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Jail Management of Arrestees/Inmates Enrolled in Community Methadone Maintenance Programs

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ABSTRACT *Anecdotal evidence suggests that many jails fail to adequately detoxify arrestees/inmates who are enrolled in methadone programs, but there are few empirical data. The objective of this study was to assess how jails manage arrestees/inmates enrolled in methadone programs. A national survey of 500 jails in the United States was conducted. Surveys were mailed to the 200 largest jails in the country in addition to a random sample of 300 of the remaining jails (10% sample). Jails were specifically asked about management of opiate dependency among arrestees/inmates enrolled in methadone programs. Weighted logistic regression analyses were conducted to assess predictors of continuing methadone during incarceration and use of recommended detoxification protocols. Among the 245 (49%) jails that responded, only 1 in 4 (27%) reported they contacted the methadone programs regarding dose, and only 1 in 8 (12%) continued methadone during the incarceration. Very few (2%) jails used methadone or other opiates for detoxification. Most used clonidine. However, half (48%) of jails failed to use clonidine, methadone, or other opiates to detoxify inmates from methadone. Weighted logistic regression models showed that moderately large jails and those located in the South and Midwest were significantly more likely to continue methadone. Very large jails, those with an estimated prevalence of opiate dependence of 6%–10% among arrestees/inmates, and those located in the Northeast were significantly more likely to use recommended detoxification protocols. Very few jails provided continuous treatment to arrested persons on methadone, and half failed to detoxify arrestees/inmates using recommended protocols. These practices jeopardize the health and well-being of persons enrolled in methadone programs and underscore the need for uniform national policies within jails.*

KEYWORDS *Delivery of health care, Heroin dependence, Methadone, Prisoners, Substance withdrawal syndrome.*

There are approximately 140,000 to 170,000 patients enrolled in methadone maintenance programs across the country.[1] Based on an annual arrest rate of 10% among persons enrolled in methadone maintenance programs, approximately 14,000 to 17,000 annual arrests in the United States involve persons enrolled in methadone maintenance programs.[2] Despite this number, little is known regarding the management

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of patients enrolled in methadone maintenance programs who are arrested and detained in US jails or who are sentenced following trial.

The primary aim of this study was to assess how jails manage methadone among arrestees/inmates enrolled in methadone programs. Specifically, do most jails continue methadone for detained persons enrolled in methadone maintenance programs? If methadone is not continued, what detoxification protocols are followed? What factors predict continuation of methadone? What factors predict use of recommended detoxification protocols? To address these questions, we administered mailed surveys to jails across the country.

METHODS

Sample

The study was approved by the University of Rochester School of Medicine and Dentistry Human Subjects Review Board. The contents of the survey were approved by the American Jail Association. The names and addresses of 500 US jails were obtained from the American Jail Association through a list company. The sample included the 200 largest jails in the United States in addition to a 10% random sample of the remaining jails nationally. In all, we mailed surveys to 500 of 3,200 adult jails in the country.

Procedures for Survey Administration

Following the approach suggested by Dillman,[3] beginning in July 2002 we mailed a survey with an initial cover letter addressed to the director of health services of each jail. Four weeks later, we sent out a second cover letter and duplicate survey to nonresponders. Eight weeks following the first survey, we sent out a third and final cover letter and duplicate survey to nonresponders.

Measures

The survey included questions regarding the title of the person completing the survey (health care provider, administrator, other); jail size based on daily inmate census (<250, 250–499, 500–999, 1000–2000, >2000); estimated percentage of arrestees/inmates who were opiate dependent (0%–1%, 2%–5%, 6%–10%, >10%); whether there was a methadone program in the surrounding community (yes or no); whether opiate dependence was routinely assessed on admission to the jail (yes or no); whether a specific standardized treatment protocol was used to detoxify arrestees/inmates on methadone (yes or no); whether the jail routinely contacted the methadone program regarding methadone dose (yes or no); whether methadone was routinely continued during incarceration; whether clonidine was routinely used to treat withdrawal (yes or no); whether methadone was routinely used to treat withdrawal (yes or no); and whether any other opiates were used to treat withdrawal (yes or no). In addition, we created a measure for use of recommended detoxification protocols by combining responses to several items. We defined recommended detoxification as one that used methadone, other opiates, or clonidine.

Statistical Analysis

The data were analyzed using SAS (Version 8.2, Cary, NC). We conducted univariate and bivariate analyses to assess the prevalence of various management strategies. To account for oversampling of larger jails, we weighted the results using published

data on the national distribution of jails by size.[4] We used weighted logistic regression models to assess predictors of continuing methadone during incarceration or use of recommended detoxification protocols.

