

***Alcohol and Other Drug Treatment  
for Parents and Welfare Recipients:  
Outcomes, Costs, and Benefits***

Final report

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## Executive Summary

This report analyzes the outcomes, costs, and benefits of substance abuse treatment—that is, treatment for drug or alcohol problems—for two partially overlapping groups that are of special interest to social welfare agencies: parents of children under 18 years of age and recipients of public income support such as Aid to Families with Dependent Children (AFDC). The primary data source is **CALDATA**, a study of treatment outcomes in a random sample of persons (N = 1,825) representing approximately 150,000 individuals who during 1991-92 received drug and alcohol treatment and recovery services in California. Key results of this analysis of the drug and alcohol treatment population were as follows:

**Many persons in substance abuse treatment, especially women, were parents, welfare recipients, or both:**

- Slightly more than one-third (36%) of the California treatment population had children living with them prior to treatment.
- About half of those with children were men and half were women. There were substantially more men than women in treatment, but women were proportionately much more likely to have children or express parenting concerns:
  - Nearly half of the women in treatment had children in the household compared with less than one-third of the men (47% versus 29%).
  - More than three times as many women as men cited parenting concerns as a reason for entering treatment (28 % versus 8 %).
  - Altogether, 56 percent of the women in treatment had children in the household or cited parenting concerns as reasons for treatment, compared with 33 percent of the men.
- About 41 percent of all the women in treatment and 64 percent of the women with children in their households received welfare income in the year before treatment; by comparison, about 18 percent of men and 23 percent of men with children received welfare.

**Women, parents, and welfare recipients improved after treatment:**

- The beneficial outcomes of treatment for substance abuse were similar for men, women without children, and women with children, including those who received welfare income.
- Compared with the year before treatment, the number of substance users after treatment among women with children who received welfare income dropped by about 39 percent for crack cocaine, 42 percent for cocaine powder, 48 percent for amphetamines, 14 percent for heroin, and 26 percent for alcohol. (For the purposes of these analyses “substance user” was defined as someone who had used the substance five or more times in the past year.)
- Among women with children who received welfare income, comparing the year before and the year after treatment:
  - The percentage who engaged in one or more illegal activities per annum dropped by about 67 percent, the percent who sold or helped to sell drugs fell by about 60 percent, and the percent who were arrested, booked, or taken into custody dropped by about 54 percent.
  - The percentage hospitalized during the course of one year dropped by about 58 percent.
  - The percentage who were homeless for two days or more dropped by about 61 percent.

**Measurable treatment benefits exceeded treatment costs for each group of special interest:**

- The benefits of treatment as measured from the point of view of taxpayers included reductions in crime, transfer payments, and health care expenditures. These benefits outweighed the costs of treatment for those who received welfare income, were raising children, or expressed parenting concerns as reasons for seeking treatment.
- An average treatment episode lasted about three months, cost about \$1,400, and yielded benefits to taxpayers during and after treatment worth about \$10,000, with the greatest share of benefit deriving from reductions in the economic burden of crime.
- The measured benefit to taxpayers exceeded the cost of treatment by 6 to 1 for women with children who did not receive welfare and 2% to 1 for women with children who did receive welfare. The benefits of treatment were lower among women than men, and especially among women who were parents or received welfare, principally because these women initially committed less crime than men.

- The role of treatment in moving persons from economic dependency to greater self-support was difficult to evaluate in **CALDATA**, because overall unemployment rose steadily in California throughout the period under study, from about 5.6 percent to 9.2 percent, and the treated population worked largely in occupations that were disproportionately vulnerable to employment fluctuations.

From the standpoint of social welfare policy, particularly as it bears on families, we believe these results provide clear encouragement to support treatment options. Our benefit estimates are conservative, because they do not quantify the improved life chances of the children of treated parents or measure continuing benefits sustained beyond the first year after treatment. While treatment does not help everyone, it appears to be a widely useful and cost beneficial instrument for policy for those concerned with the welfare of families or individuals receiving public income support.

## 1. Introduction

The cost-effectiveness of alcohol and other drug treatment is an important issue in current welfare policy discussions for two principal reasons. First, substance abuse by parents may have serious and potentially indelible effects on their children. Substance abuse by parents may increase the risk of retardation, learning impairments, poor school achievement, physical and emotional neglect and abuse, and, of course, the specific risk that children will themselves proceed to abuse alcohol or other drugs.

In recent years teachers have reported an increasing number of children who display troubling behaviors and learning problems that they suspect may be related to the effects of substance abuse—either prenatal exposure to alcohol or other drugs or the consequences of living in families and communities where substance abuse is common. Children exposed to adult substance abuse are more likely than other children to display problem behaviors such as short attention span, extreme distractibility, speech and language disorders, aggressive and disruptive behavior, and social incompetence.<sup>1</sup> While it is difficult, and beyond the scope of this report, to quantify the costs to society of the reduced prospects for productive lives of children exposed to adult substance abuse, research suggests that these intergenerational effects are likely to be large.

The second reason for human service agency interest in substance abuse treatment is that substance abuse has been identified as a barrier to economic self-sufficiency. Two 1994 HHS reports used data from the National Household Survey on Drug Abuse (NHSDA) to show the following:

- 10.5 percent of persons aged 15 and older in Aid to Families with Dependent Children (AFDC) households reported past month illicit drug use.

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<sup>1</sup> U.S. Department of Health and Human Services and U.S. Department of Education, *Risk and Reality: Teaching Preschool Children Affected by Substance Abuse*, 1994.

- 5.2 percent of adults in AFDC households had significant alcohol or other drug abuse problems that may be sufficiently debilitating to preclude immediate participation in employment or training activities
- 11.2 percent of adults in AFDC households were somewhat impaired by alcohol or drug use and might need substance abuse treatment concurrent with participation in employment and training activities.<sup>2</sup> In addition, the National Longitudinal Alcohol Epidemiologic Survey indicated that 9.6% of adult men and 7.3 % of adult women who received welfare assistance were dependent on alcohol and 5.6% of men and 3.3% of women who received welfare abused or were dependent on illicit **drugs**.<sup>3</sup>

The body of this report presents data on the outcomes, costs, and benefits of recovery services for substance abuse in California with a special focus on alcohol and other drug treatment outcomes for parents and recipients of public income support, and particularly women with children who received welfare income—the main concern of the federal AFDC program. Our primary source of data is the California Drug and Alcohol Treatment Assessment (CALDATA). During 1992-1994, under contract to the California Department of Alcohol and Drug Programs, a research team at the National Opinion Research Center and Lewin-VIII (now The Lewin Group) designed and performed CALDATA and authored the study's widely known report, *Evaluating Recovery Services*.<sup>4</sup> CALDATA was designed to reveal baseline, in-treatment, and post-treatment characteristics of a representative probability sample of 1991-92 clients in the four major types of treatment available to California residents who are eligible for public support such as Medical

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<sup>2</sup> U.S. Department of Health and Human Services, Office of the Assistant Secretary for Planning and Evaluation and the National Institute on Drug Abuse, *Patterns of Substance Abuse and Program Participation*, 1994; U.S. Department of Health and Human Services, Office of the Assistant Secretary for Planning and Evaluation, the Substance Abuse and Mental Health Services Administration, and the National Institute on Drug Abuse, *Patterns of Substance Abuse and Substance-Related Impairment Among Participants in the Aid to Families with Dependent Children Program (AFDC)*, 1994. The national results based on NHSDA are comparable to previous findings on the scope of substance abuse in local-area samples of AFDC and General Public Assistance (GPA) recipients (see Schmidt, L., 1992, "*Shifting* moral categories of the poor: addiction and mothers on welfare," paper presented at the Alcohol Epidemiology Symposium, Toronto, June, 1992; Sisco, C.B. and C.L. Pearson, 1994, "Prevalence of alcoholism and drug abuse among female AFDC recipient," *Health and Social Work* 19: 75-77.)

