

DEVELOPMENT OF A “TREATMENT PROGRAM” DESCRIPTOR -
THE ADDICTION TREATMENT INVENTORY

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ABSTRACT

This paper reviews the current literature on the definition and classification of drug and alcohol treatment “programs,” and provides a rationale for our approach to measuring the treatment programs in the Drug Evaluation Network System (DENS). The DENS gathers extensive background and recent status data on patients' drug, alcohol, psychiatric, medical, employment, legal, and family problems as they enter a sample of treatment programs throughout the country. The DENS recognized the need for descriptive information on important structural, organizational, and service delivery aspects of the programs in which those patients were treated. To this end, we present our efforts thus far in characterizing and monitoring “service delivery units” or “programs” that are sampled in the DENS system. Specifically, we present development of the Addiction Treatment Inventory (ATI), a standardized measurement instrument to characterize these service delivery units and their services.

INTRODUCTION

The Drug Evaluation Network System (DENS) is an electronic treatment tracking system that provides standardized, timely information on patients entering a sample of drug and alcohol treatment programs across the country. Data have been collected from public and private alcohol and drug treatment facilities, including inpatient, outpatient, and methadone maintenance programs since July of 1996. Although DENS is currently in its pilot phase, we are expanding into a nationwide random sample of 100 treatment programs that will ultimately give researchers a nationwide “snapshot” of people seeking treatment. DENS will also provide a foundation for targeted outcome studies and clinical trials.

One of the objectives of DENS is to collect information about the structure, organization, and function of participating treatment programs to allow comparison between types of treatment, and to monitor the changes in program structure, organization, staffing patterns and services delivered over time. Here we present our efforts thus far in characterizing and monitoring “service delivery units” that are the basic elements of the DENS system. Specifically, we present our efforts to develop a standardized measurement instrument to characterize these treatment delivery units. To this end, this paper presents the current literature on the definition and classification of substance dependence treatment “programs,” and provides a rationale for our approach to measuring treatment programs in the DENS.

PROCEDURES

Review of Existing Treatment Program Surveys and Instruments

Our initial hope was to adopt an existing descriptive interview or survey that had been widely used in multiple types of treatment modalities, ideally in one or more national treatment studies. In this regard, we identified the following surveys and questionnaires; the Uniform Facility Data Set (UFDS), the Service Delivery Unit Questionnaire from the National Evaluation of Substance Abuse Treatment (NESAT), administrative interviews from the National Treatment Improvement Evaluation Study (NTIES), the Alcohol and Drug Services Survey (ADSS) and the National Treatment Center Study (NTCS), and the Drug and Alcohol Program Treatment Inventory (DAPTI). Each of these instruments has been used in one or more prominent treatment evaluation studies and each provides some of the information that is necessary for the DENS. Here we provide a brief description of these instruments, including the names and addresses of

their authors or sponsors, as a service to the reader and as a way of discussing their attributes relative to the needs of the DENS study.

1. UFDS is a 50-minute questionnaire usually completed by administrators of treatment programs by mail or phone. Data from UFDS surveys are collected on adult and adolescent, public and private, drug use and alcoholism treatment and prevention facilities nationwide on 1 day every 1 to 3 years. Thus UFDS provides a 1-day, point prevalence census of clients in treatment and collects other aspects of treatment operations at the reporting program such as services provided, funding sources and managed care affiliations.

Since 1992 the Office of Applied Studies has sponsored UFDS. Originally this data collection effort began with National Institute of Drug Abuse (NIDA) funding in 1976 and National Institute on Alcohol Abuse and Alcoholism (NIAAA) funding in 1979, and was known as the National Drug and Alcohol Abuse Treatment Unit Survey (NDATUS). (Office of Applied Studies information materials can be accessed through the Department of Health and Human Services, Substance Abuse and Mental Health Services Administration home page at <http://www.samhsa.gov>).

