

NEDS ANALYTIC SUMMARY

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Highlights

Treatment appeared more effective in reducing cocaine and crack use among clients with:

- Fewer prior treatment episodes
- Lower pre-treatment frequency of use
- Longer duration
- Higher intensity of treatment.



Treatment for Cocaine and Crack Use in the National Treatment Improvement Evaluation Study



NEDS Analytic Summary Series

The Center for Substance Abuse Treatment (CSAT) works to improve the lives of those affected by alcohol and other substance abuse, and, through treatment, to reduce the ill effects of substance abuse on individuals, families, communities, and society at large. Thus, one important CSAT mission is to expand the knowledge about effective substance abuse treatment and recovery services. In support of these efforts, CSAT established the National Evaluation Data Services (NEDS) contract to provide a wide array of secondary data analysis products to the substance abuse treatment field.

Specifically, the NEDS project is focused upon providing CSAT with an analytic capability to use existing data to address policy- and practice-relevant topics as well as future research and evaluation activities. NEDS has developed several product lines designed to provide analytic findings to substance abuse treatment policy makers, service providers, services researchers and evaluators in a format that is most useful to the end user.

The Analytic Summary is one of the NEDS product lines. The purpose of the Analytic Summary is to provide a brief summary of analyses performed under NEDS written in non-technical language. Readers who find the Analytic Summary results of interest can contact the authors for more detailed information. Through this process, the NEDS Analytic Summaries provide information to the substance abuse treatment field and promote linkages among different areas in the field.

This Analytic Summary

This Analytic Summary is based on analyses done by Dean R. Gerstein and Robert A. Johnson at the National Opinion Research Center (NORC). NORC prepared the summary under Contract No. 270-97-7016 for the Center for Substance Abuse Treatment. Information for obtaining additional copies is provided on the last page of this summary.

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Treatment for Cocaine and Crack Use in the National Treatment Improvement Evaluation Study

Understanding treatment issues specific to cocaine powder and crack users is vital to improving treatment outcomes for this important population. This report describes the demographic, pre-treatment, and treatment characteristics of 2,577 clients in treatment for the use of cocaine powder or crack cocaine who participated in the National Treatment Improvement Evaluation Study (NTIES), and compares them to those of 1,834 NTIES participants in treatment for other substances. The report also provides some estimates of the effectiveness of various types of substance abuse treatment for cocaine and crack use in reducing drug use among clients with different demographic and pre-treatment profiles.

The goals of this analysis are:

- To describe and compare the demographic, pre-treatment substance use, and treatment characteristics of individuals in treatment for the use of cocaine powder, crack cocaine, and other substances
- To evaluate the effectiveness of different kinds of treatment for cocaine and crack use as applied to individuals with different demographic and pre-treatment profiles.

The following analysis describes the participants and outcomes of the NTIES project.

The Research Sample

Exhibit 1 compares NTIES service delivery unit clients who reported they were in treatment primarily for problems of cocaine powder or crack cocaine use with clients who said they were in treatment for other substances. A well-known research finding is that individuals who use cocaine powder are demographically quite different from those who use crack cocaine. Exhibit 1 and subsequent exhibits will refer to cocaine powder as "cocaine" ("CO") and to crack cocaine as "crack" ("CR"). The columns of Exhibit 1 distinguish five subgroups of individuals:¹

- Those not in treatment for cocaine, crack, or heroin

- Those in treatment for cocaine but not heroin
- Those in treatment for crack but not heroin
- Those in treatment for heroin together with either cocaine or crack
- Those in treatment for heroin but not in treatment for either cocaine or crack.

The five groups are compared with respect to:

- Demographic characteristics (sex, race/ethnicity, age)
- Other *pre-treatment substance use* characteristics (age of first cocaine or crack use, use of cocaine or crack prior to entering treatment, peak monthly cocaine/crack use before treatment, prior treatment episodes, and criminal justice pressure to enter treatment)
- Treatment *service* characteristics (duration of stay, intensity of treatment, completion of treatment, and modality of treatment).