<sup>3</sup> Grant, B.F. and Dawson, D.A., 1996, "Alcohol and Drug Use, Abuse, and Dependence among Welfare Recipients," *American Journal of Public Health* 86: 1450-1454.

<sup>4</sup> Gerstein, D., Johnson, R.A., Harwood H.J., Fountain, D., Suter, N., Malloy, K., *Evaluating Recovery Services: The California Drug and Alcohol Treatment Assessment (CALDATA)*, California Department of Alcohol and Drug Programs, Sacramento, 1994.

(California's Medicaid program), state/county alcohol and drug treatment contract funding, or public disability insurance. **CALDATA** estimated that substantial savings accrued to taxpayers, in the neighborhood of \$7 saved for each dollar invested in treatment, as a reasonably attributable result of alcohol and drug treatment, primarily in reduced crime and reduced health care costs.

Approximately 36 percent of the treatment population of nearly 147,000 individuals represented by **CALDATA** were living in households with children under 18 years of age. About 38 percent of the treatment population were women, and more than 27 percent reported receipt of AFDC or other welfare income before, during, or after treatment. However, the original **CALDATA** analyses did not attend specifically to subgroups such as parents or welfare recipients. The research began with no prima facie reasons to expect that parents or individuals receiving welfare income would respond to substance abuse treatment differently than other treatment clients. Previous **CALDATA** analyses indicated that, by and large, women responded to treatment about the same as men, although there were a few indicators on which the analysis did suggest less satisfactory outcomes of treatment, particularly in terms of health care utilization and economic dependency. For measures of criminal activity, women showed smaller **percentage** declines in criminal activity, resulting largely from the lower aggregate pre-treatment levels of crime among the women.

Chapter 2 of this report briefly describes **CALDATA**, including the types of treatment covered. Chapter 3 defines and characterizes the treatment subgroups analyzed in this report. Chapter 4 discusses treatment outcomes in terms of drug and alcohol use, income sources, employment, criminal activity, and health status and health care utilization. Chapter 5 furnishes economic estimates of the benefits and costs of treatment from the point of view of taxpayers. Chapter 6 summarizes the main points of the study.

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## 2. Data Source: About CALDATA

The primary source of data for this study is the California Drug and Alcohol Treatment Assessment (CALDATA). CALDATA was a pioneering large-scale study of the effectiveness, costs, and benefits of alcohol and drug treatment in California, using state databases, provider records, and follow-up interviews with clients in treatment. CALDATA was designed to reveal baseline, in-treatment, and post-treatment characteristics of a representative probability sample of 1991-92 clients in the four major types of treatment available to California residents who are eligible for public support such as Medical (California's Medicaid program), state/county alcohol and drug treatment funding, or public disability insurance. The study's primary source of information was a voluntary survey of publicly supported clients.

A particular advantage to this data is that CALDATA was the first and is still the only available follow-up interview study to use random probability sampling of treatment populations rather than to select specific programs of interest or convenience. In other words, we selected with the objective that every individual in the treatment population would have a calculable and-to the extent feasible-equal chance of being selected. The main limitations on equality of chances were (a) our need to get sufficient sample numbers of each main program type so that we could study each program type in itself with reasonable precision, and (b) vagaries in program record-keeping or similar matters that made some clients easier to find and interview than others. We adjusted (weighted) all of the results reported here to reflect these variations in sampling probabilities, so that the results could be projected accurately back to the treatment population as a whole.

More than 36 percent of approximately 157,000 individuals represented by CALDATA—we will call the large, represented group the “CALDATA treatment population,” in contrast to the much smaller treatment sample who were actually interviewed-reported having children in their household in the year prior to treatment. About 27 percent of the overall treatment population received AFDC or other welfare income before, during, or after treatment. About

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38 percent of the treatment population were women. Additional details about the sample are discussed in Chapter 3.

### **Methods**

**The** methods used in the CALDATA study are described in the original study publication (Gerstein et al., 1994) and in greater detail in the methodological report (Suter et al., 1994). A brief review is included here in order to help clarify the definitions, value, and limits of the information used.

CALDATA gathered information on five types of drug and alcohol treatment in California. The treatment types were:

- Residential Treatment (21 providers selected)
- Social Model Recovery Houses (23 providers selected)
- Nonmethadone Outpatient (29 providers selected)
- Methadone Programs-two subtypes:
  - Methadone Maintenance Outpatient (18 providers selected)
  - Detoxification (19 providers selected)

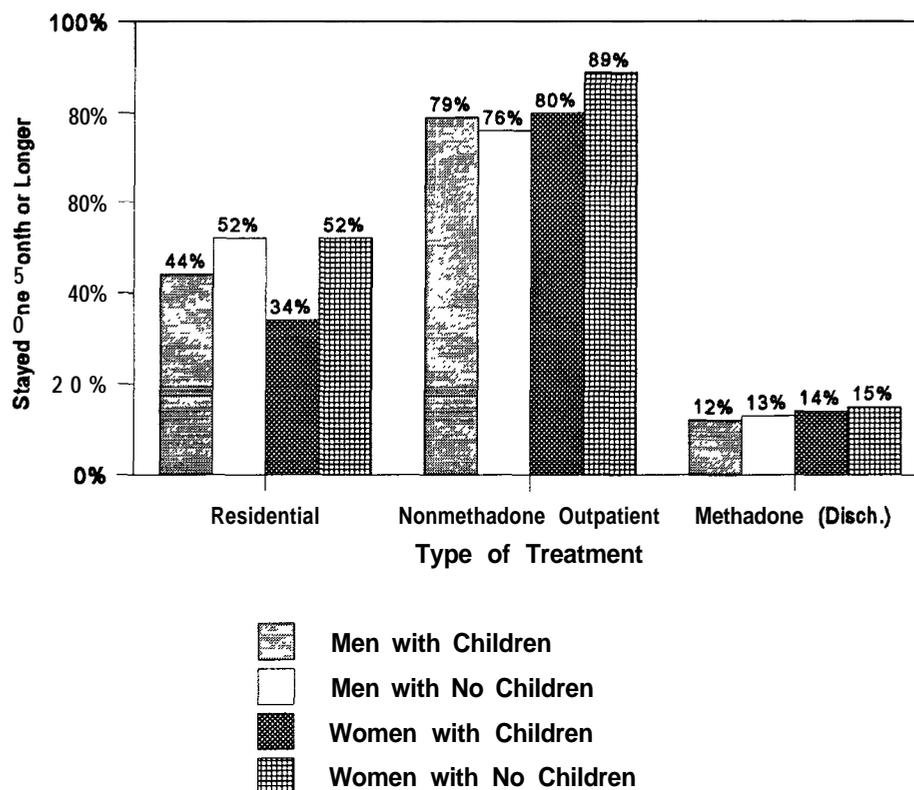
The two methadone provider groups were selected separately, but the samples in fact overlapped since most methadone providers offered both detoxification and maintenance treatment using the same facility and staffing.

