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Treatment Programs in the National Drug Abuse Treatment Clinical Trials Network

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Abstract

Drug abuse treatment programs and university-based research centers collaborate to test emerging therapies for alcohol and drug disorders in the National Drug Abuse Treatment Clinical Trials Network (CTN). Programs participating in the CTN completed organizational ($n = 106$ of 112; 95% response rate) and treatment unit surveys ($n = 348$ of 384; 91% response rate) to describe the levels of care, ancillary services, patient demographics, patient drug use and co-occurring conditions.

Analyses describe the corporations participating in the CTN and provide an exploratory assessment of variation in treatment philosophies. A diversity of treatment centers participate in the CTN; not

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Contributors

Dennis McCarty, Eldon Edmundson and Bret Fuller led the protocol study team; Drs. McCarty and Fuller led the data analysis and report preparation. The study team developed the research protocol and managed the implementation of the protocol. Coauthors participated in the study team and contributed to the analysis and preparation of the study report. Michael Miller and William Wendt represented community treatment programs in the development and implementation of the study design. Co-authors also managed the implementation of the study at their sites: Cynthia Arfken (Great Lakes Node), Marc Copersino (Mid-Atlantic Node), Anthony Floyd (Washington Node), Robert Forman (Delaware Valley Node), Bret Fuller (Oregon Node), Kathy Magruder (South Carolina Node), Michael Miller (Florida Node), Edward Nunes (Long Island Node), Jody Sindelar (New England Node), and William Wendt (Rocky Mountain Node). Lee Ann Kaskutis developed the Social Model Philosophy Scales and contributed to the data analysis, interpretation of results, and preparation of the report. All authors reviewed and approved the final manuscript.

Conflict of Interest

None of the authors report conflicts of interest.

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for profit organizations with a primary mission of treating alcohol and drug disorders dominate. Compared to N-SSATS (National Survey of Substance Abuse Treatment Services), programs located in medical settings are over-represented and centers that are mental health clinics are under-represented. Outpatient, methadone, long-term residential and inpatient treatment units differed on patients served and services provided. Larger programs with higher counselor caseloads in residential settings reported more social model characteristics. Programs with higher social model scores were more likely to offer self-help meetings, vocational services and specialized services for women. Conversely, programs with accreditation had less social model influence. The CTN is an ambitious effort to engage community-based treatment organizations into research and more fully integrate research and practice.

Keywords

Drug Abuse Treatment; Clinical Trials Network

1.0. Introduction

Lags between research-based advances in health care and the application of those methods to treat patients are persistent and contribute to inefficient and less effective health care (Institute of Medicine, 2000; Institute of Medicine, 2001). Gaps between practice and research seem to be even greater for treatment of drug and alcohol disorders (Institute of Medicine, 1998). The Substance Abuse and Mental Health Services Administration Center for Substance Abuse Treatment (CSAT) and the National Institute on Drug Abuse (NIDA) chartered the Institute of Medicine's *Committee on Community-Based Drug Treatment* "... to determine mechanisms for the effective transfer of information from the research communities to community-based drug abuse treatment" (Institute of Medicine, 1998, p. 123). After receiving public testimony and evaluating potential strategies, the Committee proposed that NIDA support a research/practice infrastructure where investigators and treatment programs collaborate to facilitate adoption of evidence-based practices (Recommendation 1, p. 6).

1.1. National Drug Abuse Treatment Clinical Trials Network

In 1999, the National Institute on Drug Abuse issued awards to support the National Drug Abuse Treatment Clinical Trials Network (CTN). The CTN uses multi-site clinical trials to test behavioral, pharmacological, and integrated behavioral and pharmacological treatment interventions in a broad range of treatment programs with heterogeneous patient populations. Each node includes community treatment programs in partnership with a research center. In January of 2003, there were 17 nodes and 112 treatment providers.

