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Organizational Correlates of Service Availability in Outpatient Substance Abuse Treatment Programs

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Abstract

In pursuit of quality care for drug abuse treatment programs, researchers continue to monitor program characteristics related to service provision. The current study examines 115 outpatient drug-free programs in 4 U.S. regions and documents typical methods of offering an array of services and the relationship between program characteristics and services offered onsite and by referral. Core services (e.g., comprehensive assessments) are offered primarily onsite, whereas delivery methods of wraparound services are mixed with transitional services offered generally onsite and medical services traditionally offered offsite. Accredited programs offered more core services onsite, while those providing case management offered more core and wraparound services onsite. Programs with a higher proportion of dually diagnosed clients offered more core services onsite and fewer wraparound services by referral. Programs with a higher concentration of criminal justice referred clients offered fewer core services onsite. These findings suggest ways of improving access to services.

Keywords

service delivery; substance abuse treatment; referral; onsite; wraparound services

In response to the National Institute on Drug Abuse's (NIDA) publication on Principles of Drug Abuse Treatment,¹ substance abuse treatment programs across the nation have become more deliberate in their attempts to provide a wide array of services to clients. The clinical model espoused by NIDA and other institutions² includes core services such as

comprehensive assessment and therapeutic care, as well as a variety of ancillary (i.e., wraparound or supplemental) treatment including but not limited to medical and specialized services. Evidence suggests that clients receiving wraparound services have better outcomes (i.e., longer retention in treatment) than those who receive only core services.³⁻⁶ While some services (counseling and drug monitoring) are considered more standard/core to the treatment of the drug use disorder and are therefore more likely to be offered, additional services attending to other health and social needs (e.g., psychiatric services and parenting instruction) are considered ancillary and are less likely to be offered.⁷ Often cost prohibitive ancillary services (such as transportation to treatment and childcare) are the first to be omitted from service availability.^{8, 9}

Further affecting access to client care, while some services (e.g., individual and group counseling) are offered primarily onsite, others are offered through various mechanisms that link clients to other offsite agencies. For specific services such as financial counseling, the client might be sent to an external agency that specializes in that area or that has more direct linkages to social services. The potential for greater specialization exists through the use of referral networks, however less than half of off-site referrals are followed-up⁸ and clients are less likely to utilize services when they aren't offered in-house.¹⁰

In an effort to identify factors associated with providing a wide array of services, studies have begun to examine the role of organizational structure in service provision. Results suggest that accreditation and ownership, among other elements, are related to a larger array of service offerings. However, most studies focus on provision at the broad level across various treatment modalities, with little attention to structural factors and categories of services offered specifically within outpatient settings. Outpatient treatment is an especially salient modality in examining client care as it is offered in more than 80% of treatment facilities across the United States.¹¹ Furthermore, most studies have limited their examination of how program structure impacts only those services provided onsite, or whether programming affects service offerings regardless of method of delivery.

Organizational Factors and Service Provision

Evidence within the treatment field suggests that organizational factors are stronger correlates of service provision than expressed client needs.¹²⁻¹⁵ In particular, structural characteristics including program accreditation, case management, ownership, parent affiliation, catchment, caseload, and staff size have been associated with provision of services in the substance abuse treatment field.

Through dedication to achieving high standards of treatment,¹⁶ as well as external requirements and a biomedical orientation,^{14, 17} accredited programs may ascribe to greater service provision, particularly various mechanisms to facilitate receipt of wraparound services such as primary medical care.^{18, 19} Jointly, by linking clients to off-site resources and tracking whether services are received, programs offering case management facilitate provision of even more services,⁴ enabling them to specifically address clients' medical and social needs. Government funding, often received by publically owned agencies, helps increase service comprehensiveness by building collaborative community ties.²⁰ Through

referrals and by employing psychologists and medical doctors, publically owned organizations aid clients in obtaining more employment, financial, legal, and health services than private for-profit agencies.^{12, 20-23}

Greater resource availability is also reported in programs associated with a parent organization. Specifically, parent-affiliated programs receive external support for service diversification,⁸ are strongly encouraged to refer clients to “sister” organizations to receive supplemental services,²⁴ and assist in reducing costs affiliated with other off-site referrals.²⁵ Conversely, programs located in rural communities, compared to urban settings, may not have access to referral networks,¹² potentially limiting their ability to offer wraparound services.