2. NESAT is a one-time, study of a national sample of patients entering both public and private addiction treatment in four modalities (methadone maintenance, residential care, intensive outpatient and traditional outpatient rehabilitation). NESAT is being conducted by the National Center on Addiction and Substance Abuse (CASA) under funding from the Office of National Drug Control Policy. The NESAT project is primarily focused upon the patient sample, measuring admission and 12-month follow-up status on a sample of 2000 patients. However, the NESAT study also includes a Service Delivery

Unit Questionnaire that is completed by treatment program directors or administrators. Although the questionnaire forms are pre-mailed, the data are gathered during an in-person interview. The form is 36 pages and reportedly takes about 30 minutes of staff time to write in the responses, but requires substantial preparation from treatment program staff to collect the information necessary to answer the questions. Items measure organization and staffing, client capacity and basic data on therapy approach, assessment methods, services offered, referral and discharge procedures, prescription medications, changes in structure of the unit and financial data. This is a one-time data collection procedure. (Information regarding NESAT is available from the National Center on Addiction and Substance Abuse located at 152 West 57th St., 12th Floor, New York, NY 10019-3310; Phone #212-841-5200; Fax: #212-956-8020, or at CASA's website at <http://www.casacolumbia.org>).

3. NTIES was a 5-year study that collected both client and treatment program data. The unit of study in NTIES was a "service delivery unit" (a single site offering a single treatment modality or service). The baseline administrative report data were collected by questionnaire, referenced the 12-month period prior to client admission, and were generally completed by treatment program directors in approximately 60 minutes. Data were collected from adult and adolescent public treatment programs receiving support from the Substance Abuse & Mental Health Services Administration (SAMHSA) block grant funding in fiscal year 1990-1991. Funded by the Center for Substance Abuse Treatment (CSAT), the study collected program administrative data including treatment orientation, fiscal considerations, staffing patterns, assessments used, services provided, and changes in administrative structure in the past year. (This study was conducted for

the SAMHSA/CSAT by the National Opinion Research Center at the University of Chicago, in collaboration with Research Triangle Institute. Information is available at SAMHSA's home page at <http://www.samhsa.gov>).

4. ADSS is also a nationally representative study of public and private addiction treatment programs supported by SAMHSA. ADSS provides information on the organization of the national treatment system, the cost-effectiveness of treatment, and retrospective outcome data on a cohort of previously discharged clients. The ADSS program description interview was completed by telephone with the program administrator in about 30 minutes (47 items mailed to the interviewee in advance), followed by a mail-in procedure to verify the information obtained in the interview. ADSS programs were drawn to represent public and private, adolescent and adult treatment programs in the same four modalities covered by NESAT. (This study was conducted for SAMHSA by Brandeis University. Information is available at SAMHSA's home page at <http://www.samhsa.gov>).
5. NTCS funded by NIAAA, included on-site interviews with the program administrator and clinical director on a sample of 450 alcohol treatment programs in 1995 - 1996. NTCS collected information from adult and adolescent, private, non-profit and for-profit alcohol treatment programs. Programs that treated drug dependent clients only were not represented. Among items measured were clinical and administrative staffing patterns, patient capacity, likelihood of closure, and involvement of managed care contracting (Roman & Blum, 1997; Roman, et al., 1997). (Information regarding the NTCS is available from the Institute for Behavioral Research at the University of Georgia, 101 Barrow Hall, Athens, GA 30602-2401; Phone: #800-742-0694; FAX: #706-542-6436).

6. DAPTI is a questionnaire describing Veterans Administration (VA) drug and alcohol treatment programs. The DAPTI is a 25-minute, mailed, self-report survey completed by program clinical directors. It was designed to measure therapeutic orientation, treatment goals, staff organizations, and treatment activities. Originally created for a national evaluation of VA drug and alcohol treatment programs, all VA programs were surveyed with the DAPTI in 1992 and 100% participation was achieved (Swindle, et al., 1995). (Information regarding the DAPTI can be obtained by contacting the Center for Health Care Evaluation at VA Palo Alto Health Care System, Menlo Park Division (152), 795 Willow Road, Menlo Park , CA 94025; telephone: (650) 493-5000, ext.22814)

As can be seen, our initial review showed a wide range of instruments that have been used to describe drug and alcohol treatment “programs.” The most comprehensive of these surveys, the NESAT Service Delivery Unit Questionnaire, offered the most information, but was quite time-consuming, requiring a great deal of research on the part of the program staff. This was not a substantial burden for the NESAT programs because the questionnaire was administered only one time. Because our study was designed for repeat administration annually, across a diverse selection of treatment programs, we felt it was important not to overburden treatment staff.

