

Need for Medical and Psychosocial Services Among Injection Drug Users: A Comparative Study of Needle Exchange and Methadone Maintenance

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This study compares the prevalence of perceived and unmet needs of HIV-negative injection drug users (IDUs) not receiving drug treatment (n = 251) and those recruited from a methadone maintenance program (n = 312) in 1998. We studied self-reported needs for six community services: medical, mental health, housing, income assistance, alcohol treatment, and drug treatment. Respondents reported the highest levels of need for mental health and housing services. Ninety-four percent of out-of-treatment IDUs reported having at least one need compared to 62% of methadone clients (p < .001). Across all reported service needs, at least 69% of respondents in both cohorts reported their needs were unmet. While HIV-infected drug users receive assistance through the Ryan White CARE Act, these findings suggest that seronegative drug users may benefit from similar community service programs. (Am J Addict 2002;11:262-270)

Injection drug users constitute a growing percentage of new AIDS cases in the United States. In studies of persons with HIV, it has been recognized that injection drug users frequently utilize medical services as well as a broad array of supportive services, including drug treatment, alcohol treatment, benefits counseling, housing, and mental health treatment.^{1,2} These

services, often provided through multiple community-based providers, are designed to decrease reliance on more costly institutional services and improve access and adherence to medical care and quality of life. Recent research suggests that HIV-infected injection drug users have high levels of need for a variety of services and that these needs often go unmet.^{1,2}

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Injection drug users who are not HIV-infected also use high rates of medical services and are likely to have substantial unmet needs for other services.³ While the Ryan White CARE Act has provided substantial funding for supportive services for HIV-infected drug users, such assistance is unavailable to drug injectors without HIV. HIV-infected drug users often have access to Ryan White CARE Act case managers, who can enable clients to more effectively access services; such case managers are not available to HIV-negative drugs users.⁴ Thus, even when community services are available, clients may have difficulty negotiating the complex health and social service systems. Reasons for unmet service needs vary and include lack of patient knowledge about the availability of services as well as more concrete barriers to care. Drug users who are actively injecting might be expected to have particularly high needs; yet, the greatest difficulty accessing assistance is due to the disorganized lifestyle often associated with injection.

Needle exchange programs (NEPs), originally developed to reduce HIV transmission among active injectors, have functioned both as a single intervention and as a bridge to other treatment, including formal drug treatment programs and mental health treatment.⁵ There are currently over one hundred NEPs in operation in the United States, the number increasing dramatically over the past six years.⁶ While NEPs offer direct contact with drug users, most have relatively limited hours, are staffed by volunteers, do not mandate a prescribed frequency of attendance, and, because clients are anonymous, have not typically offered other services on-site (although some offer referrals).

Methadone has been available for the treatment of heroin addiction since the 1960s. Methadone maintenance has been the most rigorously studied method of drug treatment in regard to treatment

effectiveness, variously defined as reduction in street crime, street drug use, and improvement in psychological functioning.⁷ It has been suggested that methadone maintenance may serve as an effective platform for delivery.^{7,8}

The purpose of this paper is to assess and compare the need and unmet need for supportive services in a sample of injection drug users enrolled in a needle exchange program and a methadone maintenance program. The specific supportive services we examined included medical, drug treatment, alcohol treatment, mental health treatment, income assistance, and housing.

METHODS

Between July 1997 and March 1998, we recruited persons from the Providence Needle Exchange Program and from Codac, Inc., Rhode Island's largest Methadone Maintenance Treatment Program (MMTP) for the Providence Methadone and Injection Use Study (PROMETHIUS), a study of health service utilization among injection drug users in Providence, RI.⁹ To be eligible, MMTP clients had to have been continuously enrolled in Codac for at least 6 months; NEP clients must have not received formal substance abuse treatment over the previous six months. All subjects were over 18 years of age, nonpregnant, and signed informed consent. This study was approved by the Rhode Island Hospital Human Subjects Committee.

