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**Substance Abuse and Mental Health Services Administration  
Office of Applied Studies**

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**Drug Services Research Survey  
(DSRS)**

**Final Report: Phase I**

**REVISED**

February 22, 1993

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**U.S. Department of Health and Human Services  
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**DRUG SERVICES RESEARCH SURVEY**

**Phase I Final Report:  
Non-Correctional Facilities**

**REVISED**

**Contract Number 271-90-8319/1**

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Description of Terms Used in the Analysis,  
Drug Services Research Survey (DSRS)

- Sampling Frame:** The mailing list (SAFIS/MASTERUID file) for the 1989 National Drug and Alcoholism Treatment Unit Survey (NDATUS) was the main sampling frame for DSRS. Facilities were excluded that (a) were known to be prevention only or not providing treatment at the most recent update of April 1990, or (b) were participants in the DSRS pilot test. The sampling frame was refined and stratified by treatment modality based on information from the 1987 and 1989 NDATUS surveys.
- Phase I:** Phase I is the mail/telephone portion of the DSRS survey which was conducted on 1,183 drug treatment facilities. Phase I, completed in August 1990, collected information on policies and procedures and aggregated client data from sampled treatment programs. This report presents results from the Phase I survey.
- Respondents:** For purposes of this report, all facilities for which telephone survey questionnaires were completed are considered to be respondents. A questionnaire was considered to be complete when all questions on the questionnaire were asked of the facility spokesperson and either a valid response or a "don't know" was elicited. Call backs were made for blanks and for numeric tables which did not add correctly, until a valid response or "don't know" was determined or until additive values were corrected to within 10 percent of control totals.
- National Estimates:** National estimates produced from this survey will represent drug treatment facilities and clients nationwide to the extent that the NDATUS mailing list and the refined sampling frame from the mailing list represent drug treatment facilities nationwide. In this report the national estimates incorporate adjustment for non-response by sampled facilities to DSRS, and are adjusted for non-response to ten individual survey questions.

**Drug Treatment Facilities:** Facilities in the NDATUS sampling frame which are providing drug treatment, whether in combination with alcohol treatment or as drug treatment alone. Facilities that self-reported as 'alcohol only' but would also provide treatment for the drug abuse problems of their alcohol clients were included for the purpose of DSRS and counted as respondents. However, unless otherwise noted, those 'alcohol only' treatment facilities are excluded from the Phase I analyses.

**Environment/Modality:** For the purposes of this survey, drug treatment facilities classified themselves according to provided environment (hospital inpatient, residential, and outpatient) and modality of treatment (detoxification, maintenance, and drug free) as follows:

Hospital Inpatient  
    Detoxification  
    Drug-Free

Residential  
    Detoxification  
    Drug-Free

Outpatient  
    Detoxification  
    Maintenance  
    Drug-Free

**Single Modality  
Facilities:**

Facilities where only one modality/environment of drug abuse treatment is offered are referred to as single modality facilities.

**Multiple Modality  
Facilities:**

Facilities where two or more modalities/environments of drug abuse treatment care are offered are referred to as multiple modality facilities. In some instances, multiple modality facilities report client counts by specific modality of care. In other cases facilities were unable to report data by specific modality and provided information for modalities of two or more types.

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## EXECUTIVE SUMMARY

### Study Purpose and Methods

The findings from the 1990 Drug Services Research Survey (DSRS) are presented in this report. DSRS collected data from a sample of drug and drug/alcohol treatment facilities for the point prevalence date of March 30, 1990 and for the facilities' most recent twelve-month reporting period. The objective of the study is to collect data describing the characteristics of treatment facilities and the clients in treatment in more depth than has been possible with previous national surveys. Data on populations of special interest, such as pregnant women, IV drug users, dual diagnosis clients, HIV clients, adolescents, and individuals on methadone maintenance were collected. DSRS will provide insight into key policy issues in drug treatment, including access to treatment, costs, and quality of care.

DSRS encompasses a two phase research design. Phase I of the DSRS research program is a telephone survey of a stratified random sample of 1,183 drug treatment facilities in the coterminous United States which were listed on the 1990 NDATUS Master Unit Identification File. These 1,183 surveys represent an 81 percent total response rate. Phase II of the DSRS project focuses on client level data. On-site abstraction of sampled client records took place in 120 facilities.

The data presented below represent responses from 1,111 facilities, as 58 'alcohol only' and 14 correctional facilities are excluded from these analyses. The 1,111 facilities are estimated to represent 7,163 drug treatment facilities. Results have been adjusted for facility non-response, and an imputation strategy has been carried out to adjust for item non-response for estimates of capacity; actual numbers of clients in treatment; alcohol, drug, and combined alcohol and drug client distributions; methadone clients; IV drug users; and dual diagnosis clients. Estimates with a coefficient of variation equal to or greater than .30 are noted as statistically unstable and should be interpreted with caution.

The data describe organizational characteristics of drug treatment facilities by modality: single or multiple modality treatment status; ownership; and staffing patterns. The second section delineates reported capacity and actual numbers of clients in treatment, total, and by environment. The third section reviews characteristics of clients (race/ethnicity, age, employment status, primary source of client payment, and principal drug abused), reported by treatment modality. Facility reports of treatment completion are analyzed using discharge data in the fourth section. In the last section, specific policy issues are discussed,

including waiting list policies, methadone maintenance treatment practices, treatment for pregnant women, intravenous drug users (IVDUs), dual diagnosis clients, and facilities' ability to report clients' HIV status.

## Overview of Major Findings

### Characteristics of Drug Treatment Facilities

#### Modalities of care

- About two-thirds (66 percent) of facilities offer only one modality of care. On the other hand, most modalities (57 percent) are offered in conjunction with other modalities at the same facility.
- The most common modalities are outpatient drug free, accounting for 46 percent of all modalities and offered in 71 percent of all facilities, and residential drug free, accounting for 19 percent of all modalities and offered by 29 percent of facilities.

#### Ownership

- The majority of drug treatment facilities (64 percent) are private not-for-profit organizations. One-in-six (17 percent) of facilities are organized as private for-profit organizations. One-in-five facilities are operated by public entities: either state or local governments (16 percent) or the federal government (3 percent).

#### Staffing

- About 26 percent of all facilities have staff psychiatrists, 24 percent have other staff physicians, and 33 percent have staff psychologists. Social workers and registered nurses are each on staff at about 40 percent of all facilities. The majority (59 percent) of all facilities have non-degreed counselors and 72 percent have other degreed counselors on staff.

### Capacity and Utilization

- The national capacity for alcohol and drug abuse clients at non-correctional drug treatment facilities was estimated to be 819,781 units of capacity (point prevalence slots) on March 30, 1990.
- Almost 88 percent of all treatment capacity was utilized on March 30, 1990.

### Clients in Treatment

- An estimated 501,753 clients were receiving drug treatment services on March 30, 1990.
- An estimated 217,331 clients were in alcohol treatment in drug/alcohol treatment facilities on March 30, 1990.
- National estimates of total clients in treatment show an estimated 719,084 alcohol and other drug clients receiving treatment services on March 30, 1990.

### Age and Race/Ethnicity Distributions of Clients in Treatment

- White clients constitute 63 percent of all clients in treatment in drug/alcohol treatment facilities, black clients make up 24 percent, and Americans of Hispanic origin comprise 11 percent of clients in treatment.
- Minorities comprise 59 percent of those in treatment in outpatient drug maintenance programs. In particular, Hispanics make up 29 percent of those in outpatient drug maintenance programs. Blacks make up 33 percent of those in residential programs. Outpatient drug free and inpatient hospital programs contain more than 60 percent white clients.
- The percentage of 25-34 year olds in drug treatment is almost twice their proportion in the national population. Only 9 percent of those in treatment are younger than 18 years old; about a fourth of these (2 percent of total) are less than 15 years old.
- Age concentrations of clients vary across treatment modalities. Outpatient drug maintenance programs have the oldest clients (62 percent are over 34 years of age) and outpatient drug free programs have the youngest (32 percent are under 25 years of age). Hospital inpatient modalities tend to serve older clients than do residential programs.

### Employment and Insurance Status

- Half of those in treatment on March 30, 1990 were employed at admission to treatment.
- Outpatient drug maintenance modalities have a somewhat less than average percentage of employed clients, about 42 percent of clients report being employed at the time of admission. Residential treatment programs have the smallest percentage (19 percent) of their clients employed.
- About 51 percent of clients have no outside primary source of payment for treatment, public or private. Thirty-two percent are listed as primarily "self payment" and 19 percent as "no payment".
- Private insurance as the primary payor covers 16 percent of clients and public payors support 33 percent.
- Hospital inpatient facilities have the highest percentage of privately insured patients (44 percent), while outpatient drug free, outpatient maintenance and alcohol programs have over 50 percent of clients with no outside payment source (neither private insurance, public third-party coverage nor other public payment).

### Principal Drug of Abuse

- Two-thirds of those in treatment on March 30, 1990 were admitted to treatment for either cocaine (including crack) or heroin/other opiates as their principal drug of abuse. Cocaine use accounts for 40 percent, and heroin/other opiate abuse represents 27 percent.
- Cocaine (including crack) is the principal drug of abuse in hospital inpatient (55 percent of clients), residential (60 percent of clients) and outpatient drug free (46 percent of clients) modalities. In outpatient drug maintenance programs, heroin/other opiates is the principal drug of abuse for 85 percent of clients.

### Completion of Treatment

- Sixty-two percent (62 percent) of all clients leaving treatment during the prior year completed treatment, according to facility administrators. Hospital inpatient (81 percent) and residential (65 percent) treatment show higher completion rates than the outpatient treatment (51 percent).

## Policy Findings

### Waiting List Policies

- There were an estimated 79,072 applicants waiting to enter drug treatment facilities on March 30, 1990. The majority were waiting to enter outpatient drug free treatment (37,847 applicants) or residential treatment (21,714 applicants).
- About 42 percent of all facilities sampled report that they usually have more applicants than capacity for treatment. Among all facilities, those with and without a waiting list system, applicants are estimated to have to wait on average 14 days to enter drug treatment.
- About 60 percent of all facilities report having a system for placing applicants on a waiting list. For facilities having a waiting list system, the estimated average waiting time in public facilities is 23 days while in private facilities it is 20 days.

### Methadone Maintenance Treatment Policies

- Of the estimated 112,943 drug treatment clients receiving methadone, 8 percent were considered to be in detoxification and 92 percent were in maintenance.
- One-half of facilities reported maximum methadone dosages between 76 mg. and 100 mg. Ten percent of facilities reported providing maximum daily dosages equal to or greater than 120 mg.
- Three-fourths of facilities reported minimum dosages equal to or less than 10 mg. Ten percent of facilities reported providing minimum daily dosages equal to or greater than 20 mg.
- One-half of facilities reported average daily dosages between 40 mg. and 60 mg. Ten percent of facilities reported providing average daily dosages greater than 62 mg., and 10 percent reported average daily dosages equal to or less than 33 mg.
- About 95 percent of facilities reported having clients who received take home supplies of methadone.
- Over 90 percent of facilities reported not having a maximum length of time a client could be maintained on methadone.

### Treatment of Pregnant Women

- Approximately 58 percent of all facilities reported treating pregnant women. Single modality residential facilities were the least likely to treat pregnant clients (36 percent).
- Of the estimated 25,367 pregnant clients in drug treatment during the 12-month reporting period, one-half received treatment in multiple modality facilities and almost 29 percent were in single modality outpatient drug free treatment.

### HIV Testing and Treatment of HIV Clients

- About 51 percent of facilities reported that during the prior year they had no clients who had been diagnosed with AIDS, 23 percent reported some AIDS clients, and 26 percent either refused or could not answer.
- Approximately 43 percent of facilities reported that they did not have any clients who were HIV seropositive (not confirmed AIDS), 31 percent reported some clients, and 26 percent either refused to report or did not know the number of clients who were positive.
- Almost one-third (31 percent) of facilities indicated that they conducted HIV/AIDS testing on clients; however there was great variation depending on the modality. While only 6 percent of single modality outpatient drug free facilities conducted testing, 86 percent of single modality hospital inpatient facilities performed such testing.
- Of the estimated 32,597 known HIV seropositive or AIDS diagnosed clients in drug treatment during the 12-month reporting period, almost one-half received treatment in multiple modality facilities. About 20 percent were in single modality outpatient maintenance (estimate statistically unstable), 17 percent were in single modality outpatient drug free, 11 percent were in single modality residential (estimate statistically unstable), and 3 percent were in single modality hospital inpatient (estimate statistically unstable).

Treatment of IV Drug Users

- An estimated 177,309 IV drug users were reported to be in drug treatment on March 30, 1990. This was about 25 percent of the clients in treatment on that date.

Treatment of Dual Diagnosis Clients (Substance Abuse and Mental Illness)

- About 12 percent of clients (88,366 clients) in treatment on March 30, 1990 were classified as dual diagnosis clients (substance abuse and a mental disorder). Forty-seven percent received treatment in single modality outpatient drug free facilities and 42 percent in multiple modality facilities. About one-third of hospital inpatient treatment clients were dually diagnosed, and 13 percent of outpatient treatment clients were dually diagnosed.



## 1. INTRODUCTION

This report presents final results from the 1990 Drug Services Research Survey (DSRS) sponsored by the National Institute on Drug Abuse (NIDA). The data in this report are based on analyses of non-correctional drug and combined drug/alcohol treatment facilities. Estimates of capacity and utilization; number of methadone clients, IV drug users and dual diagnosis clients have been adjusted for item non-response through an imputation process documented in Appendix III.

DSRS collected data from a sample of drug treatment facilities for the point-prevalence date of March 30, 1990 and for the most recent twelve-month reporting period of the facility. The objective of the study was to collect data describing the characteristics of drug treatment facilities and the clients in treatment in more depth than had been possible with previous national surveys.

### 1.1 Background

Many gaps exist in understanding the drug abuse treatment system, as discussed in President Bush's National Drug Control Strategy (White House, September 1989 and January 1990). The Office of Management and Budget (OMB) and the Office of National Drug Control Policy (ONDCP) called for new information to be collected which would provide more detailed data about

the drug treatment system. DSRS was undertaken in order to address many of these gaps. NIDA contracted with the Institute for Health Policy of the Heller School at Brandeis University to design, direct and analyze DSRS. The subcontractor for conducting the survey and carrying out the imputation strategy for missing data was Westat Corporation.

The research objectives of DSRS are two-fold. First, data have been collected on the organizational and financial characteristics of drug treatment facilities and characteristics of clients served for a point in time and for a year-long reporting period. The research focuses on populations of special interest, including pregnant women, IV drug users, dual diagnosis clients, adolescents, individuals on methadone maintenance, and those with or at risk for HIV infection. Secondly, data have been collected that will provide insight into key policy issues in drug treatment, including access to treatment, and the costs and quality of care.

Data from DSRS will supplement information which is periodically collected through NIDA's National Drug and Alcoholism Treatment Unit Survey (NDATUS). NDATUS collects information for the universe of reporting treatment facilities regarding their scope, utilization and other facility and client characteristics, while the DSRS collects more in-depth information from a sample of treatment units.

DSRS encompasses a two-phase research design. The first phase of DSRS, completed August 22, 1990, was a mail questionnaire collected by telephone interview of a stratified random sample of 1,183 drug treatment facilities in the coterminous United States which were listed on the April 1990 NDATUS Master Unit Identification File. This phase of the research

collected data on the treatment of special populations and the policies and practices of the facilities. Results presented in this report reflect responses from 1,111 non-correctional drug treatment facilities that completed the Phase I mail/telephone survey. Phase II of the DSRS project focuses on client level data. On-site abstraction of sampled client records took place during Fall, 1990 for a subsample of 120 facilities which completed Phase I of DSRS. These data provide detailed information on client characteristics, including drug treatment history, for 2,222 clients. At each facility, an administrative questionnaire will also collect data on waiting list policies, reporting practices, differences in treatment for alcohol and drug clients, and special programs offered.

## 1.2 Organization of Report

This report is divided into four chapters. This first chapter provides a brief overview of the genesis of DSRS and the types of data collected from the DSRS drug treatment facilities. The second chapter gives a methodological overview of DSRS, describing the instrument development, pilot testing, sampling design and weights, adjustments to the data for non-response, the treatment of combined alcohol and drug treatment facilities, and the relationship between facility, environment and modality. The third chapter presents findings on the sample of facilities participating in Phase I of DSRS. This chapter is divided into four sections described below. Each section is organized around a discussion of a series of tables in which an overview of the table is presented followed by highlights of major findings. All tables are based on weighted data and thus represent a national view of drug treatment facilities. In some tables, national estimates of numbers of facilities have been generated.

It should be noted that the national estimates have been adjusted for item non-response for capacity and utilization; number of alcohol, drug and combined alcohol and drug abusers; number of methadone clients, IV drug users and dual diagnosis clients. Other data have not been adjusted for item non-response because of insufficient information available to impute missing values. These later items thus represent underestimates. The fourth chapter presents concluding comments.

The major findings of the research are presented in Chapter Three. The first section of Chapter Three describes organizational characteristics of drug treatment facilities by modality: single or multiple modality treatment status; ownership; and staffing patterns. The second section delineates reported capacity and actual numbers of clients in treatment, total and by environment. The third section reviews demographic and other characteristics of clients (race/ethnicity, age, employment status, primary source of client payment, and principal drug abused), reported by treatment modality. Facility reports of treatment completion are analyzed using discharge data in the fourth section. In the last section, specific policy issues are discussed, including waiting list policies, methadone maintenance treatment practices, access to treatment for pregnant women, facilities' ability to report clients' HIV status, intravenous drug users (IVDUs), and dual diagnosis clients.

## 2. METHODOLOGY

The Drug Services Research Survey (DSRS) is based on a complex national sample of drug treatment facilities in the coterminous United States. This report presents results from a sample of 1,111 facilities.

The DSRS Steering Group, convened by NIDA, developed the first draft of the survey. Upon receipt of the DSRS contract, Brandeis worked with Westat to develop two instruments: a 10 minute telephone screener to establish that the selected facilities existed and provided drug treatment to clients, and a 20-page survey. The survey was mailed to facilities with information to be collected by trained Westat telephone interviewers. The questionnaire was divided into four sections collecting the following data:

- (1) facility organizational data for March 30, 1990;
- (2) client data for March 30, 1990;
- (3) client data for the prior twelve-month reporting period; and
- (4) facility financial data for the prior twelve-month reporting period.

The instruments were pilot tested and revised. In both the pilot test and the main study, facility directors or administrators completed the questionnaire.

The following methodology section briefly presents the sampling design, the generation of sampling weights and national estimates, the

treatment of data outliers, the strategy for imputing missing values for item non-response, a discussion of facilities that provide both drug and alcohol treatment services, and a brief comparison of environment data for correctional and non-correctional facilities. Finally, the environments and modalities of treatment that facilities offer are described.

## 2.1 Sampling Design

The mailing list for NIDA's National Drug and Alcoholism Treatment Unit Survey (NDATUS) provides the basis for the DSRS sampling frame. NDATUS is a voluntary survey which is designed to be a census of all known drug abuse and alcoholism treatment facilities in the United States. DSRS used the April 1990 version of the Master Unit Identification (MUID) file, containing the most recent NDATUS mailing information. Before sampling for DSRS, three groups of facilities were eliminated from the MUID file: known prevention only programs, facilities outside the coterminous U.S., and the 100 facilities contacted during DSRS pilot testing.

The DSRS sampling frame was divided into the following six strata before units were selected for screening.

- Based on a plurality of clients in each facility treatment environment/modality, 1989\* NDATUS respondents were assigned to one of four sampling strata: hospital inpatient, residential, outpatient drug free, or to outpatient drug detoxification/maintenance strata.
- Treatment facilities labeled as 'alcohol only' in 1989 NDATUS were included as a stratum to incorporate facilities which may have broadened their programs to include clients who abused drugs other than alcohol.

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\*Strata were assigned based on an early April '89 NDATUS working tape as the final tape was not available when sampling for this survey was carried out.

- The 'new or unknown' facilities constitute the sixth sampling stratum; these facilities were non-respondents to the 1989 NDAUS, or were added to the MUID since the 1989 census.

Approximately equal sampling rates were assigned to the strata and then adjusted to assure a minimal number of facilities for each of the four drug treatment environment/modality categories in the completed survey sample. Expected rates of eligibility of response were considered in determining risks of sampling by stratum. The final sampling rates were:

<u>Stratum</u>	<u>Sampling Rate</u>
Hospital Inpatient	0.35
Residential	0.25
Outpatient Detoxification or Drug Maintenance	0.35
Outpatient Drug Free	0.25
Alcohol Only	0.20
New/Unknown	0.20

The number of facilities sampled for possible screening was 2,486, which was then adjusted to reduce the overlap between the DSRS sample and the sample for another NIDA survey expected to enter the field in the fall of 1990. After this adjustment 2,374 drug treatment facilities remained for DSRS screening selection. This size was determined to be adequate to reach the goal of 1,000 completed questionnaires.

The screening sample was divided randomly into two equal subsamples of 1,187 (Subsamples A and B) with each subsample containing five waves of facilities. The first four waves of facilities in Subsample A (1,139) were released for DSRS eligibility screening in early June 1990, and an additional wave of facilities from Subsample B (664) was released in early July. Thus there were 1,803 facilities selected for screening.

- Of the 1,803 facilities selected for screening, 1,757 were screened for eligibility. Of those successfully screened, 1,531 facilities remained eligible for survey participation.
- Of these 1,531 facilities, an additional 89 were found to be ineligible at the time of telephone interview (34 did not provide treatment, 27 treated only alcohol abuse clients, 19 were duplicates or overlapped with already completed DSRS surveys, 4 were not in business and 5 for other reasons), reducing the number of eligible facilities to 1,442. Despite repeated attempts to contact them, 117 facilities could not be reached to collect survey information. Outright refusals were received from 141 facilities, and one facility mailed back a response and subsequently refused a telephone survey. Thus 1,183 facilities completed DSRS surveys.
- The total survey response rate, including the refusals to the screener, is 81 percent (1,183 surveyed facilities/1,458 eligible facilities).

Table 1 shows the number of facilities at different stages from sampling to respondent and their response rates by original sampling strata. The highest response rate is from residential facilities (92 percent) while the lowest is from facilities in the new or unknown stratum (76 percent). The 80 percent response rate from the alcohol stratum indicates that facilities sampled and screened from this group should be representative of other facilities like them. Other strata response rates did not differ substantially from the overall mail/telephone questionnaire response rate of 82 percent. (For comparative purposes, Table 2 contains related information for the Preliminary Report submitted in August 1990.)

Tables 3 (number of facilities) and 4 (percent of facilities) show the strata from which facilities were sampled based on predominant treatment modality from the 1989 NDATUS and the modalities of treatment they reported offering in 1990. They are classified in DSRS analyses by the most recent and complete information on all types of treatment the

facility provided. Of the 138 facilities sampled from the hospital inpatient stratum, only 20 percent remained classified in their predominant treatment type from their sampled stratum. The bulk of this group (75 percent) reported offering drug treatment services in a multiple modality environment. Facilities sampled from the residential and outpatient drug free strata tended to remain in those single modality facility groups. Of the original 80 facilities in the outpatient detoxification or maintenance stratum, less than 20 percent could be strictly classified as outpatient detoxification or maintenance. More than a quarter reported offering only outpatient drug free services, and more than half provided treatment in multiple modality settings.

Slightly more than a third of facilities from the alcohol only stratum remain primarily alcohol treatment facilities (58 facilities) but indicated they would also treat the drug problems of clients. Their results are excluded from the analyses in this report (see Section 2.5). Most alcohol stratum facilities offered care in a single modality setting, one-third reported to be single modality outpatient drug free, and about one in six provided services for drug and alcohol clients in a single modality residential setting. Nearly one-half (47 percent) of facilities from the new or unknown stratum were found to provide care in a single outpatient modality, while slightly more than a third (34 percent) delivered services in a multiple modality setting.

## 2.2 Sampling Weights and National Estimates

The DSRS sampling design incorporates a stratified random probability sample that allows for estimates of parameters at the national level. The sample data must be weighted in order to describe drug abuse treatment

facilities at the national level; consequently sampling weights were developed. The first stage sampling weights, based upon the initial probability of being sampled, were adjusted twice to account for both the overlap with another NIDA survey and for the number of waves released from each half-sample for contact. Final sampling weights were calculated to address the differential response rates of facilities within each stratum. As no information was available on the eligibility status of the facilities that refused or could not be contacted, an assumption was made that all refusals were eligible for the survey and those not contacted were ineligible. (This was similar to assuming an eligibility rate of about 50 percent among refusals and non-contacted facilities. See Appendix II for a more complete description of this process.)

The national estimates and percentage distributions presented in this report are DSRS results generalized to treatment programs on the NDATUS Master Unit Identification file that met criteria for inclusion in the Drug Services Research Survey. These eligible facilities: (a) are listed on the April 1990 NDATUS MUID mailing list; and (b) include all treatment units with an allocated budget and assigned program staff offering drug treatment services on March 30, 1990.

### 2.3 Adjustments to the Data

Estimates have been adjusted in four ways for this report. First, the estimates of number of facilities and clients in treatment have been adjusted for facility non-response, i.e., facilities sampled for DSRS that refused to participate. Second, weights have been adjusted to reflect the assignment of a self-weight to two large facilities, one a prison system in stratum 6 and the other, a multi-site program in stratum 3. Base weights

and final adjusted weights for other cases in these strata were affected by these two changes, as well. Third, data for 58 alcohol only (see Section 2.5) and 14 correctional facilities are excluded from this report, reducing the number of facilities for which data were analyzed from 1,183 to 1,111. Fourth, estimates have been adjusted for item non-response for 59 variables. These include estimates of capacity and utilization data (Tables 22-24); estimates of clients in treatment for alcohol, drug, or combined alcohol and drug abuse (Tables 9,10); estimates of methadone clients (Table 44), IV drug users (Table 48); and estimates of dual diagnosis clients (Table 49). Estimates were not adjusted for item non-response where sufficient information was not available to impute missing data. For these estimates, item non-response rates are reported in the tables. (See Appendix III for a more complete description of the imputation and reweighting process).

#### **2.4 Sampling Error Estimates**

Since DSRS is based upon sample data, the national estimates of facilities and clients in treatment are subject to sampling error. Sampling errors are calculated using WESVAR, a SAS procedure employing replicated estimates of variance. WESVAR was developed by Westat, Inc. and is used to produce sampling errors for this complex survey data.

#### **2.5 Treatment of Data from Alcohol Only and Combined Drug and Alcohol Treatment Facilities**

Table 5 shows the eligibility and response status of facilities in the alcohol treatment stratum that indicated they primarily provide treatment to alcohol clients. As the table indicates, the alcohol treatment facilities were assessed for eligibility at the screener and

again by the Brandeis Survey Assistance Hotline. Facilities were instructed to call the toll free number if they classified themselves as alcohol only facilities. Callers were asked if they provided a treatment program for the abuse of drugs other than alcohol for their clients. During the screener, 39 facilities were eliminated as alcohol only; 26 more were excluded as a result of Hotline calls; and 2 did not complete questionnaires. However, 58 facilities, 34 in the alcohol stratum and 24 from the other 5 sampling strata, reported that they primarily treat alcohol clients but would also treat the abuse of drugs other than alcohol if clients presented with that problem. These 58 facilities were interviewed but their responses were excluded from this report.

Table 6 displays survey respondents according to whether they offer single or multiple modalities of care, and what modalities of care they offer. The table also displays whether or not facilities reported offering both drug and alcohol treatment services. Of the 1,125 facilities, 14 were correctional facilities: 10 offered alcohol and drug treatment and 4 offered only drug treatment. Of the remaining 1,111 non-correctional facilities, 709 facilities reported providing a single environment/modality of drug treatment, 556 of whom also offered alcohol treatment services. Multiple modality facilities (n=402) comprise 36 percent of facilities in the DSRS sample. These facilities offer more than one modality of drug treatment and most (325) provide alcohol treatment as well. The most frequent combinations of treatment offered by multiple modality facilities include facilities with outpatient and residential drug free programs (71), hospital inpatient programs combining detoxification and drug free

modalities (58), and outpatient drug free programs combined with hospital inpatient detoxification and drug free services (51).

Table 7 presents the distribution of all sampled drug treatment facilities (n=1,125 excluding the 58 facilities which classified themselves as treating alcohol clients only) and the weighted national estimate of facilities (7,257) by single modality of treatment or multi-modality status. In this distribution, an estimated 3,298 facilities offer single modality outpatient drug free services to clients, and an estimated 2,469 offer drug treatment in multiple modality facilities.

In Table 8, the distribution of facilities is presented excluding 14 correctional facilities. These 1,111 responding non-correctional drug treatment facilities are estimated to represent 7,163 facilities, and they form the basis for the findings in the remainder of this report and for Table 8. Outpatient drug free single modality facilities, an estimated 3,251 facilities, comprise 45 percent of this group, and an estimated 2,450 multiple modality facilities constitute an additional 34 percent.

The impact of excluding correctional facilities is generally small for estimates of facility capacity and for actual clients in treatment.

#### Capacity (Slots) - Point Prevalence as of March 30, 1990

The capacity for treatment in correctional and non-correctional facilities, combined, on March 30, 1990 was an estimated 844,632 (+40,405) slots. These capacity data are based on 1,114 correctional and non-correctional facilities for which capacity data were reported or imputed (data not shown).

Excluding correctional facilities, the capacity for treatment on March 30, 1990 was an estimated 819,781 (+37,999) units of capacity. These

capacity data are based on 1,101 non-correctional facilities for which capacity data were reported or imputed (Tables 22-24).

Actual Clients in Treatment - Point Prevalence as of March 30, 1990

The actual number of clients on March 30, 1990 in correctional and non-correctional facilities, combined, was estimated to be 747,507 (+41,120) with 513,020 (+32,199) drug treatment clients and 219,104 (+18,212) clients receiving alcohol treatment in combined drug and alcohol treatment facilities. These data are based on 1,121 facilities (data not shown).

Excluding correctional facilities, the actual number of clients in treatment on March 30, 1990 was estimated to be 719,084 (+41,792) with 501,753 (+31,845) in drug treatment and 217,331 (+18,200) in alcohol treatment. These estimates are based on 1,111 facilities (Tables 22-24).

The data analyses in the next chapter focus on the availability of drug abuse treatment services and clients receiving such services. While the 58 DSRS respondents self-reporting as alcohol only treatment programs (and the 14 correctional facilities) have been excluded from this report, most of the remaining 1,111 drug treatment facilities report offering alcohol treatment in addition to or alongside their drug abuse treatment programs. In such cases, facilities were asked to indicate what percentage of their clients were receiving treatment services for alcohol versus drug abuse on March 30, 1990. Table 9 presents the aggregate percentages for clients receiving services by type of facility; Table 10 gives the national estimates of clients in treatment in these service categories. More than one in four clients were receiving treatment for alcohol abuse only (25 percent), while an additional 27 percent were in treatment for drug abuse

only (15 percent single drug abuse, 12 for two or more drugs). Just under one-half of clients (47 percent) received services for both alcohol and drug abuse. About 21 percent abused alcohol and one other drug, while 26 percent abused two or more drugs and alcohol.

## 2.6 Environment/Modality of Treatment

Table 11 contains the assignment of DSRS responding facilities to their reported environment/modality of treatment. In this report, environment/modality refers to a matrix consistent with the 1989 NDATUS, and composed of three environments (hospital inpatient, residential, and outpatient), and three treatment types (detoxification, maintenance or drug free). Of the nine possible combinations of environment/type, there were few hospital inpatient drug maintenance or residential drug maintenance facilities. The remaining seven environment/modality designations are used as major analytic categories or modalities throughout the report.

Table 12 examines the distribution of facilities by single and multiple modality status. Of the 1,111 facilities, 709 offer a single modality of drug treatment while 402 facilities offer multiple modalities. These 402 multiple modality facilities contain 1,030 modalities of care which, in combination with the single modality facilities, total 1,739 modalities of drug treatment offered at the 1,111 sampled DSRS facilities. Table 12 presents single and multiple modality status by hospital inpatient, residential and outpatient environments. The distributions in these tables are analyzed further in Section 3.1.1.