Agencies maintaining higher counselor caseloads often offer fewer medical,¹⁴ HIV testing, and counseling services²⁶ and report difficulty in accurately assessing clients needs.¹⁸ Whereas, intensely staffed larger organizations tend to allow for more flexibility in treatment provision, such as trying innovative counseling techniques.²⁷

In addition to organizational structure, client composition can also impact service provision. Ducharme et al.⁷ report that programs with a higher proportion of female clients offer greater diversification of supplemental services. Whereas some findings show that agencies with females tend to emphasize services addressing specific needs for women (e.g., child-care),²⁸ other findings show that these services are seldom provided.²⁹ Consistent with client needs, agencies with a high composition of dually-diagnosed clients offer better access to mental health services.²⁰ However, other case-mix factors, such as proportion of criminal justice referred clients have been found to be associated with less client contact.³⁰

Unlike the majority of studies discussed, the current study focuses exclusively on service provision within outpatient drug-free treatment settings. Specifically, the purpose of this study is two-fold. First, this research allows an examination of the extent to which outpatient drug-free programs offer care consistent with NIDA’s components of comprehensive services, including an array of core and wraparound services, and to examine by what means these facilities are offering the various services (i.e., onsite versus by referral). Second, multiple correlates of services are examined to determine what elements of organizational structure and client composition serve as facilitators or barriers to service diversification and the method of delivery. Although studies have often shown that services offered onsite are more often received, there might be particular elements of outpatient programming that perpetuate referral to offsite locations for services over in-house care.

Method

Sample and Procedure

The sample consists of 115 outpatient substance abuse treatment programs participating in a NIDA-funded project entitled “Treatment Costs and Organizational Monitoring” (TCOM).^{30, 31} Organizational structure data were collected in 2004-2005 in 9 states: Florida, Idaho, Illinois, Louisiana, Ohio, Oregon, Texas, Washington, and Wisconsin. Programs were recruited through four Addiction Technology Transfer Centers (ATTCs;

Southern Coast, Great Lakes, Gulf Coast, and Northwest Frontier) and reflected major types of Outpatient Drug-Free (ODF) treatment for adults. A naturalistic quota sampling plan was developed to provide adequate coverage of various program types (e.g., “regular” versus “intensive” levels of care) and geographic regions. In general, with the exception of an oversampling of nonprofit programs, the program sample was comparable to the 2005 ODF sample from the National Survey of Substance Abuse Treatment Services.³⁰ All programs that met inclusion criteria (i.e., stand-alone unit, adult outpatient, minimum of three staff) were enlisted and offered staff training opportunities and program-level feedback reports in exchange for providing organizational data. Participating staff members provided informed consent, and the study was reviewed and approved by the Texas Christian University Institutional Review Board.

Upon enrollment in the project, a program director or clinical manager completed the Survey of Structure and Operations (SSO)³⁰ (available without charge for download at www.ibr.tcu.edu). The SSO gathers information about general program characteristics, organizational relationships, clinical assessment and practices, services offered, staff and client characteristics, and recent program changes.

Measures

Program structure—Directors described their outpatient service approach as (a) regular outpatient (less than six hours of structured programming per week), (b) intensive outpatient (minimum of two hours of structured programming on three days per week), or (c) mixed (both regular and intensive outpatient).³² For this study, regular outpatient served as the reference group in the analyses. Parent organization affiliation was defined as belonging to a larger organization or agency of which the clinic or program is a part (with either shared or separate financial accounting practices). Primary catchment area was identified by the program director as rural, suburban, or urban and then collapsed into two categories representing rural versus non-rural. Ownership was assessed by asking whether the facility operated as a (a) private for-profit, (b) private not-for-profit, or (c) public entity (i.e., local, county, state, tribal, or federal). The programs were then collapsed into either private or public ownership categories. To assess accreditation, directors were asked to indicate whether the program was accredited by the Joint Commission or the Commission on Accreditation of Rehabilitation Facilities (CARF). Programs that responded “yes” to accreditation by one or both were coded as “accredited.”

Directors were also asked to indicate how many clients were referred from the criminal justice (CJ) system in the last year, and how many were dually diagnosed (DD; e.g., having both mental health and substance abuse problems during that same period). Numbers were then divided by the total annual client count, resulting in proportion of CJ-referred clients and proportion of DD clients. Due to the skewed distribution, the measure of DD clients was categorized into three groups representing none, less than half, or 50% or more. The proportion of female clients was determined by dividing the number of female clients by the total annual client count.

Caseload reflects the average counselor caseload (i.e., the number of clients per counselor) as reported by directors. For case management, program directors were asked how many

hours a “typical” client spends in case management per week. Those that responded with 30 minutes or more were coded as offering case management.