Because of the anonymous nature of NEP attendance and the brevity of most interaction between NEP staff and attendees, we recruited attendees to a separate research site (Rhode Island Hospital). The NEP gave out laminated study cards announcing a "health service use study" to all IDUs seen at the NEP during the recruitment period and kept demographic data (sex, race, and age) for all attendees who received cards. At the study visit, the

research interviewer recorded the study card number to allow a comparison of the demographics of those participating in the study versus those who did not choose to participate. Study participants underwent a 45 minute, face-to-face interview with study staff. The questionnaire included sections on demographics, drug use, and health service use. All persons received urine toxicologic testing (to confirm they were using heroin or cocaine) and HIV testing (using Orasure, saliva-based testing).¹⁰ Persons completing the research assessment received \$40 and information regarding substance abuse treatment programs.

The Providence Needle Exchange Project (NEP) began in 1995 under the auspices of the Rhode Island Department of Health. Volunteers and one paid coordinator operated the anonymous exchange in Providence ten hours each week, exchanging needles and providing condoms, bleach bottles, and alcohol wipes. Written information is available on-site regarding formal drug treatment, medical and mental health care services, shelters, and legal services. No direct referrals are made by NEP staff, and no case management services are available on-site.

Codac MMTP clients were interviewed at Codac and received the same research protocol as NEP clients except for urine toxicologic testing. Codac, Inc., is Rhode Island's largest methadone maintenance treatment program. The general clinical protocol includes weekly group and individual counseling in addition to daily methadone dosing. Patients are seen by the physician as necessary for dose adjustments, and random urinalyses are performed approximately weekly. No designated case managers are available at Codac; counselors may provide advice and direct referrals for services off-site.

The interviews were performed by four experienced interviewers who rotated between the two enrollment sites.

Unmet needs were assessed by subject responses to two-part questions across multiple possible service needs. For example, subjects were first asked, "In the last 6 months, did you need mental health treatment or emotional care or counseling?" If they responded "Yes," they were asked, "Did you get help in finding mental health treatment?" Responses included "No," "Yes, but not as much as I needed," and "Yes, as much as I needed."

Participants were asked whether in the last 6 months, they needed the following supportive services: medical care, alcohol treatment, drug treatment (needle exchange participants only), income assistance, or housing. Persons enrolled from NEP were asked if they needed drug treatment. Participants who stated that they needed one or more of the five services were considered to have need.

Unmet need was defined as needing the service in the prior six months but not receiving help or not receiving as much help as needed. Unmet need was determined as the number of persons with an unmet need divided by the total number of persons who said they needed help for that service. This approach assessed how well the system provides for persons who need the service.

Because HIV-infected IDUs have access to case management services, we excluded from analyses persons who tested HIV-positive (NEP, 6 persons; MMT, 51 persons).

Analyses

Bivariate associations between each variable and unmet need were assessed using Fisher's exact test. Multiple logistic regression was used to test the independent contributions of factors previously associated with each type of unmet need. We developed models for each cohort separately (MMTP, NEP) and for the combined group. All analyses were performed using SAS.

RESULTS

Sociodemographic Characteristics

Of 354 individuals seen at NEP during the study period, 251 (71%) consented to enroll in the study. Of 452 individuals seen at MMTP during the enrollment period, 312 (69%) were enrolled. There was no significant difference by sex, race, or mean age between participants and non-participants at either site.

Table 1 shows the sociodemographic characteristics of persons enrolled in the Methadone Maintenance Treatment Program ($n = 312$) and Needle Exchange Program ($n = 251$). The MMTP cohort was predominantly male (56%), white (67%), over age 30 (92%), and had a high school education or less (76%). Similarly, in the NEP cohort, the majority of subjects were male (67%), white (85%), over age 30 (81%), and had a high school education or less (75%). The majority of subjects in both groups had a current partner (66 vs. 69%).

More than half of both groups had used intravenous drugs for at least five years (55%). Eighty three percent of persons in the MMTP cohort had been continuously enrolled for more than one year, and the majority (85%) was receiving daily methadone doses higher than 70 mg/day. The majority of the NEP group was currently injecting both heroin and cocaine (62%), with fewer using heroin alone (34%) or cocaine alone (4%). Two thirds of NEP clients reported shooting up more than three times per day.

