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Evidence-Based Treatment for Opiate-Dependent Clients: Availability, Variation, and Organizational Correlates

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Abstract: The majority of opiate-dependent clients entering substance abuse treatment are referred to "drug-free" (non-methadone) modalities. Given the known challenges of treating these clients in drug-free settings relative to the documented effectiveness of methadone maintenance, these analyses investigate the availability of various clinical and wraparound services for this population among a US sample of addiction treatment programs with and without methadone maintenance services (N = 763). Face-to-face interviews conducted in 2002–2003 gathered data on the number of opiate-dependent clients treated; organizational characteristics, including size, ownership, accreditation, and staffing; treatment practices, including methadone availability, use of other pharmacotherapies, and levels of care; and services offered, including vouchers, transportation, and other wraparound services. Facilities treating proportionately more opiate-dependent clients were significantly more likely to offer a variety of evidence-based services, regardless of methadone availability. Implications for referral linkages and quality of care are discussed.

Keywords: Evidence-based practice, innovation, opiate addiction, treatment

Recent Federal data indicate that methadone was a planned component of treatment for only 40% of primary heroin users entering treatment (1). Thus, the majority of opiate-dependent clients are treated in modalities other than methadone maintenance (MMT). Because opiate users have

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unique treatment needs that may not be fully met in non-methadone programs (2), the services available to this population deserve particular attention. Of concern is whether these clients have access to other pharmacotherapies, psychosocial counseling approaches, and wraparound services having documented evidence of effectiveness for opiate dependent clients. This article examines the availability and correlates of a number of evidence-based practices (EBPs) for opiate dependence in a representative US sample of addiction treatment programs with and without MMT services.

There is relatively little literature on opiate users treated in non-methadone settings. There is some evidence that opiate-dependent clients in outpatient drug-free (OPDF) settings have less frequent opiate use at admission and later onset of dependence (3, 4). While they may be inappropriate candidates for MMT, they may benefit from other EBPs developed for the treatment of opiate dependence. These include the prescription of buprenorphine or naltrexone, the use of contingency management approaches (5, 6), and the provision of various wraparound services. In particular, opiate-dependent clients, especially IV drug users, have significant needs for general medical care, and are at increased risk for contracting viral infections such as HIV and hepatitis. There is evidence that MMT is effective in decreasing HIV risk behaviors among clients in treatment (7, 8). It has also been documented that opiate-dependent clients' retention in treatment improves when they are employed (9), and when they have adequate transportation to treatment. Programs that are able to meet these needs have generally been found to have higher retention rates (10), and their clients exhibit diminished drug use and criminal behavior. An unanswered question is whether non-MMT programs have adopted these practices as part of their clinical services.

It is important that treatment centers with sizeable opiate-dependent caseloads are equipped to meet the complex needs of these clients. The following analyses consider the organizational factors associated with the availability of the three FDA-approved pharmacotherapies for opiate dependence, contingency management approaches in counseling, and wraparound services including the provision of HIV programs, vocational services, and transportation assistance. We compare these dimensions of service delivery across opiate-focused programs (i.e., where opiate clients represent at least 25% of the center's caseload) and non-opiate-focused programs. Regardless of the modality in which they are treated, opiate-dependent clients benefit from access to any and all of these services. We examine community based treatment programs with MMT units as one of their modalities, as well as programs with no MMT services available. By including both methadone-available and non-methadone settings, we are able to compare the number and type of services available to opiate

users in the range of programs where they may receive treatment. In particular, the inclusion of a large number of non-methadone programs provides insight into the services available in the programs to which the majority of opiate-dependent clients are referred.

METHODS

Data for these analyses were collected in 2002–2003 from nationally representative samples of specialty addiction treatment programs in the public and private sectors. Extensive face-to-face interviews were conducted with administrators and clinical directors of 763 treatment programs, including inpatient and outpatient, hospital and freestanding, urban and rural facilities. Among them, 401 are programs operating on revenues from predominantly private sources (e.g., commercial insurers and client fees), while 362 derive their principal funding from government sources (including block grants, demonstration grants, and criminal justice contracts). Government-owned, non-profit, and for-profit programs are included in the samples. Responding facilities totaled 83% of those that were sampled and eligible. Details about the study design and sample selection have been published elsewhere (11, 12).