### 3. DSRS FINDINGS

The first section of this chapter describes organizational characteristics of drug treatment facilities by the type of treatment modality offered. The second section delineates reported capacity and actual numbers of clients in treatment by environment. In the third section, demographic characteristics of clients are reviewed. Facility reports of treatment completion are analyzed using discharge data in the fourth section. In the last section, specific policy issues are discussed, including waiting list policies; methadone maintenance treatment practices; access to treatment for pregnant women; facilities' ability to report clients' HIV status; IV drug users; and, dual diagnosis clients. All numbers in this section are national estimates of facilities or drug treatment clients.

#### 3.1 Characteristics of Drug Abuse Treatment Facilities

This section describes the organizational characteristics of facilities delivering drug abuse treatment on March 30, 1990. Each facility answered a series of questions about its ownership and management (e.g., public or private), its location in one of three settings (hospital inpatient, residential, and outpatient), and the modalities of care offered (detoxification, maintenance, and drug free). The DSRS gathered much information, including demographic information on clients, according to the

modalities of care offered by the facility. This is a unique feature of the DSRS, since most previous research gathered client demographic data at the facility level only.

This section is organized by a series of tables. Table 13 estimates the number and distribution of treatment facilities delivering each of the seven modalities of care. Table 14 estimates the number and distribution of modalities for each of three environments: hospital inpatient, residential, and outpatient. Table 15 estimates the number and distribution of publicly-owned and privately-owned treatment facilities. Table 16 and Table 17 estimate the number and distribution of facilities of each ownership status by type of environment/modality. Lastly, Table 18 through Table 21 describe the proportion and number of facilities having each of 12 professional groups both on staff and under contract.

### 3.1.1 ENVIRONMENTS AND MODALITIES

#### Table 13: Percentage Distribution and National Estimates for Treatment Modalities

In Table 13 each facility is classified as a single modality or multiple modality facility, according to the number of drug treatment modalities of care offered. As illustrated in this table, most facilities (66 percent) are estimated to offer only a single modality of care (4,713 of 7,163 facilities). However, most modalities of care are offered at facilities with multiple modalities. When modalities, rather than facilities, are examined in Table 13, 57 percent of modalities are offered at multiple modality facilities (6,268 of 10,981 modalities).

Outpatient drug free is the most common modality of care, accounting for 46 percent of all modalities (5,101 of 10,981 modalities) and offered by over 71 percent of all facilities (5,101 of 7,163 facilities).

Outpatient drug free and residential drug free are the only modalities that are more likely to be offered in single modality facilities than in combination with other modalities. Understanding this feature of the way facilities are organized is an important framework for the remainder of the analysis.

Further analysis will be needed to determine if there are meaningful combinations of modalities that could be independently analyzed. (Table 6 presents a listing of the most frequent combinations.) Also, further analysis may be able to determine if a predominant modality exists among some portion of these multiple modality facilities, which might lead to a more useful classification of facilities. For example, if very few clients are enrolled in one of two modalities, for analysis purposes one modality might be considered the predominant service while the other is considered a supplemental service.

- Nearly two-thirds (66 percent) of facilities offer only one modality of care. On the other hand, most modalities (57 percent) are offered in conjunction with other modalities at the same facility. Multiple modality facilities on average offer 2.6 modalities of care.
- The most common modality, outpatient drug free, accounts for 46 percent of modalities and is offered by over 71 percent of facilities. Residential drug free is the second most common modality, accounting for 19 percent of all modalities and offered by 29 percent of facilities. Hospital drug detoxification modality and hospital drug free modality accounted for 10 and 8 percent of all modalities, respectively. The three remaining modalities did not exceed 6 percent of all modalities or more than 9 percent of facilities.

- Multiple modality facilities were less likely than single modality facilities to offer outpatient drug free (30 percent vs 69 percent) or residential drug free (16 percent vs 22 percent) modalities of care. They were more likely to offer each of the hospital inpatient modalities, i.e., detoxification (15 percent vs 3 percent) and drug free (13 percent vs 2 percent) and offer outpatient drug detoxification (10 percent vs less than 1 percent, estimate unstable) modality more than single modality facilities.
- Only two modalities, outpatient drug free and residential drug free, were more likely to be offered in single modality facilities than multiple modality facilities.
- None of the other modalities were more frequently organized in single modality facilities. Of outpatient drug maintenance modalities, only 20 percent were offered in single modality facilities. Of the remaining modalities, none were offered in more than 20 percent of the facilities as single modalities.

Table 14: Percentage Distribution and National Estimates for Treatment Environments

Table 14 summarizes the findings in the previous table for each drug treatment environment: hospital inpatient, residential, and outpatient.

- The most common environment is the outpatient setting; over 71 percent of single modality programs and nearly one-half of multiple modality programs are in outpatient settings.
- Single modality facilities are less likely than multiple modality facilities to be based in hospital inpatient environments (5 percent vs 28 percent).
- The vast majority of hospital inpatient modality programs (89 percent) and a slight majority of residential programs (57 percent) are in multiple modality facilities, unlike outpatient environment programs where only 47 percent are in multiple modality facilities.

### 3.1.2 OWNERSHIP

Table 15: Percentage Distribution and National Estimates of Facilities by Ownership Status

The majority of drug abuse treatment facilities based on NIDA's Master Unit Identification File are owned by private not-for-profit

organizations. Sampled facilities were asked about the type of organization that owned and managed the facility. The distribution of answers for both questions is nearly identical. National estimates based on the Master Unit Identification File indicate there are 4,555 private not-for-profit facilities and 1,233 private for-profit facilities offering drug abuse treatment services. The number of for-profit facilities is estimated to exceed the number of state and local public facilities (1,144). Nationally there are an estimated 218 federally owned facilities. It is understood that private-for-profit facilities and some groups of federally-owned facilities are underrepresented in the Master Unit Identification File from which the DSRS sample is drawn.

- The majority of drug abuse facilities (64 percent) are private not-for-profit organizations.
- One-in-six (17 percent) of facilities are organized as private for-profit organizations.
- One-in-five facilities are operated by public entities: either state or local governments (16 percent) or the federal government (3 percent).

Table 16: Percentage Distribution of Ownership Status by Facility Environment/Modality

- Single modality residential facilities are more likely to be organized as private not-for-profit organizations (84 percent) and less likely to be private-for-profit organizations than other facilities (6 percent).
- Compared to other facilities, single modality hospital inpatient programs are less likely to be in privately-owned facilities and more likely to be in public facilities.
- Most multiple modality facilities are private not-for-profit organizations (61 percent).

Table 17: National Estimates of DSRS Facilities by Ownership Status and Environment/Modalities

- Among private not-for-profit facilities, there are an estimated 2,019 single modality outpatient facilities, 935 single modality residential facilities, and 1,486 multiple modality facilities. No other group of facilities, classified by treatment modality and ownership status, accounts for over 700 facilities.

### 3.1.3 STAFFING

Table 18: Percentage of Facilities Reporting Staff by Type of Staff

DSRS asked each facility to indicate, for each professional group, the number of full-time and part-time staff members on payroll, and the number of staff on contract. Table 18 indicates the percentages of facilities who report having personnel on staff, full time and part time combined, and on contract. As is illustrated in the table, there is great diversity in the professional backgrounds of staff members at drug abuse treatment facilities. While the majority of facilities employ degreed and non-degreed counselors, no other staffing category other than administrative/support is represented at more than 43 percent of facilities.

- Of all facilities, 26 percent have staff psychiatrists, 24 percent have other staff physicians, and 33 percent have staff psychologists. At least 20 percent of all facilities have contracts with each of these professional groups.
- The majority (59 percent) of all facilities have non-degreed counselors on staff; only 4 percent have contracts with non-degreed counselors.
- Social workers and registered nurses are on staff at 42 percent and 37 percent of all facilities, respectively.
- Nearly three-quarters (72 percent) of all facilities have other degreed counselors on staff. Nearly 9 percent of facilities have contracts with other degreed counselors.

- A higher proportion of single modality residential than other types of facilities, 78 percent, employ non-degreed counselors. Professional groups less likely to be on staff at single modality residential facilities than at other facilities include psychiatrists, other physicians, psychologists and social workers.
- Multiple modality and single modality hospital inpatient facilities are more likely to have staff represented in nearly all categories and more staff with advanced degrees than single modality residential or single modality outpatient facilities.
- An equal proportion of physicians are on contract as on staff. For all other staff categories, the proportion of facilities with contract staff is exceeded by the proportion with staff members.

Table 19: National Estimates of Full-Time Staff on Payroll

This table presents national estimates for the number of full-time staff members on payroll at drug abuse treatment facilities on March 30, 1990. Among all facilities, the largest staffing categories are degreed counselors and non-degreed counselors, with an estimated 18,843 and 14,576 staff members, respectively. Registered nurses (8,991 full-time staff), social workers (5,078 full-time staff) and other licensed nurses (4,739 full-time staff) are also common staffing categories. No other categories had over 3,200 full-time staff members within drug abuse treatment facilities. Full-time psychologists (2,536) are more common than psychiatrists (931 staff) and other physicians (1,012 staff).

- The largest full-time staffing category is other degreed counselors (excluding social workers and family therapists) and non-degreed counselors, 18,843 and 14,576 staff members, respectively.
- Psychologists (2,536 staff members) are more frequently on the full-time payroll than psychiatrists (931 staff members) and other physicians (1,012 staff members).

Table 20: National Estimates of Part-Time Staff on Payroll

The pattern for part-time staff is somewhat different from that reported for full-time staff. A smaller portion of counselors are part-time and a larger portion of the medical staff are part-time. While there are an estimated 4,002 part-time registered nurses, there are only 3,132 and 2,235 other degreed and non-degreed counselors. Unlike full-time staff, there are more psychiatrists (1,996) and other physicians (1,860) on part-time payroll than psychologists (1,658).

- The largest part-time staffing categories are registered nurses (4,002 staff members) and degreed counselors (3,132 staff members), excluding social workers and family therapists.
- Psychiatrists and other physicians are more commonly on part-time payrolls than full-time payrolls, while psychologists are more often full-time (2,536) than part-time (1,658).

Table 21: National Estimates of Personnel on Contract

The largest number of contract staff are professionals with advanced degrees: non-psychiatric physicians (2,820), psychiatrists (2,494), and psychologists (2,459). In general, there are far fewer personnel on contract than on full-time or part-time staff. However, the number of psychiatrists and other physicians on contract nearly equal the number on staff.

Single modality hospital inpatient and single modality outpatient drug free facilities tend to contract for medical professional positions rather than non-medical positions. The other single modality programs and multiple modality programs, also contract for social workers and other types of counselors. However, many of the estimates are statistically unstable and should be interpreted with caution.

- There are 2,494 psychiatrists, 2,820 other physicians, and 2,459 psychologists on contract at drug abuse treatment facilities as of March 30, 1990.
- There are also large numbers of non-medical counselors on contract for these facilities, including 1,540 social workers, 1,515 other degreed counselors, and 673 non-degreed counselors.
- Psychologists (1,190 staff members) and social workers (1,204 staff members, estimate unstable) are the largest professional groups on contract at single modality outpatient facilities.
- Psychiatrists (1,428 staff members) and other physicians (1,735 staff members) are the largest professional groups on contract at multiple modality facilities.

### 3.2 National Estimates of Client Capacity, Clients in Treatment, and Utilization Rates

This section reports estimates of the nation's drug treatment capacity and utilization. Drug treatment facilities are defined as facilities with treatment services for drug abuse other than alcohol. While alcohol abuse treatment is often offered by these facilities, the definition excludes solely alcohol treatment facilities. (A more thorough description of the sampling universe is found in Chapter 2.)

In the analysis presented below, missing responses were imputed for estimates of total capacity, total actual numbers of clients in treatment, and the actual number of clients in treatment by treatment environment. While imputation has been carried out for capacity totals and actual client totals, no imputation of missing information was carried out for estimated capacity by modality because of insufficient data to impute data missing in these categories (see Appendix III for complete description of the imputation process).

Although the estimates of total capacity and total number of clients are relatively straightforward, the original intent was to distinguish drug

treatment capacity separately from alcohol treatment capacity. However, the definition of drug treatment services used by DSRS created some reporting difficulties for facilities, especially the distinction between drug treatment modalities and alcohol treatment modalities and the distinction between drug abuse clients and alcohol abuse clients. Many clients in treatment at these drug treatment facilities are reported as abusers of both alcohol and other drugs, making the distinction between alcohol and drug modality of treatment inappropriate. Of all clients at drug treatment facilities, 47 percent abuse both alcohol and other drugs, 25 percent abuse alcohol only, and 27 percent abuse other drugs only. (For a more thorough discussion of this finding see Chapter 2, Section 5).

### 3.2.1 CAPACITY and UTILIZATION

The national treatment capacity at drug treatment facilities is estimated as 819,781 units of capacity on March 30, 1990, excluding alcohol only and correctional facilities. (See Appendix III for discussion of imputation of missing values for capacity and clients in treatment data.) While most facilities (99 percent) had total capacity data for the facility, the total estimated capacity for all facilities includes both drug and alcohol treatment data.

For those facilities with capacity data, utilization rates were calculated by (a) dividing the number of actual clients in treatment on March 30 by (b) the number of units of capacity and (c) multiplying by 100. On March 30, 1990, an estimated 719,084 clients received treatment in facilities with an estimated capacity for 819,781 clients. Overall, client utilization of available units of capacity at drug treatment facilities was 88 percent of capacity on March 30, 1990.

### Tables 22-24: National Estimates of Clients in Treatment

In addition to capacity data, each facility was asked to report the number of total clients in treatment on March 30, 1990 for each type of care. Tables 22-24 presents estimates of the total number of clients in the nation's drug treatment facilities with a percentage breakdown for clients in each drug treatment environment, alcohol treatment, and total facilities.

About 719,084 clients are estimated to have been in treatment on March 30, 1990. About 501,753 clients were identified by environment of drug treatment. Another 217,331 clients were identified as receiving alcohol treatment.

- The outpatient environment serves the largest group of clients, accounting for an estimated 435,802 clients or 87 percent of clients in treatment on March 30, 1990.
- About 10 percent of clients were in residential treatment environments.
- Three percent were in hospital inpatient environments.
- In drug treatment facilities, 70 percent were in drug treatment and 30 percent were in alcohol treatment.

### 3.3 Demographic, Drug and Payor Characteristics of Clients in Treatment

This section describes the characteristics of clients in treatment for drug abuse, including their race and ethnicity, age, employment status, principal drug of abuse and primary source of payment. Data on client characteristics and demographics may have implications for policy and treatment decisions, as clients of different ethnic groups, age, and employment status may face different social and personal problems when trying to overcome their addictions. In several instances, we compare

demographic characteristics of clients in drug treatment with the proportion of that characteristic for the U.S. population as a whole. These are gross comparisons which are unadjusted for other population characteristics. For example, since drug use varies with age and racial/ethnic groups have different age distributions, comparisons across racial/ethnic groups should be interpreted cognizant of the fact that the numbers are not age-adjusted.

Race and ethnicity data are provided in Table 25 and Table 26; Tables 27 and 28 present data on the age distribution of those in treatment; Tables 29 and 30 present data on client employment status; Tables 31 and 32 present data on primary source of payment; and Tables 33 and 34 present information on the distribution of principal drug of abuse among clients in treatment. National estimates presented in these tables are not adjusted for the rate of non-response to survey questions.

The data in this section were collected separately by modality in each facility when possible. The row "Alcohol" is included because some drug treatment facilities identified modalities dedicated solely to the treatment of alcohol abuse. The row entitled "Modalities of Two or More Types, Including Alcohol Clients," presents information for facilities unable to separately report data by single modalities of care they offered, including care to alcohol clients. The following row "Modalities of Two or More Types, Not Including Alcohol Clients," presents information from facilities that could not separately report clients by the environment and modality of drug treatment service, but could exclude alcohol clients from their counts.

### 3.3.1 RACE/ETHNICITY

#### Table 25 and Table 26: Race/Ethnicity of DSRS Clients

Table 25 presents the percentage distribution of race/ethnicity of DSRS clients and Table 26 presents the national estimates based on DSRS clients in treatment by race/ethnicity. As seen in Table 25, almost 63 percent of those in treatment are non-Hispanic whites. However, blacks and Hispanics are disproportionately represented in drug treatment compared to their percentage of the general population; the percentage of the treatment population that is black is about twice the percentage of black Americans in the entire U.S. population (24 percent versus 12 percent). The percentage of those in treatment who are Hispanic is also greater than the percentage of Americans who are Hispanic (11 percent versus 8 percent) (United States Population Estimate, 1987, and Statistical Abstract of the U.S., 1988, from the Bureau of the Census).

This table also indicates that there are differences among the environment/modalities of treatment in which white and minority clients are served. About 63 percent of those in inpatient hospital settings are white. While blacks receive treatment in hospital inpatient programs slightly higher than their representation in the drug treatment population (28 percent), Hispanics are underrepresented in hospital inpatient settings (7 percent). Residential settings are characterized by an overrepresentation of black clients (33 percent). Outpatient environments show different distributions depending on the modality of treatment. Blacks and Hispanics are overrepresented in outpatient drug maintenance programs, while whites dominate outpatient drug free and alcohol modalities.

- White clients constitute 63 percent of those in treatment, while black clients make up 24 percent of those in treatment. This is about twice the percentage of black Americans in the nation's population. Americans of Hispanic origin are also overrepresented in treatment programs, comprising 11 percent of clients but 8 percent of the U.S. population.
- Minorities make up 59 percent of those in treatment in outpatient drug maintenance programs. In particular, Hispanics comprise almost 29 percent of those in drug maintenance programs, almost three times their percentage of the treatment population as a whole.
- Blacks make up 33 percent of those in residential treatment programs.
- Outpatient drug free and inpatient hospital programs contain the highest percentages of white, non-Hispanic clients (68 percent and 63 percent, respectively).

### 3.3.2 AGE

#### Table 27 and Table 28: Age of DSRS Clients

Table 27 presents the percentage distribution of the age of DSRS clients and Table 28 presents national estimates based on DSRS clients in treatment where age was reported. As seen in Table 27, the age distribution of those in drug treatment is skewed toward youth when compared to the distribution of the entire population. In particular, the 25-34 age group represents 18 percent of the nation's population but comprises 35 percent of the treatment population. The 18-24 group and the 35-44 group are also heavily overrepresented in the treatment population (Statistical Abstract of the US, 1988, Bureau of the Census). Outpatient drug maintenance programs have the oldest clients, with almost 62 percent over 34 years old and only 7 percent less than 25 years old. Outpatient drug free programs treat the youngest population as almost a third of their clients are younger than 25.

- The percentage of 25-34 year olds in drug treatment is almost twice their percentage of the national population.
- Only 9 percent of those in treatment are younger than 18 years old; about a fourth of these (2 percent of the total) are less than 15 years old.
- Nearly two-thirds (62 percent) of those in hospital inpatient treatment are between the ages of 25 and 44.
- Almost two-thirds (64 percent) of those in residential care are between the ages of 18 and 34.
- Outpatient drug maintenance programs reported no clients under age 18.
- Almost 62 percent of those in outpatient drug maintenance are over the age of 34.
- Nearly one-third of those in outpatient drug free programs are under the age of 25; 12 percent are under 18 years old.

### 3.3.3 EMPLOYMENT

#### Table 29 and Table 30: Employment Status of DSRS Clients

Table 29 presents the percentage distribution of employment status of DSRS clients at the time of admission and Table 30 presents national estimates of clients in treatment by employment status. Respondents provided client employment status information separately for most modalities. Table 29 shows that 50 percent of those in treatment were unemployed at admission to treatment. However, less than one-fifth of the clients in residential programs were employed.

- Fifty percent of those in treatment were employed at admission to treatment.
- Residential treatment programs have the smallest percentage (19 percent) of their clients employed.
- Although outpatient drug maintenance modalities have a somewhat less than average percentage of employed clients, about 42 percent of clients are reported as being employed.

### 3.3.4 PRIMARY SOURCE OF PAYMENT

#### Table 31 and Table 32: Primary Source of Payment for DSRS Clients

Table 31 presents the percentage distribution of primary source of payment of DSRS clients and Table 32 presents national estimates of clients by primary source of payment. Although these tables report on clients' primary sources of payment for treatment, they do not indicate the percentage of total income to facilities from various sources. For example, 13 percent of clients in treatment have their bills paid primarily by Medicaid; this does not mean that 13 percent of the income of treatment facilities comes from Medicaid.

As shown in Table 31, more than half of clients (51 percent) have no primary source of public or private payment for drug treatment services. Almost 19 percent have no payment source, and the remaining 32 percent enter treatment stating they will pay for themselves. About 33 percent of clients have their treatment paid for by public payors, with Medicaid paying 13 percent, Medicare paying 1 percent, and other public payments of 19 percent. About 16 percent of clients have private insurance as the primary payor for substance abuse treatment.

Table 31 indicates that there are large differences in the kinds of treatment being supported by different payors. Hospital inpatient modalities have the largest percentage of privately insured clients (44 percent), while outpatient drug maintenance modalities have virtually no clients with private insurance as the primary source of payment. Public payment covers 49 percent of clients in outpatient drug maintenance and 29 percent of those in outpatient drug free programs. Clients in outpatient drug maintenance programs depend heavily on Medicaid (37 percent) and self-

payment (42 percent). Outpatient drug free programs serve a large percentage of clients without private insurance or public payment (53 percent) as the primary source of payment.

- More than half of those in treatment (51 percent) have no outside source of payment, public or private.
- About one-third of those in treatment have their services paid primarily from public sources. Most frequently this is Medicaid (13 percent of the total) or other public payment (20 percent).
- Private health insurance as the primary payor covers 16 percent of patients. Inpatient hospital modalities have the highest percentage of clients with private coverage (44 percent).
- Residential modalities have the highest percentage of clients covered primarily by non-Medicaid public payors (35 percent).
- A majority of clients in outpatient drug maintenance programs are being covered primarily by public payors (49 percent). More than one-third of outpatient drug maintenance clients are covered primarily by Medicaid (37 percent).
- Among outpatient facilities, drug free programs have the lowest percentage of their clients covered by public payors (29 percent) and a high percentage of clients who have no payment source (20 percent) or who self pay (33 percent).

### 3.3.5 PRINCIPAL DRUG OF ABUSE

#### Table 33 and Table 34: Principal Drug of Abuse of DSRS Clients

Table 33 presents the percentage distribution of principal drug of abuse other than alcohol by DSRS clients and Table 34 presents national estimates of clients in treatment by principal drug of abuse. Alcohol was excluded as a principal drug of abuse in order to follow our mandate to examine drug abuse patterns other than alcohol. It is clear from this survey and other information that poly-drug abuse, rather than the abuse of any single drug, is common among drug abusers, and alcohol is often abused with other drugs. In addition, because this question asked facilities to

indicate the "principal drug of abuse", the data do not indicate the prevalence of use for any drug. A client whose principal drug of abuse is amphetamines may also be using cocaine or benzodiazepines, or both. Lastly, the "crack" column does not include all crack users. The table column labeled "crack/cocaine" was created to insure complete information on the use of cocaine for facilities that could not separately report on crack users. Such facilities included crack users with other cocaine users in unknown proportions.

Table 33 illustrates, within the context of poly-drug use, that cocaine (including crack) is the principal drug for which people are being treated. About 40 percent of those in treatment use either cocaine or its derivative, crack, as their principal drug. The next most commonly used principal drug is heroin/other opiates, at 27 percent. These two categories combined encompass two-thirds (67 percent) of clients in drug treatment. The third most common principal drug of abuse is marijuana/hashish (20 percent). It should be noted that the relatively high proportion of reported marijuana/hashish abusers may be an artifact of reporting by primarily alcohol facilities whose clients' principal drug of abuse, other than alcohol, is marijuana. Of the remaining 5 categories of drugs, only amphetamines as a principal drug of abuse represent more than 5 percent of the total.

Over half of the clients in inpatient hospital programs are there primarily for abuse of cocaine including crack, (55 percent). Nearly 20 percent of clients in inpatient hospital treatment have marijuana/hashish listed as their principal drug of abuse. Again, respondents were asked to report on their clients' principal drug of abuse other than alcohol.

Clients of residential programs are most likely to have cocaine, including crack, as their principal drug of abuse (60 percent). As one would expect, outpatient drug maintenance clients are overwhelmingly heroin/other opiate users (85 percent). Yet these data indicate that 15 percent of those in outpatient drug maintenance programs have a non-opiate drug as the principal drug of abuse. This appears to reflect the fact that respondents may have interpreted this question to mean current drug of abuse rather than drug of abuse at the time of admission to treatment. (This is known to be the case for one large outpatient methadone maintenance facility that reported 35 percent of their client population as current crack users, even though the clients presumably entered methadone maintenance treatment because of an addiction to heroin or other opiates.) Overall, about 12 percent of clients in outpatient maintenance were reported as using cocaine (including crack), but this estimate is unstable and should be interpreted with caution. Outpatient drug free programs treat the largest number of non-opiate using clients and have a very diverse client mix in terms of principal drug abused. Cocaine (including crack) users predominate (46 percent) while 28 percent of outpatient drug free clients' principal drug of abuse other than alcohol is marijuana and about 9 percent abuse amphetamines.

- Two-thirds of those in treatment have heroin/other opiates or cocaine (including crack) as their principal drug of abuse (67 percent). Cocaine (including crack) use is most frequently listed as the principal drug of abuse (40 percent), while heroin/other opiate abuse represents over 27 percent of the cases.
- Marijuana/hashish is the third most commonly listed principal drug of abuse, representing about 20 percent of cases.

- In hospital inpatient treatment, about one-half of clients are abusing cocaine including crack, (55 percent) and one-fifth (20 percent) are abusing marijuana/hashish.
- Residential programs have the highest percentage of cocaine (including crack) abusers as clients (60 percent).
- In outpatient drug free modalities, 46 percent of clients primarily abuse cocaine (including crack) and 28 percent primarily abuse marijuana.

#### 3.4 Discharge Status of DSRS Clients by Environment

This section provides information about the way client treatment was concluded. An estimated 1,866,890 clients were discharged during the facilities' most recent 12-month period. Facilities were asked to classify their clients who ended treatment during the past year into one of three categories: those who completed the planned treatment program, those who left treatment before completion due to a decision of the facility, and those who left treatment before completion, by client circumstances, including client decision, incarceration, moving, or death. In many cases, facilities cannot state with certainty why clients stopped coming for treatment. Interpretation of results in this column in the tables in this section must therefore be made with caution.

#### Table 35, Table 36 and Table 37: National Estimates and Percentage Distribution of Discharge Status for DSRS Clients

Table 35 presents national estimates and percentage distribution of discharge status for DSRS clients. Tables 36 and 37 present a breakdown of Table 35 by facilities who could separate out alcohol clients and facilities who could not, respectively. As seen in Table 35, national estimates of numbers of annual discharges indicate over 1.8 million discharges from drug treatment facilities. The largest number of annual

discharges are from the outpatient environment (892,360), followed by the residential (595,442) and then hospital inpatient environments (379,089).

As is illustrated in Table 35, facility administrators reported that about 62 percent of all clients completed the planned treatment program. Completion of treatment does not necessarily mean successful treatment, however. The table indicates that completion rates approach 81 percent in hospital inpatient settings and 65 percent in residential programs. Completion rates in the outpatient category are estimated at 51 percent.

- Approximately 62 percent of all clients ending treatment at drug treatment facilities completed treatment.
- Inpatient environments (hospitals and residential programs) have a higher completion rate than that reported for clients in outpatient treatment. The hospital inpatient environment has the highest reported completion rate (81 percent), and the residential environment has a reported completion rate of 65 percent.
- Over half of clients ending treatment in the outpatient environment (51 percent) completed treatment.

### 3.5 Key Drug Services Research Policy Issues

The Drug Services Research Survey will allow the analysis of many important policy issues related to drug treatment. In this section a selection of the kinds of key questions which the database can be used to answer is presented. Six areas were selected for these analyses: waiting list policies, methadone maintenance policies, treatment of pregnant women, intravenous drug users (IVDUs), HIV status and testing, and dual diagnosis clients.

### 3.5.1 CHARACTERISTICS OF WAITING LIST SYSTEMS

The first part of this section reports on the average waiting times to enter treatment at facilities, the proportion and number of facilities having formal procedures for maintaining a waiting list, and estimates of the number of applicants on waiting lists. Tables 38 through 43 describe characteristics of all facilities, and then the characteristics of public and privately owned facilities.

All facilities were asked: (a) whether they usually have more applicants than slots; (b) to estimate the waiting time on March 30, 1990 for a drug treatment applicant; and (c) to identify if they had a system to place applicants on a waiting list. Those facilities with a waiting list system were asked to report the number of applicants on a waiting list and the time they had been waiting. A series of questions on waiting list system characteristics then followed.

The tables present estimates of average waiting time for two groups of facilities: first, all facilities in an environment/modality (including those with no waiting list applicants or no system); second, those facilities with a waiting list system. The focus of the tables in this section is on the facilities having a waiting list system, that is, a procedure to place names on a list. It should be noted that some facilities have a system but did not have any waiting list applicants on March 30, 1990. Other facilities had waiting list applicants but did not report a formal waiting list system and therefore were not asked questions about their waiting list features. They are not included in the tabulation of waiting list characteristics. Among facilities which usually had more

applicants than slots, 88 percent had a formal waiting list system (data not shown).

The analysis presented here reveals that two out of five facilities (42 percent) usually have more applicants than slots and that the majority of facilities (60 percent) maintain a waiting list system. Virtually all the systems are reported to have procedures to screen, verify the status, and list the name of waiting list applicants.

Of all facilities, the shortest average waiting time is 7 days at single modality hospital inpatient facilities (estimate unstable) and the longest waiting time is 22 days at single modality residential facilities. While the average waiting time at all facilities is 14 days, public facilities generally have longer average waiting times (16 days) than private facilities (13 days).

For facilities with a waiting list system, each facility was asked to report for each modality the total number of applicants on the waiting list as of March 30, 1990 and to report the time each applicant had been on the list. Based on those DSRS facilities which could provide information, there were an estimated 79,072 applicants waiting to enter treatment on March 30, 1990. Of the 79,072 applicants, the majority (74 percent) were waiting to enter either outpatient drug free modalities or residential drug free modalities. An estimated 37,847 ( $\pm$  4,535) applicants were waiting to enter outpatient drug free treatment, and an estimated 21,714 ( $\pm$  3,302) were on lists to enter residential drug free treatment (data not shown).

Of the estimated 79,072 applicants on waiting lists on March 30, 1990, 59 percent had been on the list for one month or less and 38 percent had waited over one month. (Facilities did not report the time waiting for

3 percent of the applicants.) Since these applicants had yet to gain entrance to treatment as of March 30, 1990, we do not know the total time they waited to enter treatment. In other words, a distribution of waiting times for these applicants at the time they eventually entered treatment would show longer average waits.

These estimates of the number of applicants should be interpreted cautiously. One caveat is that 28 percent of the facilities with waiting lists systems could not separate out alcohol only clients in their estimates of applicants, leading to an overcount of the number of clients waiting for drug abuse treatment. Secondly, these estimates cannot be directly compared to the national estimates of capacity because the estimates of those waiting are only based on that portion of facilities with a waiting list system. A more detailed analysis would compare the number of applicants to treatment slots for only those facilities which provided both estimates.

Interesting questions regarding waiting list characteristics await further analysis, such as geographic patterns in waiting times and differences between not-for-profit and for-profit private facilities.

Table 38 and Table 39: Waiting List Characteristics of DSRS Facilities

Table 38 illustrates differences between facilities in their waiting list policies and characteristics. Table 39 estimates the number of facilities nationally with each waiting list characteristic.

- Approximately 42 percent of all facilities sampled report that they usually have more applicants than treatment slots. Facilities estimated applicants' average waiting time was 14 days.
- Among all facilities, single modality residential facilities have a higher proportion of facilities with more applicants than slots

(69 percent) and a longer wait (22 days) than single modality outpatient facilities (35 percent, 12 days) and multiple modality facilities (40 percent, 13 days).

- 60 percent of all facilities report having a system for placing applicants on a waiting list. For facilities having a waiting list system, the estimated average waiting time is 21 days.
- Of those 60 percent of facilities having a waiting list system, 93 percent have a procedure for screening the eligibility of applicants; 89 percent have a procedure for verifying the status of waiting list entries, and 95 percent record the names of the waiting list entries.
- Only 46 percent of facilities with a waiting list system require the client to maintain contact with the facility in order to remain on the waiting list.
- Single modality residential facilities are more likely to have a waiting list system (82 percent) than single modality outpatient facilities (49 percent) and multiple modality facilities (65 percent).
- Single modality residential facilities are also more likely to require contact with the facility in order to remain on the waiting list (74 percent) than single modality outpatient facilities (32 percent) and multiple modality facilities (46 percent).
- Overall, there are an estimated 2,986 facilities which usually have more applicants than slots. Single modality outpatient facilities, multiple modality facilities, and single modality residential facilities account for nearly all these facilities.