RESULTS

There were 245 jails that responded, for an overall response rate of 49%. Of the surveys, 79% were completed by a health care provider (physician, physician's assistant, or nurse), 16% by a jail administrator, and 4% by another jail official. Both unweighted and weighted results are presented in the tables; only weighted results are referred to in the text or were used in the multivariate analyses. Table 1 shows the characteristics of the jails that responded. No data were available regarding jails that did not respond. However, comparisons with the national distribution of jails by size showed that jails with fewer than 250 inmates were underrepresented among responders even after accounting for oversampling of large jails.

Estimates of opiate dependence were fairly evenly split between the four categories of opiate prevalence among arrestees/inmates and approximate estimates from the Arrestee Drug Abuse Monitoring Program (ADAM). These data approximate estimates of opiate dependence from ADAM.[5] Nearly two thirds (62%) of jails

TABLE 1. Characteristics of the jails (N = 246) surveyed

		Percentage	
	N	Unweighted	Weighted
Average daily census of jail			
<250	17	7	78
250–499	72	30	7
500–999	77	31	6
1,000–2,000	46	19	4
>2000	33	13	5
Missing	1		
Region of the country			
Northeast	33	13	12
South	118	48	47
Midwest	36	15	17
West	59	24	24
Missing	0		
Estimated percentage of opiate dependent arrestees/inmates in own jail by respondent			
0%–1%	32	14	27
2%–5%	82	35	37
6%–10%	47	20	14
>10%	72	31	22
Missing	13		
Methadone maintenance program in the community			
Yes	161	67	62
No	78	33	38
Missing	7		

reported there was a methadone maintenance program in their community. Most (56%) jails reported they asked inmates/arrestees/inmates about opiate dependency.

Jail management practices are summarized in Table 2. Only about one in four jails (27%) contacted methadone maintenance programs regarding arrestees/inmates enrolled in those programs. Jails located in communities with such programs were

TABLE 2. Management of arrestees/inmates enrolled in methadone maintenance programs by jails (N = 246)

		Percentage	
	N	Unweighted	Weighted
Inmates/arrestees are asked about opiate dependence on entry to jail			
Yes	206	86	56
No	34	14	44
Missing	6		
Use a specific standardized treatment protocol for opiate detoxification for arrestees/inmates already enrolled in methadone programs			
Yes	96	41	23
No	140	59	77
Missing	10		
Routinely contact methadone maintenance programs about dose			
Yes	99	42	27
No	136	58	73
Missing	11		
Methadone is continued during incarceration			
Yes	33	14	12
No	179	76	85
During pregnancy only	25	11	3
Missing	9		
Clonidine is routinely used to treat withdrawal*			
Yes	127	62	50
No	77	38	50
Methadone routinely used to treat withdrawal*			
Yes	3	1	<1
No	201	99	99
Analgesics routinely used to treat withdrawal*			
Yes	133	65	66
No	71	35	34
Primary drug used to treat withdrawal*			
Methadone	3	1	<1
Other opiates	13	6	1
Clonidine	121	59	50
Analgesics alone	42	21	30
No treatment	25	12	18

*Includes only the 204 jails that did not continue methadone maintenance for methadone-dependent arrestees/inmates.

significantly more likely to do so (odds ratio [OR] 3.42, 95% confidence interval [CI] 2.92–4.01). Specific protocols were used by 23% for detoxifying arrestees/inmates on methadone. With the exception of pregnant arrestees/inmates, only 1 in 8 jails (12%) reported they continued methadone. Among jails that did not continue methadone, only half (52%) reported using a recommended detoxification protocol for patients on methadone.

We examined predictors of continuing methadone maintenance among new arrestees/inmates; we used a weighted logistic regression model that included jail size, prevalence of opiate dependence among arrestees/inmates estimated by the respondent, region of the country, whether the jail had established protocols to manage methadone-dependent inmates, and whether methadone maintenance programs existed in the surrounding community (Table 3). The estimated prevalence of opiate dependency in the community was collapsed into two categories, less than 5% and 5% or more, because the sample contained no jails from the Northeast (estimated prevalence 0%–1% and the Midwest (estimated prevalence above 10%) that continued methadone. The results showed that moderately large jails (1,000–2,000 inmates) and jails from the South and Midwest were significantly more likely than others to continue methadone treatment among arrestees/inmates. Use of written protocols for methadone management and presence of methadone maintenance programs in the communities served by the jails were not significantly associated with continuation of methadone.