1.2. Treatment Philosophy

Clinics addressing alcohol and drug disorders vary in treatment philosophies, and that variation may influence the adoption and use of specific treatment strategies. The Institute of Medicine identified three program philosophies or orientations that guide treatment strategies: physiological (addiction is a progressive disease that requires medical intervention including the use of pharmacotherapy), psychological (addiction is a behavioral and emotional problem that responds to intensive group and individual therapy), and sociocultural (addiction is the result of socialization in environments that promote use of alcohol and other drugs and treatment requires environmental restructuring and new social relationships) (Institute of Medicine 1990). These models of care are not mutually exclusive but reflect service priorities.

Social model programs, for example, articulate six core beliefs: 1) experiential learning is the key to recovery and the basis of therapeutic authority, 2) the relationship between the person

and the program (rather than a therapist) is the primary therapeutic relationship, 3) everyone gives and receives help, 4) self-help principles and dynamics provide the fundamental program framework, 5) maintenance of an environment conducive to recovery (i.e., sobriety) is critical, and 6) addiction is a product of the social environment (Wright, 1990). Programs that adhere to a social model philosophy tend to contrast with medical model programs (i.e., professionals provide treatment, formal degrees and education are the basis for authority, treatment is given to patients, and treatment emphasizes changes in the patient rather than the environment) (Borkman, 1990). The Social Model Philosophy Scale assesses the relative influence of a social model orientation on six domains: physical environment, staff role, authority base, view of alcohol and drug problems, governance, and community orientation (Kaskutas et al., 1998).

Treatment philosophies vary internationally. A telephone survey of 179 Australian treatment agencies reported that 66% offered services to support alcohol use moderation and viewed controlled drinking strategies as empirically based (Dawe and Richmond, 1997). Support for alcohol use moderation, however, varied by level of care; outpatient programs (89%) were more likely than combined inpatient and outpatient services (70%) and residential treatment units (27%) to offer controlled drinking services. Variations in treatment philosophies also appear to be emerging in China as the service systems move from models that emphasize punishment to those that rely on medications and traditional Chinese medicine. Chinese drug addiction treatment facilities are classified as voluntary, compulsory, and re-education through labor; different government agencies (health, police and justice respectively) regulate the different service types (Tang and Hao, 2007).

Because social model programs emphasize personal experience with recovery, they may be less likely to use specific evidence-based practices. Physicians in recovery, for example, reported less use of naltrexone for treatment of alcohol disorders (Thomas et al., 2003) and counselors in recovery were less likely to know about buprenorphine (Knudsen et al., 2005). There has been little attention, however, on the role of program philosophy in variations in service delivery.

The CTN recognized the importance of characterizing its participants and authorized a research protocol to collect information on the attributes of participating treatment organizations, treatment units, and the clinical workforce providing care. Survey results describe the membership of the CTN and begin to assess potential barriers to the successful dissemination and use of effective treatment interventions in real world settings. The Social Model Philosophy Scale was included in the characterization of CTN treatment programs to shed light on the variability of treatment philosophies within the CTN. The analysis describes the characteristics of the participating treatment corporations and assesses the influence of program orientation on services provided.

2.0. Methods

Drug abuse treatment organizations participating in the CTN completed three surveys: 1) Organizational Surveys, 2) Treatment Unit Surveys, and 3) Workforce Surveys. Treatment organizations with multiple treatment units limited eligibility to the units currently participating (or likely to participate) in CTN activities. Each organization identified the distinct treatment programs and facilities they managed and operated that were eligible to participate in the surveys. The program director, administrator, or manager at each program site completed a survey that collected site-specific information. The protocol also surveyed the clinic's workforce to assess their characteristics and their attitudes and beliefs about specific drug abuse treatments. This report summarizes data from the Organizational and Treatment Unit Surveys. Results from the Workforce Survey are presented elsewhere (McCarty et al., 2007). While the study was in the field, the CTN expanded to include three additional research centers and their

treatment programs. Data collection was extended to include the treatment units in the new nodes. Data collection took place between March 2002 and August 2004.

2.1. Protocol Coordinators

The 17 nodes participating in the CTN identified a Protocol Coordinator who managed data collection for the node. Coordinators contacted individuals at each program and facilitated survey distribution. Coordinators were trained prior to data collection and each node followed similar procedures.