Although we found individual items from all the instruments described above to be very useful for the purposes of the DENS study, and we included many of them to increase continuity of measurement across studies, none of the instruments reviewed had the same descriptive focus, was designed for repeat administration (to measure change), or was brief and direct enough to permit rapid data collection by treatment staff. We therefore decided to develop a new instrument that might meet the needs of the DENS project as well as the broader need for a

general program descriptor. In this effort, the first step was to identify those questions of particular interest and import to policy-makers and treatment organizations. We did this as part of our pilot work in the DENS study using our sample of 36 treatment programs selected by convenience from five cities from geographically distinct parts of the country (Carise, et al., 1999).

Identifying Questions

Treatment “program” information that we thought would be most widely applicable and useful to policy makers, researchers, and treatment providers included: Internal Revenue Service (IRS) status, facility affiliation, treatment capacity, length of stay, length of waiting list, types of treatment services offered, patient demographics, staff demographics, and source of payment. Our first draft of the survey included 16 sets of multiple choice questions and 12 sets of fill-in-the-blank questions and was designed to be completed by the program director.

Implementation Phase I

As we attempted to implement our pilot testing in our 36 DENS pilot sites, we uncovered a major problem. We discovered that what we had been calling “the treatment program” was not necessarily the same “program” that the treatment staff had in mind. We did not anticipate how many different ways the title of “program” was being applied in the field. For example, one methadone maintenance “program” was actually located at 17 separate sites across a large urban area, each with its own staff and patients. To our thinking, this would have been 17 “programs.” Another inpatient treatment “program” for women who were pregnant and HIV positive, was actually a very small segment of a larger program for all types of inpatients. Here, treatment

services were provided at the same location, by the same staff, at the same time, as a men's program, several criminal justice and parole programs, and other (non-pregnant, non-HIV positive) women's programs. To our thinking, these were all one program. These discoveries led to the adoption of more specific operational definitions for the terms we use to describe drug and alcohol user treatment entities; and to changes in our methods of obtaining the information.

Definition of a Service Delivery Unit, or SDU

We decided to eliminate the use of the term "program" in favor of "service delivery unit" (SDU). An SDU has been defined as a "**single modality of treatment at a single geographic site**" (Gerstein et al., 1997) and was used by CSAT in their NTIES (Gerstein, 1996). Although this was immediately helpful, there remained ambiguity in the term "modality." Any system of categorizing, such as identifying modalities of treatment programs, is a dynamic process guided in part by the usefulness of the system. There is generally no single, systematic, ultimately "correct" method. For example, in the broadest sense, there are two modalities, those that are biological in nature, and those that are behavioral in nature (CSAT, 1994). In an effort to adopt the most widely accepted system for categorizing treatment programs, we started with the guidelines published by the National Academy of Sciences, Institute of Medicine (IOM). The IOM describes five modalities of drug and alcohol user treatment: methadone maintenance, therapeutic communities, outpatient non-methadone programs, residential or inpatient chemical dependency, and detoxification (Gerstein & Harwood, 1990). However, there was the suggestion that so-called "intensive outpatient" treatments, (with services provided 7 or more hours per week), might be qualitatively different from traditional outpatient programs (6 or fewer

hours per week of services) (McLellan & Weisner, 1996). Thus, we agreed upon four modalities: inpatient/residential, outpatient (6 or less hours per week), intensive outpatient (7 or more hours per week), and methadone maintenance. We decided that detoxification was not a distinct modality since these physiological and emotional stabilization services can be delivered within any of the other modalities, and is different in the therapeutic goals and expected duration of effectiveness, from the other "rehabilitation" modalities. This is a distinction that appears to be agreed upon by the American Society of Addiction Medicine (ASAM) in their description of treatment types (American Society of Addiction Medicine, 1996). Therefore, we did not include any SDU where detoxification is the only service.

After substantial practice with the SDU term, we believe it is an improvement in clarity. However, it should be recognized that the term still leads to some unusual or atypical categorizations. For example, an outpatient SDU could include a women's outpatient program, a men's outpatient program, and any other outpatient programs that are at the same location, with essentially the same services delivered by the same staff. If one organization operates several outpatient programs, but the clinics are spread throughout the city, these would be considered distinct outpatient SDUs.