The first row of Exhibit 1 shows that individuals in treatment for cocaine or crack constituted about 58 percent (N=2,577) of NTIES participants. Of the 4,411 individuals in the NTIES analytical sample, 21 percent (928) were in treatment for cocaine but not crack or heroin, 28 percent (1,220) were in treatment for crack but not heroin, and 10 percent (429) were in treatment for heroin together with either cocaine or crack.

However, even among individuals who did not report cocaine or crack as a reason for entering treatment, use of these substances was common prior to entering treatment. Of those who reported entering treatment for substances other than cocaine, crack, or heroin, about 22 percent used either cocaine or crack in the year prior to entering treatment. Fifty-three percent of those who reported entering treatment for heroin but not cocaine or crack nevertheless used either cocaine or crack in the year prior to entering treatment. Similarly, among those who entered treatment for cocaine powder but not crack or heroin, or for crack but not heroin, use of the other form of cocaine was common: About 37 percent of the

¹ The first group (not in treatment for cocaine, crack, or heroin) is mostly composed of those in treatment for alcohol alone (53%) or for marijuana with or without alcohol (26%). The third group also includes a small number of individuals, fewer than 100, who reported they were in treatment for both cocaine and crack, but not heroin.

Treatment for Cocaine and Crack Use in the National Treatment Improvement Evaluation Study (cont.)

Exhibit 1
Description of NTIES Sample by Primary Drug¹:
Cocaine (CO), Crack (CR), Heroin (H), and Other Drugs

	Primary Substance(s) Reported as Reasons for Entering Treatment					
	All	Not CO, CR, or H	CO, Not CR or H	CR, Not H	H with CO or CR	H, Not CO or CR
Number of Cases	4,411	1,340	928	1,220	429	494
Male	69%	79%	72%	55%	68%	71%
Race/Ethnicity						
White non-Hispanic	26%	46%	20%	13%	22%	31%
Black non-Hispanic	55%	34%	64%	82%	61%	43%
Hispanic	15%	20%	16%	5%	17%	26%
Age at treatment						
< 25 years	20%	36%	15%	13%	13%	12%
25-34 years	41%	30%	50%	53%	37%	32%
35 or more	39%	34%	36%	35%	49%	56%
Used CO/CR before age 20	39%	25%	50%	44%	47%	37%
CO/CR use in the year prior to entering treatment						
Used CO	40%	16%	67%	29%	79%	43%
Used CR	50%	11%	61%	95%	52%	27%
Used either CO or CR	67%	22%	91%	95%	94%	53%
Used both CO or CR	23%	5%	37%	29%	37%	16%
Peak monthly CO and/or CR use in the year prior to entering treatment						
0 days per month	33%	78%	9%	5%	6%	47%
1 day per month	5%	5%	4%	4%	3%	9%
2-10 days	23%	12%	30%	29%	19%	28%
11 to 20 days	11%	2%	18%	16%	17%	6%
21 days or more	28%	2%	38%	47%	55%	10%
Prior Treatment Episodes						
None	39%	51%	37%	35%	26%	33%
One	24%	22%	24%	27%	23%	22%
Two or more	37%	27%	38%	38%	51%	45%
Criminal Justice pressure	72%	54%	74%	85%	80%	81%
Duration of Stay > Median	48%	49%	45%	47%	49%	53%
Intensity of treatment:						
> one session per week	50%	47%	56%	55%	47%	38%
Completion of Treatment						
Still in treatment	6%	6%	5%	8%	5%	6%
Completed treatment	39%	43%	36%	36%	38%	39%
Treatment not completed	55%	51%	59%	56%	57%	55%
Type of Treatment						
Methadone continuing	3%	0%	0%	0%	10%	20%
Methadone discharged	6%	0%	1%	0%	21%	36%
Nonmeth. outpatient	36%	50%	34%	38%	17%	11%
Short-term residential	20%	15%	25%	23%	23%	15%
Long-term residential	19%	14%	23%	31%	10%	5%
Correctional facility	16%	21%	18%	9%	19%	14%

¹ Primary substance" is based on substance(s) reported as "reasons the participant entered treatment"—alcohol (16% of the total sample), marijuana with or without alcohol (8%), heroin alone (9%), heroin with other substances (12%), cocaine powder with or without other substances except heroin and crack (20%), crack cocaine with or without other substances except heroin (24%), and all other substance combinations, including hallucinogens and inhalants (11%).