2.2. Survey Procedures

Protocol coordinators provided email and telephone contact information for the treatment organizations and their executive directors. A centralized data management center generated a random alphanumeric identifier for treatment organizations and respondents. Identifiers and passwords were distributed in sealed envelopes to protect confidentiality and included directions for accessing a secure website. Paper versions of the surveys were also available. To facilitate responses and minimize duplicative efforts, recipients (i.e., Executive Directors or their designees) were able to complete the web-based survey in steps, and data were changeable until the completed survey was submitted. Respondents were encouraged to seek assistance from others within the corporation who may have more detailed information (e.g., financial information may be provided by the financial officer). A summary of the responses was generated for each organization and treatment unit and the respondent was asked to review the answers for accuracy. Paper copies of the survey were returned by mail or express courier service.

The Organizational Survey requested information on the corporation (e.g., name, address, contact person), the ownership status (e.g., not-for-profit, for-profit, government), primary service setting (e.g., hospital, mental health center, free-standing addictions treatment program), and size of the corporation (e.g., total revenues, number of employees, number of facilities). In addition, respondents noted the distinct substance abuse treatment programs that the corporation operated, provided information to categorize the programs (e.g., inpatient, outpatient), and listed a program contact to receive the Treatment Unit Survey.

The Treatment Unit Survey used similar procedures. Treatment unit directors received a sealed envelope with a respondent identification code. Envelopes included a description of the study and the password for accessing the secure web site. The Treatment Unit Survey collected more detailed program information: the types and levels of care, accreditation and licensure, patient characteristics, sources of revenue, staffing, and staff retention. The survey included the Social Model Philosophy Scale (Kaskutas et al., 1998) assessing six dimensions: community orientation, dealing with drug problems, physical environment, governance, staff role, and authority base (residential services only). The dimensions are summed with a potential range of 0 to 100 – 100 reflects a program that endorses all social model facets, 50 indicates that the program incorporates about 50% of the social model characteristics, and 0 suggests that the program has no social model attributes.

2.3. Human Subject Protections

The protocol investigated organizational characteristics and attributes. The Organizational and Treatment Unit Surveys used an information sheet rather than a formal consent process. Formal consents were used if local Institutional Review Boards (IRB) required signed consents. The Oregon Health & Science University IRB served as the lead IRB, and each node received local IRB review and approval for their site. Approvals were provided from 40 separate IRBs.

Discussions with participating treatment programs and research centers generated a range of opinions on the value and need for participation compensation. Many program directors indicated that they completed the organizational and treatment unit forms because of their participation in the CTN and did not expect incentives.

2.4. Confidentiality and Quality Assurance

Confidentiality and quality assurance focused on four primary areas: 1) user registration and authentication, 2) web-based data entry, 3) paper-based data collection, and 4) keying responses from paper surveys. Usernames and passwords were mailed to the protocol coordinators and distributed directly to respondents in sealed envelopes and were not distributed by phone or email. If username and/or password were lost or forgotten, new passwords were issued. Web-based data forms included checks for range, logic, and skip patterns minimizing entry error. Confirmation boxes were used to assure the entered value was intended in critical fields. Node protocol coordinators clarified responses to the Organizational and Treatment Unit Surveys when key values were missing or appeared to be inconsistent. Executive directors received summaries of the data provided on the Organizational and Treatment Unit Surveys and corrected missing and incorrect values.

2.5. Data analysis

2.5.1. Descriptive and multivariate analyses—Four mutually exclusive levels of care categorized the treatment units: inpatient (any beds for detoxification or short-term rehabilitation), long-term residential (any residential beds with a typical length of stay greater than 30 days), methadone (any use of methadone maintenance), and outpatient (only outpatient services). Means and percentages summarized program variation by level of care.