Implementation Phase II

With the goals of the DENS study in mind, the desire to minimize clinical staff burden, the desire to incorporate as many of the items from previous instruments and our experience with several definitional issues, we constructed a second version of our treatment measurement instrument, the Addiction Treatment Inventory (ATI). It was designed to be completed as a survey or interview with the SDU director in approximately 30 - 45 minutes. The ATI collects information about the staff, activities and organization of the SDU in the past six months.

Initiating the ATI begins with the definition of an SDU to avoid ascertaining information on multiple SDUs within a facility. In the second part of our pilot, all 36 DENS sites were mailed the revised ATI, most within 3-6 months of the first data collection effort. Note that phone contact was necessary with 60% of the SDU's in order to acquire missing information or to confirm questionable responses.

The data from both the original and revised ATIs were then entered into an SPSS® database for consistency analysis. This process identified those questions that were answered in unusual ways (indicating poor understanding) and questions with no variation across all SDUs. By asking the same staff the same questions at two time periods, we were able to revise or omit questions with low test-retest reliability.

RESULTS

Description of the Addiction Treatment Inventory

The current version of the ATI takes approximately 30-45 minutes for a clinical director or senior administrative staff person to complete as an in-person or phone interview. The survey is structured in five sections discussed below with illustrative data from our sample of 36 SDUs selected opportunistically from the five pilot cities participating in the DENS project. Thus, it should be clear that the data provided are illustrative of the type of information available from the ATI but the figures themselves cannot be considered representative of any region, patient population or treatment modality.

Organizational Structure

Respondents are asked to identify the SDU as (a) independent (not affiliated with a larger organization), (b) part of a hospital or larger healthcare facility, (c) part of a university or school, (d) part of a prison or criminal justice facility, and/or (e) one of several SDUs directed by

a parent organization. Government or non-government, profit or non-profit status is determined. In our pilot sample, 51% of facilities were directed by “parent organizations” (see Table 1).

In the DENS pilot sample, “residential/non-hospital detoxification” and “residential/therapeutic community rehabilitation” were the most common types of inpatient care offered, each accounting for 20% of total inpatient care provided. “Inpatient hospital rehabilitation” and “incarceration-based rehabilitation” were the least common, each representing 6% of inpatients in the DENS sample.

Intensive outpatient and traditional outpatient accounted for 34% and 43% of outpatient SDU’s respectively. The outpatient sample also included methadone maintenance (26%), drunk driving treatment programs (17%), outpatient detoxification (11%), and treatment programs set-up exclusively for clients from the criminal justice drug courts system (9%). None of the outpatient SDU’s reported providing “partial (day) hospital rehabilitation.”

The number of beds/slots available in the SDU, clinical staff’s planned or *proposed* length of treatment in the SDU (hours per day, days per week, weeks per year), and the typical *actual* length of treatment (received by most clients) are recorded. In the DENS pilot, the largest SDU had 770 treatment “slots.”

The average number of patients on a waiting list for treatment at an SDU, and the average number of days patients wait prior to treatment availability are documented for the month prior to completing the ATI. In this sample of DENS sites, the average number of patients on waiting lists (i.e. screened and accepted for treatment but not yet receiving services at the SDU) was 11. The length of the average waiting period was 8 days.

Knowing such general information as the setting, program size, and duration of treatment is crucial for sampling, data collection, and comparison purposes. For purposes of the study, this

information also enables DENS staff to estimate the number of admissions expected. Questions about the waiting list offer at least one indication of access to treatment.

Patient Profile

Not all treatment programs or facilities are designed for the full range of potential patients. In fact, many are specifically designed to address the particular problems of a select subgroup (e.g. pregnant women, probationers, dual diagnosis) of patients. For comparisons of staffing, financing, and organization structure to be meaningful, it is important to be able to characterize differences in the intended population

To this end the SDU clinical directors are asked about the characteristics of patients eligible for treatment at the SDU. For example, the ATI records whether any of the following “types” of patients are accepted for treatment; patients with specific drug-use-associated-problems, alcohol-only patients, patients who live in shelters or on the street, non-English speaking patients, or patients without insurance. The ATI also gathers information on the acceptability of patients with serious psychiatric problems (e.g. psychosis), probation/parole involvement, pending legal charges, and HIV or AIDS related problems. Table 2 shows some of the prominent features of the patient populations in the DENS pilot SDUs