² Since the percentages in this table have been rounded, they may not sum to exactly equal 100 percent.

Treatment for Cocaine and Crack Use in the National Treatment Improvement Evaluation Study (cont.)

former group and 29 percent of the latter used both cocaine powder and crack in the year prior to entering treatment.

Demographic Characteristics. The main demographic characteristics distinguishing individuals in treatment for crack but not heroin are the high percentages who are female and black non-Hispanic: About 45 percent of those in treatment for crack but not heroin are female, as compared with only 31 percent of the total sample. About 82 percent of those in treatment for crack but not heroin are black non-Hispanic, as compared with 64 percent of those in treatment for cocaine but not crack or heroin, 61 percent of those in treatment for heroin with cocaine or crack, 43 percent of those in treatment for heroin but not cocaine or crack, and 34 percent of those in treatment for substances other than cocaine, crack, or heroin. Most individuals in treatment for either cocaine or crack but not heroin are aged 25-34 years old. They are older, on average, than those in treatment for substances other than cocaine, crack, or heroin, but they are younger, on average, than those in treatment for heroin.

Substance Use Patterns. NTIES participants in treatment for cocaine but not crack or heroin, crack but not heroin, and heroin with cocaine or crack were relatively likely to report the following:

- First use of cocaine or crack before age 20 (50%, 44%, and 47% versus 39% of the total sample)⁶
- Use of both cocaine and crack during the year prior to treatment (37%, 29%, and 37% versus 23%)
- Use of cocaine or crack more than 21 days per month in their month of highest use ("peak use") during the year prior to entering treatment (38%, 47%, and 55% versus 28%).

Participants in treatment for cocaine or crack but not heroin were less likely to report no prior treatment episodes than those in treatment for heroin but more

likely to report no prior treatment episodes than those in treatment for substances other than cocaine, crack, or heroin. In general, about 80 percent of those in treatment for cocaine, crack, and/or heroin entered treatment under pressure from the criminal justice system, while only 54 percent of those in treatment for other substances entered treatment under legal pressure.

Treatment Services Characteristics. Despite their distinctive demographic and pre-treatment profiles, NTIES participants in treatment for cocaine or crack did not differ dramatically from other NTIES participants in the types of treatment services they received. Individuals in treatment for cocaine or crack but not heroin were about as likely as other clients to stay in treatment for longer than the median duration, controlling for type of treatment (46% versus 49%). They were somewhat more likely than other participants to receive more than one counseling session per week (55% versus 45%) and had similar percentages who completed treatment (36% versus 40%). As expected, participants not in treatment for heroin were much less likely than those in treatment for heroin to be treated in methadone facilities (designed for primary heroin users). The cocaine and crack groups were also more likely than the other groups to be in short-term or long-term residential facilities (about 50% versus 39% in the total sample).⁷

The Effectiveness of Treatment

Data presented in Exhibits 2-5 address the following questions about treatment effectiveness:

- How does the effectiveness of treatment in reducing cocaine and crack use vary according to the type of treatment and, within types, according to primary substance? (Exhibits 2 and 3)
- How does the effectiveness of treatment in reducing cocaine and crack use vary according to the demographic and pre-treatment characteristics of individuals, specifically, number of prior treatment episodes

⁶ Research on substance use patterns suggests that most persons who ever use crack or cocaine initiate use between the ages of 17 or 20 (see, e.g., Yamaguchi, K. and D. Kandel, "Patterns of Drug Use from Adolescence to Young Adulthood: II, Sequences of Progression," *American Journal of Public Health* 74:668-672, 1984). The classification of NTIES participants according to whether they initiated cocaine or crack use prior to age 20 distinguishes younger from older initiates.