These treatment types differ characteristically from each other in a variety of ways. A brief description of each follows:

- **Residential Treatment in general.** A variety of recovery service approaches are employed in residential settings, which can provide heavily structured and controlled environments. Some residential programs are oriented more towards individual counseling and a classical staff/therapist model; others stress group interaction or a gradual climb through successive roles and responsibilities as a milieu for assimilating new ideas, norms, and behaviors.
- **Social Model Recovery Houses.** Seen more in California than other states, these are a particular type of residential program that which focus on recovering alcoholics, stressing peer support and communal sober living.
- **Nonmethadone Outpatient.** Outpatient programs, exclusive of those providing daily methadone doses, encompass great variety, from one hour/week one-to-one counseling that may be focused on practical, emotional, spiritual, or other issues; to daily or multiple weekly individual or group sessions that may focus on these matters or on the 12 Steps (as in Alcoholics Anonymous or Narcotics Anonymous). Some programs include substantial medical or psychiatric elements, others none at all.
- **Methadone Maintenance.** In maintenance, a stable daily oral dose of methadone hydrochloride, accompanied by other available nonresidential services such as counseling, is provided to formerly heroin-dependent clients on a long-term basis. Maintenance is open only to those who have either relapsed to heroin use following two or more previous treatments or are pregnant. Methadone in appropriate doses prevents withdrawal symptoms and maintains a level baseline of physical comfort and functioning with virtually no psychological or physiological impairment.
- **Methadone Detoxification.** Methadone detoxification means support for planned withdrawal from heroin (or sometimes other opiate) dependence using a gradually tapering dose of methadone hydrochloride, lasting a maximum of 21 days.

Of the total treatment population, 19 percent were in the two types of residential programs, which are combined for the purposes of this report; 35 percent were in nonmethadone outpatient programs, 39 percent had been discharged from methadone programs, and almost 7 percent were being treated in continuing methadone programs. Women were more likely to be in non-methadone outpatient programs than men (39 % versus 32 %), and men were more likely to be in residential programs (21% versus 17 %). Clients in residential programs of either gender tended to stay for a shorter period if they had children in their household prior to treatment (See Figure 2.1). For the other types of treatment, however, the presence of children in the household was not related to the length of stay in treatment.

**Figure 2.1 Length of Stay by Gender, Children in Household, and Type of Treatment**



Source: NORC CALDATA

Clients were selected at random from discharge (or in-treatment) lists developed on site at cooperating providers. Sixteen counties, 97 providers, and approximately 3,000 clients who were in treatment or were discharged between October 1, 1991 and September 30, 1992 were selected into the study sample. As authorized by federal and state law and permitted by consent obtained routinely on admission to treatment, the program records of clients selected for the follow-up sample were read and abstracted to determine additional important research information and to verify the self-reported data. Using a combination of methods including letters, postcards, telephone calls, visits to last known addresses, contacting relatives or institutional connections, and searching various accessible public records, CALDATA staff sought to locate members of the sample and seek their participation in the study. Respondents received a cash honorarium of

\$15 for completing an interview. In order to protect the privacy of respondents, strict confidentiality was maintained throughout the data collection period. The methods used to protect confidentiality were approved by the California Health and Welfare Protection of Human Subjects Committee.

Out of the 3,000 clients sampled, 1,858 were successfully contacted and interviewed during a **9-month** field period.<sup>5</sup> These clients were drawn from 83 cooperating providers (out of 97 sampled; we note that 9 of 14 noncooperating providers were part of two large chains of private, proprietary methadone providers) in 15 counties (out of 16 sampled-from 58 counties in the state, many of which were sparsely populated mountainous counties whose residents would travel to more populated areas for treatment). The client follow-up interview was developed for **CALDATA** based on extensive work with previous research studies. The questionnaire took approximately one hour and fifteen minutes to administer on average. Follow-up interviews occurred an average of 15 months after treatment, with the longest interval being 24 months. All time-sensitive questionnaire results were adjusted to control for the length of the after-treatment period covered by each interview. Part of the sample was comprised of individuals who were in continuing methadone maintenance treatment, since this type of treatment is typically longer term than other services.

Program records data on the respondent sample was compared with program records data on the nonrespondents to determine whether the sample had drifted to any extent away from the population to be represented. There were virtually no statistically significant differences between the responding and nonresponding clients on scores of program-level variables. The key comparisons, including **all** significant differences, are **summarized in Table 2.1**. We note that the sample overrepresents women and Hispanics, which is a pattern of higher contact and cooperation rates that is common to most surveys in the United States. The survey slightly underrepresents

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<sup>5</sup> **Thirty-two** of these respondents were interviewed too late during the field **period** for their data to be included in the analytical data files used in the original report, the same files used in this study. Analyses of differences between characteristics of early versus late responders indicated that omitting these cases has minimal effect on analytical results.

employed individuals and over-represents those whose treatment was primarily paid for by public sources. In general, we believe these results reflect the relative ease of locating and interviewing individuals who can be found at home rather than at work and for whom the cash honorarium would be a greater incentive. We also found that, notwithstanding the **firm** guarantee of confidentiality, employed individuals were more reluctant to participate in the study once they discerned that the subject matter might be viewed very negatively by an employer, particularly in light of the deteriorating economic situation in California at the time interviews were taking place (see Chapter 5).

**Table 2.1 Comparison of Sample Interviews and Noninterviewed Cases in CALDATA Using Data from Administrative Records of Cooperating Providers**

Characteristic	Interviewed (Base N [Maximum]= 821)	Not Interviewed (Base N [Maximum]=1180)
<i>Sample averages (means)</i>		
Length of sample episode (months)	2.8 (1576)	2.7 (1108)
Age at admission (years)	33.3 (1523)	33.5 (1068)
Education (1=did not complete high school, 2=HS grad OF CED, 3=Beyond HS)*	1.8 (1531)	1.9 (1090)
# Treatment services received	2.9 (1025)	2.8 (733)
# Medications prescribed during-treatment	<b>1.8 (1580)</b>	<b>1.9 (1114)</b>
<i>Percentages</i>		
% with physician notes at admission	48% (1585)	50% (1116)
% with physician notes at discharge	13% (1580)	12% (1115)
% with physician notes any other time	29% (1576)	29% (1114)
<b>% with planned treatment &gt; 25 days**</b>	<b>34% (1821)</b>	35% (1183)
% with self as primary referral source	46% (1410)	46% (1015)
% with legal system as primary referral	22% (1410)	23% (1015)
<b>% with public as primary payment source**</b>	<b>50% (1316)</b>	<b>45% (871)</b>
<b>4% female**</b>	38% (1585)	33% (1116)
<b>% Black (African-American)</b>	<b>15% (1578)</b>	<b>15% (1115)</b>
% Native American	1.5% (1578)	1.1% (1115)
% White.	76% (1578)	<b>78% (1115)</b>
<b>% Hispanic or Latino*</b>	37% (1319)	30% (929)
% who ever used needles to inject drugs**	72% (1060)	71% (707)
<b>% with cocaine as primary drug at admission**</b>	<b>15% (1471)</b>	<b>17% (1046)</b>
<b>% with heroin as primary drug at admission**</b>	<b>42% (1471)</b>	<b>40% (1046)</b>
<b>% with alcohol as primary drug at admission**</b>	<b>27% (1471)</b>	<b>29% (1046)</b>

Table continued on next page

**Table 2.1 Comparison of Sample Interviews and Noninterviewed Cases in CALDATA Using Data from Administrative Records of Cooperating Providers**

Characteristic	Interviewed (Base N [Maximum]=18,111)*	Not Interviewed (Base N [Maximum]=1180)
% with psychiatric history at admission	12% (803)	12% (609)
% employed at admission**	21% (1515)	27% (1068)
% with chronic med. condition at admission**	35% (923)	31% (700)
% with length of treatment > 25 days	58% (1576)	68% (1107)
% tested for drug or alcohol abuse during sample episode**	65% (1066)	64% (759)
% completing treatment plan before discharge**	32% (1821)	31% (1180)
% with aftercare plan stated in record	35% (1821)	35% (1180)

Base n's in parentheses are the numbers of interviewees and noninterviewees who had nonmissing data (in the program records) for the item. The maxima are 1,821 of those interviewed and 1,180 of those not interviewed. For some cases, so many items were missing from or inconsistent in their records that these cases were omitted from this comparison.