A multiple regression analysis explored relationships between the Social Model Philosophy Scale score and 20 organizational and treatment unit variables: 1) hospital affiliation, 2) for profit, 3) mean counselor caseload, 4) annual revenues trichotomized (up to 25th percentile, 26th to 74th percentile, greater than or equal to the 75th percentile), 5) mean length of stay, 6) residential beds, 7) detoxification beds, 8) methadone maintenance, 9) outpatient services, 10) on-site primary care, 11) used ASI-Lite (a brief version of the Addiction Severity Index), 12) use of NIAAA (National Institute on Alcohol Abuse and Alcoholism) treatment manuals, 13) used NIDA treatment manuals, 14) on-site self-help meetings, 15) vocational services, 16) mental health linkages, 17) specialized services for women, 18) accreditation from CARF or COA (Council on Accreditation of Rehabilitation Facilities, Council on Accreditation), 19) accreditation from JCAHO or NCQA (Joint Commission on Accreditation of Healthcare Organizations, National Committee for Quality Assurance) and 20) smoking cessation services. With the exception of mean counselor caseload and annual revenues, dependent variables were coded no/yes (no = 0, yes = 1). Missing data patterns were indistinct and assumed to be completely missing at random. PROC MI (Multiple Imputation) computed missing data for the regression analysis and the PROC MIANALYZE program averaged the parameter estimates for each model to produce a single concise solution (SAS Institute, 1999). This set of imputed values allowed the proper estimation of the standard errors by introducing natural (random) variation among these sets of imputed values. Alpha was set at $p < .01$.

2.5.2. N-SSATS comparison—Items (type of corporation, primary service, services provided, and accreditation) from the National Survey of Substance Abuse Treatment Services (N-SSATS) were included in the CTN Organizational Survey to facilitate comparisons with the national treatment system. The Substance Abuse and Mental Health Services Administration conducts an annual census of all known substance abuse treatment facilities in order to update information in their treatment facility locator and to report trends in program characteristics to federal, state, and local policy makers and program administrators (Substance

Abuse and Mental Health Services Administration 2005). The CTN data were compared to the 2003 N-SSATS report.

2.6. Public use data set

The data from this study are available as a public use data set. Please see the CTN data website: <http://www.ctndatashare.org/studies/NIDA-CTN-0008/>.

3.0. Results

3.1. Organizational Survey

Responses were obtained from 106 of 112 eligible community treatment programs (95% response rate). Compared with the 13,000 treatment facilities examined in the 2003 N-SSATS report, the CTN had a lower proportion of private-for-profit corporations (6% versus 25%); conversely government facilities (27% versus 15%) and not-for profit corporations (72% versus 61%) were over-represented in the CTN (Substance Abuse and Mental Health Services Administration, 2004). Similarly, the CTN had a lower proportion of free-standing alcohol and drug treatment facilities (53% versus 61%) and mental health clinics (12% versus 35%) but a higher proportion of health care facilities (25% versus 3%). Because many of the CTN research centers were located in medical schools, hospital-based programs were more likely to participate in the CTN.

Measures of staffing (full-time equivalent positions) and annual revenues suggested that the corporations participating in the CTN were relatively large entities but smaller organizations participated as well. The number of employees ranged from a low of 3 to a high of 585 with a median of 45 FTEs ($M = 77, \pm 91.6$). Similarly, CTN participants reported median annual revenues of \$4 million ($M = \6.6 million, ± 7.7 million) ranging from \$200,000 to \$43 million. More than half of the programs claimed revenues from patient fees (87%), state grants and contracts (76%), local grants and contracts (71%), and fee-for-service payments from private insurance (65%), Medicaid plans (63%), and commercial managed care plans (55%). CTN participants also reported revenues from federal grants (48%), state funds for criminal justice programs (48%), Medicaid managed care plans (44%), and charities (44%). About one in three CTN corporations had revenues from private contracts (34%), other federal grants and contracts (32%), Medicare (31%), and SAMHSA grants (30%). Relatively few programs listed revenues from CHAMPUS (11%) and the Veterans Administration (10%).

Finally, the Organizational Survey asked executive directors to specify the treatment units they operated and the number that might participate in the CTN. Programs reported a range of 1 to 100 treatment units with a median of 5 ($M = 7.5, \pm 11.6$) and noted that a median of 3 treatment units were likely to participate in the CTN (range = 1 to 10; $M = 3.5, \pm 2.4$).