⁷ Exhibit 2 and subsequent exhibits distinguish two groups of methadone clients: "methadone continuing," those still in methadone treatment at the time of the final NTIES interview and "methadone discharged," those discharged prior to the final interview. Short-term residential facilities are defined as those with typical treatment plans of less than 2 months. Long-term residential facilities had typical treatment plans of 2 months or longer.

Treatment for Cocaine and Crack Use in the National Treatment Improvement Evaluation Study (cont.)

Exhibit 2
Percent Reporting Past-Year Use of Cocaine, Crack, and Either Cocaine or Crack Pre- and Post-Treatment By Treatment Type¹

Treatment Type	Base n	Outcome Measure	Percent Pre-Tx	Percent Post-Tx	Percent Change
Total sample	4,411	% using cocaine	40%	18%	-55%*
		% using crack	50%	25%	-50%*
		% using either	67%	35%	-48%*
Methadone Maintenance Continuing	144	% using cocaine	54%	30%	-45%*
		% using crack	24%	30%	+22%
		% using either	61%	49%	-20%*
Methadone Outpatient Discharged	278	% using cocaine	60%	46%	-23%*
		% using crack	32%	27%	-16%
		% using either	70%	59%	-16%*
Nonmethadone Outpatient	1,566	% using cocaine	28%	13%	-52%*
		% using crack	46%	22%	-52%*
		% using either	55%	29%	-48%*
Short-term Residential	873	% using cocaine	46%	22%	-53%*
		% using crack	60%	30%	-50%*
		% using either	78%	40%	-49%*
Long-term Residential	841	% using cocaine	42%	17%	-59%*
		% using crack	66%	33%	-51%*
		% using either	81%	41%	-49%*
Correctional Facility	709	% using cocaine	43%	10%	-77%*
		% using crack	43%	14%	-68%*
		% using either	62%	19%	-69%*

* Statistically significant pre-/post-treatment change based on two-tail paired t-test, $\alpha = .05$.

¹ Since pre- and post-treatment percentages are rounded, the percent change may not exactly equal $100 \times (\text{post-treatment \% (not shown)} - \text{pre-treatment \%}) / \text{pre-treatment \%}$.

and peak monthly frequency of cocaine or crack use during the year before treatment, and do these effects interact with type of treatment? (Exhibit 4)

- How does the effectiveness of treatment in reducing cocaine and crack use vary according to the duration and intensity of treatment, and do these effects vary with type of treatment? (Exhibit 5)

The data presented here were selected from a much larger set of analyses and present the factors found to be most strongly associated with reduction in cocaine and crack use. Pre-treatment client characteristics and service-related elements that are not presented in any of the four exhibits showed little if any association with

treatment effectiveness. No notable differences in pre-/post-treatment change were found in comparing the following subgroups: males versus females; non-Hispanic whites versus blacks versus Hispanics; those who first used cocaine or crack before age 20 versus those who first used at later ages; those entering treatment under criminal justice pressure versus those entering for other reasons; and those who completed treatment versus those who did not. Individuals aged less than 25 years had higher reductions in cocaine and crack use than older individuals, but this difference appeared to be explained by the higher percentage of younger persons who had no prior treatment episodes (see Exhibit 4).

Treatment for Cocaine and Crack Use in the National Treatment Improvement Evaluation Study (cont.)

Exhibit 3 shows that NTIES participants had statistically significant reductions across the board in past-year cocaine, crack, and cocaine/crack use in every type of treatment. The percent using either cocaine or crack declined by 48 percent in nonmethadone outpatient facilities (from 55% to 29%), by 49 percent in short-term residential, by 49 percent in long-term residential, and by 69 percent in correctional facilities. However, this percent declined by only about 20 percent, from 61 percent to 49 percent, among individuals who were continuing methadone treatment and by only 16 percent, from 70 percent to 59 percent, among individuals who had been discharged from methadone facilities. Regardless of the criterion measure, correc-

tional programs have the largest percent reduction in cocaine or crack use and methadone facilities the smallest.