Table 40 and Table 41: Waiting List Characteristics of Public Facilities

In general, public facilities have longer average waiting times than private facilities. Table 40 presents the percentage breakdown of public facilities by waiting list characteristics. Table 41 presents national estimates of the number of public facilities with each waiting list characteristic.

- Almost one-half of public facilities sampled (48 percent) report they usually have more applicants than slots. The estimated average waiting time for entry into those facilities is 16 days.

- Sixty percent of public facilities report having a waiting list system. The estimated average waiting time in public facilities with waiting list systems is 23 days. An estimated 22,573 applicants are on waiting lists in publicly-owned facilities with a waiting list system.
- Of the 60 percent of public facilities with a waiting list system, 89 percent have a procedure for screening the eligibility of applicants; 78 percent have a procedure for verifying the status of waiting list entries; 38 percent require contact with the facility in order to remain on the waiting list; and 98 percent record the names of the waiting list entries.
- There are an estimated 648 public drug abuse treatment facilities that usually have more applicants than slots, and an estimated 812 public facilities with a waiting list system.

Table 42 and Table 43: Waiting List Characteristics of Privately-Owned Facilities

Table 42 presents the percentage breakdown on waiting list data for privately-owned facilities. Table 43 presents national estimates of the number of private facilities with each characteristic. About the same proportion of privately-owned facilities as publicly-owned facilities report having a waiting list system. The estimated average waiting time is shorter at these private facilities than public facilities. In addition, further analysis not shown here revealed that for-profit facilities have dramatically shorter waiting times than not-for-profit private facilities.

- Approximately 40 percent of privately-owned facilities report they usually have more applicants than slots. This is a smaller proportion than among public facilities (48 percent). The estimated average waiting time for entry into these facilities is 13 days.
- Sixty (60 percent) of private facilities report having a waiting list system. The estimated average waiting time in private facilities with waiting list systems is 20 days.
- Of the 60 percent of private facilities with a waiting list system, 94 percent have a procedure for screening the eligibility of applicants; 91 percent have a procedure for verifying the status of waiting list entries; 48 percent require contact with

the facility in order to remain on waiting list; and 94 percent record the names of the waiting list entries.

- An estimated 56,342 applicants are on waiting lists in privately-funded facilities with a waiting list system.
- Private single modality residential facilities have a higher proportion of facilities with more applicants than slots (68 percent), and a longer wait (21 days) than private single modality outpatient facilities (35 percent, 12 days) and private multiple modality facilities (36 percent, 12 days).
- Over 81 percent of private single modality residential facilities report having a waiting list system. The estimated average waiting time for those facilities is 24 days.
- There are an estimated 2,330 private drug abuse treatment facilities which usually have more applicants than slots. There are an estimated 3,449 private facilities which maintain a waiting list system.

### 3.5.2 METHADONE MAINTENANCE

#### Table 44: Methadone Maintenance Treatment and Policies

Table 44 describes the number of clients who were receiving methadone and characteristics of methadone maintenance treatment for facilities which had patients in methadone treatment on March 30, 1990. Almost 9 percent of facilities reported having active patients in methadone treatment on this date.

Information was gathered on maximum, minimum, and average daily dosages provided by facilities. The dosage data indicate that there is greater variation in the maximum daily dosage than in either the minimum or average daily dosages. The distributions for all three dosage measures have a tendency to cluster at the lower end of the reported ranges. The median maximum daily dosage was 80 mg.; the median minimum daily dosage was 5.5 mg.; and the median average daily dosage was 50 mg.

Data were also collected on facility policy regarding take home supply of methadone and the maximum length of time a client could be maintained on methadone. The vast majority of facilities allowed take home supplies and did not have a maximum length of time for a client to be maintained on methadone.

There were an estimated 112,943 drug treatment clients receiving methadone on March 30, 1990. Of these clients, 8 percent were considered to be in detoxification and 92 percent were in maintenance.

- The maximum daily dosage of methadone given to a single client on maintenance ranged from 45 mg. to 200 mg. The median maximum daily dosage was 80 mg. and the mean was 90 mg. One-half of facilities reported maximum dosages between 76 mg. and 100 mg. Ten percent of facilities reported providing maximum daily dosages equal to or greater than 120 mg.
- The minimum daily dosage of methadone given to a single client on maintenance ranged from 1 mg. to 40 mg. The median minimum daily dosage was 5.5 mg. and the mean was 9.5 mg. Three-fourths of facilities reported minimum dosages equal to or less than 10 mg. Ten percent of facilities reported providing minimum daily dosages equal to or greater than 20 mg.
- The average daily dosage of methadone given to clients on maintenance ranged from 25 mg. to 80 mg. The median and mean average daily dosage was 50 mg. One-half of facilities reported average daily dosages between 40 mg. and 60 mg. Ten percent of facilities reported providing average daily dosages greater than 62 mg. and 10 percent reported average daily dosages equal to or less than 33 mg.
- About 95 percent of facilities reported having clients who received take home supplies of methadone. Of facilities allowing a take home supply, 69 percent reported having clients who received a one day supply and 74 percent reported having clients who received a two day supply. Beyond this, there was an inverse relationship between the number of days supply and the number of facilities which had clients in these categories, with only 7 percent of facilities reporting any clients who received a seven or more days supply.
- Over 90 percent of facilities reported not having a maximum length of time a client could be maintained on methadone.

### 3.5.3 PREGNANT FEMALES

#### Table 45: Drug Abuse Treatment for Pregnant Clients

Table 45 describes whether or not facilities reported treating pregnant females during their most recent twelve-month reporting period according to the modalities of care offered by the facility and presents national estimates of the number of pregnant clients treated. On March 30, 1990 approximately 87 percent of facilities reported not having an admission policy of excluding pregnant females (data not shown). The percentage of facilities which reported treating pregnant females during the twelve-month reporting period was much lower and showed substantial variation depending on the modality characteristics of the facilities.

Almost all facilities reported whether or not they had treated pregnant clients during the twelve-month period; however, of facilities which reported treating pregnant clients, over 14 percent could not report the number of pregnant clients who had been treated (data not shown). Overall, approximately 58 percent of facilities reported having treated pregnant clients during the twelve-month reporting period. An estimated 25,367 pregnant clients received treatment.

Of facilities reporting no pregnant clients, 72 percent indicated that no pregnant females requested treatment. Lack of training by staff in the treatment of drug-addicted pregnant females (35 percent) and facility inadequately equipped to provide for the special needs of pregnant women (42 percent) were also reported as reasons. Nineteen percent reported other reasons as explanations (data not shown).

- Almost all single modality outpatient maintenance facilities treated pregnant women; however, the number of actual facilities reporting was too small to present a precise estimate.

- About 36 percent of single modality residential facilities reported treating pregnant clients. This is the lowest percentage across all facilities. Explanations as to whether these differences are related to the gender specific orientation of some residential programs or whether residential programs are less likely to be equipped to treat pregnant women await further research.
- Approximately 54 percent of single modality outpatient drug free and 61 percent of single modality hospital inpatient facilities treated pregnant clients during the reporting period.
- A greater percentage of multiple modality facilities reported having treated pregnant females than did single modality facilities (71 percent). Whether all modalities within a multiple modality facility, and which combination of modalities, treat pregnant clients awaits further analysis.
- Of the estimated 25,367 total pregnant clients in drug treatment during the 12-month reporting period, one-half received treatment in multiple modality facilities. Almost 29 percent were in single modality outpatient drug free; 9 percent were in single modality outpatient maintenance (unstable estimate); 9 percent were in single modality residential; and 4 percent were in single modality inpatient hospital facilities, but this last estimate is unstable and should be interpreted with caution.

#### 3.5.4 HIV STATUS OF CLIENTS

Table 46: Knowledge of HIV Status of Clients

Table 46 describes facilities' knowledge regarding three aspects of the HIV status of their clients: clients who were diagnosed with AIDS; clients who were HIV seropositive but did not have confirmed AIDS; and clients who were suspected to be HIV positive. The HIV/AIDS testing did not have to take place at the facility in order for the facility to report having treated clients in a given category. The number of facilities that did not know or refused to answer was substantial, approaching 30 percent for each of the three categories. One-in-five facilities reported treating some clients diagnosed with AIDS, and one-in-three reported treating clients who had tested HIV seropositive. For facilities that reported

treating AIDS or HIV clients, the numbers of such clients in a facility was very small.

- About 51 percent of facilities reported that they had no clients who had been diagnosed with AIDS, 23 percent reported some AIDS clients, and 26 percent either refused or could not answer. Of facilities reporting some clients diagnosed with AIDS, 80 percent reported having 4 or fewer clients. Sixty-four percent of facilities reported two or fewer clients in this category.
- Approximately 43 percent of facilities reported that they did not have any clients who were HIV seropositive (not confirmed AIDS), 31 percent reported some patients, and 26 percent either refused to report or did not know the number of clients who were positive. Of facilities reporting some HIV seropositive clients, three-fourths reported having 8 or fewer clients during the reporting period. Fifty percent of facilities reported three or fewer clients in this category (data not shown).

Table 47: HIV/AIDS Testing and Client HIV Status by Modality

Table 47 describes whether or not HIV/AIDS testing is conducted on clients, according to the environments/modalities which the facilities offered. Almost all facilities reported whether they conducted HIV/AIDS tests on clients during the twelve-month reporting period. About one-third of facilities indicated that they performed such testing; however, there was great variation depending on the modality characteristics of the facilities.

This table also describes whether a facility treated HIV seropositive and/or AIDS diagnosed clients during the most recent reporting period and presents national estimates of the number of these clients. An estimated 32,597 estimated HIV seropositive or AIDS diagnosed clients were treated during the reporting period. Over one-half (52 percent) of multiple modality facilities reported treating such clients. Single modality

outpatient drug free facilities were the least likely to treat these clients (26 percent).

- Only 6 percent of single modality outpatient drug free facilities conducted HIV/AIDS tests; however, facilities representing all other modality combinations reported a substantially greater amount of HIV/AIDS testing. Single modality hospital inpatient were the most likely to conduct testing (86 percent).
- Over one-half of multiple modality facilities (58 percent) and over one-third of single modality residential facilities (35 percent) conducted HIV testing.
- Across all modalities, 38 percent of facilities reported treating clients who were either HIV seropositive or had diagnosed AIDS. Because this is a combination of categories, the percent is higher than the previous table in which AIDS or HIV seropositivity were reported separately. Approximately 37 percent reported treating zero HIV or AIDS patients, and 25 percent either refused or did not know the HIV status of their clients.
- There was slight variation across facility type with respect to the percentage of facilities which did not know or refused to answer the HIV status questions. Unknowns and refusals ranged from 20 percent in single modality residential facilities to 33 percent in single modality inpatient hospital facilities.
- There was substantially greater variation across modalities with respect to knowledge of numbers of HIV seropositive and AIDS diagnosed clients. Facilities which reported having either HIV seropositive or AIDS diagnosed clients and knowing what percentage that was of total clients ranged from 27 percent of single modality outpatient drug free facilities to 52 percent of multiple modality facilities.
- Although a precise number cannot be presented because of cell size considerations, it should be noted that single modality outpatient maintenance facilities reported the highest percentage across all facility types of having some HIV seropositive or AIDS diagnosed clients.
- Facilities reporting zero HIV or AIDS clients ranged from 24 percent of multiple modality outpatient maintenance facilities to 47 percent of single modality outpatient drug free facilities.
- Of the estimated 32,597 total HIV seropositive or AIDS diagnosed clients in drug treatment during the 12-month reporting period, almost one-half received treatment in multiple modality facilities. Over 20 percent were in single modality outpatient maintenance (unstable estimate), 17 percent were in single

modality outpatient drug free, and 11 percent were in single modality residential (unstable estimate). Three percent were in single modality hospital inpatient facilities; however, this last estimate is unstable and should be interpreted with caution.

### 3.5.5 INTRAVENOUS DRUG USERS AND DUAL DIAGNOSIS CLIENTS

#### Table 48: Drug Treatment for IV Drug Users

Table 48 presents estimates of the number of IV drug users in drug treatment on March 30, 1990, according to the modalities of treatment which the facility offered. The percentage of total clients who were IV drug users within each facility group is also discussed. On March 30, 1990 approximately 6 percent of facilities reported that they do not treat IV drug users as part of an admission policy; however, over 31 percent of facilities reported that they did not have any clients who were in treatment on this date who were IV drug users (data not shown).

It was estimated that on March 30, 1990 over 177,000 drug treatment clients were IV drug users, representing approximately one-fourth of all clients in drug treatment facilities. The distribution of where these clients are treated varied substantially by modality of treatment offered and accounted for wide variation as a percentage of total clients within a facility type.

- An estimated 177,309 IV drug users were reported to be in drug treatment on March 30, 1990. This was about 25 percent of clients in treatment on that date.
- Multiple modality facilities had the highest proportion of clients who were IV drug users (33 percent) and single modality outpatient drug free had the lowest proportion (8 percent); however, it should be noted that the proportion of IV drug users in single modality outpatient maintenance was substantially greater than other modalities but the precise number cannot be reported because of cell size considerations.

Table 49: Drug Treatment for Dual Diagnosis Clients (Substance Abuse and Mental Illness)

Table 49 presents estimates of the number of clients in drug treatment on March 30, 1990 who had a dual diagnosis of substance abuse and mental illness, according to the treatment modalities which the facility offered. The percentage of total clients who were dually diagnosed within each facility group is also discussed. On March 30, 1990 approximately 12 percent of facilities reported that they do not treat dually diagnosed clients as part of an admission policy; however, over 30 percent of facilities reported no clients in treatment on this date who had a dual diagnosis of substance abuse and mental illness (data not shown).

It was estimated that on March 30, 1990, there were over 88,000 drug treatment clients who were dually diagnosed, representing approximately 12 percent of all clients in treatment. The distribution of where these clients were treated varied substantially. Estimates of numbers of dual diagnosis clients are conservative because some types of facilities may not assign diagnoses of mental illness to drug and alcohol treatment clients because facilities are not staffed to treat mental illnesses. Single modality inpatient hospital facilities had the highest percentage (34 percent, estimate unstable) of total clients who were dually diagnosed, but there was little variation in the proportion of dually diagnosed clients across other facility groups.

- Of the estimated 88,366 clients in drug treatment facilities who had a dual diagnosis of substance abuse and mental illness, 47 percent received treatment in single modality outpatient drug free facilities and 42 percent were in multiple modality facilities. Less than 5 percent of these clients were treated in other types of facilities.

- Overall treatment clients with a dual diagnosis accounted for 12 percent of all clients in drug treatment on March 30, 1990.
- Single modality hospital inpatient facilities had the highest proportion of clients who were dually diagnosed (34 percent, estimate unstable), even though the number of dually diagnosed clients in this modality represents only 1 percent of the total estimated number of dually diagnosed clients (estimate unstable). The percentage of dually diagnosed clients for the remaining facility types ranged from 11 percent to 14 percent.

#### 4. CONCLUSION

This report of the Drug Services Research Survey has presented our analyses of selected survey questions. These analyses include imputed data for missing information from facilities to produce more complete estimates of capacity and utilization; estimates of alcohol, drug, and combined alcohol and drug abusers; estimates of methadone clients, IV drug users and dual diagnosis clients.

Data for correctional facilities have been excluded from this report, and a large outlier facility has been self-weighted to represent only itself.



APPENDIX I

Tables

DRUG SERVICES RESEARCH SURVEY

Phase I Final Report:  
Non-Correctional Facilities

REVISED

Contract Number 271-90-8319/1

Submitted to the  
National Institute on Drug Abuse

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Table 1: Number of Facilities in Total Sampling Frame, Screener and Interview Status, and Number of Respondents by Sampling Strata for DSRS Facilities

Sampling Strata	Number of Facilities in Sampling Frame	Final Status, Sub-sample A (Waves 1 - 4) and Sub-sample B (Wave 1)							
		Screening Phase			Telephone Interview Phase			Facilities Completing Survey	
		Number of Facilities In Released Sample	Number of Facilities Screened <sup>a</sup>	Number of Facilities Eligible After Screening <sup>b</sup>	Number of Facilities Ineligible After Survey Contact <sup>c</sup>	Number of 'Maximum Contact' Facilities	Number of Refusals	Number of Respondents	Response Rate (% of Eligibles) <sup>d</sup>
Hospital Inpatient	693	179	178	172	6	12	16	138	83.1
Residential	1,172	216	213	203	1	11	6	185	91.6
Outpatient:									
Detoxification or Drug Maintenance	467	103	102	99	6	4	9	80	86.0
Drug Free	2,953	526	520	467	18	32	45	372	82.9
Alcohol Treatment Only	1,291	187	183	135	21	11	12	91	79.8
New Facilities since 1987 and Other Facilities with Unknown Environment/Modality	4,073	592	561	455	37	47	54	317	75.8
<b>Total</b>	<b>10,649</b>	<b>1,803</b>	<b>1,757</b>	<b>1,531</b>	<b>89</b>	<b>117</b>	<b>142</b>	<b>1,183</b>	<b>82.0</b>

Source: 1990 NIDA Drug Services Research Survey, Brandeis University, Institute for Health Policy.

a Facilities (n = 46) did not complete the screener because they could not be located (n = 27 or 1.5%), refused (n = 16 or 0.9%), or were duplicates (n = 3 or 0.2%).

b During screening, 226 facilities were determined to be ineligible because: treatment was not provided (n = 151 or 8.6%); only treatment of alcohol abuse was provided (n = 39 or 2.2%); or the facility had gone out of business (n = 36 or 2.0%).

c At telephone contact or in response to a DSRS Survey Assistance Hotline inquiry, 89 facilities were determined to be ineligible because: treatment was not provided (n = 34, or 2.2%); only treatment of alcohol abuse was provided (n = 27, or 1.8%); the facility was not in business on March 30, 1990 (n = 4, or 0.3%); the sampled service unit was a duplicate or the data included under a completed survey for an administrative unit (n = 19, or 1.2%); other reasons (n = 5, 0.3%).

d The response rate is calculated by dividing the respondents completing telephone surveys (n = 1,183) by the number of facilities considered eligible to complete the survey in the absence of other knowledge (n = 1,442). Eligible facilities include the respondents plus the facilities refusing or not completing the survey after repeated contacts.

Table 2: Interim Number of Facilities in Total Sampling Frame, Screener Status, and Number of Respondents by July 18, 1990 by Sampling Strata for DSRS Facilities

Sampling Strata	Number of Facilities in Sampling Frame	Sub-sample A, Waves 1 - 4, Status on July 18, 1990			
		Number of Facilities in Released Sample	Number of Facilities Screened <sup>a</sup>	Number of Facilities Eligible After Screening <sup>b</sup>	Number of Respondents July 18, 1990
Hospital Inpatient	693	113	113	108	76
Residential	1,172	137	136	130	114
Outpatient:					
Detoxification or Drug Maintenance	467	65	64	63	46
Drug Free	2,953	332	328	287	206
Alcohol Treatment Only	1,291	118	116	86	49
New Facilities since 1987 and Other Facilities with Unknown Environment/Modality	4,073	374	355	292	166
<b>Total</b>	<b>10,649</b>	<b>1,139</b>	<b>1,112</b>	<b>966</b>	<b>657</b>

Source: 1990 NIDA Drug Services Research Survey, Brandeis University, Institute for Health Policy.

- a Facilities (n = 27) did not complete the screener because they could not be located (n = 14 or 1.2%), refused (n = 11 or 1.0%), or were duplicates (n = 2 or 0.2%).
- b During screening, 146 facilities were determined to be ineligible because: treatment was not provided (n = 103 or 9.0%); only treatment of alcohol abuse was provided (n = 23 or 2.0%); or the facility had gone out of business (n = 20 or 1.8%).

Table 3: Numbers of DSRS Respondent Facilities by Sampling Stratum Designation and Facility Environment/Modality, March 30, 1990

Sampling Strata	Environment/Modality								All Facilities
	Single Modality Facilities						Multiple Modality Facilities	'Alcohol Only' Facilities	
	Hospital Inpatient	Residential	All Outpatient Modalities	Outpatient					
				Outpatient Detoxification	Outpatient Maintenance	Outpatient Drug Free			
Hospital Inpatient	27	7	0	0	0	0	103	1	138
Residential	0	119	4	0	0	4	58	4	185
Outpatient:									
Detoxification or Drug Maintenance	0	0	37	0	15	22	43	0	80
Drug Free	0	3	277	1	0	276	85	7	372
Alcohol Treatment Only	3	16	30	0	0	30	8	34	91
New Facilities since 1987 and Other Facilities with Unknown Environment/Modality	9	37	150	0	4	146	109	12	317
All Facilities	39	182	498	1	19	478	406	58	1,183

Source: 1990 NIDA Drug Services Research Survey, Brandeis University, Institute for Health Policy.

Table 4: Percentage Distribution of Sampling Stratum Designation by DSRS Respondent Facility Environment/Modality, March 30, 1990

Sampling Strata	Environment/Modality								Total <sup>a</sup> %    n	
	Single Modality Facilities						Multiple Modality Facilities %	'Alcohol Only' Facilities %		
	Hospital Inpatient %	Residential %	All Outpatient Modalities %	Outpatient						
				Outpatient Detoxification %	Outpatient Maintenance %	Outpatient Drug Free %				
Hospital Inpatient	19.6	5.1	0.0	0.0	0.0	0.0	74.6	0.7	100.0	138
Residential	0.0	64.3	2.2	0.0	0.0	2.2	31.4	2.2	100.0	185
Outpatient:										
Detoxification or Drug Maintenance	0.0	0.0	46.3	0.0	18.8	27.5	53.8	0.0	100.0	80
Drug Free	0.0	0.8	74.5	0.3	0.0	74.2	22.8	1.9	100.0	372
Alcohol Treatment Only	3.3	17.6	33.0	0.0	0.0	33.0	8.8	37.4	100.0	91
New Facilities since 1987 and Other Facilities with Unknown Environment/Modality	2.8	11.7	47.3	0.0	1.3	46.1	34.4	3.8	100.0	317
All Facilities	3.3	15.4	42.1	0.0	1.6	40.4	34.3	4.9	100.0	1,183
Number of Respondent Facilities	39	182	498	1	19	478	406	58		

Source: 1990 NIDA Drug Services Research Survey, Brandeis University, Institute for Health Policy.

a Percentages will not always add to 100.0% due to rounding.

Table 5: Eligibility and Response Status of 'Alcohol Only' Facilities, Sampled from Alcohol Stratum and from All Other DSRs Strata, 1990

Events Determining Status	Facilities Sampled From Alcohol Treatment Stratum	Facilities Sampled From Other Strata
Sample	187 Sampled	1,616 Sampled
Screeners	135 Possibly Eligible (29 Ineligible due to 'Alcohol Only')	1,396 Possibly Eligible (10 Ineligible due to 'Alcohol Only')
Possibly Eligible	<u>135</u>	<u>1,396</u>
DSRS Survey Assistance Hotline	48 Called Because Self-Reported as 'Alcohol Only' (15 Ineligible, Truly 'Alcohol Only')	35 Called Because Self-Reported as 'Alcohol Only' (11 Ineligible, Truly 'Alcohol Only')
DSRS-Eligible 'Alcohol Only' Facilities Treating Drug Problems of Drug and Alcohol Abusers	<u>33</u>	<u>24</u>
Respondent Status	32 Completed Survey as 'Alcohol Only' <sup>a,c</sup> (1 Refused or Never Responded After Maximum Contacts)	23 Completed Survey as 'Alcohol Only' <sup>a,c</sup> (1 Refused or Never Responded After Maximum Contacts)
Completed Survey Without Calling DSRs Survey Assistance Hotline Regarding 'Alcohol Only Status'	<u>59</u>	<u>1,069</u>
Treatment Status	2 <sup>c</sup> Self-Reported as Offering Alcohol Treatment and No Drug Treatment Modalities <sup>b</sup>	1 <sup>c</sup> Self-Reported as Offering Alcohol Treatment and No Drug Treatment Modalities <sup>b</sup>

Source: 1990 NIDA Drug Services Research Survey, Brandeis University, Institute for Health Policy.

- a Although these facilities labelled themselves as 'alcohol only' treatment programs, they were confirmed to be also addressing the drug problems of alcohol clients during treatment.
- b These facilities were also counted as 'alcohol only' facilities in the DSRs completed sample.
- c These 58 facilities (32 + 23 + 2 + 1 = 58) comprise the total number of 'alcohol only' facilities in the DSRs completed sample and are excluded from further analysis.

Table 6: Numbers of 1990 DSRS Facilities by Environment/Modality by Availability of Alcohol Treatment

Environment/Modality	Availability of Alcohol Treatment		Total
	Alcohol Treatment Offered	Only Drug Treatment Offered	
<u>'Alcohol Only', Self-Labelled:</u>	<u>58<sup>a</sup></u>	<u>0</u>	<u>58</u>
<u>Correctional Facilities</u>	<u>10</u>	<u>4</u>	<u>14</u>
<u>Single Drug Modality:</u>	<u>556</u>	<u>153</u>	<u>709</u>
Hospital Inpatient (Detoxification or Drug Free)	29	10	39
Residential (Detoxification or Drug Free)	122	56	178
Outpatient:			
Drug Detoxification	1	0	1
Drug Maintenance	2	17	19
Drug Free	402	70	472
<u>Multiple Drug Modalities:</u>	<u>325</u>	<u>77</u>	<u>402</u>
Outpatient Drug Free/Residential Drug Free	57	14	71
Hospital Inpatient (Detoxification & Drug Free)	55	3	58
Outpatient Drug Free/Hospital Inpatient (Detoxification & Drug Free)	44	7	51
Outpatient Drug Free/Residential (Detoxification & Drug Free)	27	3	30
Outpatient (Detoxification, Maintenance & Drug Free)	8	17	25
Residential (Detoxification & Drug Free)	17	4	21
Other Combinations	117	29	146
<b>Total Facilities Reported Upon</b>	<b>881</b>	<b>230</b>	<b>1,111</b>

Source: 1990 NIDA Drug Services Research Survey, Brandeis University, Institute for Health Policy.

a One 'alcohol only' facility was also a correctional facility.

Table 7: National Estimates of 1990 DSRS Facilities by Environment/Modality

Reported Environment/Modality	Respondents: Number of Facilities	National Estimates <sup>a</sup> of Numbers of Facilities Wn (± SE)	
<u>Single Modality Facilities With or Without Alcohol Treatment:</u>	719	4,788	111
Hospital Inpatient	39	211	37
Residential	182	1,147	90
Outpatient	498	3,430	105
Detoxification	1	6*	6
Maintenance	19	126	30
Drug Free	478	3,298	105
<u>Multiple Modality Facilities Combined</u>	406	2,469	100
<b>Total</b>	<b>1,125</b>	<b>7,257</b>	<b>111</b>

Source: 1990 NIDA Drug Services Research Survey, Brandeis University, Institute for Health Policy.

a Estimates may not total exactly due to rounding.

SE = Sampling Error

\* The Coefficient of Variation for this estimate is greater than or equal to 0.3, indicating this number should be interpreted with caution.

Table 8: National Estimates of 1990 DSRS Facilities by Environment/Modality Exclusive of Correctional Facilities

Reported Environment/Modality	Respondents: Number of Facilities	National Estimates <sup>a</sup> of Numbers of Facilities	
		Wn	(± SE)
<u>Single Modality Facilities With or Without Alcohol Treatment:</u>	709	4,713	114
Hospital Inpatient	39	211	37
Residential	178	1,120	87
Outpatient	492	3,383	105
Detoxification	1	6*	6
Maintenance	19	126	30
Drug Free	472	3,251	109
<u>Multiple Modality Facilities</u>	402	2,450	102
<b>Total</b>	<b>1,111</b>	<b>7,163</b>	<b>114</b>

Source: 1990 NIDA Drug Services Research Survey, Brandeis University, Institute for Health Policy.

a Estimates may not total exactly due to rounding.

SE = Sampling Error

\* The Coefficient of Variation for this estimate is greater than or equal to 0.3, indicating this number should be interpreted with caution.

Table 9: Percentage Distribution of Clients in DSRS Facilities in Treatment for Drug and/or Alcohol Abuse by Environment/Modality on March 30, 1990

Clients Receiving Services for Drug and/or Alcohol Abuse	Environment/Modality							All Facilities (Wn 7110) % (± SE)	
	Single Modality Facilities						Multiple Modality Facilities (Wn 2450) %		
	Hospital Inpatient (Wn 211) %	Residential (Wn 1120) %	All Outpatient Modalities (Wn 3330) %	Outpatient					
				Outpatient Detoxification <sup>a</sup> (Wn 6*) %	Outpatient Maintenance <sup>a</sup> (Wn 126) %	Outpatient Drug Free (Wn 3198) %			
Alcohol Abuse Only	25.0	15.8	28.5			32.6	22.1	25.1	1.4
Single Drug Abuse Only	10.1	6.5	12.3			8.9	18.3	14.8	1.1
Single Drug and Alcohol Abuse	15.3	19.8	24.8			26.3	17.6	21.3	1.0
Abuse of Two or More Drugs	9.8*	12.3*	10.2			6.9	14.9	12.4	1.4
Abuse of Two or More Drugs and Alcohol	39.7	45.5	23.8			25.0	26.9	26.1	1.6
<b>Total<sup>b</sup></b>	100.0	100.0	100.0			100.0	100.0	100.0	N/A
<b>Treatment Facilities:</b>									
Number	39	178	490			470	402	1,109	
Percent	100.0	100.0	99.6			99.6	100.0	99.8	

Source: 1990 NIDA Drug Services Research Survey, Brandeis University, Institute for Health Policy.

Note: The data in this table have been adjusted for non-response by processes of imputation of missing values. See Appendix 3.

a The number of actual facilities reporting is too small for categorical analysis; the unweighted number of facilities is 1 for outpatient detoxification and 19 for outpatient maintenance. However, these facilities' responses are included in the All Outpatient Modalities and All Facilities columns.

b Percentages will not always add to 100.0% due to rounding.

SE = Sampling Error

N/A = Not Applicable

\* The Coefficient of Variation for this estimate is greater than or equal to 0.3, indicating this number should be interpreted with caution.

Table 10: National Estimates of Clients in DSRS Facilities in Treatment for Drug and/or Alcohol Abuse by Environment/Modality on March 30, 1990

Clients Receiving Services for Drug and/or Alcohol Abuse	Environment/Modality							All Facilities (Wn 7110)
	Single Modality Facilities						Multiple Modality Facilities (Wn 2450)	
	Hospital Inpatient (Wn 211)	Residential (Wn 1120)	All Outpatient Modalities (Wn 3330)	Outpatient				
				Outpatient Detoxification <sup>a</sup> (Wn 6*)	Outpatient Maintenance <sup>a</sup> (Wn 126)	Outpatient Drug Free (Wn 3198)		
Alcohol Abuse Only (± Sampling Error)	789*	4,449	103,821			103,578	71,438	180,498 15,110
Single Drug Abuse Only (± Sampling Error)	320*	1,821	45,026			28,265	59,147	106,314 9,588
Single Drug and Alcohol Abuse (± Sampling Error)	485	5,573	90,492			83,635	56,890	153,440 11,805
Abuse of Two or More Drugs (± Sampling Error)	311*	3,468*	37,230			21,871	48,097	89,108 13,354
Abuse of Two or More Drugs and Alcohol (± Sampling Error)	1,256	12,780	86,970			79,338	86,932	187,938 10,910
Total Estimates (± Sampling Error)	3,162 641	28,092 5,033	364,757 27,068			317,904 23,542	322,979 27,574	718,989 41,789
Treatment Facilities:								
Number	39	178	490			470	402	1,109
Percent	100.0	100.0	99.6			99.6	100.0	99.8

Source: 1990 NIDA Drug Services Research Survey, Brandeis University, Institute for Health Policy.

Note: These national estimates are adjusted by processes of imputation of missing values for the rate of non-response to the survey questions on percent of clients receiving services by type and number of clients in treatment. See Appendix 3.

<sup>a</sup> The number of actual facilities reporting is too small for categorical analysis; the unweighted number of facilities is 1 for outpatient detoxification and 19 for outpatient maintenance. However, these facilities' responses are included in the All Outpatient Modalities and All Facilities columns.

