe of treatment units receiving

demonstration grant funding from CSAT. Some of the selected facilities were wholly supported by CSAT awards, while others received only indirect support or none.

Clients were interviewed at admission to treatment, when they left treatment, and then at 12 months after the end of treatment. Fewer than 10 percent of the recruited clients refused or avoided participation, and more than 83 percent (5,388 clients) completed a follow-up interview. Additional sample exclusions included:

- Missing or undetermined treatment exit date
- Inappropriate length of follow-up interval (less than 5 or more than 16 months)
- Clients incarcerated for most or all of the follow-up period.

The additional sample exclusions resulted in a final outcome analysis sample of 4,411 individuals.

## **2. TREATMENT DEMONSTRATION PROGRAMS**

CSAT initiated three major demonstration programs and made 157 multiyear treatment enhancement awards across 47 states and several territories from 1990 through 1992. One objective common to all demonstrations was CSAT's emphasis on the provision of "comprehensive treatment" services to targeted client populations. The recipients of these awards focused special attention on the substance abuse treatment service needs of minority and special populations located primarily within large metropolitan areas. The demonstration programs are briefly described below.

### **2.1 Target Cities**

Under this demonstration, nine metropolitan areas were selected to receive awards, of which half were included in the NTIES purposive sample. The following treatment improvement activities were explicitly provided for in the awards:

- Establishment of a Central Intake Unit (CIU) with automated client tracking and referral systems in place
- Provision of comprehensive services, including vocational, educational, biological, psychological, informational, and lifestyle components

- Improved inter-agency coordination (e.g., mental health, criminal justice, and human services agencies)
- Services for special populations—adolescents, pregnant and postpartum women, racial and ethnic minorities, and public housing residents.

## **2.2 Critical Populations**

Under this demonstration program, awardees were required to implement “model enhancements” to existing treatment services for one or more of the following critical populations: racial and ethnic minorities, residents of public housing, and/or adolescents. Special emphasis was given to services provided to the homeless, the dually diagnosed, or persons living in rural areas. A total of 130 grants were awarded, covering services such as vocational support/counseling, housing assistance, integrated mental health and/or medical services, coordinated social services, culturally directed services, and others.

## **2.3 Incarcerated and Non-incarcerated Criminal Justice Populations**

Under this demonstration program, funds were directed toward improving the standard of comprehensive treatment services for criminally involved clients in correctional and other settings. Some program emphasis was placed on ethnic and/or racial minorities. Nine correctional setting demonstrations were funded: five in prisons, three in local jails, and one across a network of juvenile detention facilities. All projects included a screening component to identify substance-abusing inmates, a variety of targeted treatment interventions (e.g., therapeutic communities, intensive day treatment programs), and a substantial after care component.

A total of 10 non-incarcerated projects were funded. Five programs targeted interventions at clients in diversionary programs, three focused services on probationers or parolees, and two targeted both populations. Almost all of the funded demonstration projects included the following components:

- Basic eligibility determination, followed by systematic screening and assessment
- Referral to treatment
- Graduated sanctions and incentives while in treatment
- Intensive supervision in treatment
- Community-based after care with supervision and service coordination.

In total, 19 criminal justice projects were funded as part of the CSAT 1990-1992 demonstrations, and, as indicated in the next section, these projects were purposively over-sampled in order to obtain a more robust evaluation of this program.

### 3. DESCRIPTION OF SDUs AND CLIENTS BY TREATMENT MODALITY AND PROGRAM TYPE

The 71 SDUs contributing clients to the outcome analysis sample are characterized by modality and (demonstration) program type in Exhibit A-1 below. Among the 698 SDUs in the NTIES universe, 52 percent (n=365) were Target Cities programs, 39 percent (n=274) were Critical Populations programs, and 9 percent (n=59) were Criminal Justice programs.

<b>EXHIBIT A-1</b>						
<b>SDUs IN THE OUTCOME ANALYSIS SAMPLE</b>						
<b>Program Title Number of SDUs (% of NTIES Universe)<sup>1</sup></b>	<b>NTIES Sample</b>	<b>Methodone</b>	<b>Non- methadone outpatient</b>	<b>Long-term Residential</b>	<b>Short-term Residential</b>	<b>Correctional</b>
<b>Target Cities</b> n=365 (52%)	31 (44%)	6	15	6	4	0
<b>Critical Populations</b> n=274 (39%)	27 (38%)	1	13	10	3	0
<b>Criminal Justice</b> n=59 (9%)	13 (23%)	0	5	0	0	8
<b>Totals</b> N=698 (100%)	71 (100%)	7	33	16	7	8

<sup>1</sup> The original NTIES universe of SDUs included a program type called *Specialized Services*. Because clients for the outcome analysis sample were not drawn from these SDUs (n=94), they are excluded from the exhibit.

In terms of the SDUs sampled for the NTIES outcome analysis, 44 percent were Target Cities programs, 38 percent were Critical Populations programs, and 23 percent were Criminal Justice programs. Criminal Justice SDUs were purposely over-sampled as part of the NTIES evaluation design (CSAT, 1997). Nearly half of the sampled SDUs were (non-methadone) non-methadone outpatient programs, and about one-quarter were long-term residential programs.

As shown in Exhibit A-2, 59 percent of all NTIES clients were sampled from Target Cities SDUs. Slightly more than 21 percent of all NTIES clients were sampled from Critical Populations SDUs and 20 percent were sampled from Criminal Justice SDUs. Non-methadone

outpatient SDUs treated more than one-third (35%) of the clients in the outcomes analysis sample, and almost 80 percent of these were sampled from Target Cities programs.

<b>EXHIBIT A-2</b>					
<b>DISTRIBUTION OF CLIENTS IN THE OUTCOMES ANALYSIS SAMPLE</b>					
<b>Program Title</b> <b>Number of Clients</b> <b>(% of Analysis Sample)</b>	<b>Methadone</b>	<b>Non-methadone outpatient</b>	<b>Long-term Residential</b>	<b>Short-term Residential</b>	<b>Correctional</b>
<b>Target Cities</b> n=2,600 (59%)	377 (89%)	1,214 (78%)	504 (60%)	505 (58%)	0
<b>Critical Populations</b> n=931 (21%)	45 (11%)	220 (14%)	298 (35%)	368 (42%)	0
<b>Criminal Justice</b> n=880 (20%)	0	132 (8%)	39 (5%)	0	709 (100%)
<b>Totals</b> n=4,411 (100%)	422	1,566	841	873	709

Readers who are interested in more detailed information about the NTIES project are invited to visit the NEDS Web site at <http://neds.calib.com>. The NEDS Web site provides the full-length version of the NTIES Final Report (1997), as well as copies of all data collection instruments employed in NTIES.

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