Two possible explanations of the relatively low percent declines in methadone facilities are (1) that methadone programs do less well in treating cocaine and crack use because they specialize in treating heroin use and (2) that co-occurring heroin and cocaine/crack use is more difficult to treat. The two hypotheses are evaluated by comparing those in treatment for heroin with those not in treatment for heroin within treatment types.

Exhibit 3

Percent Reporting Past-year Use of Cocaine, Crack, and Either Cocaine or Crack Pre- and Post-Treatment, By Treatment Type and Primary Drug: Heroin Versus Other Substances¹

Treatment Type	Primary Substance	Base n	Outcome Measure	Percent		Percent Change
				Pre-Tx	Post-Tx	
Total sample	Heroin	923	% using cocaine	60%	34%	-43%*
			% using crack	39%	23%	-34%*
			% using either	72%	45%	-38%*
	Not heroin	3,488	% using cocaine	34%	14%	-60%*
			% using crack	53%	25%	-53%*
			% using either	66%	32%	-52%*
Methadone Continuing ²	Heroin	140	% using cocaine	54%	30%	-45%*
			% using crack	24%	30%	+22%
			% using either	61%	50%	-19%*
Methadone Discharged ²	Heroin	270	% using cocaine	59%	46%	-22%*
			% using crack	32%	28%	-15%
			% using either	69%	59%	-15%*
Nonmethadone Outpatient	Heroin	125	% using cocaine	50%	27%	-46%*
			% using crack	38%	20%	-47%*
			% using either	62%	36%	-42%*
	Not heroin	1,441	% using cocaine	26%	12%	-53%*
			% using crack	46%	22%	-52%*
			% using either	55%	28%	-48%*
Short-term Residential	Heroin	173	% using cocaine	66%	32%	-51%*
			% using crack	51%	19%	-62%*
			% using either	85%	39%	-55%*
	Not heroin	700	% using cocaine	41%	19%	-53%*
			% using crack	63%	33%	-48%*
			% using either	77%	41%	-47%*
Long-term Residential	Heroin	67	% using cocaine	66%	39%	-40%*
			% using crack	39%	26%	-34%*
			% using either	78%	49%	-29%*
	Not heroin	774	% using cocaine	40%	15%	-62%*
			% using crack	68%	33%	-51%*
			% using either	81%	40%	-50%*
Correctional Facility	Heroin	148	% using cocaine	65%	20%	-70%*
			% using crack	50%	15%	-69%*
			% using either	79%	28%	-65%*
	Not heroin	561	% using cocaine	37%	7%	-81%*
			% using crack	41%	13%	-67%*
			% using either	58%	17%	-71%*

* Statistically significant pre-/post-treatment change based on two-tail paired t-test, $\alpha = .05$.

¹ Since pre- and post-treatment percentages are rounded, the percent change may not exactly equal $100 \times (\text{post-treatment \% (not shown)} - \text{pre-treatment \%}) / \text{pre-treatment \%}$.

² There were 4 sample cases in Methadone Continuing and 8 in Methadone Discharged who did not report heroin as a primary substance. Due to the small sample sizes, results for these subgroups are not presented.

Treatment for Cocaine and Crack Use in the National Treatment Improvement Evaluation Study (cont.)

Exhibit 3 shows that, for the total NTIES sample, the percent reductions in use of cocaine, crack, and either cocaine or crack are substantially larger among those not in treatment for heroin than among those in treatment for heroin. For example, the percent using either cocaine or crack declined by about 52 percent among those not in treatment for heroin but by only 38 percent among those in treatment for heroin. This difference appears to be due mostly to the disproportionate concentration of the heroin use group in methadone facilities, where percent reductions in cocaine and crack use are relatively small. Within other modalities, the differences between the heroin and non-heroin groups are much smaller than in the overall sample. Only in long-term residential facilities are individuals in treatment for heroin appreciably less successful in reducing cocaine and crack use than other individuals. This finding may be due to characteristics of individuals in long-term residential facilities, such as the relative difficulty of treating these individuals, rather than to any characteristics of the treatment process. Results using the three criterion measures are similar.