\* Significant difference between respondents and nonrespondents based on two-sample t test, two tail,  $\alpha = .05$ .

\*\* Significant difference between respondents and nonrespondents based on chi-square test of independence,  $\alpha = .05$ .

Source: NORC CALDATA

### 3. Characteristics of Treatment Subgroups

#### *Subgroup definitions and CALDATA population estimates*

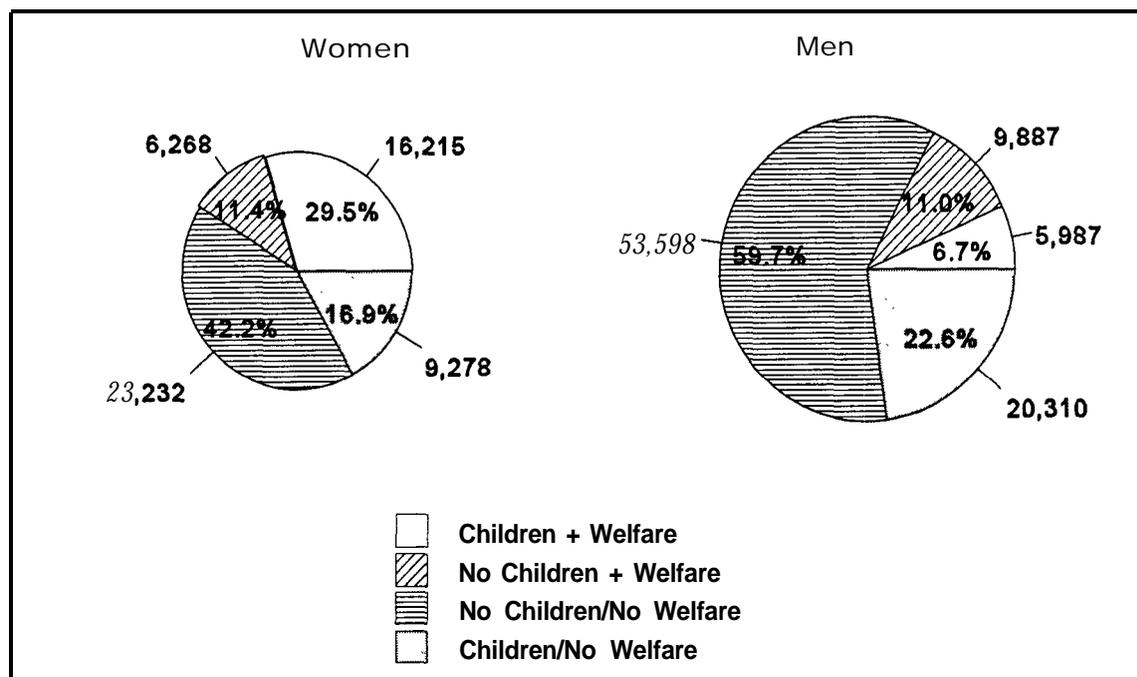
The major objective of this study is to analyze treatment outcomes of clients who were parents or received welfare income, and particularly the characteristics of women with dependent children. In order to interpret results for this group correctly, we also analyze and compare treatment population characteristics and histories prior to admission and at outcome for male clients, clients without children, clients with concerns related to children such as parenting and custody problems, and clients not receiving welfare income.

The definitions of subgroups of primary interest in this study are based on items contained in the **CALDATA** database and take into account the distribution of respondents among cross-classified subgroups, which are defined based on four main items:

- Whether clients had **children in their households** in the year prior to entering treatment (47 % of women, 29 % of men in the **CALDATA** treatment population).
- Whether clients received **welfare income** during the year prior to entering treatment (41% of women, 18% of men).
- Whether clients reported that **parenting concerns** were an important reason for entering treatment (28 % of women, 8 % of men).
- Whether clients reported **losing custody** of a child at any time prior to entering treatment (28% of women, 17% of men).

These distributions and some key cross-classifications are summarized in Figures 3.1, 3.2, and 3.3. (The estimated populations in these tables vary due to variations in the numbers of questions answered in interviews.) The pie charts for men and women are proportioned to reflect estimated numbers in the **CALDATA** treatment population.

**Figure 3.1 CALDATA Treatment Population Estimates by Gender, Children in Household, and Welfare Receipt in Past Year**



Source: NORC CALDATA

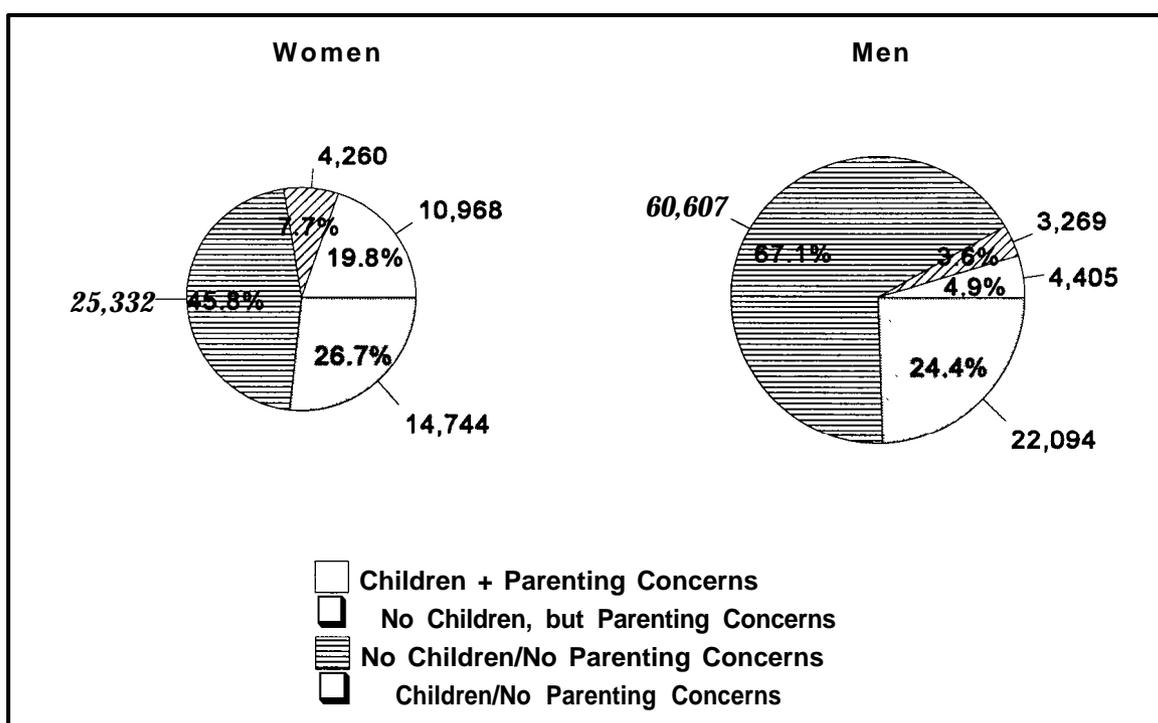
Of the treatment participants represented in the CALDATA sample:

- Most treatment participants were men (62%).
- A minority of the men admitted to treatment had children in their households in the year before treatment (29 %) or had been on welfare during the year before treatment (18 %).
- Nearly half (47 %) of women in treatment had children in their household in the year before admission, and 41 percent had received welfare payments during the year before admission.
- Less than one-fourth of men in treatment with children received welfare payments, but nearly two-thirds of women in treatment with children received welfare payments.
- The group reporting both welfare receipt and children in the household comprises about 30 percent of all women in treatment, although only about 11 percent of all treatment participants.

Women were not only more likely than men to have children in their household, but also much more likely to report parenting concerns as important reasons for treatment (see Figure 3.2).

- The majority of women entering treatment (54%) had children in their household before entering treatment or reported parenting concerns as an important reason for treatment.

**Figure 3.2 CALDATA Treatment Population by Gender, Children in Household, and Parenting Concerns**

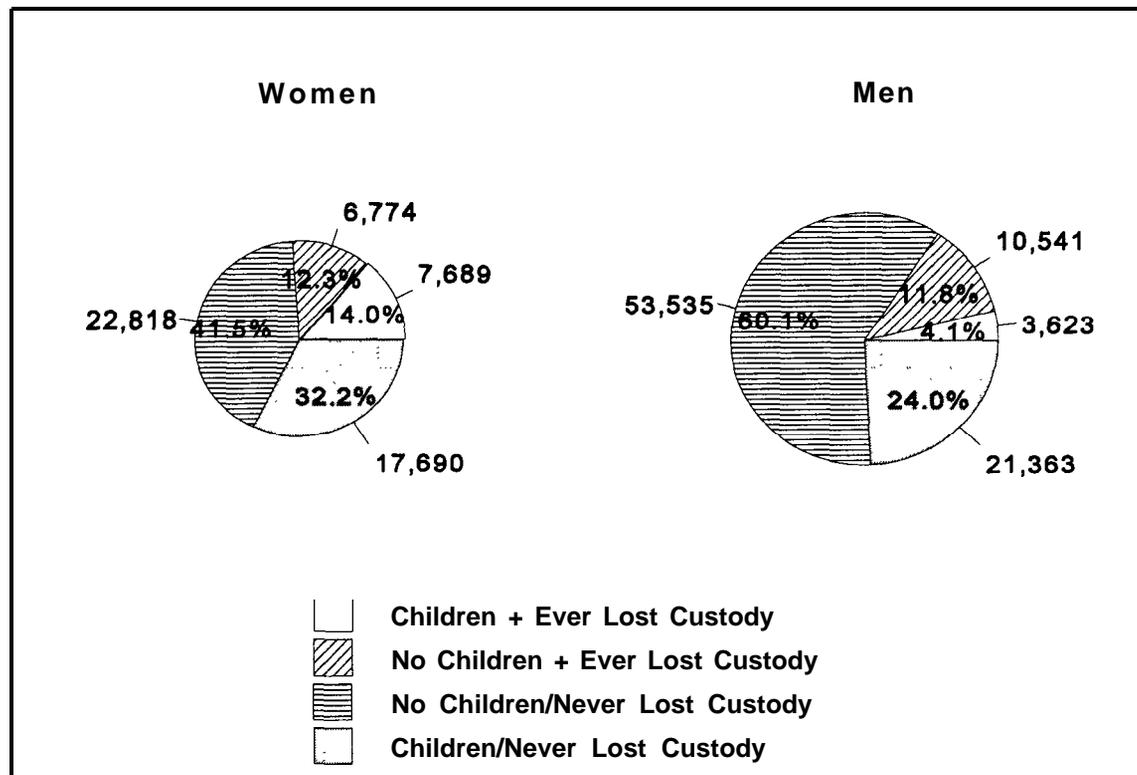


Source: NORC CALDATA

- A smaller percentage of men (33%) had children in their household before entering treatment or reported parenting concerns as an important reason for treatment.

- Only one-sixth of the men who had children in their household reported parenting concerns as an important reason for treatment; however, about three out of seven women reported parenting concerns as an important reason for treatment.

**Figure 3.3 CALDATA Treatment Population by Gender, Children in Household, and Child Custody History**



Source: NORC CALDATA

A similar proportion of men and women (12%) who no longer had children in the household had at some point before treatment lost custody of children. But a much greater percentage of women than men who had children in their household in the year before treatment had at some time lost custody of their children (14% versus 4%). The CALDATA questionnaire did not differentiate reasons for loss of custody, but this pattern suggests that the men mostly lost custody due to divorce or separation decrees and often on a permanent basis, while the women

lost custody due to episodic inability or unwillingness to carry out parenting responsibilities, and that these episodes were often temporary and the custody losses reversible.

Altogether, women with children in the household who also received welfare income made up about 11 percent of the CALDATA population. A smaller percentage, about 6 percent, of the treatment clients were women with children who did not receive welfare income, and clients in the equivalent category for men made up 14 percent of the total treatment population. Looking at the categories of men and women who had neither children in the household, welfare income, nor other parenting concerns confirms the importance of gender in parenting concerns that was seen in the previous table. Men in this category without welfare income or parenting concerns comprised about 25 percent of the total treatment population while similar women make up only about 11 percent.