Service Profile

The ATI gathers information on a wide variety of possible services that might be offered on-site, including intake/evaluation services, individual and group sessions, drug-use-related and alcohol services, medical, employment, social services, family, and psychiatric/psychological services. Other questions regarding services that might be available on-site include crisis intervention, transportation to program, use of vouchers, literacy instruction, GED preparation,

employment counseling, housing or referrals, benefits assistance, food or food stamps, legal counseling or referral, nutritional counseling, HIV testing, medical monitoring, child care, couples counseling, parenting instruction, domestic violence groups, psychological testing, relaxation/stress management, and biofeedback (see Table 3). The survey also includes questions on the availability of medications for drug and/or cigarette “cravings”, medications to reinforce alcohol abstinence, or prescriptions for medical or psychiatric problems during treatment.

Because much research has shown that the nature and extent of services provided during treatment are potentially important “active ingredients” responsible for ultimate outcomes (McLellan, Woody, Luborsky, O’Brien, & Druley, 1982; McLellan et al., 1992), the ATI asks clinical directors to estimate the number of individual and group sessions an average patient has each week. The ATI also asks for the number of drug/alcohol education groups, 12-step meetings (on and off site), and relapse prevention groups scheduled each week. **Note** that while this information offers an indication of the number and range of services available, it is obviously not possible to infer the quality or appropriateness of these sessions from this descriptive information.

Staffing Mix

Information is gathered about the categories of staff at the SDU who are the primary providers of treatment. A grid is used to identify the number of staff that are full-time or part time, and how many have been hired this fiscal year, for each of the following categories: Psychiatrists / Physicians, RNs, LPNs / other nursing staff, Doctoral level psychologists, Masters degreed Psychologists / Social workers / Case Managers, Certified Addictions Counselors, uncertified Counselors / Case Managers. The ATI also documents the number of full-time or

part-time staff that identify themselves as recovering from alcohol or illicit drug addiction, Spanish speaking, Native American, Asian, or African American.

We felt that the nature and number of staff could be important for differentiating the modalities and possibly the types of patients likely to enter and remain in treatment. For example, analysis of ATI data from the DENS pilot suggests that the average full-time staff-to-patient ratio for addictions counselors working in inpatient programs is 1:19 while in methadone maintenance programs this ratio is 1:83. As shown in Table 4, a significant number of SDU's did not provide individual sessions with Psychiatrists, Psychologists, or Social Workers (49%, 69%, and 51% respectively).

Financing

If services provided are important determinants of rehabilitation success, and sources of revenue to a program are among the most important determinants of service availability, then sources of revenue may help to determine rehabilitation success. Thus, we felt that a basic description of this dimension of care was important and potentially a predictor of staffing and service delivery patterns. Therefore, the final section of the ATI is a grid documenting the estimated percentages of clients (who attended the SDU in the past six months) whose primary source of payment for treatment was; private indemnified insurance (non-health maintenance organization [HMO] or preferred provider organization [PPO]), private HMO or PPO, public HMO or PPO, Medicaid, Medicare, VA, Social Security Income/Social Security Disability Income benefits, Criminal Justice system, other federal program, other state/municipal program, self-pay, bad debt / charity, or other source of funding.

The pilot data from the DENS sites indicates block grant accounts for the highest percentage of revenue (41%) closely followed by Medicaid (36%). Medicare/VA funding

accounts for 6%, and 14% of clients are “self-pay.” DENS pilot sites reported Private insurance, Criminal Justice funding, or bad debt/charity categories each accounted for less than 1% of funding (Fig. 1).

DISCUSSION

We have only started to develop this standardized measure we call the ATI. Although the ATI does gather substantial information about treatment programs, it has its limitations. Perhaps most importantly, it is limited by reliance on the knowledge, availability, and resourcefulness of the staff member completing it. It is at best descriptive and it is not possible to infer indications about the quality or appropriateness of staffing patterns or service delivery patterns from the ATI. Longitudinal stability and reliability of the instrument have not yet been evaluated, and further testing is needed. Because healthcare is a rapidly changing industry, there is always the possibility that some of the questions will become obsolete, as new types of care, services, and payment mechanisms replace or supplement the current ones. We have tried to include information on possibilities that, although not necessarily common today, may become more common over the next several years.