3.2. Treatment Unit Survey

Treatment Unit Surveys provided more detail on how corporations organized and managed operations and the services provided; program directors in 348 of the 384 treatment units listed in the Organizational Survey completed surveys (91% response rate). Respondents reported a mean of 623 ($\pm 1,403$) treatment unit admissions per year. Nearly all (88%) of the treatment units operated with state licensure.

The 332 units with complete data were sorted into four mutually exclusive levels of care: any outpatient methadone services (15%), long-term (30 days or longer) residential services (36%), inpatient (13%; includes detoxification and short-term (less than 30 days) residential services), and outpatient (methadone not available) services (36%). Table 1 examines the ancillary and support services available within the four types of treatment units. Self help groups were more

common in inpatient (90%) and residential (83%) settings than methadone (51%) and outpatient (39%) services. Childcare (21%), parenting groups (27%), and trauma counseling (42%) were most common in long-term residential and less common in inpatient treatment. Methadone programs were most likely to test for tuberculosis (TB) (94%), HIV (71%), and hepatitis C virus (HCV) (65%), and outpatient programs were least likely to offer these services: TB (23%), HIV (28%), and HCV (18%). 2003 N-SSATS data suggest that these tests for infectious disease were less likely to be offered in the population of alcohol and drug treatment programs: TB testing (37%), HIV testing (33%), HCV testing (25%) (Substance Abuse and Mental Health Services Administration, 2004). Smoking cessation was offered in 32% of the treatment units and was more available in residential settings (long-term = 46%; short-term = 37%) than in ambulatory services (methadone = 28%; outpatient = 19%).

Table 2 examines program operations. Two-thirds (64%) of the treatment units reported accreditation from CARF (33%), JCAHO (30%), NCQA (2%), or COA (6%). Detoxification (51%) and methadone programs (43%) were more likely to report JCAHO accreditation than residential (22%) and outpatient (22%) services. The 2003 N-SSATS data suggests that accreditation may be less common nationally: JCAHO = 24% of treatment facilities, CARF = 11%, COA = 4%, and NCQA = 2% (Substance Abuse and Mental Health Services Administration, 2004).

Most of the treatment units did not use treatment manuals or treatment guidelines. About one-third of the programs reported using a National Institute on Alcohol Abuse and Alcoholism *Project MATCH* manual: Motivational Enhancement Therapy (34%), Cognitive Behavioral Therapy (28%), and 12-Step Facilitation (20%). Similar proportions reported using National Institute on Drug Abuse treatment manuals: *Approaches to Drug Abuse Counseling* (33%), *Recovery Training and Self-help: Relapse Prevention and Aftercare for Drug Addicts* (31%), and *A Cognitive Behavioral Approach: Treating Cocaine Addiction* (26%). Methadone programs (61%) were more likely to report using one or more NIDA treatment manuals.

The treatment units used a variety of assessment tools. About half (53%) used the Global Assessment of Functioning scale (GAF), more than one-third (37%) used the Addiction Severity Index, and about one in four used the DSM-IV Checklist (23%). The Beck Depression Scale was used in 10% of the treatment units. Use of the ASI was reported more often in methadone programs (57%) than residential (37%), outpatient (35%), and inpatient (19%) services.

Program directors reported that the caseloads included about 39% women, and the proportion of women was greater in long-term residential settings (52%). Admissions included 29% African-Americans, 17% Latino-Americans, and 2.5% American Indians (see Table 3). Patient populations, however, differed depending on type of program and geographical locations.

Tobacco was the most frequently reported drug of abuse; overall an estimated 76% of the patients were smokers. More than half of the patients (52%) had disorders related to alcohol use; methadone programs reported smaller proportions of patients with alcohol use disorders (35%). Cocaine (32%) and marijuana (34%) were problems for about a third of the typical caseload. Opioid dependence was reported in about 30% of the patients overall. Methamphetamine abuse represented a smaller portion of the typical caseload (13%). However, programs from the Western United State (Rocky Mountain, Pacific, Oregon, Washington, and California-Arizona) reported much higher proportions of patients seeking treatment for methamphetamine use (30%) versus the Eastern and Southern Nodes (5%).