***Demographic characteristics of CALDATA subgroups***

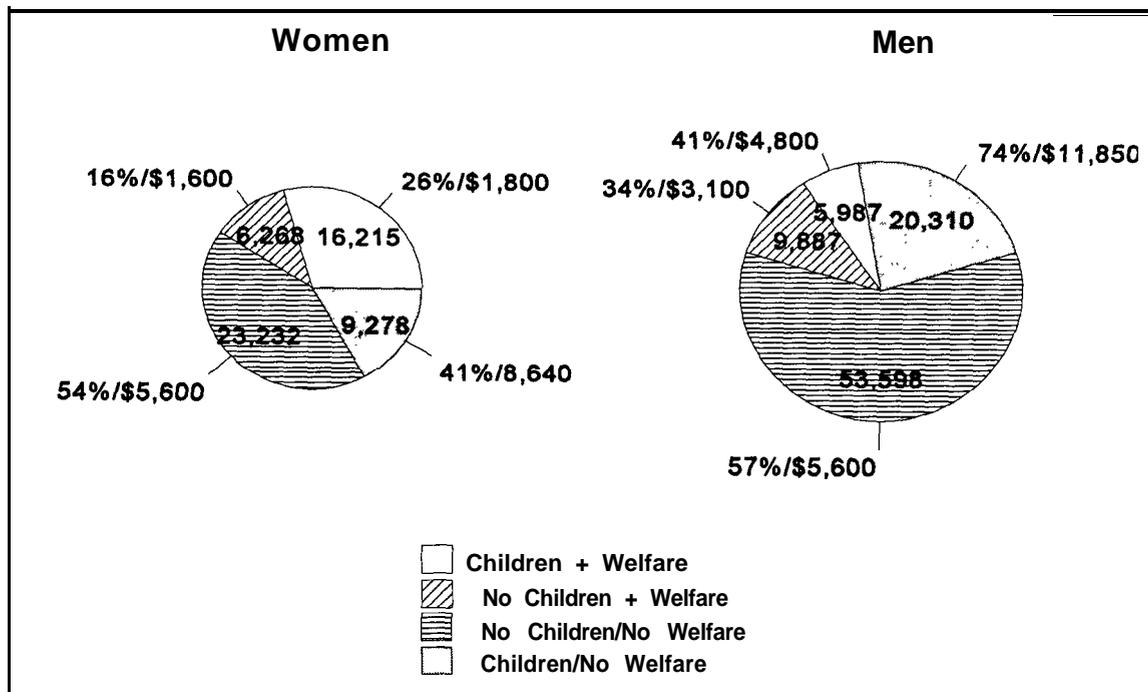
The total treatment population was split nearly equally between white non-Hispanics and other ethnicities, but with a sex difference: 48 percent of the women and 59 percent of the men were black or Hispanic. Overall, clients with children in the household or receiving welfare before treatment were about ten percentage points more likely to be black and Hispanic than those without children or welfare receipt. Among women in the treatment population, 67 percent of those who both lived with children *and* received welfare were Hispanic or black, versus only 33 percent of those with *neither* welfare nor children. All major ethnic categories were about equally likely to have lost custody of children prior to treatment.

The men in treatment were on average somewhat older than the women. About 33 percent of men versus 22 percent of women were 40 years or older. There was little difference in the ages of men with or without children, welfare, or parenting concerns. Among the women, however, those with either children or welfare were appreciably younger on average than those without; only one out of nine women (11%) with *both* children and welfare were 40 years or

older, versus one out of three women (33%) with *neither* children nor welfare. A similar gradient applied to type of treatment: 47 percent of the women with *both* children and welfare were in methadone, compared with 29 percent of women with *neither* children nor welfare.

Figure 3.4 presents employment and earnings characteristics of the different subgroups. Overall, men in treatment had significantly higher labor force participation than women—57 percent of men versus 39 percent of women earned wages from employment in the year before admission to treatment—and that working men with children, especially those who did not receive any welfare income, had higher income than any other subgroup. The data also showed that a higher percentage of men in any of these subgroups received disability income than women,

**Figure 3.4 CALDATA Treatment Population by Gender, Percentage Employed, and Median Earnings**



Source: NORC CALDATA

## Treatment for Parents and Welfare Recipients

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possibly because the route to receiving AFDC support and Medical was much easier than that to receiving SSI or SSDI. Specific earnings figures were as follows:

- Median earnings for the year among those who had been employed were low: \$6,000 for men and \$4,800 for women.
- Men and women who received welfare benefits during the year were less often employed and earned far less income than those who were not on welfare.
- About three-fourths of men with children and without welfare benefits were employed during the year before treatment, the highest percentage of any subgroup; this group of employed men earned the highest sums, a median of \$11,850.

The use of particular types of drugs might be considered to have differential impacts on the ability to care for children, child safety, and need for income support. CALDATA respondents were asked to identify the main drug or drugs (about one-fourth of the treatment population identified two drugs or, in some cases, more) for which they entered treatment. Despite the enormous public concerns generated about the use of crack cocaine, this drug preparation was very far from dominating the treatment picture in California. As indicated in Table 2.1, *the three* most prevalent main drugs at admission, as identified by program records, were heroin, alcohol, and cocaine powder (that is, cocaine formulated for injection or snorting, rather than to be smoked). From the interviews, the following five drugs accounted for most of the main drugs mentioned: heroin, 48 percent; alcohol, 28 percent; cocaine powder, 17 percent; amphetamines, 13 percent; crack cocaine, 11 percent; all other drugs, 5 percent. There was little variation in main drug by sex, parenting status, or welfare receipt. The notable exception was crack; while 10 percent of all men and 11 percent of all women reported crack as main drug, it was reported as such by 25 percent of the women and 17 percent of the men *who received welfare but were not living with children*. This crack-dependent, welfare-but-no-children group comprises about 2 percent of the CALDATA treatment population.

### **Conclusion**

We divided the CALDATA treatment population into substantial subgroups by attending to the clients' sex, parenting status, and welfare receipt. These groups diverged somewhat on other demographic and treatment-related characteristics. The women who received treatment were more likely than their male counterparts to have had children in their household, express parenting concerns as reasons for seeking treatment, and to have received welfare income prior to admission. Women who were in the children-and-welfare subgroup (the typical AFDC recipient) were much more likely to be Black or Hispanic than women with neither characteristic, and this subgroup was also more likely to be younger than 40, in methadone treatment, and in receipt of little or no wage earnings in the year prior to treatment. These differences indicate that women in treatment, like women in general, are more often child-oriented and economically dependent on income support programs than men, and that the women with both children and welfare are somewhat distinct from other women. Nevertheless, the difference seems to be more in degree than in kind. In the next two chapters, we will explore the results of treatment for these subgroups, exploring whether these conditions lead to any differences in the results of treatment for women in general and the parenting and welfare subgroups in particular.

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## 4. Treatment Effects

### *Methods and overall conclusions*

This chapter analyzes the effects of substance abuse treatment on post-treatment outcomes, including drug use, income sources, employment, criminal activity, health, and living arrangements. The principal focus throughout this chapter is on female treatment clients with children, especially those who received welfare income. As in the original **CALDATA** report, the estimates of treatment effects in this chapter use the “before-after” or “**pre/post**” research design, comparing the same behaviors/characteristics of the same treatment clients before and after treatment. As in the **CALDATA** report, we depend on the retrospective reports of sample clients at the time of the post-discharge interview to measure the presence or absence and the levels of behaviors/characteristics during the before-treatment and after-treatment reference periods. While this chapter’s findings are consistent with the hypothesis of beneficial treatment effects, there are other possible explanations for these patterns of results including **nonresponse biases** (perhaps fewer of those who did poorly after treatment participated in the research), under **reporting** of negative outcomes in the post-treatment period by those who did participate, and simple **regression** to more typical patterns of behavior after treatment than the behavior that happened to occur immediately before. The **CALDATA** report includes a detailed discussion of the assumptions underlying **CALDATA** methods and of the approaches to estimation and measurement that are applied in this chapter, including the reasons why these alternative explanations are less persuasive than the hypothesis of beneficial treatment effects.