Meanwhile, the difficulties we have faced in simply describing and defining a treatment “program” are relevant to anyone working in the field of health services or policy research. The question of how broadly or narrowly to define units of treatment, and what to call these units, should be agreed upon by policy makers, treatment providers, and researchers alike. This would permit more accurate comparisons among treatment providers, and could allow similar SDUs to more easily implement services or treatments proven to be effective. Nonetheless, we feel that the ATI shows promise in this regard and that further work with the DENS and other treatment

delivery studies may help to create a useful taxonomy for characterizing treatment providers and their services.

Table 1 Affiliation of SDU's

SDU Affiliations	Percent
Independent/Free Standing (not part of a larger, parent organization)	31%
Part of a Hospital or larger healthcare facility	20%
Part of a University or School	9%
Part of a Prison or criminal justice facility	3%
One of several programs directed by a parent organization	51%

Note – categories are not mutually exclusive.

Table 2: Selected Patient Background Characteristics

Percentage of SDU's accepting patients who are:	Percent
Living in shelters	97%
Living on the street	74%
Non-English speaking	71%
From only a single ethnic group	6%
Diagnosed with Psychiatric disorders	91%
On Psychiatric medications	94%
Suffering from Psychosis	55%
Symptomatic With HIV/AIDS	97%

Note – categories not mutually exclusive.

Table 3:

Percent of DENS Pilot SDUs that report offering Specific Services	
Service Offered	Percent
<i>Urine Testing</i>	97%
<i>Housing / referral</i>	94%
<i>Case Management</i>	92%
<i>Aftercare</i>	89%
<i>HIV testing</i>	86%
<i>Medical Evaluation</i>	81%
<i>Job Training / referral</i>	67%
<i>Legal Counseling / referral</i>	67%
<i>Parenting Instruction</i>	58%
<i>Psychological Testing</i>	34%
<i>Transportation to Program</i>	31%
<i>Crisis Intervention / Hot Line</i>	28%
<i>Child Care</i>	25%
<i>Literacy Instruction</i>	14%

Figure 1:

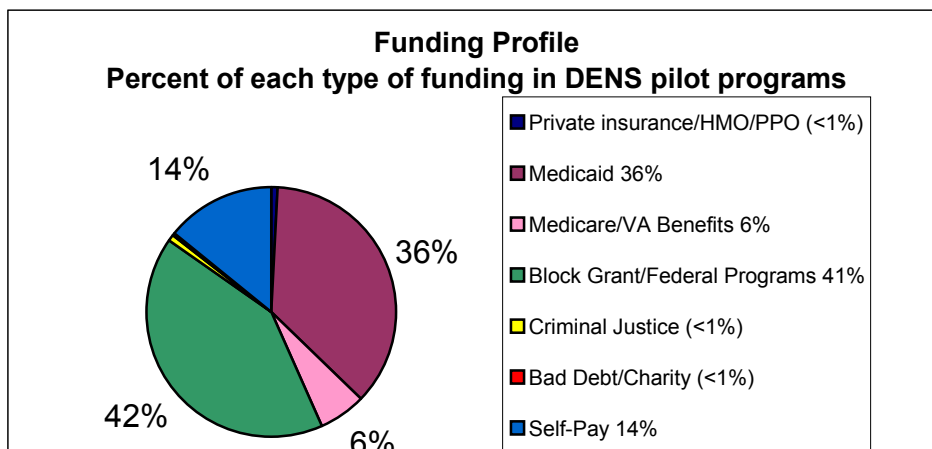


Table 4 - SDU's Providing Individual or Group Sessions with:

Profession of Staff Conducting Session	Percent SDU's Providing Individual Sessions	Percent SDU's Providing Group Sessions
Psychiatrists	51%	20%
Psychologists	31%	17%
Social Workers	49%	40%
Addictions Counselors	91%	89%
Family Therapist	26%	20%
Recreational Therapist	26%	31%
Art/Dance/Music Therapist	17%	23%

Note – categories are not mutually exclusive.

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