Exhibit 4 shows that, in the total sample and within types of treatment other than methadone, there were greater reductions in past-year use of either cocaine or crack among NTIES participants who had no prior treatment episodes than among those who had one or more prior treatment episodes.⁸ For example, in short-term residential, the percent reduction equals about 57 percent for participants with no prior treatment, 49 percent for those with one prior treatment episode, and only 40 percent for those with two or more prior treatment episodes. This pattern most likely results from a selection or filtering process whereby clients who are easier to treat, or can be more satisfactorily treated using available treatment methods, are less likely to relapse and return to treatment after each successive treatment episode, leaving a pool of progressively harder-to-treat clients at each successive round of treatment. Alternatively, the pattern might reflect either an adverse effect of failure in previous treatment episode(s) on the chance for success in the current treatment episode or a positive correlation between the number of prior treatment episodes and the duration of participants' lifetime involvements with illicit substances. More data would be needed to test these alternative interpretations.

Exhibit 4 also shows that, in the total sample and within treatment types, treatment yielded greater relative reductions among those whose pre-treatment peak monthly frequency of cocaine or crack use was lower (1 to 10 days per month) than among those whose peak frequency was higher (11 or more days per month). Among those whose reported peak frequency was zero days of cocaine or crack use per month, there were pre-/post-treatment increases in the percentage using cocaine or crack, but the percentages using cocaine or crack after treatment in this group were consistently smaller than the corresponding percentages of those whose peak frequency before treatment was 1 to 10 days per month. Thus, the lower the pre-treatment peak frequency of use, the more favorable the post-treatment prognosis. For example, in short-term residential programs, the percentage reporting cocaine or crack use after treatment equals 7 percent among those whose pre-treatment peak frequency equaled zero, 39 percent among those whose peak frequency equaled 1-10 days, and 55 percent among those whose peak frequency equaled 11 or more days.

Exhibit 5 shows that, in the total sample and in every type of treatment except methadone, statistically significant and substantial reductions in past-year use of either cocaine or crack occurred even when the duration of treatment was less than the median length of stay, controlling for treatment type, and even when the treatment was less intensive (less than one counseling session/week). In the total sample, both longer treatment and more intensive treatment are significantly associated with greater percent reductions in cocaine or crack use. In comparing treatment types, methadone appears to be the clear exception. Regardless of the levels of treatment duration and intensity, individuals continuing or discharged from methadone treatment generally have smaller percent reductions in cocaine or crack use than individuals in other types of treatment. Yet these results may reflect differences across treatment types and levels of duration and intensity in the pre-treatment severity of clients as well as differences in the kinds of treatment that are provided. Further research is needed to discriminate among interpretations.

⁸ Based on two-sample t-tests (see "Statistical Criteria"), the differences in percent change between zero and one or more prior treatment episodes are statistically significant in the total sample and within every treatment type except methadone programs

Treatment for Cocaine and Crack Use in the National Treatment Improvement Evaluation Study (cont.)