The main conclusions of this chapter are as follows:

- Among women with children who received welfare income, the number of drug users (those who used a specified drug more than five times per annum) fell after treatment by about 39 percent in the case of crack cocaine, 42 percent in the case of cocaine powder, 14 percent in the case of heroin, 48 percent in the case of amphetamines, and 26 percent in the case of alcohol. (For example, 32.1 percent of this subgroup used crack cocaine

before treatment, while only 19.6 percent used crack cocaine after treatment, for a percentage decline of about -38.9 percent, i.e.,

$$(19.6-32.1) / 32.1 = -38.9\%.$$

- Among women with children who received welfare income, the percentage who sold or helped to sell drugs fell by about 60 percent after treatment, and the percentage who were arrested, booked, or taken into custody dropped by about 54 percent after treatment.
- Among women with children who received welfare income, the percentage hospitalized during the course of one year fell by about 58 percent after treatment.
- Among women with children who received welfare income, the percentage who were homeless for two or more days during the year declined by about 61 percent after treatment.
- The proportion of the whole treatment population on welfare stayed about the same before and after treatment among men and women, with attrition from the welfare-receiving group balancing accession to that group. Of the minority of women who received welfare prior to treatment, 30 percent no longer received welfare during the year after treatment; however, of the majority who did not receive welfare prior to treatment, 16 percent were receiving welfare after treatment.
- The proportion working for wage or salary income declined by about 20 percent after treatment. We believe these results were strongly influenced by the overall doubling of the unemployment rate in California across the period covered by the study.
- In general, women with children, including those receiving welfare income, appeared as likely to benefit from drug abuse treatment as any other treatment clients. With very limited exceptions, the positive outcomes of treatment were similar among women with children who received welfare, women with children who did not receive welfare, women without children, and men.

The following three sections present a detailed analysis of the effects of treatment on the behavior and well-being of men, women, and key subgroups of women, including those living with children who received welfare income and who did not receive welfare income. These sections present representative data (and describe other data that we have analyzed) on several classes of outcome variables: drug use, employment, welfare receipt, crime, health, and homelessness.

### *Drug use*

This analysis focuses on the five “main drugs,” i.e., the five drugs that were most commonly mentioned by treatment clients as reasons for entering treatment: 1) crack cocaine (a crystalline or “free-base” form of cocaine best suited for smoking), 2) cocaine powder (the hydrochloride salt of cocaine, which is water-soluble and can be injected or snorted), 3) heroin, 4) amphetamines, and 5) alcohol. Both among treated women with children and among other clients, close to 50 percent of clients identified heroin as a reason for their entering treatment, while close to 25 percent identified alcohol, and crack, cocaine powder, and amphetamines (see Chapter 3) each were identified by more than 10 percent of clients.

For each of the five drugs, treatment significantly reduced drug use from before to after treatment (Figures 4.1- 4.5). The measure of drug use in each of the figures below was the percentage of treatment clients who used the drug five or more times in the previous year, which we call “prevalence.” For crack (Figure 4.1), prevalence in the total treatment population declined from 28 percent before treatment to 16 percent after treatment, a percentage change of -42 percent, i.e.,  $(16 - 28)/28$ . For cocaine powder, heroin, amphetamines, and alcohol, the percentage changes of prevalence in the total treatment population were -46 percent, -23 percent, -47 percent, and -29 percent (Figures 4.2-4.5), respectively.

Significant declines in drug use following treatment occurred regardless of whether the treatment client was a woman, had children, received welfare income, or had lost custody of a child or identified parenting issues as an important reason for entering treatment<sup>1</sup>. In the subgroup

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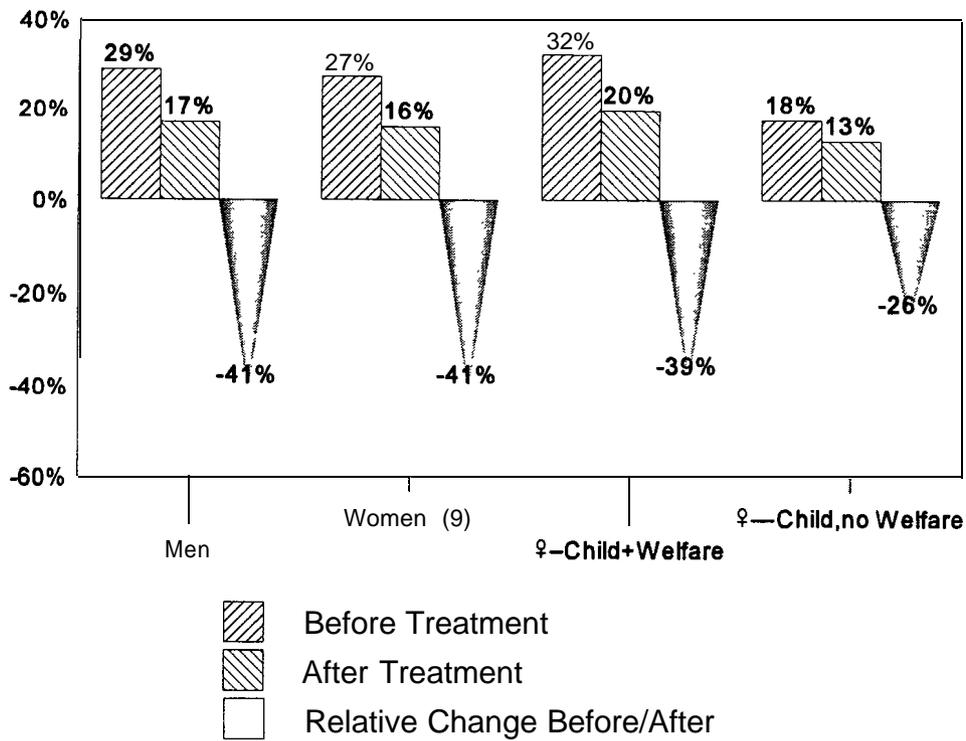
<sup>1</sup>We used ANOVA F tests to test for significant differences in treatment effects across the subgroups shown in the Figures, additional discriminations among women based on other parenting variables, and similar subgroups among the men of our analysis. Of Figures 4.14.5, only Figures 4.1 (crack) and Figure 4.4 (amphetamines) showed a significant global difference at the .05 level. Based on two-sample t-tests, neither of the two figures with a significant global difference showed a significant pairwise difference in percentage change between the two subgroups of greatest interest in our analysis, women with children who received welfare income and women with children who did not receive welfare income. We also used ANOVA F tests to test for significant global differences in the before-treatment measurement. Only one before/after difference failed (by a small margin) to reach the conventional .05 significance level: as shown in Figure 4.1, the subgroup of women with children who did not receive welfare income had the lowest percentage change in crack, -25.7 percent, of any category.

of women with children who received welfare income, the percentage changes in prevalence for crack, cocaine, heroin, amphetamines, and alcohol were -39 percent, -42 percent, -14 percent, -48 percent, and -26 percent, respectively. These percentage changes are closely similar to, and not significantly different from, the corresponding percentage changes for each drug in the total treatment population. Drug use declined significantly across the board. For each of the five drugs, the prevalence among women with children who received welfare income declined by about the same percentage as the corresponding percentage among treatment clients as a whole.