Needle exchange clients reported greater needs for all services than MMTP clients, with 94% reporting having at least one need (Table 2). Needle exchange clients reported significantly greater needs for housing (45.6% vs. 24.1%), mental health treatment (40.5% vs. 31.7%), and alcohol treatment (8.4% vs. 3.2%) than methadone clients. Eighty percent of needle exchange clients believed they needed drug treatment. Over sixty percent of MMTP clients reported need for at least one service. The most frequently reported need

TABLE 1. Population Characteristics

Variable	Cohort		Total N = 563	p-Value
	MMTP, n = 312	NEP, n = 251		
Gender				
Male	175 (56%)	168 (67%)	343 (61%)	< .01
Education				
< 12 years	120 (39%)	83 (33%)	203 (37%)	
12 years	116 (37%)	94 (38%)	210 (38%)	
Over 12 years	75 (24%)	73 (29%)	148 (26%)	.29
Insured				
Public or private	206 (66%)	93 (37%)	299 (53%)	< .001
Race				
White	208 (67%)	214 (85%)	422 (75%)	< .001
Have partner				
No	96 (31%)	86 (34%)	182 (32%)	.43
Age				
≤30	26 (8%)	78 (31%)	104 (19%)	
31-40	125 (40%)	91 (36%)	216 (38%)	
>40	161 (52%)	82 (33%)	243 (43%)	< .001

Unmet Needs Among IDUs

TABLE 2. Need for Supportive Services

Need	MMTP	NEP	<i>p</i> -Value
Place to live	24.1%	45.6%	< .001
Mental health treatment	31.7	40.5	.04
Income assistance	24.7	27.3	.54
Alcohol treatment	3.2	8.4	.01
Drug treatment	X*	79.6	N/A
Medical treatment	21.2	22.7	.73
At least one need	61.5	93.6	< .001

*X = not applicable.

among MMT clients was for mental health treatment (31.7%).

Among persons with needs, most reported that their needs were not met (Table 3), and for all services, at least 69% of respondents in both cohorts reported their needs were not met. Income assistance remained unmet most often. We examined the gradient of receiving partial help for needs. We tested whether MMT clients were more likely than NEP clients to report getting some help but “not as much as needed” across services. MMT clients were more likely to report getting some help with finding a place to live (25% vs. 11%; $p = .03$), and with income assistance (21% vs. 13%; $p = .08$) than NEP clients.

Variables associated with each prevalent need were examined using multivariate analysis controlling for race, gender, partner status, insurance, age, education, living

situation, and having at least one other need (Table 4). In each model, site was included as a control variable. Needle exchange clients were significantly less likely to report needs for medical services (OR 0.56; $p = .02$) and more likely to need a place to live (OR 1.8; $p < .01$) than MMT clients. Non-whites (OR 0.55; $p = .03$) and persons with insurance (OR .28; $p < .01$) were less likely to report a need for medical services. As expected, living on the street was significantly associated with needing a place to live (OR 14.8; $p < .01$). Female gender was associated with reporting a greater need for mental health treatment (OR 1.6; $p = .01$). Non-white race (OR 1.4; $p = .02$) was significantly associated with needing income assistance, while persons with medical insurance had less need for income assistance (OR .52; $p < .01$). Having a second need was associated with need for all services except alcohol treatment, a low prevalence need.

TABLE 3. Unmet Need for Supportive Services

Unmet Need	MMTP	NEP	<i>p</i> -Value
Place to live	72.6 (53/73)	81.6 (93/114)	.15
Mental health treatment	69.9 (65/93)	84.0 (84/100)	.02
Income assistance	86.8 (66/76)	92.3 (60/65)	.29
Alcohol treatment	70.0 (7/10)	71.4 (15/21)	.94
Drug treatment	X*	69.1 (134/194)	X
All specified needs unmet	67.3 (115/171)	61.4 (145/236)	.30

*X = not applicable.