We believe that the NTIES clients sampled from CSAT service delivery units are fundamentally representative of the public sector treatment population. Results from NTIES are therefore generalizable to this segment of the treatment population. However, this sample may

not be fully representative of all treatment services and clients in the United States. Therefore, formal statistical inferences to the wider treatment population should not be drawn due to the non-probability nature of the sample. Other possible sources of bias in the results include

Exhibit 4
Percent Reporting Past-year Use of Either Cocaine or Crack Pre- and Post-Treatment, By Treatment Type, Number of Prior Treatment Episodes, and Peak Monthly Cocaine/Crack Use Before Entering Treatment¹

Treatment Type	Pre-treatment Variable	Subgroup	Base n	Percent		Percent Change
				Pre-Tx	Post-Tx	
Total sample	Prior episodes	None	1,722	59%	26%	-56%*
		One	1,062	67%	33%	-51%*
		Two or more	1,624	75%	44%	-41%*
	Peak monthly use	0 days	1,455	0%	10%	*
		1-10 days	1,223	100%	39%	-61%*
		11 or more	1,733	100%	52%	-48%*
Methadone Continuing	Prior episodes	None	27	63%	52%	-17%
		One	23	39%	27%	-32%
		Two or more	94	66%	53%	-19%
	Peak monthly use	0 days	56	0%	8%	*
		1-10 days	44	100%	61%	-39%*
		11 or more	44	100%	89%	-11%
Methadone Discharge	Prior episodes	None	81	59%	55%	-7%
		One	50	64%	54%	-15%
		Two or more	147	78%	63%	-19%*
	Peak monthly use	0 days	83	0%	31%	*
		1-10 days	101	100%	58%	-42%*
		11 or more	94	100%	85%	-14%*
Non-methadone Outpatient	Prior episodes	None	676	46%	22%	-52%*
		One	365	58%	30%	-48%*
		Two or more	524	66%	37%	-43%*
	Peak monthly use	0 days	698	0%	10%	*
		1-10 days	408	100%	41%	-59%*
		11 or more	460	100%	48%	-52%*
Short-term Residential	Prior episodes	None	336	73%	31%	-57%*
		One	229	79%	40%	-49%*
		Two or more	308	84%	50%	-40%*
	Peak monthly use	0 days	190	0%	7%	*
		1-10 days	239	100%	39%	-61%*
		11 or more	444	100%	55%	-44%*
Long-term Residential	Prior episodes	None	318	75%	30%	-60%*
		One	205	81%	40%	-50%*
		Two or more	316	86%	52%	-39%*
	Peak monthly use	0 days	162	0%	12%	*
		1-10 days	201	100%	38%	-62%*
		11 or more	478	100%	52%	-48%*
Correctional Facility	Prior episodes	None	284	56%	14%	-75%*
		One	190	63%	20%	-67%*
		Two or more	235	70%	25%	-64%*
	Peak monthly use	0 days	266	0%	7%	*
		1-10 days	230	100%	22%	-78%*
		11 or more	213	100%	32%	-68%*

* Statistically significant pre-/post-treatment change based on two-tail paired t-test, $\alpha = .05$.

¹ Since pre- and post-treatment percentages are rounded, the percent change may not exactly equal $100 \times (\text{post-treatment \% (not shown)} - \text{pre-treatment \%}) / \text{pre-treatment \%}$.

Treatment for Cocaine and Crack Use in the National Treatment Improvement Evaluation Study (cont.)

nonresponse and measurement errors. However, response rates are appreciably higher than in other comparable evaluations and well above the typical threshold

of concern in longitudinal studies; we have been able to perform some key tests of validity and reliability that reduce concern on these dimensions.

Exhibit 5

Percent Reporting Past-year Use of Either Cocaine or Crack Pre- and Post-Treatment, by Treatment Type, Duration of Treatment (Less Versus Greater than the Median for the Type), and Intensity of Treatment (Less Versus Greater than One Counseling Session per Week)¹