\* The Coefficient of Variation for this estimate is greater than or equal to 0.3, indicating this number should be interpreted with caution.

Table 11: Percentage Distribution, Numbers of Reporting DSRS Facilities and National Estimates for Treatment Modalities Reported by DSRS Facility Single/Multiple Modality Status, March 30, 1990

Modality	Modalities (Unweighted) Enumerated						National Estimates of Treatment Modalities <sup>a</sup> n (± SE)	
	Single Modality Facilities <sup>a</sup>		Multiple Modality Facilities		Total Modalities All Facilities <sup>a</sup>			
	n	%	n	%	n	%		
Hospital Inpatient Drug Detoxification	23	3.2	171	16.6	194	11.2	1,081	72
Drug Free	16	2.3	150	14.6	166	9.5	912	57
Residential Drug Detoxification	13	1.8	75	7.3	88	5.1	542	56
Drug Free	165	23.3	159	15.4	324	18.6	2,055	88
Outpatient Drug Detoxification	1	0.1	101	9.8	102	5.9	654	65
Drug Maintenance	19	2.7	74	7.2	93	5.3	636	63
Drug Free	472	66.6	300	29.1	772	44.4	5,101	132
Total Modalities <sup>b</sup>	709	100.0	1,030	100.0	1,739 <sup>d</sup>	100.0	10,981	237
Total Actual Reporting Facilities <sup>c</sup>	709	100.0	402	100.0	1,111 <sup>e</sup>	100.0	N/A	

Source: 1990 NIDA Drug Services Research Survey, Brandeis University, Institute for Health Policy.

- a See methodology discussion for sampling of alcohol treatment modalities. In this analysis, facilities offering alcohol treatment in conjunction with only a single drug treatment modality are counted as single modality facilities; facilities offering only alcohol treatment are excluded.
- b Percentages will not always add to 100.0% due to rounding.
- c Of the 709 single drug modality facilities, 556 also offered an alcohol treatment modality. Among multiple-modality facilities, there were an additional 325 alcohol treatment modalities.
- d The sum of all treatment modalities is greater than the sum of facilities sampled because where facilities offer more than one treatment modality, the facility is counted in each modality offered.
- e Facilities (n = 58) reporting themselves as 'alcohol only' treatment facilities are excluded. Correctional facilities (n = 14) are also excluded.

N/A = Not Applicable

SE = Sampling Error

Table 12: Percentage Distribution and National Estimates for Treatment Environments Reported by DSRS Facility Single/Multiple Modality Status, March 30, 1990

Environment	Modalities (Unweighted) Enumerated						National Estimates of Treatment Modalities <sup>a</sup> n (± SE)	
	Single Modality Facilities <sup>a</sup>		Multiple Modality Facilities		Total Modalities All Facilities <sup>a</sup>			
	n	%	n	%	n	%	n	(± SE)
Hospital Inpatient	39	5.5	321	31.2	360	20.7	1,993	116
Residential	178	25.1	234	22.7	412	23.7	2,597	112
Outpatient	492	69.4	475	46.1	967	55.6	6,391	189
Total Modalities <sup>b</sup>	709	100.0	1,030	100.0	1,739 <sup>d</sup>	100.0	10,981	237
Total Actual Reporting Facilities <sup>c</sup>	709	100.0	402	100.0	1,111 <sup>e</sup>	100.0	N/A	

Source: 1990 NIDA Drug Services Research Survey, Brandeis University, Institute for Health Policy.

- a See methodology discussion for sampling of alcohol treatment modalities. In this analysis, facilities offering alcohol treatment in conjunction with only a single drug treatment modality are counted as single modality facilities; facilities offering only alcohol treatment are excluded.
- b Percentages will not always add to 100.0% due to rounding.
- c Of the 709 single drug modality facilities, 556 also offered an alcohol treatment modality. Among multiple modality facilities, there were an additional 325 alcohol treatment modalities.
- d The sum of all treatment modalities is greater than the sum of facilities sampled because where facilities offer more than one treatment modality, the facility is counted in each modality offered.
- e Facilities (n = 58) reporting themselves as 'alcohol only' treatment facilities are excluded. Correctional facilities (n = 14) are also excluded.

N/A = Not Applicable

SE = Sampling Error

Table 13: Percentage Distribution and National Estimates for Treatment Modalities Reported by DSRS Facility Single/Multiple Modality Status, March 30, 1990

Modality	Modalities (Weighted) Enumerated						National Estimates of Treatment Modalities <sup>a</sup> n (± SE)	
	Single Modality Facilities <sup>a</sup>		Multiple Modality Facilities		Total Modalities All Facilities <sup>a</sup>			
	Wn	%	Wn	%	Wn	%		
Hospital Inpatient								
Drug Detoxification	124	2.6	957	15.3	1,081	9.8	1,081	72
Drug Free	87	1.8	825	13.2	912	8.3	912	57
Residential								
Drug Detoxification	89	1.9*	453	7.2	542	4.9	542	56
Drug Free	1,031	21.9	1,025	16.3	2,055	18.7	2,055	88
Outpatient								
Drug Detoxification	6*	0.1*	648	10.3	654	6.0	654	65
Drug Maintenance	126	2.7	510	8.1	636	5.8	636	63
Drug Free	3,251	69.0	1,850	29.5	5,101	46.4	5,101	132
Total Modalities <sup>b</sup>	4,713	100.0	6,268	100.0	10,981 <sup>d</sup>	100.0	10,981	237
(± SE)	114		265		237			
Total Estimated Facilities <sup>c</sup>	4,713	N/A	2,450	N/A	7,163	N/A	N/A	
(± SE)	114		102		114			

Source: 1990 NIDA Drug Services Research Survey, Brandeis University, Institute for Health Policy.

a See methodology discussion for sampling of alcohol treatment modalities. In this analysis, facilities offering alcohol treatment in conjunction with only a single drug treatment modality are counted as single modality facilities; facilities offering only alcohol treatment are excluded.

b Percentages will not always add to 100.0% and estimates will not always total due to rounding.

c Of the estimated 4,713 single drug modality facilities, an estimated 3,709 also offered an alcohol treatment modality. Among multiple-modality facilities, there were an additional estimated 1,922 alcohol treatment modalities.

d The sum of all treatment modalities is greater than the sum of facilities sampled because where facilities offer more than one treatment modality, the facility is counted in each modality offered.

N/A = Not Applicable

SE = Sampling Error

\* The Coefficient of Variation for this estimate is greater than or equal to 0.3, indicating this number should be interpreted with caution.

Table 14: Percentage Distribution and National Estimates for Treatment Environments Reported by DSRS Facility Single/Multiple Modality Status, March 30, 1990

Environment	Modalities (Weighted) Enumerated						National Estimates of Treatment Modalities <sup>a</sup> n (± SE)	
	Single Modality Facilities <sup>a</sup>		Multiple Modality Facilities		Total Modalities All Facilities <sup>a</sup>			
	Wn	%	Wn	%	Wn	%		
Hospital Inpatient	211	4.5	1,782	28.4	1,993	18.1	1,993	116
Residential	1,120	23.8	1,478	23.6	2,597	23.7	2,597	112
Outpatient	3,383	71.8	3,008	48.0	6,391	58.2	6,391	189
Total Modalities <sup>b</sup>	4,713	100.0	6,268	100.0	10,981 <sup>d</sup>	100.0	10,981	237
(± SE)	114		265		237			
Total Estimated Facilities <sup>c</sup>	4,713	N/A	2,450	N/A	7,163	N/A	N/A	
(± SE)	114		102		114			

Source: 1990 NIDA Drug Services Research Survey, Brandeis University, Institute for Health Policy.

- a See methodology discussion for sampling of alcohol treatment modalities. In this analysis, facilities offering alcohol treatment in conjunction with only a single drug treatment modality are counted as single modality facilities; facilities offering only alcohol treatment are excluded.
- b Percentages will not always add to 100.0% and estimates will not always total due to rounding.
- c Of the estimated 4,713 single drug modality facilities, an estimated 3,709 also offered an alcohol treatment modality. Among multiple-modality facilities, there were an additional estimated 1,922 alcohol treatment modalities.
- d The sum of all treatment modalities is greater than the sum of facilities sampled because where facilities offer more than one treatment modality, the facility is counted in each modality offered.

N/A = Not Applicable

SE = Sampling Error

**Table 15: Percentage Distribution and National Estimates of DSRS Facilities by Ownership Status, March 30, 1990**

Ownership Status	National Estimates of Number of Facilities		Percentage Distributions	
	n	(± SE)	Total, All Facilities %	Valid Responses %
Public, Federal	218	45	3.0	3.0
Public, State/City/Local	1,144	81	16.0	16.0
Private for-Profit	1,233	72	17.2	17.2
Private Not-for-Profit	4,555	148	63.6	63.7
Other, Unknown, Refused	14*	10	0.2*	N/A
<b>Total<sup>a</sup></b>	<b>7,163</b>	<b>114</b>	<b>100.0</b>	<b>100.0</b>

Source: 1990 NIDA Drug Services Research Survey, Brandeis University, Institute for Health Policy.

a Percentages will not always add to 100.0% due to rounding.

N/A = Not Applicable

SE = Sampling Error

\* The Coefficient of Variation for this estimate is greater than or equal to 0.3, indicating this number should be interpreted with caution.

Table 16: Percentage Distribution of DSRS Facilities by Ownership Status by Environment/Modality, March 30, 1990

Ownership Status	Environment/Modality <sup>a</sup>							All Facilities (Wn=7149) % (± SE)	
	Single Modality Facilities						Multiple Modality Facilities (Wn=2442) %		
	Hospital Inpatient (Wn=211) %	Residential (Wn=1120) %	All Outpatient Modalities (Wn=3377) %	Outpatient					
				Outpatient Detoxification (Wn=6*) <sup>b</sup> %	Outpatient Maintenance (Wn=126) <sup>b</sup> %	Outpatient Drug Free (Wn=3245) %			
Public, Federal	7.9*	0.0	2.6			2.5*	4.6	3.1	0.6
Public, State/City/Local	26.0*	10.9	17.5			17.9	15.4	16.0	1.1
Private for-Profit	11.6*	5.6	20.1			19.8	19.1	17.3	1.1
Private Not-for-Profit	54.6	83.5	59.8			59.8	60.8	63.7	1.4
Total <sup>c</sup>	100.0	100.0	100.0			100.0	100.0	100.0	N/A

Source: 1990 NIDA Drug Services Research Survey, Brandeis University, Institute for Health Policy.

- a Only valid responses are included in the calculation of percentages; 14 responses indicating multiple ownership status or unknown status are excluded.
  - b The number of actual facilities reporting is too small for categorical analysis; the unweighted number of facilities is 1 for outpatient detoxification and 19 for outpatient maintenance. However, these facilities' responses are included in the All Outpatient Modalities and All Facilities columns.
  - c Percentages will not always add to 100.0% due to rounding.
- Wn = Weighted number of facilities.
- SE = Sampling Error
- \* The Coefficient of Variation for this estimate is greater than or equal to 0.3, indicating this number should be interpreted with caution.

Table 17: National Estimates of DSRS Facilities by Ownership Status and Environment/Modality, March 30, 1990

Ownership Status	Environment/Modality <sup>a</sup>							All Facilities
	Single Modality Facilities						Multiple Modality Facilities	
	Hospital Inpatient	Residential	All Outpatient Modalities	Outpatient				
				Outpatient Detoxification <sup>b</sup>	Outpatient Maintenance <sup>b</sup>	Outpatient Drug Free		
Public, Federal (± Sampling Error)	17*	0	88			80*	113	218 45
Public, State/City/Local (± Sampling Error)	55*	122	590			582	377	1,144 81
Private for-Profit (± Sampling Error)	24*	63	680			642	466	1,233 72
Private Not-for-Profit (± Sampling Error)	115	935	2,019			1,941	1,486	4,555 148
Total	211	1,120	3,377			3,245	2,442	7,149
(± Sampling Error)	37	87	106			110	102	115

Source: 1990 NIDA Drug Services Research Survey, Brandeis University, Institute for Health Policy.

Note: These national estimates are not adjusted for the non-response rate of 0.2% to the survey question on ownership.

a 14 Responses of multiple ownership status and unknown status are excluded.

b The number of actual facilities reporting is too small for categorical analysis; the unweighted number of facilities is 1 for outpatient detoxification and 19 for outpatient maintenance. However, these facilities' numbers are included in the All Outpatient Modalities and All Facilities columns.

\* The Coefficient of Variation for this estimate is greater than or equal to 0.3, indicating this number should be interpreted with caution.

Table 18: Percentage of Facilities Reporting Staff by Type of Staff, by DSRS Facility Environment/Modality, March 30, 1990

Type of Staff	Environment/Modality <sup>a</sup>							All Facilities (N=7163) % (+ SE)	
	Single Modality Facilities						Multiple Modality Facilities (N=2450) %		
	Hospital Inpatient (N=211) %	Residential (N=1120) %	All Outpatient Modalities (N=3383) %	Outpatient					
				Outpatient Detoxification (N=6*) <sup>b</sup> %	Outpatient Maintenance (N=126) <sup>b</sup> %	Outpatient Drug Free (N=3251) %			
Psychiatrists, on payroll	39.5	13.2	23.2			22.9	35.3	26.3	1.3
Psychiatrists, on contract	17.6*	15.3	17.0			17.0	28.1	20.6	1.4
Other Physicians, on payroll	57.2	11.2	14.3			12.4	38.9	23.5	1.4
Other Physicians, on contract	21.9	29.7	15.0			14.4	34.7	24.2	1.2
Registered Nurses, on payroll	97.9	35.4	14.7			12.9	64.1	37.3	1.4
Registered Nurses, on contract	2.1*	6.6*	2.1*			1.9*	6.4	4.3	0.8
Other Lic. Nurses, on payroll	58.8	20.4	5.8			3.6	50.7	25.0	1.2
Other Lic. Nurses, on contract	0.0	0.4*	1.2*			0.7*	5.2	2.4	0.4
Other Medical, on payroll	57.2	8.5	2.8			1.3*	26.9	13.6	0.7
Other Medical, on contract	0.0	5.3*	1.6*			1.3*	4.8	3.2	0.5
Psychologists, on payroll	43.1	17.6	32.3			32.2	38.9	32.6	1.4
Psychologists, on contract	19.4*	21.7	21.2			21.7	22.6	21.7	1.4
Social Workers, on payroll	54.3	28.4	40.7			40.8	49.4	42.2	1.3
Social Workers, on contract	2.1*	4.5	11.2			11.5	6.4	8.2	1.1
Family Therapists, on payroll	14.0*	19.5	21.9			22.6	35.4	25.9	1.1
Family Therapists, on contract	3.7*	4.0*	5.2			5.4	3.1	4.3	0.6
Voc. Rehab Spec., on payroll	13.6*	6.9*	5.6			5.4	12.8	8.5	1.0
Voc. Rehab Spec., on contract	2.1*	0.9*	1.7*			1.8*	4.3*	2.5	0.6
Other Degreed Couns., on payroll	67.2	68.8	65.3			64.5	82.7	71.9	1.8
Other Degreed Couns., on contract	5.8*	8.6	10.9			11.3	6.1	8.7	0.9
Non-deg. Counselors, on payroll	68.2	78.0	45.7			45.5	69.0	59.4	1.3
Non-deg. Counselors, on contract	0.0	5.1*	3.6			3.8	5.0	4.2	0.6
Adm./Support, on payroll	86.5	89.6	84.8			84.8	91.5	87.9	0.8
Adm./Support, on contract	0.0	6.3	4.8			5.0	5.5	5.1	0.7
Other, on payroll	58.8	62.8	21.9			21.2	52.7	39.9	1.3
Other, on contract	0.0	5.9*	4.0			3.9	5.4	4.7	0.7

Source: 1990 NIDA Drug Services Research Survey, Brandeis University, Institute for Health Policy.

Table 18: Percentage of Facilities Reporting Staff by Type of Staff, by DSRS Facility Environment/Modality, March 30, 1990

(Continued)

- a Each environment/modality-specific percentage represents the number of facilities reporting staff available of a given type (e.g., psychiatrists on payroll) as a percentage of all facilities responding to the survey in that environment/modality category; responses of unknown or refusal are counted as facilities not having available any staff in a given category.
- b The number of actual facilities reporting is too small for categorical analysis; the unweighted number of facilities is 1 for outpatient detoxification and 19 for outpatient maintenance. However, these facilities' responses are included in the All Outpatient Modalities and All Facilities columns.

SE = Sampling Error

Wn = Weighted number of facilities.

\* The Coefficient of Variation for this estimate is greater than or equal to 0.3, indicating this number should be interpreted with caution.

Table 19: National Estimates of Full-Time Staff on Payroll by Type of Staff and by DSRS Facility Environment/Modality, March 30, 1990

Type of Full-Time (FT) Staff	Environment/Modality <sup>a</sup>							All Facilities (N=7163)
	Single Modality Facilities						Multiple Modality Facilities (N=2450)	
	Hospital Inpatient (N=211)	Residential (N=1120)	All Outpatient Modalities (N=3383)	Outpatient				
				Outpatient Detoxification (N=6*) <sup>b</sup>	Outpatient Maintenance (N=126) <sup>b</sup>	Outpatient Drug Free (N=3251)		
FT Psychiatrists, on payroll (#)	53*	25*	153			152	699	931
(± Sampling Error)	31	17	35			35	194	214
Other FT Physicians, on payroll (#)	66*	44*	155			61*	747	1,012
(± Sampling Error)	23	19	39			21	138	146
FT Registered Nurses, on payroll (#)	768	466	660			239	7,097	8,991
(± Sampling Error)	181	102	141			39	725	718
Other FT Lic. Nurses, on payroll (#)	493	450	304			128*	3,492	4,739
(± Sampling Error)	189	110	83			40	325	398
Other FT Medical, on payroll (#)	425*	245*	134*			63*	2,325	3,129
(± Sampling Error)	136	104	69			63	373	356
FT Psychologists, on payroll (#)	58*	169	853			774	1,456	2,536
(± Sampling Error)	20	48	120			105	167	211
FT Social Workers, on payroll (#)	161*	345	1,879			1,820	2,694	5,078
(± Sampling Error)	54	70	237			236	315	329
FT Family Therapists, on payroll (#)	34*	232	966			966	1,730	2,963
(± Sampling Error)	19	33	154			154	322	335
FT Voc. Rehab Spec., on payroll (#)	41*	147*	180			150*	384	752
(± Sampling Error)	20	64	50			49	99	143
Other FT Degreed Couns., on payroll (#)	347	2,090	5,369			4,698	11,037	18,843
(± Sampling Error)	78	226	382			329	1,145	1,254
FT Non-deg. Counselors, on payroll (#)	408*	2,658	3,025			2,746	8,485	14,576
(± Sampling Error)	140	305	226			213	758	1,000
FT Adm./Support, on payroll (#)	401	3,633	5,871			5,088	11,452	21,356
(± Sampling Error)	110	382	400			376	847	837
FT Other, on payroll (#)	580*	2,865	2,548*			2,271*	8,049	14,042
(± Sampling Error)	214	478	931			923	1,040	1,378

Source: 1990 NIDA Drug Services Research Survey, Brandeis University, Institute for Health Policy.

Note: These national estimates are not adjusted for the rate of non-response to the survey questions; non-response rates to the full-time staffing questions ranged from 0.2% to 0.5%.

Table 19: National Estimates of Full-Time Staff on Payroll by Type of Staff and by DSRS Facility Environment/Modality, March 30, 1990

(Continued)

- a Each environment/modality-specific percentage represents the number of facilities reporting staff available of a given type (e.g., psychiatrists on payroll) as a percentage of all facilities responding to the survey in that environment/modality category; responses of unknown or refusal are counted as facilities not having available any staff in a given category.
  - b The number of actual facilities reporting is too small for categorical analysis; the unweighted number of facilities 1 for outpatient detoxification and 19 for outpatient maintenance. However, these facilities' responses are included in the All Outpatient Modalities and All Facilities columns.
- Wn = Weighted number of facilities.
- \* The Coefficient of Variation for this estimate is greater than or equal to 0.3, indicating this number should be interpreted with caution.

Table 20: National Estimates of Part-Time Staff on Payroll by Type of Staff and by DSRS Facility Environment/Modality, March 30, 1990

Type of Part-Time (PT) Staff	Environment/Modality <sup>a</sup>						Multiple Modality Facilities (N=2450)	All Facilities (N=7163)
	Single Modality Facilities							
	Hospital Inpatient (N=211)	Residential (N=1120)	All Outpatient Modalities (N=3383)	Outpatient				
				Outpatient Detoxification (N=6*) <sup>b</sup>	Outpatient Maintenance (N=126) <sup>b</sup>	Outpatient Drug Free (N=3251)		
PT Psychiatrists, on payroll (#)	89*	146	877			830	884	1,996
(± Sampling Error)	37	41	91			94	119	160
Other PT Physicians, on payroll (#)	112	110	449			363	1,188	1,860
(± Sampling Error)	32	26	65			63	193	194
PT Registered Nurses, on payroll (#)	435*	273	337			298	2,956	4,002
(± Sampling Error)	149	52	59			55	255	304
Other PT Lic. Nurses, on payroll (#)	129*	165*	74*			43*	1,317	1,684
(± Sampling Error)	53	53	30			23	155	149
Other PT Medical, on payroll (#)	207*	155*	66*			33*	829	1,257
(± Sampling Error)	99	58	21			14	112	150
PT Psychologists, on payroll (#)	42*	110	937			921	570	1,658
(± Sampling Error)	15	28	114			115	77	118
PT Social Workers, on payroll (#)	49*	111*	818			805	626	1,604
(± Sampling Error)	25	37*	133			133	110	173
PT Family Therapists, on payroll (#)	4*	56*	555			547	372*	987
(± Sampling Error)	4	21	113			114	112	153
PT Voc. Rehab Spec., on payroll (#)	0	16*	105*			105*	119	240
(± Sampling Error)	0	16	33			33	30	41
Other PT Degreed Couns., on payroll (#)	112*	303	1,613			1,600	1,104	3,132
(± Sampling Error)	61	82	239			239	151	304
PT Non-deg. Counselors, on payroll (#)	87*	452	709			705	986	2,235
(± Sampling Error)	46	117	101			98	173	202
PT Adm./Support, on payroll (#)	169*	987	2,449			2,417	1,981	5,585
(± Sampling Error)	89	174	235			237	263	461
PT Other, on payroll (#)	352*	1,305*	641			585	2,290	4,588
(± Sampling Error)	204	524	117			120	343	612

Source: 1990 NIDA Drug Services Research Survey, Bandeis University, Institute for Health Policy.

Note: These national estimates are not adjusted for the rate of non-response to the survey questions; non-response rates to the part-time staffing questions ranged from 0.2% to 0.5%.

Table 20: National Estimates of Part-Time Staff on Payroll by Type of Staff and by DSRS Facility Environment/Modality, March 30, 1990

(Continued)

- a Each environment/modality-specific percentage represents the number of facilities reporting staff available of a given type (e.g., psychiatrists on payroll) as a percentage of all facilities responding to the survey in that environment/modality category; responses of unknown or refusal are counted as facilities not having available any staff in a given category.
- b The number of actual facilities reporting is too small for categorical analysis; the unweighted number of facilities is 1 for outpatient detoxification and 19 for outpatient maintenance. However, these facilities' responses are included in the All Outpatient Modalities and All Facilities columns.
- Wn = Weighted number of facilities.
- \* The Coefficient of Variation for this estimate is greater than or equal to 0.3, indicating this number should be interpreted with caution.

Table 21: National Estimates of Contract Staff by Type of Staff and by DSRs Facility Environment/Modality, March 30, 1990

Type of Contract Staff	Environment/Modality <sup>a</sup>						Multiple Modality Facilities (N=2450)	All Facilities (N=7163)
	Single Modality Facilities							
	Hospital Inpatient (N=211)	Residential (N=1120)	All Outpatient Modalities (N=3383)	Outpatient				
				Outpatient Detoxification (N=6*) <sup>b</sup>	Outpatient Maintenance (N=126) <sup>b</sup>	Outpatient Drug Free (N=3251)		
Psychiatrists, on contract (#)	79*	248	738			716	1,428	2,494
(± Sampling Error)	47	72	88			87	272	330
Other Physicians, on contract (#)	83*	410	593			534	1,735	2,820
(± Sampling Error)	45	55	81			77	153	196
Registered Nurses, on contract (#)	35*	73*	101*			93*	631*	840*
(± Sampling Error)	35	22	39			38	258	289
Other Lic. Nurses, on contract (#)	0	4*	55*			24*	417*	476
(± Sampling Error)	0	4	32			11	129	128
Other Medical, on contract (#)	0	81*	54*			41*	201	336
(± Sampling Error)	0	29	22			21	52	65
Psychologists, on contract (#)	82*	369*	1,190			1,178	817	2,459
(± Sampling Error)	33	118	179			179	106	257
Social Workers, on contract (#)	9*	66*	1,204*			1,200*	260	1,540
(± Sampling Error)	9	26	363			363	65	372
Family Therapists, on contract (#)	8*	56*	443			443	121*	627
(± Sampling Error)	8	23	122			122	46	126
Voc. Rehab Spec., on contract (#)	4*	15*	85*			85*	138*	242
(± Sampling Error)	4	12	31			31	46	59
Other Degreed Couns., on contract (#)	12*	202*	825			825	476*	1,515
(± Sampling Error)	9	70	178			178	155	230
Non-deg. Counselors, on contract (#)	0	142*	206*			206*	326*	673
(± Sampling Error)	0	73	75			75	104	139
Adm./Support, on contract (#)	0	217*	296*			296*	332	844
(± Sampling Error)	0	84	96			96	92	168
Other, on contract (#)	0	227*	216			207	328*	771
(± Sampling Error)	0	88	56			56	105	162

Source: 1990 NIDA Drug Services Research Survey, Brandeis University, Institute for Health Policy.

Note: These national estimates are not adjusted for the rate of non-response to the survey questions; non-response rates to the contract staff questions ranged from 0.2% to 0.7%.

Table 21: National Estimates of Contract Staff by Type of Staff and by DSRS Facility Environment/Modality, March 30, 1990

(Continued)

- a Each environment/modality-specific percentage represents the number of facilities reporting staff available of a given type (e.g., psychiatrists on payroll) as a percentage of all facilities responding to the survey in that environment/modality category; responses of unknown or refusal are counted as facilities not having available any staff in a given category.
- b The number of actual facilities reporting is too small for categorical analysis; the unweighted number of facilities is 1 for outpatient detoxification and 19 for outpatient maintenance. However, these facilities' responses are included in the All Outpatient Modalities and All Facilities columns.

Wn = Weighted number of facilities.

- \* The Coefficient of Variation for this estimate is greater than or equal to 0.3, indicating this number should be interpreted with caution.

Tables 22 - 24: National Estimates of Clients in Treatment by Environment, Total Clients in Treatment, Total Capacity, and Total Utilization Rate for DSRS Facilities on March 30, 1990

Environment	Reporting Modalities, Unweighted		National Estimates of Capacity and Number of Clients and Utilization		
	#	%	Estimated Number of Clients in Treatment n (± SE)		Percent of Clients
Hospital Inpatient	224	100.0	15,342	1,444	3.0
Residential	350	100.0	50,610	4,956	10.1
Outpatient	810	100.0	435,802	31,632	86.8
Total Environments	1,384	100.0	501,753	31,845	100.0
	<u># of Facilities</u>	<u>% of Facilities</u>			
Total Number of Clients in Drug Treatment Environments	1,111	100.0	501,753	31,845	69.8
Total Number of Clients in Alcohol Treatment	881	100.0	217,331	18,200	30.2
Total Number of Clients in Drug Treatment Facilities (Total Utilization)	1,111	100.0	719,084	41,792	100.0
Total Capacity	1,111	100.0	819,781	37,999	
Utilization Rate <sup>a</sup>	1,111	100.0	87.7	1.8	N/A

Source: 1990 NIDA Drug Services Research Survey, Brandeis University, Institute for Health Policy.

Note: These national estimates are adjusted for the rate of non-response to the survey questions on capacity and clients in treatment by processes of imputation of missing values. See Appendix 3.

a Utilization Rate is calculated by dividing Clients in Treatment by Capacity, times 100.

SE = Sampling Error

Table 25: Percentage Distribution of Race/Ethnicity of DSRS Clients in Treatment by Environment/Modality on March 30, 1990

Environment/Modality <sup>a</sup>	Reporting Modalities, Unweighted n %		Race/Ethnicity					Total <sup>b,c</sup> %	
			White, not Hispanic %	Black, not Hispanic %	Hispanic %	Asian or Pacific Islander %	Native American %		Other %
Hospital Inpatient	304	94.7	62.5	28.1	7.2	0.1*	1.7	0.3*	100.0
Residential	380	95.0	55.1	33.2	8.7	0.6*	2.1	0.2*	100.0
Outpatient	860	93.9	61.3	24.0	12.8	0.6	1.2	0.3	100.0
Detoxification	42	56.8	43.1	30.1*	22.7	1.5*	2.4*	0.1*	100.0
Maintenance	70	74.5	40.7	30.2	28.5	0.3	0.2*	0.1*	100.0
Drug Free	680	90.9	68.1	21.5	8.1	0.6*	1.4	0.3	100.0
Combined	68	94.4	51.7	32.1	14.7*	0.1*	1.3*	0.1*	100.0
Alcohol	333	34.6	72.3	19.9	5.2	0.4*	1.9	0.4*	100.0
Modalities of Two or More Types, Including Alcohol Clients <sup>d</sup>	19	100.0	69.1	28.7*	0.6*	0.0	0.8*	0.8*	100.0
Modalities of Two or More Types, Not Including Alcohol Clients <sup>d</sup>	21	70.0	28.9*	46.6*	14.8*	0.0	9.7*	0.0	100.0
Modalities	1,917	97.3							
Clients	672,082 <sup>e</sup>		62.6 <sup>f</sup>	24.2	10.9	0.5	1.4	0.3	100.0

Source: 1990 NIDA Drug Services Research Survey, Brandeis University, Institute for Health Policy.

- a Numbers at individual facilities were allowed to vary in two ways: no more than 10% above the total number of clients in treatment reported by each facility; and to any amount below the total number of clients in treatment due to clients with unknown or unreported race/ethnicity.
- b Percentages will not always add to 100.0% due to rounding.
- c Modalities with 0 clients in treatment on March 30, 1990 have been excluded from all calculations in this table.
- d Includes reports from some of the combined modality facilities, i.e., instances where client characteristics could be reported but not separately for each modality. If the data for a given modality within a multi-modality facility could be separately reported, the data appear under that modality.
- e The sampling error for this estimate is 37,689.
- f The sampling errors for these percentages are: White, 1.9; Black, 1.9; Hispanic, 1.1; Asian, 0.1; Native American 0.2; Other, 0.1.
- \* The Coefficient of Variation for this estimate is greater than or equal to 0.3, indicating this number should be interpreted with caution.

Table 26: National Estimates of DSRS Clients in Treatment by Race/Ethnicity and Environment/Modality on March 30, 1990

Environment/Modality <sup>a</sup>	Reporting Modalities, Unweighted n %		Race/Ethnicity					Total <sup>b,c</sup>	
			White, not Hispanic	Black, not Hispanic	Hispanic	Asian or Pacific Islander	Native American		Other
Hospital Inpatient	304	94.7	11,447	5,149	1,314	25*	315	52*	18,303
Residential	380	95.0	30,144	18,134	4,767	338	1,163	118*	54,664
Outpatient	860	93.9	292,673	114,425	61,138	2,675	5,574	1,247	477,732
Detoxification	42	56.8	2,787	1,947*	1,470*	94*	157*	8*	6,462
Maintenance	70	74.5	39,822	29,592	27,862	329	177*	79*	97,862
Drug Free	680	90.9	236,926	74,717	28,072	2,228*	4,910	1,136	347,989
Combined	68	94.4	13,138	8,169*	3,734*	25*	330*	24*	25,419
Alcohol	333	34.6	83,238	22,896	5,938	435*	2,220	437*	115,164
Modalities of Two or More Types, Including Alcohol Clients <sup>d</sup>	19	100.0	2,512*	1,045*	22*	0	28*	30*	3,636*
Modalities of Two or More Types, Not Including Alcohol Clients <sup>d</sup>	21	70.0	747*	1,204*	382*	0	251*	0	2,584*
Modalities	1,917	97.3							
Clients <sup>e</sup>	672,082		420,761	162,852	73,561	3,474	9,551	1,884	672,082

Source: 1990 NIDA Drug Services Research Survey, Brandeis University, Institute for Health Policy.