TABLE 4. Logistic Regression for Prevalent Needs

Variable	Medical (n = 561)			Drug Treatment Need (n = 249)			Alcohol Treatment (n = 557)			Housing (n = 559)			Mental Health Treatment (n = 554)			Income Assistance				
	OR	95% CI	p	OR	95% CI	p	OR	95% CI	p	OR	95% CI	p	OR	95% CI	p	OR	95% CI	p		
NEP	.56	.34, .92	.02				1.97	.81, 4.78	.13	1.88	1.20, 2.94	<	.01	1.21	.79, 1.86	.38	.74	(.47, 1.17)	.20	
Non-white	.55	.32, .94	.03	2.34	.76, 7.14	.14	1.02	.39, 2.68	.96	.92	.87, 2.20	.17	.71	.45, 1.10	.12	1.41	(.89, 2.23)	.02		
Lived on Street	.72	.35, 1.51	.39	1.08	.43, 2.76	.86	.88	.28, 2.71	.82	14.78	6.39, 34.17	<	.01	.95	.52, 1.74	.87	1.19	(.63, 2.23)	.59	
Female	1.20	.77, 1.89	.42	1.11	.53, 2.33	.77	.84	.37, 1.89	.67	1.28	.85, 1.94	.24	1.61	1.10, 2.35	.01	.84	(.55, 1.28)	.41		
Have a Partner	1.09	.69, 1.72	.72	1.33	.67, 3.92	.41	1.21	.53, 2.77	.66	.73	.48, 1.11	.14	1.02	.69, 1.51	.91	.85	(.56, 1.29)	.44		
Insured	.28	.17, .44	<	.01	1.20	.60, 2.42	.60	.84	.38, 1.89	.68	1.04	.69, 1.59	.84	1.39	.72, 1.61	.10	.52	(.34, .79)	<	
30 or younger (over 40 is referent)	.72	.38, 1.35	.31	1.20	.54, 2.66	.65	2.62	.85, 8.10	.09	1.31	.75, 2.30	.34	.64	.37, 1.11	.11	.87	(.50, 1.58)	.68		
Between 30 and 40 (over 40 is referent)	.84	.52, 1.38	.50	1.74	.77, 3.92	.18	2.78	1.02, 7.55	.04	1.14	.72, 1.79	.58	.84	.56, 1.28	.43	.85	(.54, 1.34)	.49		
No HS diploma (more than HS referent)	1.78	.68, 2.06	.56	1.18	.52, 2.66	.65	1.47	.56, 3.8	.43	.93	.56, 1.54	.76	.77	.49, 1.22	.08	1.68	(1.00, 2.84)	.05		
HS grad (more than HS referent)	1.08	.62, 1.88	.78	1.20	.5, 2.66	.65	.76	.27, 2.15	.60	1.00	.61, 1.63	.99	.66	.42, 1.05	.08	1.26	(.74, 2.12)	.39		
Any other need	3.27	1.77, 6.03	<	.01	2.26	1.06, 4.84	.04	2.12	.59, 7.68	.25	1.93	1.20, 2.94	.01	2.54	1.58, 4.08	<	.01	1.62	(.50, 1.58)	.0002

DISCUSSION

These data provide the first estimates of the level of needs and unmet needs for services among IDUs who are in and out of drug treatment in one community. The mechanisms mediating between socio-demographic factors and service needs include differences in individuals' level of social support, financial resources, and health behaviors. Our study extends prior work on need and unmet need for supportive services among injection drug users by focusing on HIV-negative persons and by comparing two cohorts of IDUs. We found high levels of need for supportive services, higher among those actively injecting when compared to persons enrolled in a methadone treatment program. Unmet needs were universally high in both cohorts, similar to the national DATOS population of in-treatment clients where unmet needs was also over 50% for most services.¹¹