The complexities of the patient population were apparent in the data on co-occurring disorders. About one-third (37%) of the patients had psychiatric disorders and these patients were more likely to be enrolled in long-term residential settings. About 16% of agencies served patients

with severe and persistent mental illness. One in three admissions (31%) were on probation, and 10% were referred from parole. One in four (23%) reported being homeless; however, the proportion of homeless patients was much higher in residential treatment units (38%) and detoxification settings (31%) than in outpatient (10%) or methadone programs (11%). More than half of the admissions (57%) did not have health insurance.

3.3. Social Model Philosophy Scale

The typical CTN program reported relatively few features of a social model orientation. The mean value was 35 (± 12.6) and ranged from 11.4 to 67.8. None of the treatment units met criteria for classification as a social model program (a score of 75 or greater). As a group, long-term residential services had stronger social model orientations ($M = 46.6; \pm 10.9$); social model influences were less apparent in inpatient ($M = 35.2 \pm 10.0$), outpatient ($M = 28.8 \pm 8.5$), and methadone ($M = 26.5 \pm 6.3$) treatment units.

A multiple regression analysis examined relationships between the Social Model Philosophy Scale score (independent variable), organizational characteristics, and services provided at the treatment unit. Positive regression weights suggested stronger social model influences and negative weights suggested weaker social model influences. Parameter estimates, standard errors, *t* scores, and *p* values are listed in Table 4. The model accounted for about 50% of variation in scores (mean $R^2 = 0.49$ – missing data imputation generated 20 models and R^2 ranged from .46 to .51). Controlling for other variables, social model philosophies were most apparent in residential programs and less influential in ambulatory settings. Programs with accreditation endorsed fewer social model facets. Social model influences were more apparent in treatment units with higher counselor caseloads. Longer lengths of stay were associated with less social model orientation and appear to be due primarily to the influence of methadone maintenance. Finally, programs that offered self-help groups and vocational services had higher social model philosophy scores.

4.0. Discussion

The CTN implements randomized clinical trials in community drug abuse treatment services to assess the effectiveness of science-based behavioral and pharmacological therapies. The Organizational and Treatment Unit Surveys describe 106 corporations providing drug abuse treatment in 348 treatment units. Most treatment units are not-for-profit and are not affiliated with health care or mental health care organizations. In the CTN, hospital-based services are over-represented and programs based in mental health centers are under-represented. The CTN programs also tend to be larger than the modal drug abuse treatment program. Because of the need to recruit large samples of patients and the need for infrastructure to support research activities, the bias toward larger corporations may be unavoidable. Still, there is an array of both larger and more modest sized treatment organizations participating in the CTN. The treatment units serve a heterogeneous patient population, and the inpatient, residential, methadone, and outpatient levels of care vary in the services provided. The structure and diversity of CTN treatment units appear to facilitate testing a range of interventions for women, men and adolescents dependent on licit and illicit drugs of abuse in multiple levels of care.

4.1. Social Model Influences

The Social Model Philosophy Scale assesses features of treatment services and implicitly contrasts social and medical model approaches. Because of the strong medical influence in the CTN, it is not surprising that treatment unit directors acknowledged few social model characteristics. None of the treatment units met criteria for classification as a social model program. Pure social model programs, moreover, may be vanishing as managed care emphasizes requirements for licensed professionals and formal treatment plans and becomes

a primary payer in both private and publicly funded systems of care. A 1998 survey of 311 licensed residential addiction treatment programs in California, for example, found diminished adherence to the social model; 30% of the 187 programs that self-identified as a social model program incorporated 75% or more of the social model features and there was a significant decline in social model adherence in 14 programs that responded to both a 1995 survey and the 1998 survey (Kaskutas, Keller, and Witbrodt, 1999).

In the assessment of CTN participants, social models facets were most apparent in programs with bigger caseloads and in residential treatment where social milieu is important. Variation in social model orientation appears to affect the services available in treatment centers. Programs with more social model facets were more likely to provide self-help meetings and vocational services. Social model orientation was negatively related to accreditation—emphasis on record keeping and hierarchical staffing patterns is antithetical to key domains of the social model philosophy. Relatively large standard errors were associated with the organizational variable of hospital setting and with the availability of mental health or primary care services and may have contributed to the failure to find a relationship with these indicators of medical model services. Social Model Philosophy Scale scores, moreover, did not have a significant relationship with the use of treatment manuals or standardized assessment tools. These findings suggest a blurring of social and medical/clinical approaches. At the same time, the results highlight the contribution of program philosophy to the availability of specific service domains (e.g., vocational services, child care) that may dissipate as social models of care becomes less influential.