Note: These national estimates are not adjusted for the rate of non-response to the survey question on clients' race/ethnicity.

- a Numbers at individual facilities were allowed to vary in two ways: no more than 10% above the total number of clients in treatment reported by each facility; and to any amount below the total number of clients in treatment due to clients with unknown or unreported race/ethnicity.
- b Modalities with 0 clients in treatment on March 30, 1990 have been excluded from all calculations in this table.
- c Sampling errors for each modality total are as follows: Hospital Inpatient, 1,384; Residential, 5,420; Outpatient, 31,907; Outpatient Detoxification, 1,653; Outpatient Maintenance, 15,945; Outpatient Drug Free, 27,040; Outpatient Combined, 6,770; Alcohol, 13,109; Modalities of Two or More Including Alcohol, 2,324; Modalities of 2 or More Not Including Alcohol, 1,866. The sampling error for the total is 37,689.
- d Includes reports from some of the combined modality facilities, i.e., instances where client characteristics could be reported but not separately for each modality. If the data for a given modality within a multi-modality facility could be separately reported, the data appear under that modality.
- e Sampling errors for each racial/ethnic group total are as follows: White, 24,735; Black, 14,713; Hispanic, 9,752; Asian, 884; Native American, 1,225; Other, 393.
- \* The Coefficient of Variation for this estimate is greater than or equal to 0.3, indicating this number should be interpreted with caution.

Table 27: Percentage Distribution of Age of DSRs Clients in Treatment by Environment/Modality on March 30, 1990

Environment/Modality <sup>a</sup>	Reporting Modalities, Unweighted		Age in Years							Total <sup>b,c</sup> %
	n	%	<15 %	15-17 %	18-24 %	25-34 %	35-44 %	45-64 %	65+ %	
Hospital Inpatient	303	94.4	2.0	8.6	14.3	35.5	26.2	11.3	2.1	100.0
Residential	370	92.5	1.6	9.1	21.0	43.4	17.7	6.5	0.8*	100.0
Outpatient	838	91.5	2.6	6.7	17.2	34.2	27.8	10.5	1.0	100.0
Detoxification	42	56.8	0.1*	1.0*	14.4	46.6	29.9	6.6*	1.4*	100.0
Maintenance	69	73.4	0.0*	0.0*	7.0*	31.3	46.0	15.0	0.7	100.0
Drug Free	664	88.8	3.5	8.6	20.2	35.4	22.2	9.1	1.0	100.0
Combined	63	87.5	1.6*	9.1*	18.7*	26.7	30.3	12.2*	1.4*	100.0
Alcohol	326	33.9	1.6	5.6	20.1	32.6	25.7	12.6	1.7	100.0
Modalities of Two or More Types, Including Alcohol Clients <sup>d</sup>	17	89.5	0.3*	0.8*	11.6*	42.7	28.5	14.3*	1.8*	100.0
Modalities of Two or More Types, Not Including Alcohol Clients <sup>d</sup>	21	70.0	1.3*	4.6*	4.1*	31.0	36.6	21.5*	0.8*	100.0
Modalities	1,875	95.5								
Clients	646,494 <sup>e</sup>		2.3 <sup>f</sup>	6.7	17.8	34.8	26.6	10.6	1.1	100.0

Source: 1990 NIDA Drug Services Research Survey, Brandeis University, Institute for Health Policy.

- a Numbers at individual facilities were allowed to vary in two ways: no more than 10% above the total number of clients in treatment reported by each facility; and to any amount below the total number of clients in treatment due to clients with unknown or unreported age.
- b Percentages will not always add to 100.0% due to rounding.
- c Modalities with 0 clients in treatment on March 30, 1990 have been excluded from all calculations in this table.
- d Includes reports from some of the combined modality facilities, i.e., instances where client characteristics could be reported but not separately for each modality. If the data for a given modality within a multi-modality facility could be separately reported, the data appear under that modality.
- e The sampling error for this estimate is 39,872.
- f The sampling errors for these estimates are: <15, 0.3; 15-17, 0.5; 18-24, 0.8; 25-34, 0.7; 35-44, 0.9; 45-64, 0.5; 65+, 0.1.
- \* The Coefficient of Variation for this estimate is greater than or equal to 0.3, indicating this number should be interpreted with caution.

Table 28: National Estimates of DSRs Clients in Treatment by Age and Environment/Modality on March 30, 1990

Environment/Modality <sup>a</sup>	Reporting Modalities, Unweighted		Age in Years							Total <sup>b,c</sup>
	n	%	<15	15-17	18-24	25-34	35-44	45-64	65+	
Hospital Inpatient	303	94.4	363	1,553	2,572	6,373	4,705	2,030	381	17,978
Residential	370	92.5	833	4,709	10,821	22,404	9,118	3,332	398*	51,615
Outpatient	838	91.5	11,948	30,666	78,831	156,887	127,411	48,002	4,414	458,158
Detoxification	42	56.8	8*	63*	932*	3,012	1,931	427*	91*	6,462
Maintenance	69	73.4	24*	10*	6,806*	30,632	45,028	14,644	701	97,845
Drug Free	664	88.8	11,531	28,437	66,658	116,901	73,266	30,045	3,296	330,136
Combined	63	87.5	386*	2,155*	4,435*	6,341*	7,186	2,886*	326*	23,716
Alcohol	326	33.9	1,815	6,370	22,616	36,817	29,006	14,260	1,891	112,774
Modalities of Two or More Types, Including Alcohol Clients <sup>c</sup>	17	89.5	12*	30*	420*	1,552*	1,037*	520*	65*	3,636*
Modalities of Two or More Types, Not Including Alcohol Clients <sup>d</sup>	21	70.0	31*	108*	95*	724*	853*	502*	20*	2,333*
Modalities Clients <sup>e</sup>	1,875	95.5								
	646,494		15,002	43,435	115,355	224,758	172,130	68,645	7,169	646,494

Source: 1990 NIDA Drug Services Research Survey, Brandeis University, Institute for Health Policy.

Note: These national estimates are not adjusted for the rate of non-response to the survey question on clients' age.

- a Numbers at individual facilities were allowed to vary in two ways: no more than 10% above the total number of clients in treatment reported by each facility; and to any amount below the total number of clients in treatment due to clients with unknown or unreported age.
- b Modalities with 0 clients in treatment on March 30, 1990 have been excluded from all calculations in this table.
- c The sampling errors for each modality are as follows: Hospital Inpatient, 1,413; Residential, 5,538; Outpatient, 33,608; Outpatient Detoxification, 1,653; Outpatient Maintenance, 15,936; Outpatient Drug Free, 29,114; Outpatient Combined, 6,801; Alcohol, 12,688; Modalities of Two or More Types, Including Alcohol Clients, 2,324; Modalities of Two or More Types, Not Including Alcohol Clients, 1,632.
- d Includes reports from some of the combined modality facilities, i.e., instances where client characteristics could be reported but not separately for each modality. If the data for a given modality within a multi-modality facility could be separately reported, the data appear under that modality.
- e The sampling errors for each age group are as follows: <15, 2,392; 15-17, 4,125; 18-24, 8,880; 25-34, 12,993; 35-44, 12,416; 45-64, 5,754; 65+, 744.
- \* The Coefficient of Variation for this estimate is greater than or equal to 0.3, indicating this number should be interpreted with caution.

**Table 29: Percentage Distribution of Employment Status of DSRS Clients in Treatment by Environment/Modality on March 30, 1990**

Environment/Modality <sup>a</sup>	Responding Modalities, Unweighted		Employment Status		Total <sup>b,c</sup> %
	n	%	Employed %	Not Employed %	
Hospital Inpatient	301	93.8	47.2	52.8	100.0
Residential	370	92.5	19.1	80.9	100.0
Outpatient	830	90.6	51.6	48.4	100.0
Detoxification	42	56.8	34.6	65.4	100.0
Maintenance	67	71.3	42.3	57.7	100.0
Drug Free	656	87.7	54.1	45.9	100.0
Combined	65	90.3	57.1	42.9*	100.0
Alcohol	325	33.8	59.1	40.9	100.0
Modalities of Two or More Types, Including Alcohol Clients <sup>d</sup>	19	100.0	36.1*	63.9	100.0
Modalities of Two or More Types, Not Including Alcohol Clients <sup>d</sup>	17	56.7	46.2*	53.8*	100.0
<b>Modalities</b>	<b>1,862</b>	<b>94.9</b>			
<b>Clients</b>	<b>631,287<sup>e</sup></b>		<b>49.8<sup>f</sup></b>	<b>50.2</b>	<b>100.0</b>

Source: 1990 Drug Services Research Survey, Brandeis University, Institute for Health Policy.

- a Numbers at individual facilities were allowed to vary in two ways: no more than 10% above the total number of clients in treatment reported by each facility; and to any amount below the total number of clients in treatment due to clients with unknown or unreported employment status.
- b Percentages will not always add to 100.0% due to rounding.
- c Modalities with 0 clients in treatment on March 30, 1990 have been excluded from all calculations in this table.
- d Includes reports from some of the combined modality facilities, i.e., instances where client characteristics could be reported but not separately for each modality. If the data for a given modality within a multi-modality facility could be separately reported, the data appear under that modality.
- e The sampling error for this estimate is 37,427.
- f The sampling errors for these percentages are: Employed, 1.6; Not Employed, 1.6.
- \* The Coefficient of Variation for this estimate is greater than or equal to 0.3, indicating this number should be interpreted with caution.

Table 30: National Estimates of DSRS Clients in Treatment by Employment Status and Environment/Modality on March 30, 1990

Environment/Modality <sup>a</sup>	Responding Modalities, Unweighted		Employment Status		Total <sup>b,c</sup>
	n	%	Employed	Not Employed	
Hospital Inpatient	301	93.8	8,273	9,238	17,511
Residential	370	92.5	10,134	42,788	52,922
Outpatient	830	90.6	233,100	219,016	452,115
Detoxification	42	56.8	2,239	4,223*	6,462
Maintenance	67	71.3	39,784	54,290	94,074
Drug Free	656	87.7	172,768	146,742	319,509
Combined	65	90.3	18,310*	13,761*	32,070*
Alcohol	325	33.8	60,597	41,981	102,579
Modalities of Two or More Types, Including Alcohol Clients <sup>c</sup>	19	100.0	1,291*	2,285*	3,576*
Modalities of Two or More Types, Not Including Alcohol Clients <sup>d</sup>	17	56.7	1,195*	1,389*	2,584*
Modalities	1,862	94.9			
Clients <sup>e</sup>	631,287		314,590	316,697	631,287

Source: 1990 Drug Services Research Survey, Brandeis University, Institute for Health Policy.

Note: These national estimates are not adjusted for the rate of non-response to the survey question on clients' employment status.

- a Numbers at individual facilities were allowed to vary in two ways: no more than 10% above the total number of clients in treatment reported by each facility; and to any amount below the total number of clients in treatment due to clients with unknown or unreported employment status.
- b Modalities with 0 clients in treatment on March 30, 1990 have been excluded from all calculations in this table.
- c The sampling errors for each modality are as follows: Hospital Inpatient, 1,328; Residential, 5,388; Outpatient, 32,578; Outpatient Detoxification, 1,653; Outpatient Maintenance, 16,034; Outpatient Drug Free, 24,658; Outpatient Combined, 10,429; Alcohol, 11,100; Modalities of Two or More types, Including Alcohol Clients, 2,327; Modalities of Two or More Types, Not Including Alcohol Clients, 1,866. The sampling error for the total is 37,427.
- d Includes reports from some of the combined modality facilities, i.e., instances where client characteristics could be reported but not separately for each modality. If the data for a given modality within a multi-modality facility could be separately reported, the data appear under that modality.
- e The sampling error for Employed is 21,206 and for Not Employed is 21,203.
- \* The Coefficient of Variation for this estimate is greater than or equal to 0.3, indicating this number should be interpreted with caution.

Table 31: Percentage Distribution of Primary Source of Payment of DSRS Clients in Treatment by Environment/Modality on March 30, 1990

Environment/Modality <sup>a</sup>	Reporting Modalities, Unweighted n %		Primary Source of Payment						Total <sup>b,c</sup> %
			No Payment %	Self Payment %	Private Health Insurance %	Medicaid %	Medicare %	Other Public Support %	
Hospital Inpatient	300	93.5	15.5	7.2*	44.3	12.0	4.0	17.0	100.0
Residential	378	94.5	28.6	17.9	10.2	8.2*	0.1*	35.0	100.0
Outpatient	849	92.7	17.6	35.0	15.2	14.6	1.1	16.5	100.0
Detoxification	44	59.5	14.5*	34.7	4.9*	16.2	4.0*	25.7*	100.0
Maintenance	68	72.3	9.0	41.6	0.9*	36.7	0.2*	11.7	100.0
Drug Free	667	89.2	20.3	32.9	18.0	9.4	1.4	17.9	100.0
Combined	70	97.2	16.3*	36.7*	29.5*	3.1*	0.1*	14.3*	100.0
Alcohol	331	34.4	19.3	30.9	20.0	8.8	0.8*	20.1	100.0
Modalities of Two or More Types, Including Alcohol Clients <sup>d</sup>	19	100.0	22.2*	53.4*	15.6*	4.4*	1.6*	2.7*	100.0
Modalities of Two or More Types, Not Including Alcohol Clients <sup>e</sup>	21	70.0	9.7*	0.7*	5.0*	24.2*	0.5*	59.9*	100.0
Modalities	1,898	96.4							
Clients	652,594 <sup>g</sup>		18.8 <sup>f</sup>	32.1	16.4	13.0	1.0	18.8	100.0

Source: 1990 NIDA Drug Services Research Survey, Brandeis University, Institute for Health Policy.

- a Numbers at individual facilities were allowed to vary in two ways: no more than 10% above the total number of clients in treatment reported by each facility; and to any amount below the total number of clients in treatment due to clients with unknown or unreported primary source of payment.
- b Percentages will not always add to 100.0% due to rounding.
- c Modalities with 0 clients in treatment on March 30, 1990 have been excluded from all calculations in this table.
- d Includes reports from some of the combined modality facilities, i.e., instances where client characteristics could be reported but not separately for each modality. If the data for a given modality within a multi-modality facility could be separately reported, the data appear under that modality.
- e The sampling error for this estimate is 38,621.
- f The sampling errors for these percentages are: No Payment, 1.3; Self Payment, 1.9; Private Health Insurance, 1.6; Medicaid, 1.4; Medicare, 0.2; Other Public Support, 2.1.
- \* The Coefficient of Variation for this estimate is greater than or equal to 0.3, indicating this number should be interpreted with caution.

Table 32: National Estimates of DSRS Clients in Treatment by Primary Source of Payment and Environment/Modality on March 30, 1990

Environment/Modality <sup>a</sup>	Reporting Modalities, Unweighted n %		Primary Source of Payment					Total <sup>b,c</sup>	
			No Payment	Self Payment	Private Health Insurance	Medicaid	Medicare		Other Public Support
Hospital Inpatient	300	93.5	2,697	1,246*	7,706	2,084	687	2,960	17,381
Residential	378	94.5	15,558	9,760	5,538	4,467*	44*	19,056	54,423
Outpatient	849	92.7	81,102	161,100	70,000	67,110	5,148	75,987	460,447
Dextoxification	44	59.5	977*	2,337*	330*	1,087*	271*	1,726*	6,729
Maintenance	68	72.3	8,388	38,722	809*	34,211	142*	10,882	93,155
Drug Free	667	89.2	66,246	107,712	58,940	30,773	4,701	58,563	326,935
Combined	70	97.2	5,490*	12,328*	9,921*	1,039*	35*	4,815*	33,629
Alcohol	331	34.4	22,074	35,319	22,805	10,087	860	22,978	114,123
Modalities of Two or More Types, Including Alcohol Clients <sup>d</sup>	19	100.0	809*	1,940*	569*	160*	59*	99*	3,636*
Modalities of Two or More Types, Not Including Alcohol Clients <sup>d</sup>	21	70.0	251*	19*	130*	625*	12*	1,547*	2,584*
Modalities Clients <sup>e</sup>	1,898	96.4							
	654,594		122,491	209,383	106,748	84,534	6,811	122,627	652,594

Source: 1990 NIDA Drug Services Research Survey, Brandeis University, Institute for Health Policy.

Note: These national estimates are not adjusted for the rate of non-response to the survey question on clients' primary source of payment.

- a Numbers at individual facilities were allowed to vary in two ways: no more than 10% above the total number of clients in treatment reported by each facility; and to any amount below the total number of clients in treatment due to clients with unknown or unreported primary source of payment.
- b Modalities with 0 clients in treatment on March 30, 1990 have been excluded from all calculations in this table.
- c The sampling errors for each modality are as follows: Hospital Inpatient, 1,372; Residential, 5,454; Outpatient, 32,645; Outpatient Detoxification, 1,760; Outpatient Maintenance, 16,458; Outpatient Drug Free, 24,009; Outpatient Combined, 10,306; Alcohol, 12,376; Modalities of Two or More Types, Including Alcohol Clients, 2,324; Modalities of Two or More Types, Not Including Alcohol Clients, 1,866. The sampling error for the total is 38,621.
- d Includes reports from some of the combined modality facilities, i.e., instances where client characteristics could be reported but not separately for each modality. If the data for a given modality within a multi-modality facility could be separately reported, the data appear under that modality.
- e The sampling error for each source of payment is as follows: No Payment, 9,839; Self Payment, 12,552; Private Health Insurance, 13,374; Medicaid, 12,681; Medicare, 1,274; Other, 15,603.
- \* The Coefficient of Variation for this estimate is greater than or equal to 0.3, indicating this number should be interpreted with caution.

Table 33: Percentage Distribution of Principal Drug Abused by DSRS Clients in Treatment by Environment/Modality on March 30, 1990

Environment/Modality <sup>a</sup>	Reporting Modalities, Unweighted		Principal Drug Abused									Total <sup>c,d</sup> %
	n	%	Heroin/ Other Opiates %	Crack <sup>b</sup> %	Crack/ Cocaine <sup>b</sup> %	Benzodia- zepines %	Barbi- turates %	Amphet- amines %	Marijuana/ Hashish %	PCP/ LSD %	Other Drugs (not Alcohol) %	
Hospital Inpatient	282	87.9	9.7	17.4	38.0	5.6	1.4	4.6	19.6	1.0	2.7	100.0
Residential	349	87.3	12.5	23.0	37.1	1.7	1.1	6.4	15.2	1.1	2.0	100.0
Outpatient	790	86.2	31.1	8.9	26.6	2.1	1.3	6.0	19.5	1.6	2.9	100.0
Detoxification	38	51.4	91.0	1.3*	2.5*	1.6*	0.1*	0.6*	1.6*	0.0	1.2*	100.0
Maintenance	67	71.3	84.5	4.8	7.6*	1.1*	0.2*	0.2*	0.7*	0.0	0.9*	100.0
Drug Free	617	82.5	7.2	11.4	34.7	2.6	1.9	8.6	27.8	2.4	3.5	100.0
Combined	68	94.4	47.2	2.1*	25.5*	0.9*	0.5*	3.2*	15.2	1.2*	4.2*	100.0
Alcohol	78	8.1	3.9	14.6*	39.2*	2.1	2.0*	4.4*	30.2	0.6*	3.1*	100.0
Modalities of Two or More Types, Including Alcohol Clients <sup>e</sup>	15	78.9	4.6*	11.9*	29.0	7.7*	8.9*	12.2*	23.7*	1.5*	0.6*	100.0
Modalities of Two or More Types, Not Including Alcohol Clients <sup>e</sup>	21	70.0	69.6*	21.8*	5.8*	0.5*	0.0	0.0	1.3*	1.0*	0.0	100.0
Modalities	1,535	89.5										
Clients	439,616 <sup>f</sup>		27.2 <sup>g</sup>	10.9	28.6	2.2	1.4	5.9	19.7	1.5	2.8	100.0

Source: 1990 NIDA Drug Services Research Survey, Brandeis University, Institute for Health Policy.

- a Numbers at individual facilities were allowed to vary in two ways: no more than 10% above the total number of clients in treatment reported by each facility; and to any amount below the total number of clients in treatment due to clients with unknown or unreported principal drug abused.
- b Crack is included with cocaine for facilities not reporting crack separately.
- c Percentages will not always add to 100.0% due to rounding.
- d Modalities with 0 clients in treatment on March 30, 1990 have been excluded from all calculations in this table.
- e Includes reports from some of the combined modality facilities, i.e., instances where client characteristics could be reported but not separately for each modality. If the data for a given modality within a multi-modality facility could be separately reported, the data appear under that modality.
- f The sampling error for this estimate is 30,486.
- g The sampling errors for these estimates are: Heroin/Other Opiates, 2.5; Crack, 1.6; Crack/Cocaine, 1.9; Benzodiazepines, 0.2; Barbiturates, 0.2; Amphetamines, 0.9; Marijuana/Hashish, 1.2; PCP/LSD, 0.3; Other Drugs (not Alcohol), 0.5.
- \* The Coefficient of Variation for this estimate is greater than or equal to 0.3, indicating this number should be interpreted with caution.

Table 34: National Estimates of DSRS Clients in Treatment by Principal Drug Abused and Environment/Modality on March 30, 1990

Environment/Modality <sup>a</sup>	Reporting Modalities, Unweighted n %		Principal Drug Abused									Total <sup>c,d</sup>
			Heroin/ Other Opiates	Crack <sup>b</sup>	Crack/ Cocaine <sup>b</sup>	Benzodia- zepines	Barbi- turates	Amphet- amines	Marijuana/ Hashish	PCP/ LSD	Other Drugs (not Alcohol)	
Hospital Inpatient	282	87.9	1,391	2,491	5,449	802	199	666	2,809	147	390	14,344
Residential	349	87.3	5,188	9,560	15,435	725	477	2,649	6,332	473	814	41,653
Outpatient	790	86.2	110,160	31,387	94,002	7,312	4,748	21,109	69,108	5,809	10,098	353,734
Detoxification	38	51.4	5,481*	79*	150*	97*	8*	39*	94*	0	75*	6,021
Maintenance	67	71.3	76,281	4,291	6,824*	1,010*	201*	178*	635*	0	829*	90,248
Drug Free	617	82.5	16,688	26,490	80,697	5,971	4,413	20,087	64,605	5,520	8,162	232,635
Combined	68	94.4	11,711	527*	6,331*	233*	126*	805*	3,774*	289*	1,033*	24,830
Alcohol	78	8.1	989*	3,729*	10,044*	527*	503*	1,138	7,724	152*	798*	25,605
Modalities of Two or More Types, Including Alcohol Clients <sup>a</sup>	15	78.9	91*	235*	574*	152*	177*	242*	470*	29*	12*	1,981*
Modalities of Two or More Types Not Including Alcohol Clients <sup>a</sup>	21	70.0	1,599*	502*	133*	12*	0	0	30*	24*	0	2,298*
Modalities Clients <sup>f</sup>	1,535	89.5										
	439,616		119,417	47,902	125,638	9,530	6,104	25,805	86,473	6,633	12,112	439,616

Source: 1990 NIDA Drug Services Research Survey, Brandeis University, Institute for Health Policy.

Note: These national estimates are not adjusted for the rate of non-response to the survey question on clients' principal drug of abuse.

a Numbers at individual facilities were allowed to vary in two ways: no more than 10% above the total number of clients in treatment reported by each facility; and to any amount below the total number of clients in treatment due to clients with unknown or unreported principal drug abused.

b Crack is included with cocaine for facilities not reporting crack separately.

c Modalities with 0 clients in treatment on March 30, 1990 have been excluded from all calculations in this table.

d The sampling errors for each modality are as follows: Hospital Inpatient, 1,295; Residential, 4,574; Outpatient, 28,838; Outpatient Detoxification, 1,747; Outpatient Maintenance, 16,102; Outpatient Drug Free, 21,465; Outpatient Combined, 6,689; Alcohol, 6,971; Modalities of Two or More Types, Including Alcohol Clients, 1,084; Modalities of Two or More Types, Not Including Alcohol Clients, 1,630. The sampling error for the total is 30,486.

e Includes reports from some of the combined modality facilities, i.e., instances where client characteristics could be reported but not separately for each modality. If the data for a given modality within a multi-modality facility could be separately reported, the data appear under that modality.

f The sampling errors for each drug group are as follows: Heroin, 13,983; Crack, 7,359; Crack/Cocaine, 12,197; Benzodiazepines, 834; Barbiturates, 561; Amphetamines, 4,750; Marijuana, 6,076; PCP/LSD, 1,206; Other Drugs, 2,555.

\* The Coefficient of Variation for this estimate is greater than or equal to 0.3, indicating this number should be interpreted with caution.

Table 35: National Estimates of Numbers of Discharges and Percentage Distribution of Discharge Status by DSRS Environment for Most Recent 12-Month Period

Environment	Facilities Reporting Total Discharges		Discharges During Most Recent 12-Month Period				National Estimates of Numbers of Annual Discharges <sup>a, e</sup> n (+ SE)	
	# of Treatment Environments	% of Treatment Environments	Discharge Status <sup>a</sup>			Total <sup>d</sup> %		
			Completed Planned Drug Treatment %	Not Completed Treatment Plan, by Client Circumstances <sup>b</sup> %	Not Completed Treatment Plan, by Facility Choice <sup>c</sup> %			
Hospital Inpatient	183	83.6	81.1	14.5	4.4	100.0	379,089	37,912
Residential	311	92.6	64.8	27.2	8.0	100.0	595,442	98,109
Outpatient	667	87.6	51.0	37.6	11.4	100.0	892,360	65,167
All Modalities, for Facilities with Discharge Status by Environment	1,161	88.2	61.8	29.3	8.8	100.0	1,866,890	117,842
	<u># of Facilities</u>	<u>% of Facilities</u>						
Facilities with Discharge Status by Environment <sup>f</sup>	948	100.0	61.8 <sup>g</sup>	29.3 <sup>g</sup>	8.8 <sup>g</sup>	100.0	1,866,890	117,842
Facilities Not Reporting Discharge Status by Environment <sup>h</sup>	25	25.0	65.9 <sup>i</sup>	16.6 <sup>+i</sup>	17.2 <sup>+i</sup>	100.0	62,675	16,880
All Facilities	973	92.8	61.9 <sup>j</sup>	29.0 <sup>j</sup>	9.1 <sup>j</sup>	100.0	1,929,749	119,441

Source: 1990 NIDA Drug Services Research Survey, Brandeis University, Institute for Health Policy.

- a The number of discharged clients for the 12-month period may include readmissions of the same clients over the 12-month reporting period. This is a count of treatment episodes, not a count of unduplicated clients.
- b Includes client decision, incarceration, moving, and death.
- c Includes facility termination of treatment because of client's failure to comply with facility policy.
- d Numbers at individual facilities were allowed to vary  $\pm 10\%$  from the total number of clients in treatment reported by each facility. The percentages were calculated using the reported discharge status and total discharges; the discharge status percentages therefore do not always add to 100.0%.
- e An additional 28,414 ( $\pm 7,314$ ) discharges are excluded from the national estimates because the facilities' reporting periods were not equal to 12-months. These additional discharges were reported by 1 hospital inpatient, 11 residential, 40 outpatient, and 11 combined modality facilities.
- f These discharge status data represent the facilities above with discharge status by environment.
- g The sampling errors for these percentages are: Completed Planned Drug Treatment 1.8; Not Completed Treatment Plan, by Client Circumstances 1.9; Not Completed Treatment Plan, by Facility Choice 0.7.
- h These data are for multiple-modality facilities which are unable to separately report discharge status data for each available modality.
- i The sampling errors for these percentages are: Completed Planned Drug Treatment 11.7; Not Completed Treatment Plan, by Client Circumstances 5.4; Not Completed Treatment Plan, by Facility Choice 13.0.
- j The sampling errors for these percentages are: Completed Planned Drug Treatment 2.0; Not Completed Treatment Plan, by Client Circumstances 1.8; Not Completed Treatment Plan, by Facility Choice 0.7.

SE = Sampling Error

\* The Coefficient of Variation for this estimate is greater than or equal to 0.3, indicating this number should be interpreted with caution.

Table 36: National Estimates of Numbers of Discharges and Percentage Distribution of Discharge Status by DSRS Environment for Most Recent 12-Month Period for Facilities That Could Separate Out Alcohol Only Clients

Environment/Modality	Facilities Reporting Total Discharges		Discharges During Most Recent 12-Month Period				National Estimates of Numbers of Annual Discharges in Facilities Separating Out Alcohol Clients <sup>a, b</sup> n (± SE)	
	# of Treatment Modalities	% of Treatment Modalities	Discharge Status <sup>a</sup>			Total % <sup>d</sup>		
			Completed Planned Drug Treatment %	Not Completed Treatment Plan, by Client Circumstances <sup>b</sup> %	Not Completed Treatment Plan, by Facility Choice <sup>c</sup> %			
Hospital Inpatient	60	82.2	81.1	14.5	4.4	100.0	81,928	14,618
Residential	130	91.5	64.8	27.2	8.0	100.0	137,978	17,691
Outpatient	316	87.5	51.0	37.6	11.4	100.0	409,942	51,489
All Modalities, for Facilities With Discharge Status by Environment	506	87.8	61.8	29.3	8.8	100.0	629,848	57,135
Facilities with Discharge Status by Environment <sup>f</sup>	410	100.0	61.8 <sup>g</sup>	29.3 <sup>g</sup>	8.8 <sup>g</sup>	100.0	629,848	57,135
Facilities Not Reporting Discharge Status by Environment <sup>h</sup>	4	7.5	65.9 <sup>i</sup>	16.2* <sup>i</sup>	17.2* <sup>i</sup>	100.0	6,204*	3,832
All Facilities Separating Out Alcohol Clients	414	89.4	61.9 <sup>j</sup>	29.0 <sup>j</sup>	9.1 <sup>j</sup>	100.0	636,052	57,245

Source: 1990 NIDA Drug Services Research Survey, Brandeis University, Institute for Health Policy.

- a The number of discharged clients for the 12-month period may include readmissions of the same clients over the 12-month reporting period. This is a count of treatment episodes, not a count of unduplicated clients.
- b Includes client decision, incarceration, moving, and death.
- c Includes facility termination of treatment because of client's failure to comply with facility policy.
- d Numbers at individual facilities were allowed to vary ± 10% from the total number of clients in treatment reported by each facility. The percentages were calculated using the reported discharge status and total discharges; the discharge status percentages therefore do not always add to 100.0%.
- e An additional 15,878\* (±6,098) discharges are excluded from the national estimates because the facilities' reporting periods were not equal to 12-months. These additional discharges were reported by 1 hospital inpatient, 7 residential, 23 outpatient, and 8 combined modality facilities.
- f These discharge status data represent the facilities above reporting discharge status by environment.
- g The sampling errors for these percentages are: Completed Planned Drug Treatment 1.8; Not Completed Treatment Plan, by Client Circumstances 1.9; Not Completed Treatment Plan, by Facility Choice 0.7.
- h These data are for multiple-modality facilities which are unable to separately report discharge status data for each available modality.
- i The sampling errors for these percentages are: Completed Planned Drug Treatment 11.7; Not Completed Treatment Plan, by Client Circumstances 5.4; Not Completed Treatment Plan, by Facility Choice 13.1.
- j The sampling errors for these percentages are: Completed Planned Drug Treatment 2.0; Not Completed Treatment Plan, by Client Circumstances 1.8; Not Completed Treatment Plan, by Facility Choice 0.7.

SE = Sampling Error

\* The Coefficient of Variation for this estimate is greater than or equal to 0.3, indicating this number should be interpreted with caution.