We also examined predictors of appropriate methadone detoxification among arrestees/inmates at the 204 jails that did not continue methadone maintenance;

TABLE 3. Weighted odds ratios and 95% confidence intervals for continuation of methadone am arrestees/inmates enrolled in methadone maintenance programs

	OR	95% CI
Inmate census		
<250	0.96	(0.44–2.06)
250–499	1.18	(0.51–2.71)
500–999	1.99	(0.85–4.66)
1,000–2,000	2.83	(1.12–7.20)
>2,000	1.00	—
Estimated prevalence of opiate dependency rate in own jail		
0%–5%	7.93	(5.08–12.39)
>5%	1.00	—
Location of jail by region		
South	4.69	(2.28–9.64)
West	0.60	(0.26–1.39)
Midwest	13.72	(6.54–28.76)
Northeast	1.00	—
Methadone maintenance program in local community		
Yes	0.70	(0.47–1.1)
No	1.00	—
Established protocol to manage methadone-dependent arrestees/inmates		
Yes	1.12	(0.47–1.06)
No	1.00	—

TABLE 4. Weighted odds ratios and 95% confidence interval for appropriate detoxification of dependent arrestees/inmates at jails that do not continue methadone maintenance (N = 204)

	OR	95% CI
Inmate census		
<250	0.24	(0.15–0.41)
250–499	0.56	(0.30–1.06)
500–999	0.33	(0.17–0.62)
1,000–2,000	0.42	(0.21–0.81)
>2,000	1.00	—
Estimated prevalence of opiate dependency in own jail		
0%–1%	0.25	(0.16–0.40)
2%–5%	0.37	(0.26–0.53)
6%–10%	5.04	(3.30–7.69)
>10%	1.00	—
Region		
South	0.06	(0.03–0.10)
West	0.08	(0.04–0.14)
Midwest	0.06	(0.03–0.12)
Northeast	1.00	—
Established protocol to detoxify methadone-dependent arrestees/inmates		
Yes	4.12	(3.18–5.36)
No	1.00	—
Methadone maintenance program in local community		
Yes	1.02	(0.77–1.35)
No	1.00	—

we used a weighted logistic regression that included jail size, estimated prevalence of opiate dependence among arrestees/inmates, region of the country, and use of established protocols for detoxification of opiate-dependent arrestees/inmates (Table 4). *Appropriate detoxification* was defined as detoxification using methadone, other opioids, or clonidine. Results showed that jails with fewer than 2,000 inmates; those for which the estimated prevalence of dependency was less than 6%; and jails from the South, West, or Midwest were all significantly less likely to report using appropriate detoxification methods. The presence of a methadone-specific protocol, but not the existence of a methadone program in the community, was significantly associated with use of recommended detoxification.

DISCUSSION

These findings, based on a national survey of jails, are notable in several respects. First, they demonstrated that persons enrolled in methadone maintenance programs are likely to experience discontinuity in their methadone maintenance. Very few jails elected to continue methadone following arrest. Pregnancy was a notable exception. Surprisingly, jails in the South and Midwest were more likely to continue methadone than those in the Northeast, but were less likely to use appropriate detoxification protocols. The reasons for this are unclear, but may reflect expediency.

Failing to continue methadone exposes these arrestees/inmates to the risks of relapse and overdose following release from jail because the arrestee is no longer on blocking doses of the methadone. Relapse to heroin use is associated with risk of human immunodeficiency virus (HIV) and hepatitis C infection, cellulitis, endocarditis, and overdose.[6] The risk of overdose is particularly great because both detoxification from methadone and arrest are risk factors for overdose from opiates.[7] Moreover, forced interruption of methadone maintenance is associated with a very high relapse rate and risk for rearrest.[2]

There are several approaches that jails can use to continue methadone programs among arrestees/inmates. The first option is for the jail to seek certification as a methadone maintenance program. This option represents a major commitment on the part of the jail, and only a few jails in the country have taken this route.[8] The second option is to become a satellite site of a methadone maintenance program. This option requires exceptional coordination of services between jails and programs. The third option is to contract with a local methadone maintenance program for dosing. Typically, this means that the methadone program delivers the methadone to the jail, or the jail transports the inmate to the program. Unfortunately, this option is expensive for the methadone programs, which are not usually reimbursed for delivering methadone to the jail, or for jails that choose to transport inmates to methadone programs for dosing.

Given these challenges, it is not surprising that our second significant finding is the lack of coordination of care between jails and methadone programs. Only one in four jails contacted methadone programs regarding methadone dose. Consequently, jails either relied on the dose reported by the arrestee or made no attempt to tailor detoxification based on dose. Higher methadone dose is indicative of greater severity of addiction[9] and potentially more severe withdrawal.