4.2. Limitations

The study provides useful insights into the structure of the treatment programs participating in the CTN. The CTN's heterogeneous array of potential study sites cannot reflect the full diversity of treatment organizations in the United States. While not-for-profit corporations dominate, the CTN also includes for-profit corporations and units operated through local, state and federal government agencies. Generalization from CTN trials, therefore, must be cautious and practitioners must evaluate each trial independently. Participating community treatment programs were selected to enhance the competitive applications and tend to be larger corporations that offer multiple levels of care and have an emphasis on treating drug problems. Nonetheless, the CTN is one of the more ambitious efforts to bridge the practice/research gap and to test the applicability of emerging drug abuse treatments in diverse patient populations using community treatment programs as study sites.

A comparison of the CTN and a nationally representative sample of drug abuse treatment units controlled for organizational variables and suggested that participation in the buprenorphine clinical trials was associated with increased adoption of buprenorphine (20% versus 11%) (Ducharme, et al., 2007). Participation in the CTN, however, did not enhance adoption of contingency management strategies (34% versus 31%). The study also noted that CTN participants were less likely to operate as for-profit corporations (12% versus 18%), less likely to offer detoxification services (19% versus 29%), more likely to treat opiate dependent patients (42% with a primary opiate problem versus 16%), and more likely to report JCAHO or CARF accreditation (66% versus 48%) (Ducharme, et al., 2007). CTN and non-CTN programs did not differ on percent of revenues from public sources (about 50%), physicians on staff or contract (about 70%), and counselors with Master's degrees (45%). These data help complete the description of the CTN and how they vary from the population of drug abuse treatment services in the United States.

The National Drug Abuse Treatment Clinical Trials Network is a unique alliance designed to bridge the gap between practice and research. Built on a strong base of interested and committed

community treatment programs its research offers potential for promoting the spread of evidence-based practices.

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Table 1

Services by Level of Care in percent

Level of Care	All programs (n = 332)	Outpatient (n = 119)	Methadone (n = 51)	Long Term Residential (n = 120)	Inpatient: Detoxification and Short-Term Residential (n = 42)	Statistical Tests χ^2 df = 3
Primary Medical Care	26.8	7.8	29.4	39.3	41.5	35.5**
TB Testing	56.5	22.9	94.1	66.1	78.6	96.4**
HIV Testing	47.5	27.6	70.6	55.9	51.2	32.9**
HCV Testing	37.0	18.1	64.7	39.5	48.8	37.3**
Mental Health Counseling	71.0	65.8	82.4	74.8	61.0	7.6
Mental Health Medication	63.7	52.5	72.0	68.9	70.7	10.1*
Smoking Cessation	32.3	18.8	27.5	46.2	36.6	21.2**
Child Care	22.1	17.1	14.0	37.3	2.4	28.6**
Mothering Groups	26.8	14.7	31.4	45.3	2.4	42.1**
Trauma Counseling	42.1	37.1	34.0	57.8	22.0	21.1**
Self-help Meetings	63.2	39.0	51.0	83.2	90.0	66.4**
Vocational Services	36.3	26.5	38.0	52.9	14.3	28.0**

*** p < .01

* p < .05

Table 2

Program operations and accreditation by level of care in percent

Level of Care	All programs (n = 332)	Outpatient (n = 119)	Methadone (n = 51)	Long Term Residential (n = 120)	Inpatient: Detoxification and Short-Term Residential (n = 42)	Statistical Tests χ^2 df = 3
NIAAA Treatment Manuals	42.5	35.7	47.1	41.2	44.2	1.5
NIDA Treatment Manuals	45.8	40.5	60.8	37.8	49.2	8.7*
ASI-Lite	37.0	19.0	56.9	35.3	36.7	14.6**
DSM-IV Checklist	23.2	14.3	27.5	18.5	29.2	6.3
Global Assessment of Functioning	52.8	55.0	60.8	50.0	51.3	1.9
Beck Depression Scale	10.3	7.5	18.0	7.7	10.4	4.4
CARE or COA Accreditation	36.8	39.6	32.0	37.3	33.3	1.1
JCAHO or NCOA Accreditation	31.5	28.2	42.9	23.1	51.2	14.7**