Services offered—Directors were provided with a list of services and asked to indicate whether or not each was (a) not provided, (b) provided by the program on-site, or (c) provided by referral only. The list of services measured is derived from the U.S. Department of Health and Human Services (N-SSATS).³² The services assessed reflect core and wraparound services described by the National Institute on Drug Abuse¹ and Etheridge et al.³³ Core services included assessment (e.g., comprehensive mental health assessment/diagnosis), therapy (e.g., counseling, relapse prevention groups), and drug monitoring (e.g., drug/alcohol urine screening), whereas wraparound services included health screening (e.g., HIV testing), transitional (e.g., discharge planning), medical (e.g., smoking cessation, detoxification), and specialized offerings (e.g., family therapy, financial services).

Analysis Strategy

All analyses were performed using SAS 9.1. To explore relationships between program characteristics and service delivery at the univariate level, ANOVAs were used for categorical measures (with number of services as the dependent variable) and Pearson correlations were calculated for continuous variables. An accurate estimation of the effects was handled through multiple imputation procedures,³⁴ because data was missing at random. Multivariate linear regression with a backward stepwise procedure was employed to evaluate the associations between services offered and variables that had shown significant relationships ($p < .05$) with services in the univariate analyses. Five separate regression analyses were conducted, with each of the following as the dependent measure: (1) total services offered, (2) core services offered onsite, (3) wraparound services onsite, (4) core services by referral, and (5) wraparound services by referral.

Results

Of the 115 non-methadone outpatient substance abuse treatment programs, 23% represent the Southern Coast ATTC, 26% the Gulf Coast ATTC, 23% the Great Lakes ATTC, and 28% the Northwest Frontier ATTC. Forty percent of the programs were accredited, 75% were affiliated with a parent organization, 62% offered case management hours, 21% were located in a rural area, 8% were publically owned, and 56% utilized a mixed service approach, with another 12% classified as offering exclusively intensive programming. Average program staff size was 6.71 ($SD = 4.93$) counselors, with a typical caseload of 26 ($SD = 14$) clients per counselor. For client composition, 23% of the programs served 50% or more dually diagnosed clients, 54% served less than half, and 23% did not serve dually diagnosed clients. The proportion of CJ-referred clients averaged 57% ($SD = 31\%$), with females representing on average 37% ($SD = 24\%$) of the client base.

On average, programs offered a higher proportion of listed core services (an average of nearly 8 of 10 core services; $M = 7.92$, $SD = 2.45$) compared to wraparound services (13 of 23 wraparound services, or 57%; $M = 13.01$, $SD = 8.79$). Regarding method of delivery, on average, more of the 33 total services were offered onsite ($M = 14.92$, $SD = 3.85$) rather than by referral to an offsite location ($M = 6.00$, $SD = 6.49$). Nearly all core services were

offered onsite ($M = 7.22$, $SD = 1.43$), rather than by referral ($M = .70$, $SD = 1.02$). Pharmacotherapy was the one exception, with one more program offering this core service by referral than by onsite provision (see Table 1).

Unlike core services, wraparound services varied in delivery method with slightly more services being offered onsite ($M = 7.70$, $SD = 3.05$), than by referral ($M = 5.31$, $SD = 5.74$). Services within the health screening and medical categories were more likely to be offered by referral, whereas transitional services were more likely to be offered onsite (see Table 1). Some specialized services were generally offered onsite (family therapy, HIV education), while others were generally offered by referral (education classes, financial services, legal counseling).

Means and standard deviations for services offered by program structure measures and delivery method are described in Table 2. Significant univariate associations were revealed for accreditation, case management, public ownership, mixed service approach, and dually diagnosed clients. Pearson correlations examining associations between services and continuous structure measures (i.e., caseload, average percent of criminal justice clients, and average percent female clients) revealed only one statistically significant relationship: programs with a higher percentage of criminal justice clients offered fewer core services ($r = -.18$, $p < .05$). Association with a parent organization, rural catchment, intensive service approach, caseload, and percentage of female clients were not significantly associated with service provision at the univariate level of analysis and were therefore not included in multivariate models.