The third significant finding is that nearly half of jails failed to use recommended detoxification protocols for methadone clients. Smaller jails were significantly less likely to use recommended protocols for detoxification. Among jails that reporting using opiate detoxification protocols concordant with national guidelines,[10,11] the overwhelming majority reported using clonidine for this purpose. Several small, randomized, controlled trials suggested that use of clonidine is associated with comparable rates of successful detoxification as methadone.[12,13] However, these findings may have limited generalizability, particularly to persons on high doses of methadone. Moreover, other studies suggested that use of clonidine for methadone detoxification is associated with significant dropout from detoxification[14–16] and greater severity of withdrawal symptoms than if methadone is used for detoxification,[17] particularly for those who are heavily opiate dependent.[18] Moreover, most jails lack a license to use methadone or opiates for detoxification. Nonetheless, use of methadone for opiate detoxification in jails has been shown to be safe and effective and to reduce rates of opiates in jail.[19,20]

The Key Extended Entry Program, located in the Rikers Island Jail system in New York City, not only continues methadone among previously enrolled arrestees/inmates, but also initiates methadone among opiate-dependent arrestees/inmates not previously in treatment.[8] The program admits 4,000 arrestees/inmates per year into the program, and long-term follow-up has shown the program is associated with significantly lower rearrest rates.[8]

Buprenorphine, approved by the Food and Drug Administration in 2002, can be administered by qualified physicians in office practice for opioid dependence treatment. It had not yet been approved at the time the survey was conducted, but represents a viable alternative for both opioid maintenance and detoxification in jails.[21,22]

Among jails that failed to use recommended detoxification protocols, nearly two thirds reported using only nonnarcotic analgesics; more than a third reported no treatment. Such practices are not consistent with community standards and raise troubling questions regarding the rights of arrestees/inmates on methadone to adequate health care. Entry into methadone maintenance, in the absence of a court mandate, represents a voluntary decision to seek treatment for a chronic, relapsing disease.[23] Many persons are arrested for offenses committed prior to enrolling in a methadone maintenance program. Failing to treat acute withdrawal from methadone adequately among arrestees who have typically not yet been convicted of the offense for which they were arrested raises ethical and constitutional questions.[24] In the absence of appropriate detoxification, arrest and detention of persons enrolled in methadone programs may precipitate needless suffering and, in rare instances, death.[25]

These findings suggest the need for the establishment of national standards for management of arrestees/inmates enrolled in methadone programs in US jails, as well as the need to provide improved education to health professionals working in correctional facilities regarding appropriate management of persons enrolled in methadone programs. National organizations such as the American Jail Association, American Correctional Association, and the National Commission on Correctional Health Care need to assume leadership in fostering coordination of care between methadone programs and jails minimize disruptions in treatment. Innovative strategies for covering the costs of this care are also needed.

There are several limitations to these findings worth noting. We oversampled larger jails to obtain more precise estimates among jails that house large numbers of inmates. Estimates among smaller jails are thus less reliable. Only about half the jails responded to the survey despite repeated efforts to obtain the data. It is likely that jails using detoxification protocols concordant with community and/or national standards were more likely to respond to the survey. This response bias would tend to underestimate inadequate detoxification by jails. A survey jointly sponsored by the Department of Justice and the Substance Abuse and Mental Health Services Administration that was completed by virtually every jail in the country showed that only 28% of jail administrators reported that their jails ever detoxed arrestees/inmates.[26] Moreover, our data were based on reported management. It is possible that actual practice differed from that reported. In fact, national survey data of jail inmates who admitted to drug abuse showed that only 1% reported ever receiving detoxification in jails.[27]

In addition, our analyses were conducted at the level of the jail. In this respect, our findings may overstate the risk for inappropriate detoxification for persons enrolled in methadone programs. Methadone programs tend to be located in larger cities where larger jails are located. Thus, persons enrolled in methadone programs may be more likely to be arrested, detained, or sentenced to jails that are more likely to provide appropriate detoxification than small jails located in rural areas. However, the presence of methadone in the community was not associated with odds that jail used appropriate detoxification.

Last, our survey did not explore obstacles to continuing methadone or use of recommended detoxification protocols.

In summary, this national survey of US jails showed that most jails do not continue methadone among arrestees/inmates who are enrolled in methadone maintenance programs. Few jails used detoxification protocols involving tapering doses of methadone or other opiates. Most used clonidine. However, a sizable minority

of jails used only acetaminophen or other nonnarcotic analgesics. These findings highlight the need for uniform jail policies regarding management of arrestees/inmates on methadone, closer coordination between jails and programs, improved education of health professionals working in jails, as well less-restrictive regulations governing use of methadone in jails.

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