Table 3
Patient Characteristics, Drug Use, and Co-occurring Conditions by Levels of Care in mean %

Services	Outpatient	Methadone	Long-Term Residential	Inpatient: Detoxification and Short Term Residential	F Tests (degrees of freedom)
Patient Characteristics					
Women	30.8 ¹	35.5 ²	52.3 ^{1,2,3}	31.8 ³	14.4 (3, 303) **
African-Americans	25.8 ¹	28.4	34.5 ¹	24.2	2.9 (3, 311)
Hispanics	16.1 ¹	26.3 ^{1,2,3}	17.6 ²	11.8 ³	4.6 (3, 304) *
Patient Drug Use					
Tobacco	71.1 ¹	74.7	79.5	79.0 ¹	2.3 (3, 257) *
Alcohol	55.3 ¹	30.2 ^{1,2,3}	54.4 ³	56.6 ²	9.6 (3, 298) **
Cocaine	26.8 ¹	37.7	36.4 ¹	30.2	3.3 (3, 299) *
Marijuana	35.1	22.5 ¹	37.4 ¹	32.4	2.9 (3, 278) *
Opioids	13.4 ^{3,5}	82.17 ^{1,2,3}	20.6 ^{2,4}	38.5 ^{1,4,5}	115.2 (3, 300) **
Methamphetamine	11.4	7.4	17.2	8.5	3.0 (3, 272) *
Injection Drug Use	9.9 ^{3,4,5}	56.6 ^{1,2,3}	19.6 ^{2,5}	24.6 ^{1,4}	53.8 (3, 269) **
Co-occurring Conditions					
Psychiatric Disorders	32.6 ¹	33.2	43.6 ¹	36.9	3.7 (3, 385) **
Probation	34.0 ²	15.2 ^{1,2}	36.0 ¹	25.5	8.3 (3, 279) **
Welfare to Work	6.5 ¹	8.2	16.6 ^{1,2}	4.6 ²	5.4 (3, 232) **
Homeless	9.7 ^{2,4}	10.8 ^{1,3}	38.8 ^{1,2}	31.1 ^{2,3,4}	27.5 (3, 280) **
Uninsured	51.2 ¹	42.7 ²	66.6 ^{1,2}	57.4	6.4 (3, 281) **

* p < .05

** p < .01

Note: Means with the same superscript are significantly different from each other (Sheffe post-hoc Tests).

Table 4
Estimated parameters for the predictors of the Social Model Philosophy Total Scale Score

Variable	Parameter Estimate	Standard Error	t value
Intercept	24.77	2.91	8.53*
Hospital Setting	1.22	1.73	0.71
For Profit	-0.35	2.82	-0.12
Mean Caseload	0.08	0.02	3.74*
Annual Revenue	2.11	0.88	2.40
Mean Length of Stay	-0.01	0.003	-2.77*
Residential Treatment	9.93	1.90	5.22*
Detoxification Services	-0.57	1.65	-0.35
Methadone Services	0.02	0.03	0.67
Outpatient Services	-3.50	1.95	-1.80
Primary Care Services	-0.88	0.50	-1.77
Self Help Groups	4.09	1.28	3.20*
Vocational Services	4.92	1.27	3.88*
Mental Health and Medication Services	1.43	0.73	1.98
Women's Services	1.36	.58	2.34
Smoking Cessation	-0.86	1.28	-0.67
CARE/COA Accreditation	-3.86	1.35	-2.87
JCAH/NCQA Accreditation	-4.24	1.50	-2.83*
Use of NIDA Manuals	0.25	1.24	0.20
Use of NIAAA Manuals	1.07	1.26	0.85

* p < .01