The six program characteristics that were significantly correlated with service provision in one or more univariate analysis were examined simultaneously in each of the five multiple regression models. Results for total services offered (onsite or by referral) are presented in Table 3. Accredited programs and those with case management offered more services than unaccredited programs or those without case management. Results of the four subsequent analyses examining specific service category and delivery method are presented in Table 4. Correlates of more core services offered onsite included accreditation, case management, and a higher percentage of dually-diagnosed clients ($F(6,106) = 6.35$, $p < .0001$). Correlates of more wraparound services offered onsite included case management and not being publicly owned ($F(6,106) = 3.17$, $p < .01$). Public programs were more likely to provide more core services by referral, as were those with a lower percentage of dually-diagnosed clients and a lower percentage of CJ-referred clients ($F(6,106) = 6.47$, $p < .0001$). Correlates of more wraparound services by referral included accreditation and a lower percentage of dually-diagnosed clients ($F(6,106) = 4.86$, $p < .001$).

Discussion

The current study considered the extent to which services are offered within outpatient drug-free treatment facilities, the method through which these services are available, and the degree to which organizational structure and client composition are associated with provision. These findings reveal that outpatient drug-free programs offer a majority of core services and roughly half of the wraparound services listed by the U.S. Department of

Health and Human Services (N-SSATS),³² perhaps reflecting the availability of resources for the provision of these services. These results are disconcerting if acknowledging that better client outcomes (e.g., longer retention in treatment, lower tendency for relapse) are related to a broader array of comprehensive services beyond the typical core offerings.^{4, 21, 35, 36} Furthermore, the findings show that while core services are primarily offered onsite, a majority of medical and health screening services are only being offered by referral. While referrals help promote a more comprehensive coverage of services, barriers exist that limit the use of such mechanisms. For instance, programs are not always reimbursed for linkages to offsite care³⁷ and medical services offered by referral are less likely to be received.¹⁰ Providing specialized services by referral may be particularly problematic for some treatment populations.³⁸

While 77 of the 115 programs participating in this study served dually diagnosed (DD) clients (23% reported client composition of greater than 50% DD), fewer than half offered psychiatric services, with most offering assistance offsite. This falls short of the goal of providing an integrated service delivery model, under which substance abuse treatment and mental health services are provided in a single setting.³⁹⁻⁴¹ In addition, although on average more than a third of clientele were female, outpatient programs provided limited availability to services needed by women (e.g., childcare: 37%, transportation assistance: 55%) and that are needed to breakthrough key overarching treatment barriers, reflecting similar findings from D'Aunno.²⁹ Similarly, programs with a higher proportion of clients from the criminal justice system tend to offer fewer core services by referral. Findings are encouraging, however, in that programs with more dually diagnosed clients tend to generally offer their services in-house rather than requiring clients to go outside the program for needed assistance.

Although gaps in services appear problematic, particularly for dual-diagnosis and female clients, several organizational factors appear to be associated with the likelihood that services will be offered. Results of the current study document that publicly-owned programs offer fewer wraparound services onsite, possibly due in part to available resources and their greater utilization of government links for provision of these ancillary services.²⁰ Results from this study, also suggest that more wraparound services (including medical) are offered by accredited programs than non-accredited programs, albeit primarily outside the treatment facility. Case management is also important. In terms of services offered by referral, treatment planning that involves case management is generally associated with a heightened evaluation of need for additional health services⁴ which generally leads to the development of linkages to external sites within the community. However, results from the current study also suggest that case management offered within outpatient programs relates to the availability of both core and wraparound services offered within the treatment facility (onsite availability).

Certain limitations to the current study should be noted. First, service availability was evaluated at the program-level, rather than the client-level. While client-level data would provide a measure of service receipt, director responses serve as a marker for the propensity to which drug-free treatment programs offer service linkages.¹⁹ Second, in order to increase homogeneity in the sample, the current study focused exclusively on drug-free outpatient

treatment, which represents the overwhelming majority of treated clients in the U.S.⁴² These results may not generalize to other treatment modalities. For instance, methadone outpatient facilities place a higher priority on serving special populations and making referrals for appropriate services than non-methadone outpatient facilities.⁸

Third, in order to reduce the likelihood of statistical error, the current study did not examine subcategories of services (e.g., transitional, medical) in relation to organizational and client composition factors. This relationship deserves further exploration to determine whether factors found to be non-significant in the current study (e.g., caseload, parent affiliation) could explain service provision at the subcategory level of analysis. For instance, it is possible that programs with higher caseloads might offer more specialized services (such as parenting instruction) by referral. Fourth, linkages between organizational factors and level of service offerings are potentially reciprocal, rather than reflecting a single causal direction. It is possible that women and persons with mental illness choose to attend programs because of their variety of services, rather than the program expanding services based on client composition. Future studies should examine organizational factors (such as accreditation and case management) as correlates of service provision in a longitudinal framework. By examining change in service delivery over time, the degree to which programs with rich service offerings seek accreditation or offer more services in order to gain accreditation can be examined.