Table 37: National Estimates of Numbers of Discharges and Percentage Distribution of Discharge Status by DSRS Environment for Most Recent 12-Month Period for Facilities That Could Not Separate Out Alcohol Only Clients

Environment	Facilities Reporting Total Discharges		Discharges During Most Recent 12-Month Period				National Estimates of Numbers of Annual Discharges in Facilities Not Separating Out Alcohol Clients <sup>a, e</sup> n (± SE)	
			Discharge Status <sup>a</sup>			Total <sup>d</sup> %		
	# of Treatment Modalities	% of Treatment Modalities	Completed Planned Drug Treatment %	Not Completed Treatment Plan, by Client Circumstances <sup>b</sup> %	Not Completed Treatment Plan, by Facility Choice <sup>c</sup> %			
Hospital Inpatient	123	84.2	80.8	14.5	4.7	100.0	297,160	31,259
Residential	181	93.3	65.4	27.0	7.5	100.0	457,464	89,527
Outpatient	351	87.8	53.9	35.3	10.8	100.0	482,418	41,390
All Modalities, for Facilities With Discharge Status by Environment	655	88.5	64.9	27.0	8.0	100.0	1,237,042	109,144
Facilities with Discharge Status by Environment <sup>f</sup>	538	100.0	64.9 <sup>g</sup>	27.0 <sup>g</sup>	8.0 <sup>g</sup>	100.0	1,237,042	109,144
Facilities Not Reporting Discharge Status by Environment <sup>h</sup>	21	44.7	75.3 <sup>i</sup>	19.7* <sup>i</sup>	4.5* <sup>i</sup>	100.0	56,471	15,311
All Facilities Not Able to Separate Out Alcohol Clients	559	95.6	65.2 <sup>j</sup>	26.9 <sup>j</sup>	7.8 <sup>j</sup>	100.0	1,293,697	110,835

Source: 1990 NIDA Drug Services Research Survey, Brandeis University, Institute for Health Policy.

- a The number of discharged clients for the 12-month period may include readmissions of the same clients over the 12-month reporting period. This is a count of treatment episodes, not a count of unduplicated clients.
- b Includes client decision, incarceration, moving, and death.
- c Includes facility termination of treatment because of client's failure to comply with facility policy.
- d Numbers at individual facilities were allowed to vary ± 10% from the total number of clients in treatment reported by each facility. The percentages were calculated using the reported discharge status and total discharges; the discharge status percentages therefore do not always add to 100.0%
- e An additional 12,536\* (± 4,412) discharges are excluded from the national estimates because the facilities' reporting periods were not equal to 12-months. These additional discharges were reported by 4 residential, 17 outpatient, and 3 combined modality facilities.
- f These discharge status data represent the facilities above reporting discharge status by environment.
- g The sampling errors for these percentages are: Completed Planned Drug Treatment 2.6; Not Completed Treatment Plan, by Client Circumstances 2.8; Not Completed Treatment Plan, by Facility Choice 0.8.
- h These data are for multiple-modality facilities which are unable to separately report discharge status data for each available modality.
- i The sampling errors for these percentages are: Completed Planned Drug Treatment 6.6; Not Completed Treatment Plan, by Client Circumstances 6.7; Not Completed Treatment Plan, by Facility Choice 1.8.
- j The sampling errors for these percentages are: Completed Planned Drug Treatment 2.6; Not Completed Treatment Plan, by Client Circumstances 2.7; Not Completed Treatment Plan, by Facility Choice 0.8.

SE = Sampling Error

\* The Coefficient of Variation for this estimate is greater than or equal to 0.3, indicating this number should be interpreted with caution.

Table 38: Percentage of Waiting List Characteristics and National Estimates of Applicants on Waiting Lists by DSRS Facility Environment/Modality on March 30, 1990

Waiting List Characteristic	Environment/Modality <sup>a</sup>							All Facilities (Wn=7163)
	Single Modality Facilities						Multiple Modality Facilities (Wn=2450)	
	Hospital Inpatient (Wn=211)	Residential (Wn=1120)	All Outpatient Modalities (Wn=3383)	Outpatient				
				Outpatient Detoxification (Wn=6*) <sup>b</sup>	Outpatient Maintenance (Wn=126) <sup>b</sup>	Outpatient Drug Free (Wn=3251)		
% Facilities Usually Having More Applicants than Slots (± Sampling Error)	26.1*	69.4	34.6			33.8	40.1	41.7
Mean Estimated Average Waiting Time, in days, All Facilities (± Sampling Error)	8.7	3.7	1.8			2.1	2.6	1.5
	7*	22	12			12	13	14
	3	2	1			2	1	1
As of March 30, 1990,								
% Facilities Having a System for Placing Applicants on a Waiting List (± Sampling Error)	49.8	81.5	48.9			48.3	65.1	59.6
(Wn)	105	913	1,656			1,570	1,596	4,269
% Facilities with a Procedure for Screening for Eligibility before Placing Applicants on a Waiting List (± Sampling Error)	100.0	95.6	89.0			88.4	95.6	93.1
	0.0	1.7	2.2			2.4	1.1	1.0
% Facilities with a Procedure for Verifying Current Status of Waiting List Entries (± Sampling Error)	91.4	94.6	84.6			84.0	88.8	88.5
	5.7	1.7	2.1			2.2	2.1	1.2
% Facilities Requiring Contact with Facility to Remain on List (± Sampling Error)	23.8*	74.1	32.0			31.9	45.5	45.9
	8.9	3.1	3.1			3.1	3.6	1.9
% Facilities with Names of Waiting List Entries (± Sampling Error)	100.0	94.7	95.8			95.9	94.0	95.0
	0.0	1.7	1.5			1.5	1.6	1.1
Mean Estimated Average Waiting Time, in days, Facilities with System for Placing Applicants on Waiting List (± Sampling Error)	14*	25	21			21	19	21
	5	2	3			3	2	2
National Estimates of Applicants on Waiting List Among Facilities with System for Placing Applicants on Waiting List (± Sampling Error)								79,072
								5,937

Source: 1990 NIDA Drug Services Research Survey, Brandeis University, Institute for Health Policy.

Note: The national estimate of applicants on waiting lists is not adjusted for the non-response rate of 4.2% to the survey question.

- a Each environment/modality-specific percentage represents the number of facilities answering positively to the given characteristic as a percentage of all facilities responding to the survey in that environment/modality category; responses of unknown or refused are counted as a negative response.
- b The number of actual facilities reporting is too small for categorical analysis; the unweighted number of facilities is 1 for outpatient detoxification and 19 for outpatient maintenance. However, these facilities' responses are included in the All Outpatient Modalities and All Facilities columns.

Wn = Weighted number of facilities.

\* The Coefficient of Variation for this estimate is greater than or equal to 0.3, indicating this number should be interpreted with caution.

Table 39: National Estimates of Numbers of Facilities by Waiting List Characteristics and DSRS Facility Environment/Modality on March 30, 1990

Waiting List Characteristic	Environment/Modality							All Facilities (Wn=7163)
	Single Modality Facilities						Multiple Modality Facilities (Wn=2450)	
	Hospital Inpatient (Wn=211)	Residential (Wn=1120)	All Outpatient Modalities (Wn=3383)	Outpatient				
				Outpatient Detoxification (Wn=6*) <sup>a</sup>	Outpatient Maintenance (Wn=126) <sup>a</sup>	Outpatient Drug Free (Wn=3251)		
National Estimates of Facilities Usually Having More Applicants than Slots	55*	777	1,171			1,099	982	2,986
(± Sampling Error)	17	82	80			86	70	116
As of March 30, 1990,								
National Estimates of Facilities Having a System for Placing Applicants on a Waiting List	105	913	1,656			1,570	1,596	4,269
(± Sampling Error)	23	82	74			82	88	103
National Estimates of Facilities with a Procedure for Screening for Eligibility before Placing Applicants on a Waiting List	105	872	1,473			1,388	1,526	3,976
(± Sampling Error)	23	84	77			84	86	99
National Estimates of Facilities with a Procedure for Verifying Current Status of Waiting List Entries	96	864	1,400			1,319	1,417	3,778
(± Sampling Error)	22	74	69			73	86	111
National Estimates of Facilities Requiring Contact with Facility to Remain on List	25*	677	530			501	727	1,959
(± Sampling Error)	11	63	56			56	68	98
National Estimates of Facilities with Names of Waiting List Entries	105	865	1,587			1,505	1,500	4,056
(± Sampling Error)	23	76	75			80	81	95

Source: 1990 NIDA Drug Services Research Survey, Brandeis University, Institute for Health Policy.

Note: The national estimate of applicants on waiting lists is not adjusted for the non-response rate of 4.2% to the survey question.

<sup>a</sup> The number of actual facilities reporting is too small for categorical analysis; the unweighted number of facilities is 1 for outpatient detoxification and 19 for outpatient maintenance. However, these facilities' responses are included in the All Outpatient Modalities and All Facilities columns.

Wn = Weighted number of facilities.

\* The Coefficient of Variation for this estimate is greater than or equal to 0.3, indicating this number should be interpreted with caution.

Table 40: Percentage of Waiting List Characteristics and National Estimates of Applicants on Waiting Lists by Environment/Modality for Public DSRs Facilities on March 30, 1990

Waiting List Characteristic	Environment/Modality, Public Facilities <sup>a, b</sup>							All Facilities (N=1362)
	Single Modality Facilities						Multiple Modality Facilities (N=490)	
	Hospital Inpatient (N=71) <sup>c</sup>	Residential (N=122)	All Outpatient Modalities (N=678)	Outpatient				
				Outpatient Detoxification (N=0) <sup>c</sup>	Outpatient Maintenance (N=16) <sup>c</sup>	Outpatient Drug Free (N=662)		
% Facilities Usually Having More Applicants than Slots (± Sampling Error)		77.6 9.2	34.6 4.4			34.1 4.7	57.1 5.2	47.6 3.2
Mean Estimated Average Waiting Time, in Days, All Facilities (± Sampling Error)		33 8	13 2			13 2	18 3	16 2
As of March 30, 1990,								
% Facilities Having a System for Placing Applicants on a Waiting List (n) (± Sampling Error) (N)		80.3 11.9 98	46.9 4.5 318			48.0 4.7 318	70.4 4.8 345	59.7 3.4 812
% Facilities with a Procedure for Screening for Eligibility before Placing Applicants on Waiting List (± Sampling Error)		93.9 6.2	80.5 6.5			80.5 6.5	93.9 3.5	89.0 3.0
% Facilities with a Procedure for Verifying Current Status of Waiting List Entries (± Sampling Error)		88.8 8.0	71.6 7.3			71.6 7.3	78.0 5.6	77.6 3.8
% Facilities Requiring Contact with Facility to Remain on List (± Sampling Error)		57.1 11.7	27.6 6.2			27.6 6.2	46.3 5.8	38.4 4.5
% Facilities with Names of Waiting List Entries (± Sampling Error)		100.0 0.0	97.5 2.5			97.5 2.5	97.7 2.3	98.1 1.3
Mean Estimated Average Waiting Time, in Days, Facilities with System for Placing Applicants on Waiting List (± Sampling Error)		31 8	21 4			21 4	22 4	23 3
National Estimates of Applicants on Waiting Lists Among Facilities With System for Placing Applicants on Waiting List (± Sampling Error)								22,573 4,175

Source: 1990 NIDA Drug Services Research Survey, Brandeis University, Institute for Health Policy.

Note: The national estimate of applicants on waiting lists is not adjusted for the non-response rate of 5.4% to the survey question by public facilities.

Table 40: Percentage of Waiting List Characteristics and National Estimates of Applicants on Waiting Lists by Environment/Modality for Public DSRS Facilities on March 30, 1990

(Continued)

- a Public facilities include those owned by a Federal, State, or Local government.
- b Each environment/modality-specific percentage represents the number of facilities answering positively to the given characteristic as a percentage of all facilities responding to the survey in that environment/modality category; responses of unknown or refused are counted as a negative response.
- c The number of actual facilities reporting is too small for categorical analysis; the unweighted number of facilities is 14 for hospital inpatient, 0 for outpatient detoxification, and 2 for outpatient maintenance. However, these facilities' responses are included in the All Facilities column.

Wn = Weighted number of facilities.

Table 41: National Estimates of Numbers of Facilities by Waiting List Characteristics and Environment/Modality for Public DSRS Facilities on March 30, 1990

Waiting List Characteristic	Environment/Modality, Public Facilities <sup>a, b</sup>							All Facilities (N=1362)
	Single Modality Facilities						Multiple Modality Facilities (N=490)	
	Hospital Inpatient (N=71) <sup>c</sup>	Residential (N=122)	All Outpatient Modalities (N=678)	Outpatient				
				Outpatient Detoxification (N=0) <sup>c</sup>	Outpatient Maintenance (N=16*) <sup>c</sup>	Outpatient Drug Free (N=662)		
National Estimates of Facilities Usually Having More Applicants than Slots (± Sampling Error)		94 22	234 41			226 41	280 41	648 68
As of March 30, 1990,								
National Estimates of Facilities Having a System for Placing Applicants on a Waiting List (± Sampling Error)		98 22	318 46			318 46	345 42	812 75
National Estimates of Facilities with a Procedure for Screening for Eligibility before Placing Applicants on Waiting List (± Sampling Error)		92 20	256 47			256 47	324 40	723 71
National Estimates of Facilities with a Procedure for Verifying Current Status of Waiting List Entries (± Sampling Error)		87 22	228 44			228 44	269 38	631 74
National Estimates of Facilities Requiring Contact with Facility to Remain on List (± Sampling Error)		56 16	88 22			88 22	160 27	312 46
National Estimates of Facilities with Names of Waiting List Entries (± Sampling Error)		98 22	310 47			310 47	337 42	797 75

Source: 1990 NIDA Drug Services Research Survey, Brandeis University, Institute for Health Policy.

Note: The national estimate of applicants on waiting lists is not adjusted for the non-response rate of 5.4% to the survey question by public facilities.

- a Public facilities include those owned by a Federal, State, or local government.
  - b Each environment/modality-specific percentage represents the number of facilities answering positively to the given characteristic as a percentage of all facilities responding to the survey in that environment/modality category; responses of unknown or refused are counted as a negative response.
  - c The number of actual facilities reporting is too small for categorical analysis; the unweighted number of facilities is 14 for hospital inpatient, 0 for outpatient detoxification, and 2 for outpatient maintenance. However, these facilities' responses are included in the All Facilities column.
- N = Weighted number of facilities.

Table 42: Percentage of Waiting List Characteristics and National Estimates of Applicants on Waiting Lists by Environment/Modality for Privately-Owned DSRS Facilities on March 30, 1990

Waiting List Characteristic	Environment/Modality, Privately-Owned Facilities <sup>A, D</sup>							All Facilities (N=5788)
	Single Modality Facilities						Multiple Modality Facilities (N=1952)	
	Hospital Inpatient (N=139) <sup>C</sup>	Residential (N=998)	All Outpatient Modalities (N=2699)	Outpatient				
				Outpatient Detoxification (N=6*) <sup>C</sup>	Outpatient Maintenance (N=110) <sup>C</sup>	Outpatient Drug Free (N=2583)		
% Facilities Usually Having More Applicants than Slots (± Sampling Error)		68.4 4.0	34.7 2.1			33.8 2.3	35.6 2.7	40.3 1.7
Mean Estimated Average Waiting Time, in Days, All Facilities (± Sampling Error)		21 2	12 2			12 2	12 1	13 1
As of March 30, 1990, % Facilities Having a System for Placing Applicants on a Waiting List (N) (± Sampling Error) (N)		81.6 3.1 815	49.6 1.7 1,338			48.5 1.8 1,252	63.7 2.2 1,243	59.6 1.4 3,449
% Facilities with a Procedure for Screening for Eligibility before Placing Applicants on Waiting List (± Sampling Error)		95.8 1.8	91.0 2.4			90.4 2.5	96.1 1.2	94.1 1.0
% Facilities with a Procedure for Verifying Current Status of Waiting List Entries (± Sampling Error)		95.4 1.5	87.7 2.4			87.1 2.6	91.7 2.3	91.0 1.3
% Facilities Requiring Contact with Facility to Remain on List (± Sampling Error)		76.2 3.3	33.0 3.3			33.0 3.3	45.0 4.1	47.5 1.9
% Facilities with Names of Waiting List Entries (± Sampling Error)		94.1 1.9	95.4 1.8			95.4 1.9	92.9 1.8	94.3 1.1
Mean Estimated Average Waiting Time, in Days, Facilities with System for Placing Applicants on Waiting List (± Sampling Error)		24 2	21 4			21 4	18 2	20 2
National Estimates of Applicants on Waiting Lists Among Facilities With System for Placing Applicants on Waiting List (± Sampling Error)								56,342 5,048

Source: 1990 NIDA Drug Services Research Survey, Brandeis University, Institute for Health Policy.

Note: The national estimate of applicants on waiting lists is not adjusted for the non-response rate of 3.8% to this survey question by privately-owned respondents.

Table 42: Percentage of Waiting List Characteristics and National Estimates of Applicants on Waiting Lists by Environment/Modality for Privately-Owned DSRS Facilities on March 30, 1990

(Continued)

- a Privately-owned facilities include non-publicly-owned for-profit and not-for-profit facilities.
- b Each environment/modality-specific percentage represents the number of facilities answering positively to the given characteristic as a percentage of all facilities responding to the survey in that environment/modality category; responses of unknown or refused are counted as a negative response.
- c The number of actual facilities reporting is too small for categorical analysis; the unweighted number of facilities is 24 for hospital inpatient, 1 for outpatient detoxification, and 17 for outpatient maintenance. However, these facilities' responses are included in the All Facilities column.

Wn = Weighted number of facilities.

Table 43: National Estimates of Numbers of Facilities by Waiting List Characteristics and Environment/Modality for Privately-Owned DSRs Facilities on March 30, 1990

Waiting List Characteristic	Environment/Modality, Privately-Owned Facilities <sup>a, b</sup>							All Facilities (Wn=5788)
	Single Modality Facilities						Multiple Modality Facilities (Wn=1952)	
	Hospital Inpatient (Wn=139) <sup>c</sup>	Residential (Wn=998)	All Outpatient Modalities (Wn=2699)	Outpatient				
				Outpatient Detoxification (Wn=6*) <sup>c</sup>	Outpatient Maintenance (Wn=110) <sup>c</sup>	Outpatient Drug Free (Wn=2583)		
National Estimate of Facilities Usually Having More Applicants than Slots (± Sampling Error)		683 81	936 69			873 71	694 60	2,330 117
As of March 30, 1990, National Estimates of Facilities Having a System for Placing Applicants on a Waiting List (± Sampling Error)		815 81	1,338 63			1,252 66	1,243 90	3,449 109
National Estimates of Facilities with a Procedure for Screening for Eligibility before Placing Applicants on a Waiting List (± Sampling Error)		781 83	1,218 64			1,132 68	1,194 84	3,246 104
National Estimates of Facilities with a Procedure for Verifying Current Status of Waiting List Entries (± Sampling Error)		778 73	1,173 60			1,091 61	1,140 85	3,139 107
National Estimates of Facilities Requiring Contact with Facility to Remain on List (± Sampling Error)		621 66	442 49			414 47	559 62	1,639 95
National Estimates of Facilities with Names of Waiting List Entries (± Sampling Error)		767 76	1,276 62			1,195 62	1,155 83	3,252 103

Source: 1990 NIDA Drug Services Research Survey, Brandeis University, Institute for Health Policy.

Note: The national estimate of applicants on waiting lists is not adjusted for the non-response rate of 3.8% to this survey question by privately-owned respondents.

a Privately-owned facilities include non-publicly-owned for-profit and not-for-profit facilities.

b Each environment/modality-specific percentage represents the number of facilities answering positively to the given characteristic as a percentage of all facilities responding to the survey in that environment/modality category; responses of unknown or refused are counted as a negative response.

c The number of actual facilities reporting is too small for categorical analysis; the unweighted number of facilities is 24 for hospital inpatient, 1 for outpatient detoxification, and 17 for outpatient maintenance. However, these facilities' responses are included in the All Facilities column.

Wn = Weighted number of facilities.

**Table 44: National Estimates of Total Methadone Clients, Methadone Detoxification Clients, and Methadone Maintenance Clients in DSRS Facilities on March 30, 1990 and Selected Characteristics of Methadone Maintenance Treatment Policies**

Characteristics	Number of Responding Facilities <sup>a</sup> (Wn)	Values Reported by Responding Facilities
National Estimate of Methadone Clients	614	112,943 <sup>b</sup>
(± Sampling Error)	55	16,547
National Estimate of Methadone Detoxification Clients	614	9,370
(± Sampling Error)	55	2,312
National Estimate of Methadone Maintenance Clients	614	103,538
(± Sampling Error)	55	14,677
<b>For Methadone Maintenance Treatment:</b>		
Maximum Daily Dosage:	552	
Median		80 mg.
Range		45 mg. - 200 mg.
Minimum Daily Dosage:	552	
Median		5.5 mg.
Range		1 mg. - 40 mg.
Average Daily Dosage:	540	
Median		50 mg.
Range		25 mg. - 80 mg.
% Methadone Facilities Providing Any Take Home Supplies	550	94.5%
% Methadone Facilities with No Maximum Maintenance Period	561	90.5%

Source: 1990 NIDA Drug Services Research Survey, Brandeis University, Institute for Health Policy.

a All facilities reporting a number of clients on methadone on 3/30/90 are included; thus facilities with modalities other than outpatient drug maintenance may be included in these statistics.

b This estimate has been adjusted for non-response by processes of imputation of missing values. See Appendix 3.

Wn = Weighted number of facilities.

Table 45: Percentage of DSRS Facilities Treating Pregnant Females, and Percentage Distribution and National Estimates of Pregnant Females in Treatment by Environment/Modality During Most Recent 12-Month Period

Characteristic	Environment/Modality							All Facilities (Wn=7163)
	Single Modality Facilities						Multiple Modality Facilities (Wn=2450)	
	Hospital Inpatient (Wn=211)	Residential (Wn=1120)	All Outpatient Modalities (Wn=3383)	Outpatient				
				Outpatient Detoxification (Wn=6*) <sup>a</sup>	Outpatient Maintenance (Wn=126) <sup>a</sup>	Outpatient Drug Free (Wn=3251)		
Pregnant Females Treated: % Yes, All Respondents <sup>b</sup>	61.3	35.9	53.7			52.3	69.7	56.6 <sup>c</sup>
% Yes, Among Valid Responses to this Question <sup>d</sup>	62.6	36.1	56.0			54.6	71.2	58.3 <sup>e</sup>
Pregnant Females in Treatment, % by Responding Facilities (± Sampling Error)	3.7* 1.3	9.2 2.0	37.4 4.7	0.0	9.0* 4.2	28.5 3.5	49.8 4.0	100.0
National Estimates of Pregnant Females Treated (± Sampling Error)	928* 322	2,333 531	9,475 1,433	0	2,235 1,123	7,240 755	12,630 1,434	25,367 2,084

Source: 1990 NIDA Drug Services Research Survey, Brandeis University, Institute for Health Policy.

Note: These national estimates are not adjusted for the non-response rate of 12.8% to the survey question on number of pregnant females treated.

a The number of actual facilities reporting is too small for categorical analysis; the unweighted number of facilities is 1 for outpatient detoxification and 19 for outpatient maintenance. However, these facilities' responses are included in the All Outpatient Modalities and All Facilities columns.

b Each environment/modality-specific percentage represents the number of facilities answering that they treat pregnant females as a percentage of all facilities responding to the survey in that environment/modality category; responses of unknown or refusal are counted as a negative response.

c The sampling error for this estimate is 1.7.

d Each environment/modality-specific percentage represents the number of facilities answering that they treated pregnant females as a percentage only of facilities which responded "yes" or "no" to this question in that environment/modality category; unknowns and refusals are excluded.

e The sampling error for this estimate is 1.7.

Wn = Weighted number of facilities.

\* The Coefficient of Variation for this estimate is greater than or equal to 0.3, indicating this number should be interpreted with caution.

**Table 46: Percentage Distribution of DSRS Facilities According to Type of HIV Status of Clients During Most Recent 12-Month Period**

Facility	HIV Status <sup>a</sup>					
	AIDS Diagnosed All Facilities (Wn=7163)		HIV Seropositive (Not Confirmed AIDS) All Facilities (Wn=7163)		Suspected HIV Positive All Facilities (Wn=7163)	
	%	(± SE)	%	(± SE)	%	(± SE)
No Clients	51.0	1.6	42.5	1.4	45.3	1.6
Some Clients	23.1	1.5	31.3	1.7	25.4	1.1
Don't Know #/Refused	25.9	1.4	26.2	1.5	29.3	1.4
Total <sup>b</sup>	100.0	N/A	100.0	N/A	100.0	N/A
Number of Clients per Median Facility With Some Clients in Category	2		3		4	

Source: 1990 NIDA Drug Services Research Survey, Brandeis University, Institute for Health Policy.

a Facilities able to tabulate clients by HIV status may or may not be conducting HIV testing on site.

b Percentages will not always add to 100.0% due to rounding.

Wn = Weighted number of responding facilities.

SE = Sampling Error

N/A = Not Applicable

Table 47: Percentage of Facilities Reporting Clients' HIV Status and HIV Testing Policies, and Percentage Distribution and National Estimates of HIV Clients by DSRS Environment/Modality During Most Recent 12-Month Period

Characteristics	Environment/Modality							All Facilities (N=7163)
	Single Modality Facilities						Multiple Modality Facilities (N=2450)	
	Hospital Inpatient (N=211)	Residential (N=1120)	All Outpatient Modalities (N=3383)	Outpatient				
Outpatient Detoxification (N=6*) <sup>a</sup>				Outpatient Maintenance (N=126) <sup>a</sup>	Outpatient Drug Free (N=3251)			
Conducting HIV Tests:								
% Respondents Conducting HIV Tests <sup>b</sup>	84.4	35.0	7.3			5.5	56.7	30.8 <sup>c</sup>
% Respondents with Valid Responses Conducting HIV Tests <sup>d</sup>	86.2	35.0	7.5			5.7	58.0	31.4 <sup>c</sup>
Clients' HIV Status of HIV Seropositive or AIDS Diagnosed <sup>e</sup> :								
No Clients	28.9*	41.5	46.1			47.3	23.5	37.1 <sup>c</sup>
Some Clients	38.3	38.5	27.0			25.8	52.4	37.8 <sup>c</sup>
Don't Know/Refused	32.8	20.1	27.0			26.8	24.2	25.1 <sup>c</sup>
Total <sup>f</sup>	100.0	100.0	100.0			100.0	100.0	100.0
HIV Seropositive and AIDS Diagnosed Clients in Treatment, % by Responding Facilities <sup>g</sup>	3.2*	10.6*	36.7	0.0	20.0*	16.7	49.6	100.0
National Estimates of HIV Seropositive and AIDS Diagnosed Clients During Most Recent 12-Month Period	1,041*	3,440	11,947*		6,516*	5,432	16,169	32,597
(± Sampling Error)	378	1,009	3,679		3,487	1,254	2,382	3,947

Source: 1990 NIDA Drug Services Research Survey, Brandeis University, Institute for Health Policy.

Note: These national estimates are not adjusted for the non-response rate of 24.8% to the two survey questions on the number of HIV seropositive and AIDS diagnosed clients.

- a The number of actual facilities reporting is too small for categorical analysis; the unweighted number of facilities is 1 for outpatient detoxification and 19 for outpatient maintenance. However, these facilities' responses are included in the All Outpatient Modalities and All Facilities column.
  - b Each environment/modality-specific percentage represents the number of facilities conducting HIV tests as a percentage of all facilities responding to the survey in that environment/modality category; responses of unknown or refusal are counted as a negative response.
  - c The sampling errors for these estimates are: Row 1, 1.2, Row 2, 1.2; Row 3, 1.6; Row 4, 1.9; Row 5, 1.4.
  - d Each environment/modality-specific percentage represents the number of facilities conducting HIV tests as a percentage only of facilities which responded "yes" or "no" to this question in that environment/modality category; unknowns and refusals are excluded.
  - e Facilities able to tabulate clients by HIV status may or may not be conducting HIV testing on site.
  - f Percentages will not always add to 100.0% due to rounding.
  - g The sampling errors for these percentages are: Hospital Inpatient 1.3; Residential 3.3; All Outpatient Modalities 8.6; Outpatient Maintenance 9.6; Outpatient Drug Free 4.1; Multiple Modality Facilities 7.8.
- Wn = Weighted number of facilities.
- \* The Coefficient of Variation for this estimate is greater than or equal to 0.3, indicating this number should be interpreted with caution.

Table 48: Percentage Distribution of IV Drug Users, IV Drug Users as Percentage of Clients in Treatment, and National Estimates of IVDUs Among Clients in Treatment, by DSRS Environment/Modality on March 30, 1990

Characteristic	Environment/Modality							Total, All Facilities (Wn=7163) <sup>b</sup>
	Single Modality Facilities						Multiple Modality Facilities (Wn=2450)	
	Hospital Inpatient (Wn=211)	Residential (Wn=1120)	All Outpatient Modalities (Wn=3383)	Outpatient				
				Outpatient Detoxification (Wn=6*) <sup>a</sup>	Outpatient Maintenance (Wn=126) <sup>a</sup>	Outpatient Drug Free (Wn=3251)		
% IV Drug Users in Treatment, by Responding Facilities <sup>c</sup>	0.3	3.7*	35.8			15.1	60.2	100.0
% IV Drug Users, Percentage of All Clients in Each Facility Type	15.7	23.1	17.4			8.4	33.1	24.7 <sup>c</sup>
National Estimates of IV Drug Users in Treatment	498	6,490	63,474		36,671*	26,802	106,846	177,309
(± Sampling Error)	119	1,743	12,190		11,283	3,707	13,278	18,860

Source: 1990 NIDA Drug Services Research Survey, Brandeis University, Institute for Health Policy.

Note: These national estimates are adjusted for item non-response by processes of imputation of missing values. See Appendix 3.

a The number of actual facilities reporting is too small for categorical analysis; the unweighted number of facilities is 1 for outpatient detoxification and 19 for outpatient maintenance. However, these facilities' responses are included in the All Facilities column.

b Percentages will not always add to 100.0% due to rounding.

c The sampling error for this percent is 1.9.

Wn = Weighted number of facilities.

\* The Coefficient of Variation for this estimate is greater than or equal to 0.3, indicating this number should be interpreted with caution.

Table 49: Percentage Distribution of Dual Diagnosis Clients, Dual Diagnosis Clients as Percentage of Clients in Treatment, and National Estimates of Dual Diagnosis Clients in Treatment, by DSRs Environment/Modality on March 30, 1990

Characteristic	Environment/Modality							Total, All Facilities <sup>D</sup> (N=7163)
	Single Modality Facilities						Multiple Modality Facilities (N=2450)	
	Hospital Inpatient (N=211)	Residential (N=1120)	All Outpatient Modalities (N=3383)	Outpatient				
				Outpatient Detoxification (N=6*) <sup>a</sup>	Outpatient Maintenance (N=126) <sup>a</sup>	Outpatient Drug Free (N=3251)		
% Dual Diagnosis Clients in Treatment, by Responding Facilities	1.2*	4.6*	52.5			46.9	41.7	100.0
% Dual Diagnosis Clients, as Percent of All Clients in Each Facility Type	33.8*	14.4*	12.7			13.0	11.4	12.3 <sup>c</sup>
National Estimates of Dual Diagnosis Clients in Treatment	1,070*	4,049*	46,404	0	4,956*	41,447	36,843	88,366
(+ Sampling Error)	394	1,803	5,832		1,839	5,266	4,502	8,364

Source: 1990 NIDA Drug Services Research Survey, Brandeis University, Institute for Health Policy.

Note: These national estimates are adjusted for item non-response by processes of imputation of missing values. See Appendix 3.

a The number of actual facilities reporting is too small for categorical analysis; the unweighted number of facilities is 1 for outpatient detoxification and 19 for outpatient maintenance. However, these facilities' responses are included in the All Outpatient Modalities and All Facilities columns.

b Percentages will not always add to 100.0% due to rounding.

c The sampling error for this percent is 1.0.

N = Weighted number of facilities.

\* The Coefficient of Variation for this estimate is greater than or equal to 0.3, indicating this number should be interpreted with caution.



**APPENDIX II**

**Sampling Memos**

**DRUG SERVICES RESEARCH SURVEY**

**Phase I Final Report:  
Non-Correctional Facilities**

**REVISED**

**Contract Number 271-90-8319/1**

**Submitted to the  
National Institute on Drug Abuse**

**Project Officer: Anita Lewis Gadzuk**

**Helen Levine Batten, Principal Investigator  
Constance M. Horgan, Co-Principal Investigator  
Jeffrey M. Prottas, Co-Principal Investigator  
Lorna J. Simon, Research Associate  
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Margaret Lee, Research Associate**

**Institute for Health Policy  
Brandeis University**

**February 22, 1993**



## MEMORANDUM

TO: Helen Batten

October 18, 1990

FROM: Paul Hurwitz

SUBJECT: Drug Services Research Survey: Phase I  
Final Data Collection Results

Before describing the results of data collection for Phase I of the Drug Services Research Survey (DSRS), I would like to present some of the methods we used to ensure the integrity of the data.