Treatment Type	Duration of Treatment	Intensity of Treatment	Base N	Percent Pre-Tx	Percent Post-Tx	Percent Change
Total sample	≤ median	≤ once/week	1,033	66%	43%	-35%*
		> once/week	1,259	71%	36%	-49%*
	> median	≤ once/week	1,155	60%	29%	-52%*
		> once/week	963	71%	31%	-57%*
Methadone Continuing	≤ median	≤ once/week	63	57%	45%	-21%
		> once/week	10	70%	95%	+36%
	> median	≤ once/week	60	60%	44%	-26%
		> once/week	11	82%	54%	-34%
Methadone Discharge	≤ median	≤ once/week	84	69%	60%	-13%
		> once/week	42	64%	69%	+7%
	> median	≤ once/week	121	70%	53%	-25%*
		> once/week	31	81%	70%	-14%
Nonmethadone Outpatient	≤ median	≤ once/week	491	57%	35%	-38%*
		> once/week	252	63%	34%	-46%*
	> median	≤ once/week	530	45%	22%	-51%*
		> once/week	292	65%	27%	-58%*
Short-term Residential	≤ median	≤ once/week	132	73%	56%	-23%*
		> once/week	380	79%	41%	-48%*
	> median	≤ once/week	124	80%	30%	-62%*
		> once/week	237	78%	35%	-55%*
Long-term Residential	≤ median	≤ once/week	167	87%	55%	-37%*
		> once/week	225	88%	44%	-50%*
	> median	≤ once/week	203	77%	34%	-55%*
		> once/week	246	73%	35%	-52%*
Correctional Facility	≤ median	≤ once/week	96	63%	23%	-63%*
		> once/week	350	58%	21%	-63%*
	> median	≤ once/week	117	70%	16%	-78%*
		> once/week	146	66%	15%	-78%*

* Statistically significant pre-/post-treatment change based on two-tail paired t-test, $\alpha = .05$.

¹ Since pre- and post-treatment percentages are rounded, the percent change may not exactly equal $100 \times (\text{post-treatment \% (not shown)} - \text{pre-treatment \%}) / \text{pre-treatment \%}$.

Treatment for Cocaine and Crack Use in the National Treatment Improvement Evaluation Study (cont.)

Conclusions

Except in methadone facilities, which specialize in treating heroin use, treatment resulted in substantial reductions in the use of both cocaine powder and crack cocaine in every treatment modality. Treatment appeared more effective in reducing cocaine and crack use among clients with fewer rather than more prior treatment episodes and among clients with lower rather than higher pre-treatment frequencies of cocaine or crack use. Generally, treatments of longer duration resulted in greater percent reductions in cocaine and crack use than treatments of shorter duration. In addition, treatments of higher intensity (more than one counseling session per week) resulted in greater percent reductions than treatments of lower intensity (one session per week or less). While methadone generally appears less effective than other treatment types in treating cocaine and crack use, this may reflect differ-

ences in the characteristics of individuals who enter treatment, including their pre-treatment levels of severity and the relative difficulty of treating them, rather than any effect of the kinds of services provided.

NTIES participants who entered treatment primarily for crack use were more likely to be female and black non-Hispanic than those who entered treatment primarily for other substances. Participants in treatment primarily for cocaine or crack were also disproportionately likely to be aged 25-34, older on average (and more likely to have had prior treatment episodes) than those in treatment for marijuana or alcohol and younger on average (and less likely to have had prior treatment episodes) than those in treatment for heroin. Individuals in treatment for cocaine or crack were also more likely than those in treatment for marijuana or alcohol to have entered treatment under pressure from the criminal justice system.

For more information, please contact the National Evaluation Data Services analysis team at (703) 385-3200, or visit the NEDS Web site.

Find more on the web
<http://neds.calib.com>

The authors of this Analytic Summary are Dean R. Gerstein and Robert A. Johnson of the National Opinion Research Center (NORC).

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National Treatment Improvement Evaluation Study (NTIES)

This analysis was performed on data derived from the National Treatment Improvement Evaluation Study (NTIES). The NTIES was a national treatment services evaluation of the effectiveness of substance abuse treatment services delivered in comprehensive treatment demonstration programs supported by the Center for Substance Abuse Treatment (CSAT).

The NTIES project collected longitudinal data between FY 1992 and FY 1995 on a purposive sample of clients in treatment programs receiving demonstration grant funding from CSAT. Data were derived from client interviews conducted at three points in time: at treatment intake, at treatment exit, and 12 months after treatment exit.

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