Implications for Behavioral Health

Findings from the current study indicate that outpatient treatment settings are adequately offering core services and that shortcomings in the provision of wraparound care need to be addressed. For example, although 66% of the substance abuse treatment programs serve clients with mental health issues, fewer than half of the programs offered specialized mental health care. It is clear that more policy initiatives are needed to continue to promote the importance of an integrated service delivery model, as well as resources in order to provide substance abuse treatment and mental health services in a single setting. Affiliation with a hospital or mental health facility might expand client care beyond drug abuse treatment to include mental health services for those with a level of severity requiring such services. Equally of concern is the consideration that although a third of clients within a typical outpatient program are female, childcare and transportation assistance to treatment are rarely available. Programming that acknowledges these services as vital for ensuring that women are able to receive treatment should be implemented.

While this research indicates there is inadequate provision of specialized services in many programs, there are markers that suggest ways that the field of substance abuse treatment can begin addressing these issues. This study corroborates other research documenting that the act of seeking accreditation from a nationally recognized accreditation agency, such as the Joint Commission or CARF, has the potential to facilitate behavioral health services. Not only do clients in accredited programs have access to more specialized services that might not be available in non-accredited settings, but programs seeking this status are actively enhancing service diversification and providers are becoming more educated in ways to meet clients' needs⁴³ as part of the process. Furthermore, outpatient programs providing

case management were found to offer more core and wraparound services onsite, than programs without case management. Therefore, if resources are available, programs providing behavioral health services should consider the benefit of providing case management to their clients. As such, the case manager as an advocate and resource may expedite greater facilitation of onsite offerings to avoid gaps in service and to help offset barriers to effective client care.

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Table 1

Number of Programs Offering Services by Delivery Method

Services	Offered		Onsite		Referral	
	N	%	N	%	N	%
Core Services						
Assessment						
Substance Abuse	112	97.4	109	94.8	3	2.6
Mental Health	65	56.5	39	33.91	26	22.6
Therapeutic						
Individual Therapy	115	100	115	100	0	0
Group Therapy	114	99.1	114	99.1	0	0
Aftercare Prevention Group	106	92.2	105	91.3	1	.9
Relapse Prevention Group	103	89.6	99	86.1	4	3.5
12-Step/Support Group	88	76.5	71	61.7	17	14.8
Pharmacotherapy/Rx Meds	41	35.7	20	17.4	21	18.3
Drug Monitoring						
Drug/Alcohol Urine Screen	106	92.2	100	87.0	6	5.2
Blood Alcohol Testing	67	58.2	65	56.5	2	1.7
Wraparound Services						
Health Screening						
HIV Testing	60	52.1	25	21.7	35	30.4
TB Screening	58	50.4	20	17.4	38	33.0
Hepatitis Testing	47	40.9	4	3.5	43	37.4
STD Testing	47	40.9	4	3.5	43	37.4
Transitional						
Discharge Planning	113	98.3	113	98.3	0	0
Referral: Transitory Services	109	94.8	95	82.6	14	12.2
Assistance Obtaining Social Services	101	87.8	84	73.0	17	14.8
Employment Counseling/Training	83	72.2	43	37.4	40	34.8
Housing Assistance	75	65.2	37	32.2	38	33.0
Medical						
Smoking Cessation	38	33.1	18	15.7	20	17.4
Psychiatric	53	46.1	17	14.8	36	31.3
Detoxification	42	36.5	17	14.8	25	21.7
Diagnosis, Testing, Treatment	43	37.4	11	9.6	32	27.8
Specialized						
Family Therapy	101	87.9	90	78.3	11	9.6
HIV/AIDS Education/Counseling	105	91.3	89	77.4	16	13.9
Outcome Follow-Up (Post-Discharge)	79	68.7	77	67.0	2	1.7
Transportation Assistance to Treatment	63	54.8	43	37.4	20	17.4
Parenting Instructions	66	57.4	37	32.2	29	25.2
Family/Partner Violence Services	66	57.4	29	25.2	37	32.2