Units offering *exclusively* MMT services are not included in the sample. However, units offering MMT along with other modalities are eligible, and comprise about 20% of the total sample. Nationally, it is estimated that about 54% of all facilities providing MMT services are located within mixed-modality settings such as those included here (1). As noted above, a key focus of these analyses is to identify the availability of EBPs for opiate addiction across a broad spectrum of settings, because many opiate dependent patients receive treatment outside of traditional MMT programs. Thus, these analyses speak to service availability in the mainstream addiction treatment system, but are not claimed to be reflective of treatment services available within methadone-only programs.

Interviews at each program included detailed questions on the treatment center's organizational structure, staffing, services, caseload, and adoption of EBPs. Specific to these analyses, respondents reported the proportion of the center's caseload with a primary diagnosis of opiate abuse or dependence, as well as whether the center operated its own methadone clinic.

Respondents reported on the use of several EBPs: (a) any of three pharmacotherapies (methadone, naltrexone, or buprenorphine); (b) voucher-based motivational incentives; (c) programming for HIV/AIDS clients; (d) transportation assistance; and (e) linkages to employment or

vocational services. Each of these is measured as a dichotomous variable (1 = available, zero otherwise).

To examine variations in these services by programs' caseloads, we measured the proportion of the centers' clients with primary opiate dependence problems. Overall, respondents reported an average of 16.3% of their caseloads having primary opiate dependence diagnoses. Because evidence-based treatment practices for opiate dependence may be more prevalent among programs having greater exposure to this population, we organized our analyses around this variable rather than use it only as a control variable in our models. Specifically, we examine the relative availability of these clinical practices in programs in which at least 25% of the patients are opiate dependent. Just over 22% of the treatment centers in this sample (N = 170) met this criterion. We refer to these as "opiate-focused programs." This dichotomy yields two distinct groups of facilities with regard to their experience in treating opiate dependence. In the opiate-focused programs, an average of 43.2% of the caseload has a primary opiate dependence diagnosis, whereas in the remaining programs, an average of only 8.0% of patients are opiate dependent. Our analyses examine systematic differences in the clinical services available in these two groups of programs.

A number of organizational characteristics are included as control variables in these analyses. Because larger programs may have greater staff and financial resources to devote to the delivery of EBPs, we control for the *number of full-time equivalent (FTE) employees* (log-transformed for analysis). Next, because organizations in the public sector tend to have different caseloads from those in the private sector, and may be subject to mandates to provide certain types of services, we control for *ownership* of the center (1 = government owned, 0 = other), profit status (1 = for profit, 0 = nonprofit), and for the percentage of the center's annual operating *revenues received from government grants and contracts*. We also include a dichotomous measure indicating whether the program is *accredited* by either JCAHO or CARF. In terms of staff credentials, we control for whether the program has any *physicians* on its payroll, along with a measure of the percentage of the clinical staff that are *certified addictions counselors*. Finally, we control for the geographic location of the treatment program, contrasting "rural" facilities with those located within Census-defined metropolitan or micropolitan areas.

RESULTS

Table 1 displays descriptive statistics for the organizational characteristics and treatment services measured. We compare opiate-focused programs

Table 1. Comparison of opiate-focused programs vs. others on organizational characteristics and available services

	Opiate-focused programs (>25% primary opiate clients) N = 170	All other programs (<25% primary opiate clients) N = 593
Structural Variables:		
Number of FTEs	41.7	33.3
Government-owned	11.8%	13.7%
% Public Revenues*	40.6%	49.8%
For profit	17.6%	17.5%
Accredited**	61.2%	44.7%
Physician on Staff**	82.7%	68.1%
% Certified Counselors*	51.9%	59.6%
Rural Area	8.8%	12.0%
Clinical Services:		
Methadone**	32.5%	10.1%
Naltrexone*	38.1%	28.0%
Buprenorphine**	16.9%	8.1%
Contingency Management*	31.0%	22.8%
HIV Program*	20.6%	13.0%
Transportation Assistance*	69.4%	59.2%
Employment Counseling*	37.6%	51.8%

*Between-group differences significant at $p < .05$; **$p < .01$.

against all other facilities. Tests for statistical significance between the two groups (chi-square or t-tests) were computed for each variable. As shown, opiate-focused programs were more likely to be accredited, and to have at least one physician available. By contrast, these programs received a significantly lower proportion of their annual operating revenues from public sources (government grants and contracts), and significantly fewer of their counselors held addictions certifications. There were no significant differences between the two types of facilities in terms of size, ownership, profit status, or geographic location.