Injection drug users must cope with debilitating symptoms of withdrawal and comorbid medical and mental health problems. They must secure medical treatment and deal with the various psychological, social, and economic sequelae of addiction. Information about the types of community services is needed both for in-treatment and out-of-treatment drug users, as well as the degree to which service needs remain unmet, in order to develop programs and allocate resources. Among substance abuse treatment program clients, meeting needs leads to greater satisfaction, which may influence program retention and thereby effect post-treatment outcomes.¹² Methadone programs that provide greater numbers and types of services targeted to particular clients' needs have the greatest improvement in post-treatment outcomes.¹³ Yet even with receipt of services, problems across the domains studied here are difficult to resolve, and outside of methadone programs, resolution

of reported needs may not increase treatment effectiveness.¹⁴

Respondents frequently reported the need for mental health services, yet these needs were unmet. It is well known that drug users have high prevalence of mental disorders.¹⁵ While we did not screen for or examine specific mental health diagnoses, it was not unexpected that our cohorts would report high levels of need for mental health. As in all comparisons reported here, lower needs for MMT clients may be due to self-selection of clients attending MMT or assistance MMT counselors provide in obtaining services. Previous research suggests that treatment participation is often associated with problems existing at treatment entry.¹⁶ If counselors have assisted clients in the past (and all respondents have been in treatment at least six months), clients may no longer perceive a need for assistance. Nonetheless, the perceived need for mental health service remains high in MMT, and the high levels of unmet need suggest the need to link clients to mental health services at methadone sites. In both the DATOS and TOPS populations, unmet need for psychological services was highest for any services across all treatment modalities.¹¹ Efforts should be made to increase counselors' screening for psychiatric disorders as well as assessing needs over time, both of may result in more comprehensive treatment.

Housing was another common need reported here. Substance abuse places persons at high risk for homelessness. Housing not only stabilizes life, but among injection drug users, it has been associated with reducing HIV risk behavior.¹⁷ Here, nearly half of NEP clients needed help with housing. Homeless persons as well as those in unsatisfactory housing arrangements require assistance.¹⁸ Unmet needs in this and other areas may be high because services are in short supply for this low-income population.^{11,19}

One potential limitation of our study is that we did not objectively verify client reports of need. However, need is a fundamentally subjective concept,²⁰ and need for supportive services may be correlated with more difficult life circumstances, such as active drug use, low income, and unstable housing. Second, this is a non-random sample, though both cohorts were demographically similar to non-respondents at their respective sites. Still, the IDUs participating in this study may not be representative of IDUs outside NEP and MMT in Providence, or of other IDU cities in the United States. More generalizable estimates of need can only come from future studies from multiple sites. Third, we included no measure of drug abuse severity, which might have been a useful controlling factor. Finally, these data are cross-sectional, and the question arises as to whether the needs and unmet needs reported here are different from a decade ago.

Individuals' perceptions of their service needs are substantially influenced by subjective factors such as expectations, life experiences, and knowledge of what services are available. For many respondents, use of the word "service" itself may imply formal rather than informal assistance from a friend or relative. Given that participants may not have reported need for services that they receive from their informal support network, the total amount of services needed may be an underestimate. The time period covered by the interview questions was only six months, and the proportion of individuals who develop a need at some time over the course of their addiction may be much higher.

On-site delivery of medical and mental health services which was not the case at

this MMT site nor at most MMT programs nationally would likely decrease reported needs for such services.⁸ The linkages to these services from NEP programs is tenuous. Case management has been associated with lower unmet need for supportive services among HIV-infected persons, particularly medical services.^{3,19} On-site case management, located in addiction treatment programs, has been found to increase medical, psychiatric and employment service utilization two- to three-fold over ad hoc referral.²¹ Case management has also been seen to increase housing assistance and financial counseling for indigent clients.¹⁸

These findings emphasize the need for interventions targeted toward injection drug users, particularly out-of-treatment users, that develop services for this population and increase access to supportive services, especially for mental health specialists and medical care. Although policy makers have focused on HIV-infected persons with service needs, program planners need to use these data in light of the larger number of IDUs at risk for HIV and the changing patterns of substance abuse treatment across the country. In an era of scarce resources and a shrinking community service infrastructure, resources for injection drug users may be increasingly unavailable. Community-based care must heighten the need for creative solutions to long-standing problems of service delivery involving multiple providers.

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