Services	<u>Offered</u>		<u>Onsite</u>		<u>Referral</u>	
	<i>N</i>	%	<i>N</i>	%	<i>N</i>	%
Childcare	42	36.6	21	18.3	21	18.3
Education Classes (e.g., GED)	42	36.5	7	6.1	35	30.4
Financial Services	34	29.6	7	6.1	27	23.5
Legal Counseling/Services	33	28.7	0	0	33	28.7

Table 2

Services Available by Delivery Method, Service Category, and Program Characteristic

Program Characteristics	Total			Onsite			Referral				
	M	SD		Core		Wraparound		Core		Wraparound	
				M	SD	M	SD	M	SD	M	SD
Accreditation											
Yes	23.68***	6.06	7.83***	1.50	7.43	3.22	.98*	1.20	7.43***	6.02	
No	19.09	6.28	6.81	1.23	7.88	2.95	.51	.83	3.9	5.11	
Parent Organization											
Yes	21.44	6.5	7.29	1.47	7.5	3.12	.78 [†]	1.08	5.87 [†]	5.89	
No	19.39	6.67	7.00	1.28	8.31	2.82	.45	.78	3.66	5.01	
Case Management											
Yes	21.86*	7.10	7.35	1.33	8.11 [†]	2.49	.70	1.07	5.69	6.17	
No	19.42	5.31	7.00	1.56	7.05	3.73	.68	.93	4.70	4.97	
Rural											
Yes	19.79	6.53	7.38	1.21	8.42	3.78	.50	.83	3.50 [†]	4.81	
No	21.24	6.56	7.18	1.48	7.52	2.83	.75	1.06	5.79	5.89	
Public Ownership											
Yes	22.22	6.94	6.67	1.22	5.00***	3.20	1.89***	1.83	8.671	7.14	
No	20.83	6.55	7.26	1.44	7.93	2.94	.59	.86	5.03	5.55	
Intensive Service Approach											
Yes	19.64	6.66	7.21	1.72	6.50 [†]	2.56	.86	1.46	5.07	6.39	
No	21.12	6.56	7.22	1.39	7.87	3.09	.67	.95	5.35	5.68	
Mixed Service Approach											
Yes	20.11	6.37	7.25	1.39	8.27*	3.00	.52*	.94	4.08**	5.27	
No	22	6.72	7.18	1.48	7.00	3.00	.92	1.07	6.86	5.97	
% Dual Diagnosis Clients											
> 50 %	19.46 [†]	5.83	7.88*	1.90	8.62 [†]	2.02	0.12***	.43	2.85***	3.94	
< 50 %	20.57	6.5	7.08	1.11	7.68	3.46	.76	1.13	5.05	5.83	

Program Characteristics	Total				Onsite				Referral			
	M		SD		Core		Wraparound		Core		Wraparound	
	M	SD	M	SD	M	SD	M	SD	M	SD	M	SD
None	23.19	7.10	6.89	1.40	6.89	1.40	6.89	2.72	1.11	.93	8.30	5.84

Note: Significance tests represent differences between levels of the program characteristic and each service category

† $p < .1$,
 * $p < .05$,
 ** $p < .01$,
 *** $p < .001$

Table 3

Results of Multiple Regression Model for Total Services by Program Characteristic

Program Characteristic	Estimate	Total
		SE
Accreditation	4.576***	1.335
Case Management	3.391**	1.249
Public Ownership	-.657	2.170
Mixed Service Approach	-.927	1.263
% Dual Diagnosis	-1.165	.921
Avg. % CJ Referrals	.866	2.096
Adjusted R ²	.15	

Note: Multiple regression includes program characteristics significant in univariate analyses at $p < .05$.

†
 $p < .1$,

*
 $p < .05$,

**
 $p < .01$:

 $p < .001$

Table 4
Results of Multiple Regression Model for Service Category and Delivery Method by Program Characteristic

Program Characteristic	Onsite			Referral		
	Core Estimate	SE	Wraparound Estimate	SE	Core Estimate	SE
Accreditation	1.317***	.267	.298	.635	.098	.350
Case Management	.598*	.249	1.229*	.594	-.063	.185
Public Ownership	-.712 [†]	.435	2.856**	1.034	1.103***	.322
Mixed Service Approach	.193	.251	.778	.598	-.128	.322
% Dual Diagnosis	.571**	.185	.636	.439	-.485***	.137
Avg. % CJ Referrals	.208	.418	.666	.995	-.720*	.310
Adjusted R ²	.22		.10		.23	

Note: Multiple regression includes program characteristics significant in univariate analyses at $p < .05$.

[†] $p < .1$,

* $p < .05$,

** $p < .01$,

*** $p < .001$