Quality control is a crucial part of any data collection effort. The quality control procedures Westat employed during data collection for DSRS are summarized in Table 1, and those employed during the data preparation and processing activities are summarized in Table 2. As these tables indicate considerable effort was made to minimize errors, to maximize the response rate, and to avoid bias.

The final results of data collection from the 1,803 facilities included in the DSRS are presented beginning in Table 3 which summarizes the results of screening these facilities. Duplicate facilities (n=3) were excluded as were facilities that were not currently and actively involved in the treatment of drug abuse clients (n=226). Almost all of the remaining 1,574 facilities completed a screener and were found eligible for the study (n=1,531). A very small number of facilities (1.0%) refused the screener, and we were unable to locate 27 facilities (1.7%).

Excluding the ineligible and duplicate facilities, the response rate for the screener was 97.3% (1,531/1,574). The facilities that we were unable to locate either had a non-working phone number and no listing with directory assistance (n=24) or never existed at the address and had no listing with directory assistance (n=3). If we assume that these 27 facilities are out of business, which is not an unreasonable assumption, then they would be ineligible and the response rate for the screener would be 99.0% (1,531/1,547).

The final results of the interview process are summarized in Table 4. During this process, an additional 70 facilities were found to be ineligible and 3 additional duplicate facilities were identified. A small number of facilities were not interviewed (n=16) because their data were included in another interview with a different facility apparently under the same administration.

There was a total of 1,442 facilities in the questionnaire phase after excluding the ineligible, duplicates, and facilities with data reported by another facility. Of these, questionnaire data were collected from 1,183 facilities; 141 facilities refused; interviews were not conducted with 110 facilities after many repeated contacts; and at 7 facilities the respondents were not available after repeated attempts to speak with them. One facility mailed back the questionnaire after making some attempt to complete it, but the respondent would not agree to provide the data over the telephone.

The response rate for the interviews (after excluding the ineligible, duplicates, and facilities not interviewed because the data were reported by another facility) was quite high at 82.0% (1,183/1,442).

The data collection results for each of the six sampling strata are shown in Table 5 for the screeners and in Table 6 for the interviews. The meanings of the codes used for the sampling strata are as follows:

#### SAMPLING STRATA

1. HIP = hospital in-patient drug treatment
2. RES = residential drug treatment
3. ODM = out-patient drug detoxification/maintenance
4. ODF = out-patient drug-free treatment
5. ALC = alcohol treatment only
6. UNK = unknown treatment type

Table 7 summarizes Tables 5 and 6 by showing the ineligibility rates (from screening and interviewing combined) and the interview response rates for each sampling stratum. This table indicates that the lowest ineligibility rates occurred among facilities sampled as hospital in-patient (5.0%) and residential (5.1%). The highest ineligibility rate was found among the facilities sampled as "alcohol treatment only" (35.9%), but since facilities that only treated for alcohol abuse were ineligible, this result is not surprising. Facilities sampled without knowledge of their treatment type (the "unknown" stratum) also had a high ineligibility rate (23.5%).

Response rates varied across the sampling strata from a low of 75.8% for the facilities sampled as unknown treatment type, to a high of 91.6% for those sampled as residential facilities.

The outcome codes we used for the DSRS Phase I data collection, and a definition of each, are listed in Table 8 for the screeners and in Table 9 for the interviews.

TABLE 1

QUALITY CONTROL PROCEDURES FOR DATA COLLECTION

INTERVIEWER MANUAL WAS DEVELOPED (A CLEAR AND CONSISTENT SET OF INSTRUCTIONS FOR TRAINING, REFERENCE AND DOCUMENTATION)

ALL INTERVIEWERS WERE TRAINED IN GENERAL WESTAT TELEPHONE INTERVIEWING TECHNIQUES

EXTENSIVE STUDY-SPECIFIC TRAINING WITH EXERCISES AND ROLE PLAYS

SUPERVISOR MONITORING (EVERYONE ON THEIR FIRST DAY AND 10% TOTAL)

INDIVIDUAL OR GROUP DISCUSSIONS WITH INTERVIEWERS CONCERNING PROBLEMS FOUND DURING MONITORING

REFRESHER TRAINING WAS CONDUCTED DURING DATA COLLECTION PERIOD

"DON'T KNOW" RESPONSES WERE ALL PROBED

QUESTIONS LEFT BLANK WERE ALL QUERIED TO OBTAIN A REASON

RESPONDENTS WHO REFUSED WERE RE-CALLED BY AN INTERVIEWER TRAINED IN REFUSAL CONVERSION TECHNIQUES

TABLE 2

QUALITY CONTROL PROCEDURES FOR DATA PREPARATION AND PROCESSING

ALL INTERVIEWERS REVIEWED THEIR WORK IMMEDIATELY FOLLOWING EACH INTERVIEW (SELF-EDIT)

MANUAL EDITS WERE PERFORMED AT THE TELEPHONE RESEARCH CENTER ON EVERY QUESTIONNAIRE FOR INTERNAL CONSISTENCY (+/-10%) IN THE NUMBERS (10.5% OF THE QUESTIONNAIRES FAILED THE EDIT)

DATA PREPARATION STAFF MANUALLY REVIEWED EVERY QUESTIONNAIRE INCLUDING THE WRITTEN COMMENTS FOR PROBLEMS (SCAN EDITS)

CODING WAS PERFORMED AND 100% VERIFIED

DATA WERE KEYED (100% RE-KEYING WAS DONE)

COMPUTER EDITS WERE PERFORMED FOR RANGE AND LOGIC ERRORS

FREQUENCY DISTRIBUTIONS WERE PRODUCED FOR EVERY VARIABLE AND WERE REVIEWED FOR ADDITIONAL LOGIC AND CONSISTENCY EDITS

ALL PROBLEMS IDENTIFIED FROM TRC EDITS, DATA PREP EDITS, AND COMPUTER EDITS WERE DISCUSSED AND, WHEN NECESSARY, DATA RETRIEVAL WAS PERFORMED (CALL BACKS)

TABLE 3

FINAL SCREENING RESULTS

TOTAL SCREENED	1,803	(100%)	
-----			
INELIGIBLES	226	(12.5%)	
not a treatment facility			151 (8.4%)
alcohol only facility			39 (2.1%)
out of business			36 (2.0%)
DUPLICATES	3	(0.2%)	
-----			
SUBTOTAL	1,574	(87.3%)	
SUBTOTAL	1,574	(100%)	
-----			
Completes	1,531	(97.3%)	
Refusals	16	(1.0%)	
Facility not located*	27	(1.7%)	

\* 24 facilities had a non-working phone number, 3 facilities never existed at the address, and none of the 27 had a listing with Directory Assistance

TABLE 4.

FINAL INTERVIEW RESULTS

TOTAL QUESTIONNAIRES MAILED	1,531	(100%)	
-----			
INELIGIBLES	70	(4.6%)	
not a treatment facility			34 (2.2%)
alcohol only facility			27 (1.8%)
unknown (Brandeis determined)			5 (0.3%)
out of business			4 (0.3%)
EXCLUSIONS	19	(1.2%)	
duplicates			3 (0.2%)
included under other ID			16 (1.0%)
-----			
SUBTOTAL	1,442	(94.2%)	

SUBTOTAL	1,442	(100%)
-----		
Completes	1,183	(82.0%)
Refusals	141	(9.8%)
Maximum contacts	110	(7.6%)
Not available	7	(0.5%)
Mail complete (refused interview)	1	(0.1%)

TABLE 5

FINAL SCREENING RESULTS BY SAMPLING STRATA

SCREENING OUTCOME	SAMPLING STRATA						TOTAL
	HIP	RES	ODM	ODF	ALC	UNK	
COMPLETE	172	203	99	467	135	455	1,531
REFUSAL	1	1	1	4	2	7	16
NOT LOCATED	0	1	0	1	2	23	27
NO TREATMENT	1	10	2	44	15	79	151
ALCOHOL ONLY	0	0	0	2	29	8	39
OUT OF BUSINESS	5	0	1	7	4	19	36
DUPLICATE	0	1	0	1	0	1	3
TOTAL	179	216	103	526	187	592	1,803

TABLE 6

FINAL INTERVIEW RESULTS BY SAMPLING STRATA

INTERVIEW OUTCOME	SAMPLING STRATA						TOTAL
	HIP	RES	ODM	ODF	ALC	UNK	
COMPLETE	138	185	80	372	91	317	1,183
REFUSAL	15	6	9	45	12	54	141
MAXIMUM CONTACT	12	11	4	30	10	43	110
NOT AVAILABLE	0	0	0	2	1	4	7
MAIL COMPLETE	1	0	0	0	0	0	1
NO TREATMENT	1	0	2	5	3	23	34
ALCOHOL ONLY	2	0	1	3	13	8	27
OUT OF BUSINESS	0	0	1	2	0	1	4
INELIGIBLE (UNK)	0	1	0	0	3	1	5
EXCLUSIONS	3	0	2	8	2	4	19
TOTAL	172	203	99	467	135	455	1,531

TABLE 7

INELIGIBILITY AND RESPONSE RATES BY STRATA

	SAMPLING STRATA						TOTAL
	HIP	RES	ODM	ODF	ALC	UNK	
TOTAL FACILITIES IN STUDY	179	216	103	526	187	592	1,803
PERCENT INELIGIBLE*	5.0%	5.1%	6.8%	12.0%	35.9%	23.5%	16.4%
SUBTOTAL**	166	202	93	449	114	418	1,442
INTERVIEW RESPONSE RATE**	83.1%	91.6%	86.0%	82.9%	79.8%	75.8%	82.0%

\*FROM SCREENING AND INTERVIEWING

\*\*AFTER MAKING EXCLUSIONS AND REMOVING INELIGIBLES

TABLE 8  
OUTCOME CODES FOR SCREENING

<u>CODE</u>	<u>MEANING OF CODE</u>
<u>DATA KEYED</u>	
COM	Complete - eligible
<u>INELIGIBLES</u>	
CAO	Complete - alcohol treatment only
CNT	Complete - not a treatment facility
COB	Complete - out of business
OAO	Other - alcohol treatment only (did not complete screener)
ONT	Other - not a treatment facility (did not complete screener)
OOB	Other - out of business (did not complete screener)
<u>EXCLUSIONS</u>	
DUP	Duplicate
<u>OTHERS</u>	
RB	Refusal/Break-off
FNA	Facility never existed at the address and had no listing with Directory Assistance (not located)
NW	Non-working phone number and no listing with Directory Assistance (not located)

TABLE 9

OUTCOME CODES FOR INTERVIEWS

CODE            MEANING OF CODE

DATA KEYED

COM	Complete
PC	Partial complete - answers were not provided for at least one entire section (A, B, C or D) of the questionnaire
CPG*	Complete - permission granted for site visit
CPR*	Complete - permission refused for site visit
PCG*	Partial complete - permission granted for site visit

\*These 3 codes were used for facilities that were pre-selected for a site visit.

INELIGIBLES

ALC	Alcohol treatment only
NDT	Not a drug treatment facility
OOB	Out of business
TCL	Temporarily closed (out of business)
OBI	Other - Brandeis ineligible (reason unspecified)

EXCLUSIONS

DUP	Duplicate
DID	Data were included under the ID for the administrative unit
QNM	Questionnaire never mailed (as instructed by Brandeis) because data were included under another ID

TABLE 9 (CONTINUED)

OUTCOME CODES FOR INTERVIEWS

<u>CODE</u>	<u>MEANING OF CODE</u>
	<u>OTHERS</u>
RB	Refusal/Break-off
MC	Maximum contact - multiple phone contacts were made with the facility but we were not able to conduct the interview after many repeated attempts (approximately 16-32 depending on the particular situation) at different times of day and different days of the week.
NA	Respondent was not available for interview after repeated attempts at different times of day and different days of the week.
MCM	Mail complete - the questionnaire was mailed back after some attempt to complete it, but the respondent refused to be interviewed by phone.

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## MEMORANDUM

**TO:** Helen Barten **DATE:** July 16, 1990

**FROM:** Leyla Mohadjer

**SUBJECT:** NIDA Drug Treatment Project - Effects of Subsampling Facilities in the ISR Sample on the Precision of Estimates

Some revisions were made to the sample selection procedure to reflect our agreement with ISR to minimize the overlap between our sample of facilities and those facilities selected in the ISR survey. This memo discusses the effects of these changes on the precision of the estimates derived from this survey.

We modified our sampling plan so as to minimize the overlap in units selected for our study, and the units selected in an ISR survey for NIDA entering the field at about the same time. This was implemented in two steps, one occurred prior to sample selection, and the second step occurred after the sample of facilities was selected.

In the initial step, we identified approximately 500 hospital facilities that were in the ISR sample frame, and thus some were selected in the ISR sample. We restricted our sample to only those units not selected by ISR (that is, those hospitals selected by ISR were excluded from the sampling frame). To insure desired selection probabilities, we selected from those facilities not sampled by ISR at a conditional rate such that the product of the ISR rate and the conditional rate was equal to our desired rate. This was accomplished in the following way.

The sampling frame used for this study was divided into two subgroups. Those facilities not matching the ISR sample frame, and those matching but not selected by ISR. The sampling rates used for the units not matching by ISR facilities were equal to the desired sampling rates. The sampling rates used for the facilities matching ISR but not selected by ISR were conditioned on the sampling rates used by ISR (to select their sample

of facilities). The conditional probabilities of selection were derived such that the overall sampling rates for the latter group were equal to the desired sampling rates. That is, the overall probabilities of selection for both of these groups were equal to the desired rates. Therefore, the first step of selection did not introduce any additional variation in the sampling rates, and thus will not result in any increase in the sampling errors (or increase in the width of the Confidence Intervals) for the statistics computed for this study.

In the second step, our 'initial' sample was drawn, and sent to ISR for review. They identified the units in common with their survey. After determining the number of such units, using a systematic sampling approach, we subsampled one half of these units and retained them, and the other half were excluded from our sample. Table 1 shows the frequency of the selected facilities in our sample by subsampling status and facility strata.

As a result of subsampling, the base weights for the retained facilities were increased by a factor of two to account for the subsampling procedure. That is, the sampling weights for the retained facilities are twice as large as the weights for the remainder of facilities in each stratum. The variability in the sampling weights of facilities within each stratum increases the sampling variances (and the width of the Confidence Intervals) for statistics estimated for this survey. Under fairly general conditions, this increase in variance can be computed in the following way:

$$\left( \sum_i K_i P_i \right) \left( \sum_i \frac{P_i}{K_i} \right)$$

where  $P_i$  denotes the proportion of the population in the  $i$ th sampling stratum and  $K_i$  is the ratio of the sampling rate in the  $i$ th sampling stratum to the sampling rate in sampling stratum 1. The sampling strata is composed of a group of facilities in which the same sampling rate was used for all facilities. That is, each facility strata in our sample consisted of two sampling strata with one group consisting of all facilities not in the ISR sample, and the other group consisting of those subsampled at a rate of 1/2 to decrease the number of sampled units in common with the ISR sample.

The above formula can be written in the following way:

$$n \frac{\sum_i \sum_j W_{ij}^2}{\left( \sum_i \sum_j W_{ij} \right)^2}$$

where  $W_{ij}$  is equal to the sampling weight of the  $i$ th facility in the  $j$ th stratum and  $n$  is equal to the sample size. Using this version of the formula and the basic weights for the facilities in the sample, we can estimate the increase in variance due to subsampling facilities that were in the ISR sample. Table 2 shows the increases in the variances for each of the facility strata and also for the total sample. It can be seen that the increase in variances are mainly less than 5 percent, except for stratum 3. The table also shows the increases in the width of the Confidence Intervals.

It should be noted that the estimated increases in sampling errors given in Table 2 are based on the base weights associated with the facilities in the sample. The base weights are the reciprocal of the initial probabilities of selection for each facility. The base weights should be adjusted to take into account the number of waves that were released for each half of the sample. Furthermore, nonresponse adjustments will be computed to account for the sampled facilities that did not respond. These adjustments will change the values of the base weights, however, they do not change the amount of increase in the sampling errors due to subsampling facilities that were in common with the ISR sample.

cc: P. Hurwitz  
J. Edmonds  
D. Morganstein  
H. Price

Table 1. Distribution of the number of facilities in the NIDA sample by subsampling status within strata

Stratum	No. of facilities not subsampled	No. of facilities that were subsampled	Total
1. Hospital	233	3	236
2. Inpatient Residential	277	8	285
3. Out/Detox. Maint.	113	23	136
4. Out/Drug Free	651	42	693
5. Alc. Only	240	5	245
6. New	748	31	779
Total	2,262	112	2,374

Table 2. Increases in variances due to subsampling facilities that were in the ISR sample

Stratum	Increase in variance in percents	Increase in width of Confidence Intervals' ( $\pm$ percent)
1. Hospital	1.2%	1.1%
2. Inpatient Residential	2.6%	1.6%
3. Out/Detox. Maint.	10.3%	3.2%
4. Out/Drug Free	5.1%	2.3%
5. Alc. Only	1.9%	1.4%
6. New	3.5%	1.9%
Total	3.5%	1.9%



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## MEMORANDUM

TO: Helen Batten

DATE: July 20, 1990

FROM: Leyla Mohadjer

SUBJECT: NIDA Drug Treatment Project - Sample Weighting and Estimation

This memo provides a description of the sample weighting methodology used for the drug treatment facilities in the NIDA survey. It includes a description and the derivation of sample weights for the facilities, and the application of the weights for the computation of estimates and standard errors for characteristics of interest in this survey. A general description of the sample weights is provided in Section 1. The computation of the sample weights will be done in two main steps. The first step involves the derivation of the base weights, and the second step computes the final weights by adjusting the base weights to account for nonrespondents. A description of each of the weighting steps is provided in Section 1. Section 2 discusses the estimation procedures applicable to the data collected in the NIDA survey. Finally, a procedure for calculating the sampling error of survey estimates is discussed in Section 3.

### 1. Sampling Weights

The facilities in the NIDA survey were sampled based on a stratified sample design in which facilities were grouped into six strata. Different sampling rates were applied within each stratum to provide the required number of facilities of various types. It should be noted that there are four treatment modality strata in this survey. Because of some inadequacies in the sampling frame, however, the sample was selected from six strata. The first four strata were the same as the modality strata, and the facilities coming from the last two strata are to be included in the first four modality strata, as appropriate, for analysis purposes. Therefore, the sample design used for this study did not produce a self-weighting sample of facilities. (A self-weighting sample is one in which all selected units in the sample have the same probability of selection.) The sampled facilities within

each stratum have different initial probabilities of selection. Further variations in the probabilities were introduced when facilities in common with the ISR survey were subsampled at a rate of 1/2 to decrease the overlap between the two studies.

A sampling weight has to be computed for each facility that reflects its appropriate probability of selection. This is necessary for the production of unbiased estimates. The sample weights should be used with the data to provide estimates of statistics about the entire population of facilities or subgroups of facilities.

Sample weighting is done to accomplish the following objectives:

- To bring data up to the dimensions of the population totals;
- To adjust for unequal probabilities of selection for different facilities in the sample; and
- To minimize biases arising from the fact that nonrespondents may be different from those who cooperate;

Sample weighting is carried out in two steps. The first step involves the computation of the base weights to compensate for the unequal probabilities of selection. The second step adjusts the base weights to account for the nonresponding facilities. The following provides a description of different stages of sample weighting for the NIDA survey.

## 1.1 Sample Weights for the Drug Treatment Facilities

### Base Weights

Typically, the base weight attached to a sample unit from any sample design is the reciprocal of the selection probability of that unit. The base weights are computed in three stages, to account for the three stages of sample selection. In the first stage of selection, facilities were sampled within each of the six strata based on a set of pre-specified sampling rates. A sample of about 2,500 facilities was selected to provide about 1,000 eligible cooperating facilities. Table 1 shows the sampling rates used within each strata, and the number of facilities sampled prior to subsampling the facilities in common with the ISR survey.

In the second stage, those facilities in common with the ISR survey were subsampled at a rate of 1/2 to reduce the overlap between the two surveys. Table 2 shows the number of facilities that were retained in the sample after subsampling was carried out at this stage.

The sample of facilities was randomly divided into two equal half-samples. Each half-sample of 1,250 was further sub-divided into five waves consisting of 700, 200, 150, 150, and 50 facilities. For the first half-sample (the data collection is close to be completed for the first half-sample), the first four waves have been released. For the second half-sample, only the first wave has been released so far. The selection probability for each unit depends on the number of waves which are released and worked in each half-sample. That is, the third stage of weighting involves adjusting the base weights to account for the number of waves released for each half-sample.

The base weight for facility  $j$  in stratum  $i$  is calculated as the inverse of the probability of selection for each of the three stages and is denoted by:

$$W_{lij} = \frac{1}{(P_{ij} \cdot P_{oij} P_{ij}) (h_k)}$$

where

$W_{lij}$  = the base weight associated with the  $j$ th facility in the  $i$ th stratum

$P_{ij}$  = the probability of selecting the  $j$ th facility in the  $i$ th stratum.

$P_{oij} P_{ij}$  = 1 if the  $j$ th facility in the  $i$ th stratum was not subsampled given that it was selected in the sample  
 = 1/2 if the  $j$ th facility in the  $i$ th stratum was subsampled and retained given that it was selected in the sample  
 = 0 if the  $j$ th facility in the  $i$ th stratum was subsampled and excluded given that it was selected in the sample

$i$  = 1, 2, ..., 6

$j$  = 1, 2, ...,  $n_i$

$n_i$  = the number of facilities selected in the  $i$ th stratum

$h_k$  = proportion of the sample that was worked in each of the half-samples based on the number of subsamples released,  $k = 1, 2$

The values of  $P_{ij}$  are equal to the sampling rates, and  $n_i$  sample sizes are equal to the number of facilities given in Table 1.

### Final Weights

Nonresponse may vary by population subgroups and type of facility and thus, tends to distort the distribution of the sample. That is, survey estimates of means and proportions may be biased if facilities that were identified and did not cooperate are different with respect to the characteristics of interest from those who responded. Nonresponse adjustment steps compares the original sample selected with those who responded and try to adjust for those who did not respond. Furthermore, estimates of total populations will be underestimated unless some allowance is made for nonrespondents. The allowance will be made by upward adjustment to the base weights for responding facilities to account for those facilities who did not respond. The adjustments will be made at stratum level.

The final weight for facility  $j$  in stratum  $i$  is given by

$$W_{2ij} = W_{1ij} * \frac{\sum_{(AC)} W_{1ij}}{\sum_{(BC)} W_{1ij}}$$

where  $\sum_{(AC)}$  is the sum of all eligible facilities in class  $c$ , and  $\sum_{(BC)}$  is the sum over those facilities who responded in class  $c$ . The nonresponse adjustment classes ( $c$ ) will be defined after the data is available for the first half-sample. The classes will be based on the six strata and other characteristics of the facilities thought to be correlated with nonresponse (private vs. public facilities).

## 1.2 Sample Weights for the Visitation Facilities

A subsample of facilities was selected to provide 120 visitation facilities with equal samples from the four treatment modality strata, that is, 30 from each modality. The visitation facilities were selected from the first half-sample, waves one through three.

The base weight for the jth visitation facility will be computed as

$$W_{v1ij} = W_{2ij} * \frac{1}{P_{vij}}$$

where

$W_{v1ij}$  = the base weight associated with the jth visitation facility in the ith stratum

$P_{vij}$  = the probability that the jth facility in the ith stratum was selected for visitation

The final weight for the visitation facilities will include nonresponse adjustments similar to the main facility sample (as described above) i.e., adjustments for those facilities who responded to the main sample but did not participate in the visitation survey. The final weight for the visitation sample can then be computed as follow:

$$W_{v2ij} = W_{v1ij} * \frac{\sum_{(A^c)} W_{1vij}}{\sum_{(B^c)} W_{1vij}}$$

where  $\sum_{(A^c)}$  is the sum over those facilities who were selected for visitation and who responded in the main sample, and  $\sum_{(B^c)}$  is the sum over those who responded to the visitation survey.

Note that the final sampling weights given in the above equation are at facility level, that is, they can be used for statistics that are estimated for facilities, rather than case record characteristics. Sample weights for case record statistics should further adjust for case record nonresponse, i.e., within those facilities who responded to the

visitation survey, adjustments should be made for those case records that were sampled but no information was collected on them.

## 2. Estimation

An estimated total for a variable such as  $x$  can be computed as

$$x = \sum_i \sum_j W_{2ij} x_{ij}$$

where  $x_{ij}$  is the value of the variable (the observation) for facility  $j$  in the  $i$ th stratum.  $x_{ij}$  may be quantitative or may be 0 or 1 if a qualitative characteristic is being measured. An estimated ratio, such as proportion or average number of facilities having some characteristic has the form

$$p = \frac{\sum_i \sum_j W_{2ij} x_{ij}}{\sum_i \sum_j W_{2ij}}$$

Same types of estimation procedures can be used for the visitation facility sample.

## 3. Sampling Errors Estimation

The sample design for the NIDA survey applied different sampling rates in the various strata. Such a design will always have higher sampling variances (assuming equal variances within strata) than a sample of the same size with a uniform sampling rate among all strata. If the standard errors of statistics (such as descriptive statistics, i.e., means and proportions) are estimated using the standard methods, then the resulting sampling errors are usually too small. The increase in variances is equal to the ratio of the variances of statistics coming from a design with differential sampling rates within strata and the variances of statistics from a design with uniform sampling rates within the strata. It can be shown that the ratio is equal to

$$\left( \sum_{i\ell} K_{i\ell} P_{i\ell} \right) \left( \sum_{i\ell} \frac{P_{i\ell}}{K_{i\ell}} \right),$$

where  $P_{i\ell}$  denotes the proportion of the population in the  $i$ th sampling stratum and the  $\ell$ th subsampling status, and  $K_{i\ell}$  is the ratio of the sampling rate in the  $i$ th sampling stratum and the  $\ell$ th subsampling status to the sampling rate in sampling stratum 1,  $i=1, 2, \dots, 6$ ,  $\ell=1, 2$ , where  $\ell=1$  is the group consisting of all facilities not in the ISR sample, and  $\ell=2$  is the group consisting of those in the ISR sample (and subsampled at a rate of 1/2 to decrease the number of sampled units in common with the ISR sample).

The above formula can be written in the following way:

$$n \frac{\sum_i \sum_j W_{ij}^2}{\left( \sum_i \sum_j W_{ij} \right)^2},$$

where  $W_{ij}$  is equal to the sampling weight of the  $i$ th facility in the  $j$ th stratum and  $n$  is equal to the sample size associated with the analysis class. This measure can be used to estimate the design effects associated with this survey design. One way of approximating the true variance for the statistics of interest is to multiply the variance computed under the standard methods by this estimate of design effect. The design effect should be computed for all facilities included in the estimation process. That is, if estimates are desired for the first modality strata, then the design effect should be computed for those facilities included in the first modality strata (i.e., facilities included in the estimation of the statistic of interest).

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Table 1. Distribution of number of facilities selected (prior to subsampling those in common with the ISR Survey) and the sampling rates by strata.

Stratum	Sampling rate	Number of facilities selected
1. Hospital	0.38	239
2. Inpatient Residential	0.25	293
3. Out/Detox. Maint.	0.35	159
4. Out./Drug Free	0.25	735
5. Alc. Only	0.20	250
6. New	0.20	810
Total		2,486

**Table 2. Distribution of the number of facilities in the NIDA sample by subsampling status within strata**

<b>Stratum</b>	<b>No. of facilities not subsampled</b>	<b>No. of facilities that were subsampled</b>	<b>Total</b>
1. Hospital	233	3	236
2. Inpatient Residential	277	8	285
3. Out/Detox. Maint.	113	23	136
4. Out/Drug Free	651	42	693
5. Alc. Only	240	5	245
6. New	748	31	779
<b>Total</b>	<b>2,262</b>	<b>112</b>	<b>2,374</b>





A sampling weight had to be computed for each facility that reflected its appropriate probability of selection. This was necessary for the production of unbiased estimates. The sample weights should be used with the data to provide estimates of statistics about the entire population of facilities or subgroups of facilities.

Sample weighting was done to accomplish the following objectives:

- To bring data up to the dimensions of the population totals;
- To adjust for unequal probabilities of selection for different facilities in the sample; and
- To minimize biases arising from the fact that nonrespondents may be different from those who cooperate;

Sample weighting was carried out in two steps. The first step involved the computation of the base weights to compensate for the unequal probabilities of selection. The second step adjusted the base weights to account for the nonresponding facilities. The following provides a description of different stages of sample weighting for the NIDA survey.

## **1 Base Weights**

Typically, the base weight attached to a sample unit from any sample design is the reciprocal of the selection probability of that unit. The base weights were computed in three stages, to account for the three stages of sample selection. The following three sections include discussions of the three stages of sample selection.

### **1.1 First Stage of Sample Selection**

In the first stage of selection, facilities were sampled within each of the six strata based on a set of pre-specified sampling rates. A sample of about 2,486 facilities was selected to provide about 1,000 eligible cooperating facilities.

The first stage weight for facility  $j$  in stratum  $i$  was calculated as the inverse of the probability of selection for that facility, and is denoted by:

$$W_{1ij} = \frac{1}{P_{ij}}$$

where

$W_{1ij}$  = the first stage weight associated with the  $j$ th facility in the  $i$ th stratum

$P_{ij}$  = the probability of selecting the  $j$ th facility in the  $i$ th stratum

$i$  = 1, 2, ..., 6

$j$  = 1, 2, ...,  $n_i$

and

$n_i$  = the number of facilities selected in the  $i$ th stratum.

Table 1 shows the sampling rates used within each strata and the number of facilities sampled prior to subsampling the facilities in common with the ISR survey. The values of  $P_{ij}$  are equal to the sampling rates, and  $n_i$  sample sizes are equal to the number of facilities given in Table 1.

Table 1. Distribution of number of facilities selected (prior to subsampling those in common with the ISR Survey), sampling rates, and the first stage weights by strata.

Stratum	Sampling rate ( $P_{ij}$ )	Number of facilities selected	First stage weights
1. Hospital Inpatient	0.35	239	2.86
2. Residential	0.25	293	4.00
3. Outpatient Detox/Maint.	0.35	159	2.86
4. Outpatient Drug Free	0.25	735	4.00
5. Alcohol Only	0.20	250	5.00
6. Unknown	0.20	810	5.00
Total		2,486	

## 1.2 Second Stage of Sample Selection

In the second stage, those facilities in common with the ISR survey were subsampled at a rate of 1/2 to reduce the overlap between the two surveys.

The second stage weight for facility j in stratum i was calculated as the product of the first stage weight and the inverse of the probability of selection as the result of subsampling due to the ISR survey, and is denoted by:

$$W_{2ij} = W_{1ij} * \frac{1}{(P_{0ij}|P_{ij})}$$

where

$$\begin{aligned}
 W_{2ij} &= \text{the second stage weight associated with the } j\text{th facility in the } i\text{th stratum} \\
 P_{0ij}|P_{ij} &= 1 \text{ if the } j\text{th facility in the } i\text{th stratum was not subsampled given that it was selected in the sample} \\
 &= 1/2 \text{ if the } j\text{th facility in the } i\text{th stratum was subsampled and retained given that it was selected in the sample} \\
 &= 0 \text{ if the } j\text{th facility in the } i\text{th stratum was subsampled and excluded given that it was selected in the sample}
 \end{aligned}$$

$W_{1ij}$ ,  $P_{ij}$ ,  $i$ , and  $j$  are as defined in section 1.1.

Table 2 shows the number of facilities that were retained in the sample after subsampling was carried out at this stage, and the second stage weights.

Table 2. Distribution of the number of facilities in the NIDA sample by subsampling status within strata (after eliminating one half of the facilities in common with the ISR survey).