At the bivariate level, there appeared to be significant differences between opiate-focused programs and other facilities in the availability of EBPs for opiate-dependent clients. Opiate-focused programs were significantly more likely to: offer methadone, naltrexone, and buprenorphine; utilize contingency management techniques; offer programs for HIV/AIDS clients; and provide transportation assistance. However, they were significantly less likely to offer vocational services.

Table 2. Regression results indicating relative likelihood of service availability in opiate-focused programs (N = 763)[a]

	Results for opiate-focused programs
Methadone	OR = 3.95**
Naltrexone	OR = 1.16
Buprenorphine	OR = 1.36
Contingency Management	OR = 1.61*
HIV Program	OR = 1.87*
Transportation Assistance	OR = 1.32
Employment Counseling Services	OR = .56**

[a]Each service was included as the dependent variable in a separate regression model, controlling for status as an opiate-focused program, size, ownership, profit status, accreditation, public revenues, counselor credentials, rural location, and physician availability. Odds ratios shown are those associated with service delivery in opiate-focused programs.

*Significant at $p < .05$; **Significant at $p < .01$.

Next, we estimated a series of logistic regression models. Each model had one EBP as the dependent variable, opiate-focused program status as the predictor variable, and all of the organizational variables as controls. These nine models allow us to identify whether opiate-focused programs are, all else equal, significantly more likely to offer each of these EBPs compared to programs with proportionately fewer opiate-dependent clients.

Table 2 presents the coefficients associated with opiate-focused programs in each EBP model. Controlling for differences in the organizational characteristics of these programs attenuates the bivariate between-group differences for several EBPs. Net of the organizational variables, there are no significant differences between opiate-focused programs and other facilities in prescribing naltrexone or buprenorphine, or providing transportation or vocational counseling services. However, there are significant between-group differences on the remaining EBPs. Not surprisingly, opiate-focused programs were almost four times more likely than other programs to offer MMT services (odds ratio [OR] = 3.95, $p < .001$). They were about 1.6 times as likely to utilize motivational incentives ($p < .05$); and they were almost twice as likely to offer programs for HIV/AIDS clients (OR = 1.87, $p < .05$). By contrast, they were roughly half as likely to offer vocational services (OR = 0.56, $p < .01$).

Because we included methadone as a treatment service in these models rather than considering methadone availability as an organizational

characteristic, a question remains as to whether the higher prevalence of opiate dependence-related treatment practices is being driven by a small but robust set of MMT clinics in the sample. We ran additional regression models (not shown) to examine differences *among* the opiate-focused programs based on whether those programs operated an MMT clinic as part of their services. These two subgroups of opiate-focused programs differed significantly on only one treatment service: the availability of programs for HIV/AIDS clients. Methadone-dispensing programs were more than four times as likely as other opiate-focused programs to offer such services.

DISCUSSION

The majority of opiate-dependent clients receiving substance abuse treatment in the United States are in modalities other than methadone maintenance. These analyses show that there are significant variations in the availability of EBPs for opiate dependent clients based on the composition of a facility's usual caseload. At the bivariate level, there is a clear distinction in EBP delivery between programs meeting a threshold level of opiate-dependent clients and those who treat proportionately fewer such clients. Once other organizational variables are controlled, there remain significant differences in the availability of methadone, the use of motivational incentives, and HIV/AIDS programming. These differences were observed when a criterion level of 25% opiate-dependent clients was used. Analyses utilizing a lower threshold level (not shown) were less robust. Thus, it appears that once a "critical mass" of opiate-dependent clients is reached, the provision of some EBPs is significantly more likely.

These findings have implications for referral choices made by agencies that frequently refer opiate-dependent persons to treatment. If these agencies are unable or unwilling to refer opiate-dependent persons to MMT, it appears that these persons would be best served by referrals to programs that have a critical mass of opiate dependent clients, as these are more likely to utilize evidence-based practices that enhance engagement, retention, and recovery of this population. Being referred to an opiate-focused program increases the *likelihood* that clients will receive needed services, but it is by no means a guarantee that any or all of these services will be available. Future research should examine more closely the extent to which opiate-dependent clients in "drug-free" modalities receive evidence-based clinical care, and help referral sources identify treatment settings in which these clients have the best chances of recovery.

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