Stratum	Facilities not subsampled		Facilities subsampled (due to the ISR survey)		Total no. of facilities
	Frequency	2nd stage weight	Frequency	2nd stage weight	
1. Hospital Inpatient	233	2.941	3	5.882	236
2. Residential	277	4	8	8	285
3. Outpatient Detox/Maint.	113	2.941	23	5.882	136
4. Outpatient Drug Free	651	4	42	8	693
5. Alcohol Only	240	5	5	10	245
6. Unknown	748	5	31	10	779
Total	2,262		112		2,374

### 1.3 Third Stage of Sample Selection

The sample of 2,374 facilities (as given in Table 2) was randomly divided into two equal half-samples. Each half-sample was further sub-divided into five waves consisting of about 665, 190, 140, 140, and 50 facilities. For the first half-sample, the first four waves were released. For the second half-sample, only the first wave was released. The selection probability for each unit depends on the number of waves which were released and worked in each half-sample. That is, the third stage of weighting involved adjusting the base weights to account for the number of waves released for each half-sample. The weight computed for the third stage of selection was equal to the base weight. A description of the base weights is given in the following section.

### 1.4 Base Weights

The base weight for facility  $j$  in stratum  $i$  was calculated as the product of the second stage weight and the weight computed for the third stage of sample selection, and is denoted by:

$$W_{Bij} = W_{1ij} * \frac{1}{h}$$

or

$$= \frac{1}{(P_{ij} \cdot P_{oij} | P_{ij}) (h)}$$

where

$W_{Bij}$  = the base weight associated with the jth facility in the ith stratum

$h$  = proportion of the sample that was worked in the half-samples based on the number of subsamples released

$P_{ij}, P_{oij} | P_{ij}, i,$  and  $j$  are as defined in section 1.1.

A total of 1,803 facilities (out of 2,374) were released for screening. Table 3 shows the base weights for the facilities in the released sample.

Table 3. Distribution of base weights for the screened facilities in the sample.

Stratum	Facilities not subsampled		Facilities subsampled (due to the ISR survey)		Total no. of facilities
	Frequency	Base weight	Frequency	Base weight	
1. Hospital Inpatient	177	3.873	2	7.745	179
2. Residential	210	5.267	6	10.534	216
3. Outpatient Detox/Maint.	85	3.873	18	7.745	103
4. Outpatient Drug Free	500	5.267	26	10.534	526
5. Alcohol Only	182	6.584	5	13.167	187
6. Unknown	569	6.584	23	13.167	592
Total	1,723		80		1,803

Some of the sampled facilities were determined to be ineligible for the survey during the screening process. Specifically, 1,531 facilities were screened as eligibles, 256 facilities were ineligible, and 16 facilities refused to complete the screener. The ineligible facilities were excluded from the remainder of the steps involved in the weighting process. The exclusion of the ineligibles resulted in the aggregate of the base weights for eligible facilities to be an estimate of the total number of eligible facilities in the target population (assuming that the refusals were also eligible for the survey). That is,

$$\sum_i \sum_j W_{Bij} = \sum_i \sum_j W_{Bij1} + \sum_i \sum_j W_{Bij2}$$

where

$W_{Bij1}$  = the base weight for an eligible facility  $j$  in stratum  $i$

$W_{Bij2}$  = the base weight for an ineligible facility  $j$  in stratum  $i$ :

Note that

$\sum_i \sum_j W_{Bij1}$  = estimated total number of eligible facilities in the sampling frame

$\sum_i \sum_j W_{Bij2}$  = estimated total number of ineligible facilities in the sampling frame

and

$\sum_i \sum_j W_{Bij}$  = estimated total number of facilities in the sampling frame.

## 2 Final Weights

Nonresponse may vary by population subgroups and type of facility and thus, tends to distort the distribution of the sample. That is, survey estimates of means and proportions may be biased if facilities that were identified and did not cooperate are different with respect to the characteristics of interest from those who responded. Nonresponse adjustment steps compares the original sample selected with those who responded and try to adjust for those who did not respond. Furthermore, estimates of total populations will be underestimated unless some allowance is made for nonrespondents. The allowance will be made by upward adjustment to the base weights for responding facilities to account for those facilities who did not respond.

The facilities in the sample were mainly divided into the following groups:

- (1) facilities that were determined to be ineligible at the screening phase,
- (2) facilities who completed the screener and were determined to be ineligible at the questionnaire phase,
- (3) facilities that refused to participate in the survey at the screening phase,
- (4) facilities that completed the screener but refused to respond to the questionnaire,
- (5) facilities that were not reached even after the maximum number of contacts were made, and
- (6) facilities who completed, or partially completed, the questionnaire.

The ineligible cases, described in items (1) and (2) above, were excluded from the nonresponse adjustment computations. The eligibility status of the facilities in items (3), (4), and (5) were unknown at the conclusion of the survey. Table 4 shows the distribution of the sampled facilities by eligibility status.

Table 4. Distribution of the eligible respondents, refusals, and "maximum contact" facilities by sampling strata.

Stratum	Screener		Questionnaire			
	Eligible respondents	Refusals	Eligible respondents	Exclusions (Ineligibles & duplicates)	Unknown eligibility	
					Refusals	Others
1. Hospital Inpatient	172	1	138	6	15	13
2. Residential	203	1	185	1	6	11
3. Outpatient Detox/Maint.	99	1	80	6	9	4
4. Outpatient Drug Free	467	4	372	18	45	32
5. Alcohol Only	135	2	91	21	12	11
6. Unknown	455	7	317	37	54	47
Total	1,531	16	1,183	89	141	118

For the production of nonresponse adjustments, we assumed that refusals, both as the screener and at the questionnaire phase, were eligible cases. Those with unknown eligibility status were assumed to be ineligible for the survey. This approach was about same as assuming an eligibility rate of about 55% among facilities with unknown eligibility status.

The final weight for facility  $j$  in stratum  $i$  was given by

$$W_{Fij} = W_{Bij} * \frac{\sum_{(Ai)} W_{Bij}}{\sum_{(Bi)} W_{Bij}}$$

where  $W_{Fij}$  = the final weight for facility  $j$  in stratum  $i$ ,  $\sum_{(Ai)}$  is the sum of all eligible facilities in stratum  $i$ , and  $\sum_{(Bi)}$  is the sum over those facilities who responded in stratum  $i$ . Table 5 provides the nonresponse adjustments applied to the NIDA sample.

Table 5. Distribution of nonresponse adjustments for the NIDA drug treatments sample.

Stratum	Eligible respondents		Expected eligibles in the sample		Nonresponse adjustment $\frac{\sum_{(Ai)} W_{Bij}}{\sum_{(Bi)} W_{Bij}}$
	Frequency	Total weights $\sum_{(Bi)} W_{Bij}$	Frequency	Total weights $\sum_{(Ai)} W_{Bij}$	
1. Hospital Inpatient	138	534.42	152	600.26	1.123
2. Residential	185	1000.69	192	1037.56	1.037
3. Outpatient Detox/Maint.	80	367.90	90	406.63	1.105
4. Outpatient Drug Free	372	2069.84	421	2333.18	1.127
5. Alcohol Only	91	612.26	105	704.43	1.151
6. Unknown	317	2198.88	378	2613.64	1.189
Total	1183	6784.00	1340	7695.69	

Table 6. Distribution of final weights for the respondent facilities in the NIDA drug treatment sample.

Stratum	Facilities not subsampled		Facilities subsampled (due to the ISR survey)		Total no. of facilities
	Frequency	Final weight	Frequency	Final weight	
1. Hospital Inpatient	138	4.35	0	-	138
2. Residential	180	5.46	5	10.92	185
3. Outpatient Detox/Maint.	65	4.28	15	8.56	80
4. Outpatient Drug Free	351	5.94	21	11.87	372
5. Alcohol Only	89	7.57	2	15.15	91
6. Unknown	300	7.83	17	15.65	317
Total	1,123		60		1,183

## Appendix

### Sample Weights used for the Preliminary Analysis

The methodology for the computation of sample weights for the preliminary analysis was similar to the one applied to the final sample, as described in this memorandum. Base weights were computed based on the three stages of sampling described in section 1.1 to 1.3. The treatment of ineligible facilities was the same as that used for the final sample, i.e., they were excluded from the steps involved in nonresponse adjustments.

The preliminary weights were computed before the completion of data collection for the first half of the sample. As a result, many facilities were not finalized and had a disposition code of "Pending" at the time the sample weights were computed. For the computation of nonresponse adjustments, all "Pending" facilities were assumed to be eligible for the survey. This assumption overestimated the total number of eligible facilities in the population since not all "Pending" facilities were later finalized as eligibles.

The following tables provide the base weights, the nonresponse adjustments, and the final weights used in the preliminary analysis of the data.

Table A.1. Distribution of base weights for the screened facilities in the preliminary sample.

Stratum	Facilities not subsampled		Facilities subsampled (due to the ISR survey)		Total no. of facilities
	Frequency	Base weight	Frequency	Base weight	
1. Hospital Inpatient	113	6.128	0	0	113
2. Residential	133	8.333	4	16.667	137
3. Outpatient Detox/Maint.	55	6.128	10	12.255	65
4. Outpatient Drug Free	315	8.333	17	16.667	332
5. Alcohol Only	114	10.417	4	20.833	118
6. Unknown	356	10.417	18	20.833	133
Total	1,086		53		1,139

Table A.2. Distribution of the eligible respondents, refusals, and "Pending" facilities by sampling strata for the preliminary sample.

Stratum	Screener		Questionnaire		
	No. of eligible respondents	No. of refusals	No. of eligible respondents	No. of refusals	Number pending*
1. Hospital Inpatient	109	0	76	2	28
2. Residential	130	0	114	0	16
3. Outpatient Detox/Maint.	63	1	46	0	13
4. Outpatient Drug Free	286	3	206	3	71
5. Alcohol Only	86	2	49	0	25
6. Unknown	292	5	166	4	110
Total	966	11	657	9	263

\* The facilities with the "Pending" disposition code were not finalized at the time the preliminary weights were being computed. The "pending" facilities were assumed to be eligible facilities for the computation of nonresponse adjustments.

Table A.3. Distribution of nonresponse adjustments for the NIDA drug treatments preliminary sample

Stratum	Eligible respondents		Expected eligibles in the sample		Nonresponse adjustment $\frac{\sum_{(A)} W_{BIj}}{\sum_{(B)} W_{BIj}}$
	Frequency	Total weights $\sum_{(B)} W_{BIj}$	Frequency	Total weights $\sum_{(A)} W_{BIj}$	
1. Hospital Inpatient	76	465.69	106	649.51	1.395
2. Residential	114	975.00	130	1108.33	1.137
3. Outpatient Detox/Maint.	46	337.01	60	428.92	1.273
4. Outpatient Drug Free	206	1825.00	283	2491.67	1.365
5. Alcohol Only	49	531.25	76	812.50	1.529
6. Unknown	166	1854.17	284	3125.00	1.685
Total	657	5988.11	939	8615.93	

Table A.4. Distribution of final weights for the respondent facilities in the NIDA drug treatment sample.

Stratum	Facilities not subsampled		Facilities subsampled (due to the ISR survey)		Total no. of facilities
	Frequency	Final weight	Frequency	Final weight	
1. Hospital Inpatient	76	8.55	0	-	76
2. Residential	111	9.47	3	18.95	114
3. Outpatient Detox/Maint.	37	7.80	9	15.60	46
4. Outpatient Drug Free	193	11.38	13	22.76	206
5. Alcohol Only	47	15.93	2	31.86	49
6. Unknown	154	17.56	12	35.11	166
Total	618		39		657

APPENDIX III

Imputation Description from Drug Services Research Survey (1990)\*

DRUG SERVICES RESEARCH SURVEY

Phase I Final Report:  
Non-Correctional Facilities

REVISED

Contract Number 271-90-8319/1

Submitted to the  
National Institute on Drug Abuse

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\* Source: Data File Documentation: Appendix D. Prepared for the National Institute on Drug Abuse by the Institute for Health Policy at Brandeis University and Westat, Inc., November 19, 1992.



APPENDIX D  
DETAILS OF THE IMPUTATION PROCESS

**D.1 Introduction**

Ten questions from the DSRS questionnaire representing fifty-nine (59) data items on the final DSRS imputed tape were selected for imputation. They were chosen principally for their importance in the types of analysis which are expected to occur with the dataset. Other questions (like costs and revenues) were seen as equally important, but models suitable for imputation could not be constructed in the course of the imputation work. Table D-1 provides the names of the imputed items, the number of applicable cases, the number of cases with missing and nonmissing data for the items and counts of cases by the method of imputation used.

This section provides some of the details on the imputation methods used. Four principal techniques were used, with some interaction. The following section describes the items which were imputed and the methods which were used.

**D.2 Question B1 - Facility Capacity and Actual Number of Clients in Treatment**

**Overview**

The steps taken to impute values for missing data on actual number of clients in treatment and facility capacity were as follows:

- Impute grand total actual as a function of grand total capacity;
- Impute grand total capacity as a function of grand total actual;
- Impute grand total actual via 1989 or 1990 NDATUS and grand total capacity as a function of grand total actual where both grand totals were missing;
- Edit and adjust imputed grand totals based on the sum of the reported modality totals;
- Collapse the modality totals;

Table D-1. Variables imputed: counts of responses before imputation, and method of imputation

OBS	Variable	Number Applicable	Before Imputation			Method of Imputation				Left As Is
			Nonmissing	Missing	Percent Missing	NDATUS	Nearest Neighbor	Hot Deck	Assign by Diff/Other	
1	B1_ALC_A	949	462	487	51.32	0	24	0	462	1
2	B1_HI_A	226	118	108	47.79	0	46	0	61	1
3	B1_OP_A	842	504	338	40.14	0	89	0	245	4
4	B1_RS_A	373	224	149	39.95	0	47	0	100	2
5	B1_TACT	1183	1153	30	2.54	26	4	0	0	0
6	B1_TCAP	1183	998	185	15.64	0	175	0	0	10
7	C1_HI_A	197	105	92	46.7	0	0	0	54	38
8	C1_OP_A	241	93	148	61.41	0	0	0	54	94
9	C1_RS_A	112	68	44	39.29	0	0	0	17	27
10	C1_HI_B	197	106	91	46.19	0	0	0	53	38
11	C1_OP_B	259	92	167	64.48	0	0	0	55	112
12	C1_RS_B	110	68	42	38.18	0	0	0	14	28
13	C1_HI_C	198	106	92	46.46	0	0	0	48	44
14	C1_OP_C	284	92	192	67.61	0	0	0	51	141
15	C1_RS_C	116	66	50	43.1	0	0	0	14	36
16	C1_HI_D	198	107	91	45.96	0	0	0	44	47
17	C1_OP_D	289	91	198	68.51	0	0	0	48	150
18	C1_RS_D	120	65	55	45.83	0	0	0	13	42
19	C1_HI_E	198	116	82	41.41	0	0	0	38	44
20	C1_OP_E	279	95	184	65.95	0	0	0	38	146
21	C1_RS_E	120	65	55	45.83	0	0	0	13	42
22	B13A	1183	1153	30	2.54	0	0	26	0	4
23	B13B	1183	1152	31	2.62	0	0	26	0	5
24	B13C	1183	1147	36	3.04	0	0	27	0	9
25	B13D	1183	1147	36	3.04	0	0	26	0	10
26	B13E	1183	1162	21	1.78	0	0	19	0	2
27	B13F	1183	1163	20	1.69	0	0	18	0	2
28	B13G	1183	1160	23	1.94	0	0	20	0	3
29	B13H	1183	1161	22	1.86	0	0	19	0	3
30	B13I	1183	1164	19	1.61	0	0	17	0	2
31	B15A	1183	1133	50	4.23	0	0	45	0	5
32	B15B	1183	1127	56	4.73	0	0	53	0	3
33	B15C	1183	1121	62	5.24	0	0	57	0	5
34	B15D	1183	1123	60	5.07	0	0	57	0	3

Table D-1. Variables imputed: counts of responses before imputation, and method of imputation (continued)

OBS	Variable	Number Applicable	Before Imputation			Method of Imputation				Left As Is
			Nonmissing	Missing	Percent Missing	NDATUS	Nearest Neighbor	Hot Deck	Assign by Diff/Other	
35	B15E	1183	1121	62	5.24	0	0	58	0	4
36	B16	1183	1103	80	6.76	0	0	67	5	8
37	B17	1183	1116	67	5.66	0	0	60	3	4
38	B19	1183	1180	3	0.25	0	0	0	2	1
39	B24A	86	76	10	11.63	0	0	7	0	3
40	B24B	86	76	10	11.63	0	0	7	0	3
41	B24C	86	74	12	13.95	0	0	9	0	3
42	B24D	86	74	12	13.95	0	0	9	0	3
43	B24E	86	74	12	13.95	0	0	9	0	3
44	B28A	14	10	4	28.57	0	0	0	2	2
45	B28B	14	10	4	28.57	0	0	0	2	2
46	B28C	14	10	4	28.57	0	0	0	2	2
47	B28D	14	9	5	35.71	0	0	0	2	3
48	D7A	1183	1025	158	13.36	79	0	65	1	13
49	D7B	1183	1022	161	13.61	82	0	63	2	14
50	D7C	1183	1032	151	12.76	74	0	63	2	12
51	D7D	1183	1034	149	12.6	73	0	64	1	11
51	D7E	1183	1027	156	13.19	75	0	65	2	14
53	D7F	1183	1021	162	13.69	83	0	65	1	13
54	D7G	1183	1012	171	14.45	86	0	68	2	15
55	D7H	1183	1033	150	12.68	49	0	54	36	11
56	D7I	1183	1031	152	12.85	74	0	63	3	12
57	D7J	1183	1031	152	12.85	75	0	63	2	12
58	D7K	1183	1040	143	12.09	68	0	63	1	11
59	D7L	1183	1039	144	12.17	69	0	63	1	11

- Fill in any newly defined items which are the only item missing for a particular record (missing only) using a difference function;
- Fill in the alcohol treatment modality via the answer to B15A;
- Fill in any items which are the only item missing for a particular record (missing only) using a difference function; and
- Impute missing modality totals using the nearest neighbors values in the corresponding modality totals, expressed as a percentage and applied to the imputees difference to allocate.

### **Imputation of Grand Total Actual and Grand Total Capacity**

Table D-1 provides the rate of missing data for both grand total actual and grand total capacity. The missing rate for capacity (approximately 15%) was much larger than the missing rate for actual (approximately 3%) and suggested that consideration of the pattern of missing data within records was in order. The pattern which emerged was as follows:

- 4 cases were missing grand total actual but not grand total capacity;
- 149 cases were missing grand total capacity but not grand total actual; and
- 26 cases were missing both grand total actual and grand total capacity.

The above pattern represents a total of 30 cases missing grand total actual and 175 cases missing grand total capacity.

Several regression models with one or more independent variables were tested to identify the strongest predictor(s) for the two items out of a list of likely candidates. The dependent variable and independent variable(s) used for the models were as follows:

<b>Dependent Variable</b>	<b>Independent Variable(s)</b>
DSRS Grand Total Actual	DSRS Grand Total Capacity DSRS Staff DSRS Total Costs and Revenue NDATUS (1989, 1990) Grand Total Actual NDATUS (1989, 1990) Grand Total Capacity

Dependent Variable	Independent Variable(s)
DSRS Grand Total Capacity	DSRS Grand Total Actual DSRS Staff DSRS Total Costs and Revenue NDATUS (1989, 1990) Grand Total Actual NDATUS (1989, 1990) Grand Total Capacity

Of all models tested, the models using DSRS grand total capacity as the predictor for grand total actual and DSRS grand total actual as the predictor for grand total capacity were superior to all others in terms of their r-square and width of the confidence interval about the line of prediction. The two models were also simpler than most of the others and could be used to impute for the largest number of cases, considering the frequency with which missing values occurred on the independent variables in the model(s). Grand total capacity was therefore selected as the predictor for grand total actual and grand total actual, was selected as the predictor for grand total capacity.

The cases in the DSRS file were split into groups based on modality and ownership, with a few groups being collapsed to improve the ratio of donors to imputees. The cases in each of the resulting groups were sorted by total capacity for the imputation of total actual, and total actual for the imputation of total capacity. The case with reported data which was closest (defined as the difference on the predictor variable between the two cases) to the imputee in the sorted list was selected as the donor for the case. If more than one case with reported data was closest to the imputee, one of the potential donors was selected at random and without replacement as the donor to be used. The ratio of the donors total actual to total capacity was calculated and applied to the imputees total capacity to impute total actual. A similar procedure was used to impute total capacity for the missing cases.

Sorting the cases in each group by the predictor variable allows similar cases to be adjacent and also controls for a pattern which appeared in the reported data. The ratio of total actual to total capacity, known as utilization, was shown to vary by size (defined as total actual or total capacity) and to be much more variable for smaller facilities than for large facilities. Analysis of the reported data showed that the variance on utilization could be cut in half by controlling on size and therefore supported the decision to sort by the predictor variable.

The 26 cases which were missing both total actual and total capacity were assigned the average of their 1989 and 1990 NDATAUS total actual. These cases then followed the standard procedure described above for the imputation of total capacity.

### **Editing Imputed Grand Totals**

The imputed grand totals were then compared to the sum of the reported modality totals. Six (6) cases had an imputed grand total actual which was less than the sum of the reported modality totals and 18 cases had an imputed grand total capacity which was less than the sum of the reported modality totals. These cases were adjusted so that the grand totals were set equal to the sum of the modality totals and the remaining, missing modality totals were set equal to zero.

### **Imputation of Modality Totals**

The imputation of the modality totals for actual clients in treatment was completed through a four step process of collapsing and filling in modality totals when only one total was missing, along with the use of another DSRS question to fill in the alcohol treatment line. After the four steps were complete and the rate of missing data had dropped considerably, a nearest neighbor procedure was used to fill in the modality totals which remained missing.

### **Collapsing of Original Modality Totals**

The original Question B1 data items allowed for 8 separate modality totals: hospital inpatient drug detoxification, hospital inpatient drug free, residential drug detoxification, residential drug free, outpatient drug detoxification, outpatient drug free, outpatient drug maintenance, and alcohol treatment.

These data items were collapsed so that the increased item response rates for the newly defined items would minimize the nonresponse bias remaining after imputation. The newly defined data items allowed for 4 separate modality totals: hospital inpatient, residential,

outpatient and alcohol treatment. The new items were defined as the sum of their constituent parts described above.

#### **Filling in Missing Only Records**

After the collapsing of the original modality totals was completed, a few cases had only one of the four newly defined items missing. The values for these items were determined by the difference between the reported or imputed grand total and the sum of the other three non-missing modality totals.

#### **Filling in the Alcohol Treatment Modality Total**

Most of the cases with missing values in the newly defined items had more than one of the four items missing. Most of these cases, however, had reported data in Question B15A, which asked what percentage of actual clients in treatment were receiving services for alcohol abuse only. The percentage of clients indicated by B15A was used to determine how much of the grand total to allocate to the alcohol treatment modality. If, of course, the difference between the grand total and the sum of the reported modality totals (i.e., the difference to be allocated to all missing modality totals) was less than the indicated percentage of the grand total, the difference to be allocated was assigned to the alcohol treatment modality and the remaining missing modality totals were set to zero.

#### **Filling in Missing Only Records**

A large number of cases had only one of the four newly defined items missing after the alcohol treatment modality was filled in. The values for these items were determined by the difference between the reported or imputed grand total and the sum of the other three non-missing modality totals.

### **Imputation of Modality Total Actual**

After all of the above steps were completed, the rate of missing data for all of the collapsed modality totals was below 20 percent. A total of 99 records were responsible for the remaining missing data. These records represented multi-modality facilities which could or would not separate their clients in treatment by modality.

The cases in the DSRS file were split into groups based on their specific combinations of the four modality totals and ownership, with a few groups being collapsed on ownership to improve the ratio of donors to imputees. The cases in each of the resulting groups were sorted by total actual. The case with non-missing data which was closest (defined as the difference on total actual between the two cases) to the imputee in the sorted list was selected as the donor for the case. If more than one case with reported data was closest to the imputee, one of the potential donors was selected at random and without replacement as the donor to be used. In a few of the groups the ratio of donors to imputees was low enough that a procedure was applied where the search for a donor could go as far as twenty percent away from the imputee on total actual before selecting a donor within that interval more than once. Cases which were assigned a donor for grand total actual imputation were assigned these same donors to maintain correlations across items. Cases were also assigned the same donor which was used for grand total capacity imputation, unless of course that particular donor was missing modality total actuals itself.

The difference to allocate for a given imputee was calculated as the difference between the imputees grand total and non-missing modality totals. A percentage of the difference to allocate was assigned to each imputees missing modality totals based on the donors values in the corresponding items. The percentage used was the ratio of the donors modality total to the sum of the donors modality totals which corresponded with the totals the imputee was missing.

### **D.3 Question C1 - Admissions and Discharges**

#### **Overview**

No direct imputation was carried out for these items, however a collapsing scheme was followed which was similar to that described above for the modality totals on actual clients in

treatment. There is no alcohol modality total in C1 and therefore no step involving B15A or any other data item to fill in the alcohol row. Analysis of the missing data indicated that a collapsing scheme could decrease the rate of missing data and was therefore implemented.

A search was conducted for strong predictors of the grand totals for C1 but no relationship suitable for imputation was found. Among the variables tested as predictors were the following: grand total actual and grand total capacity, total costs and revenues and staffing. Although no strong predictor was found, the decrease in the missing data rate after collapsing was still sufficient enough to suggest collapsing the items.

### **Collapsing of Original Modality Totals**

The original Question C1 data items allowed for 7 separate modality totals: hospital inpatient drug detoxification, hospital inpatient drug free, residential drug detoxification, residential drug free, outpatient drug detoxification, outpatient drug free, and outpatient drug maintenance.

These data items were collapsed into newly defined data items which allowed for three separate modality totals: hospital inpatient, residential and outpatient. The new items were defined as the sum of their constituent parts described above.

### **Filling in Missing Only Records**

After the collapsing of the original modality totals was completed, a number of cases had only one of the three newly defined items missing. The values for these items were determined by the difference between the reported grand total and the sum of the other three, nonmissing modality totals.

#### **D.4 Questions B13A..I and B15A..E - Distribution of Clients by Source of Referral and Type of Treatment**

##### **Overview**

The 14 data items associated with these questions had low rates of item missing data. The items represent categories in which percentages of the clients are expected to fall. A technique which was widely used for these types of questions in the DSRS imputation, hotdeck proportional allocation, was used for these items.

##### **Hotdeck Proportional Allocation**

The cases in the DSRS file were split into several groups based on modality by ownership. The WESTAT SAS Macro WESDECK was used to select donors at random within each of these groups to impute for the missing data items. If the entire series of items (B13A..I or B15A..E) was missing for the imputee, the donors proportions were assigned directly. If only some of the items were missing for the imputee, then a difference to be allocated was calculated as the difference between 100 percent and the sum of the nonmissing items. A percentage of the difference to allocate was assigned to each of the imputees missing items based on the donors values in the corresponding items. The percentage used was the ratio of the donors value for the item to the sum of the donors values for the items which corresponded with the items the imputee was missing. The resulting imputed and nonmissing values added to 100 percent. Note that hotdeck proportional allocation is equivalent to assigning the donors values directly when the imputee is missing the entire series.

#### **D.5 Questions B16 and B17 - Percentage of Clients Classified as IVDUs and Dual Diagnosis**

##### **Overview**

The two data items associated with these questions had low rates of item missing data. The items represent categories in which percentages of the clients are expected to fall. Both items

have another questionnaire item which can serve as an edit check or logical predictor. Hotdeck proportional allocation was used for these items.

### **Edit Checks and Logical Imputations**

The following logical imputation was used for B16:

IF B12A = 1 OR B15A = 100% THEN  
B16 = 0%

The following edit check was applied after imputation of B16:

$B16 \leq 100\% - (B15A\%)$

The following logical imputation was used for B17:

IF B12F = 1 THEN  
B17 = 0%

### **Hotdeck Proportional Allocation**

The cases in the DSRS file were split into several groups based on modality by ownership. The WESTAT SAS Macro WESDECK was used to select donors at random within each of these groups to impute for the missing data items. The donors proportions were assigned directly.

**D.6 Questions B19, B24A..E and B28A..D - Number of Clients Receiving Methadone, By Dosage Category and Determination of Maximum Length of Time**

**Overview**

The ten (10) data items associated with these questions had varying rates of item missing data. The items represent categories in which counts of clients are expected to fall and a policy related question. All of the items have other questionnaire items which can serve as an edit checks or logical predictors. Hotdeck proportional allocation was used for the remaining items.

**Edit Checks and Logical Imputations**

The following logical imputation was used for B19:

```
IF (HIDM_A6 = 2 AND RSDM_A6 = 2 AND OPDM_A6 = 2 AND (OPD
MTACT = 0 OR inapplicable)) THEN
    B19 = 0;
    B20..B28 = inapplicable
ELSE
    left as is.
```

The following edit was used for B24:

$$B24A + B24B + B24C + B24D + B24E = B20B$$

The following control total was introduced for the imputation of missing B24A..E:

$$\text{Amount to allocate} = B20B - (\text{sum of nonmissing B24A..E})$$

The following logical imputation was used for B28:

```
IF (HIDM_A6 = 2 AND RSDM_A6 = 2 AND OPDM_A6 = 2 AND      (OPD
MTACT = 0 OR inapplicable)) THEN
    B28.= inapplicable
ELSE
    left as is.
```

### Hotdeck Proportional Allocation

The cases in the DSRS file were split into several groups based on modality by ownership. The WESTAT SAS Macro WESDECK was used to select donors at random within each of these groups to impute for the missing data items. If the entire series of items (B24A..E) was missing for the imputee, the donors proportions for the items were applied to the imputees total in B20B and the resulting values were assigned directly. If only some of the items were missing for the imputee, then a percentage of the amount to allocate was assigned to each of the imputees missing items based on the donors values in the corresponding items. The percentage used was the ratio of the donors value for the item to the sum of the donors values for the items which corresponded with the items the imputee was missing. The resulting imputed and nonmissing values added to the imputees total in B20B.

## D.7 Questions D7A..L - Distribution of Revenues by Source

### Overview

The 12 data items associated with these questions had moderate rates of item missing data. The items represent categories in which percentages of the revenue sources are expected to fall. One of the items had other questionnaire items which served as logical predictors. Hotdeck proportional allocation was used for the remaining items, with a link to the 1989 NDATUS file to introduce a control total when possible.

## Edit Checks and Logical Imputations

The following logical imputation was used for D7H:

IF D3 = 2 THEN

D7H = 0%

ELSE IF D4 AND D6 not missing THEN

D7H = D4 / D6

(unless  $D4 / D6 > (100\% - \text{sum of nonmissing D7})$ , in which case D7H was set to the remainder to allocate.)

## Hotdeck Proportional Allocation

The cases in the DSRS file were split into several groups based on modality by ownership. The WESTAT SAS Macro WESDECK was used to select donors at random within each of these groups to impute for the missing data items. The 1989 NDATUS file was used to assign control totals to the DSRS categories for a particular case, when possible.

The DSRS and NDATUS categories did not correspond exactly, so the items in both data sets were collapsed into groups which did correspond. The collapsing was as follows:

New Group #	DSRS Group Letter	NDATUS Group #
1	A,C,D	1,2,4
2	B	3
3	K	5
4	L	6,10
5	H,I,J	7
6	F,G	8
7	E	9

Control totals from NDATUS were assigned to each of the groups for each case requiring imputation. If the entire series of items was missing for the imputee, the NDATUS

proportions were assigned directly. If only some of the items were missing for the imputee, then a difference to be allocated was calculated as the difference between 100 percent and the sum of the nonmissing items. A percentage of the difference to allocate was assigned to each of the imputees new group items based on the NDATUS values in the corresponding items. The percentage used was the ratio of the imputees NDATUS value for the new group item to the sum of the imputees NDATUS value for the new group items which the imputee was missing.

The values in the new group items were then assigned to the original DSRS items based on the values of the donor which was selected through the hotdeck procedure. The control total for the group item represented the amount to allocate across the constituent DSRS items. A percentage of the amount to allocate was assigned to each of the imputees missing constituent items based on the donors values in the corresponding items. The percentage used was the ratio of the donors value for the item to the sum of the donors values for the items which corresponded with the items the imputee was missing. The resulting imputed and nonmissing values added to 100 percent.

If the case could not be linked to NDATUS, the donors proportions were assigned directly if the imputee was missing the entire series. If only some of the items were missing for the imputee, then a difference to be allocated was calculated as the difference between 100 percent and the sum of the nonmissing items. A percentage of the difference to allocate was assigned to each of the imputees missing items based on the donors values in the corresponding items. The percentage used was the ratio of the donors value for the item to the sum of the donors values for the items which corresponded with the items the imputee was missing. The resulting imputed and nonmissing values added to 100 percent.



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