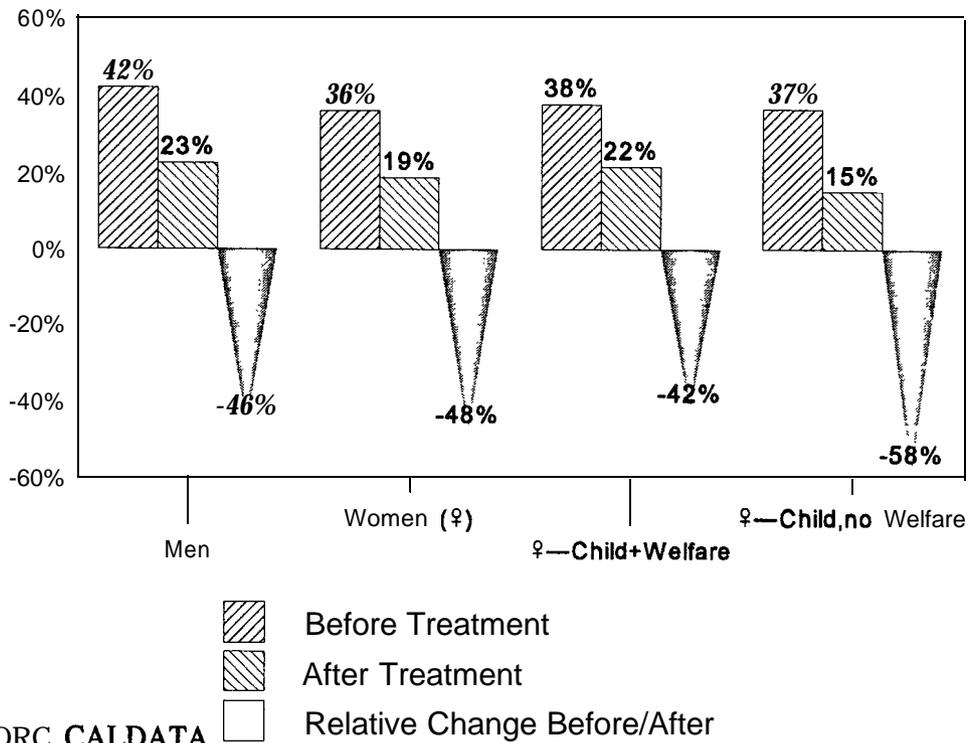
Figures 4.1-4.5 suggest that, in general, the magnitudes of the effects of treatment on drug use were similar whether or not the treatment client was a woman, had children in the household, or received welfare income. (In additional data analyses, we determined that outcomes also did not vary depending on whether the client had lost custody of a child or named parenting concerns as important reasons for their entering treatment.) There is little indication in any of these data that women with children who received welfare income differed in their response to treatment from women with children who did not receive welfare income or from other treatment clients. For each of the five drugs, the prevalence among women with children who received welfare income declined by about the same percentage as the corresponding percentage among treatment clients as a whole.

We tested a variety of alternative measure of drug use before and after treatment, such as the mean number of different drugs used during the previous year, the number of months specific drugs were used, the intensity of use during the period of highest use, and the number of drugs used across the period. These measures all led to very similar conclusions about the effects of treatment on drug use. For example, in the overall treatment population, the total number of drugs used by each client declined from 2.8 before treatment to 1.6 after treatment. In the subgroup of women with children who received welfare income, the decline was almost exactly the same,

**Figure 4.1 Crack: Change in Use (5+ Times)**

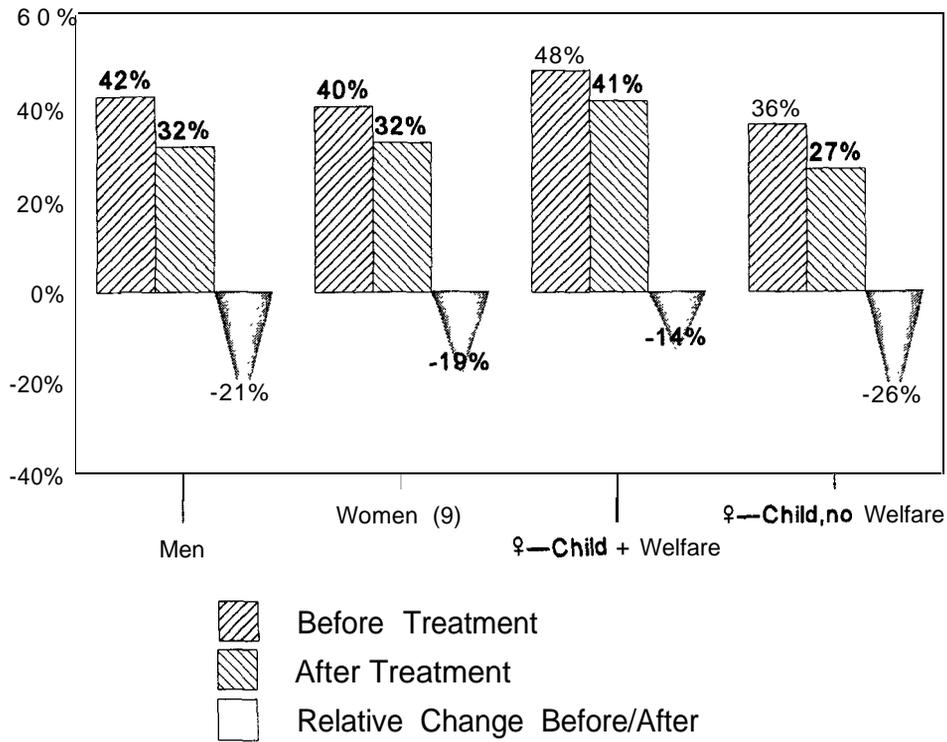


**Figure 4.2 Cocaine: Change in Use (5+ Times)**

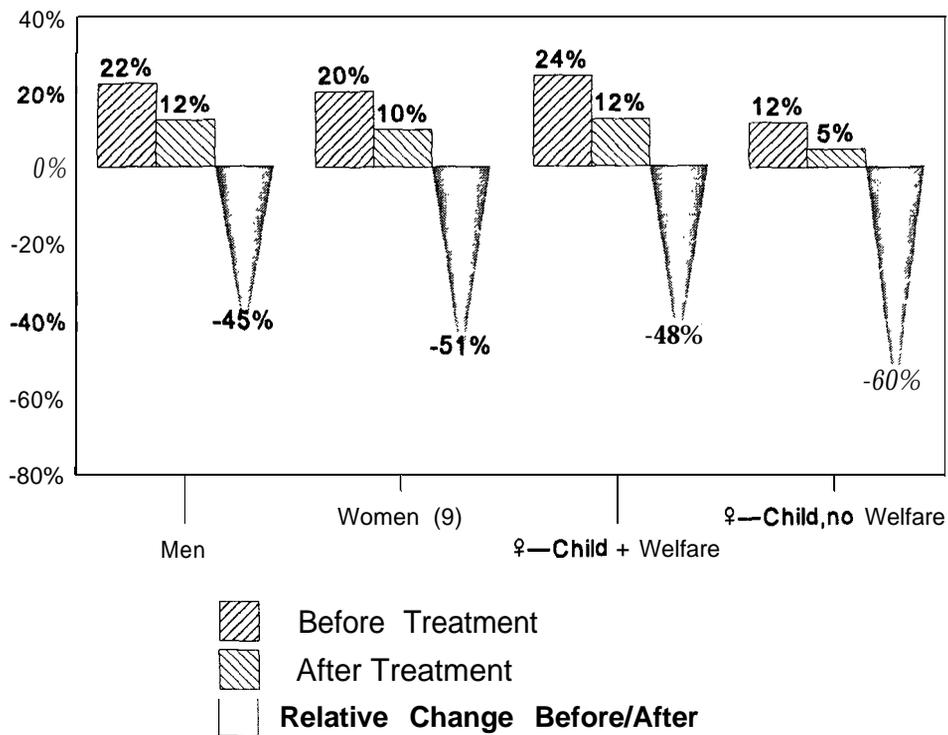


Source: NORC CALDATA

**Figure 4.3 Heroin: Change in Use (5+ Times)**

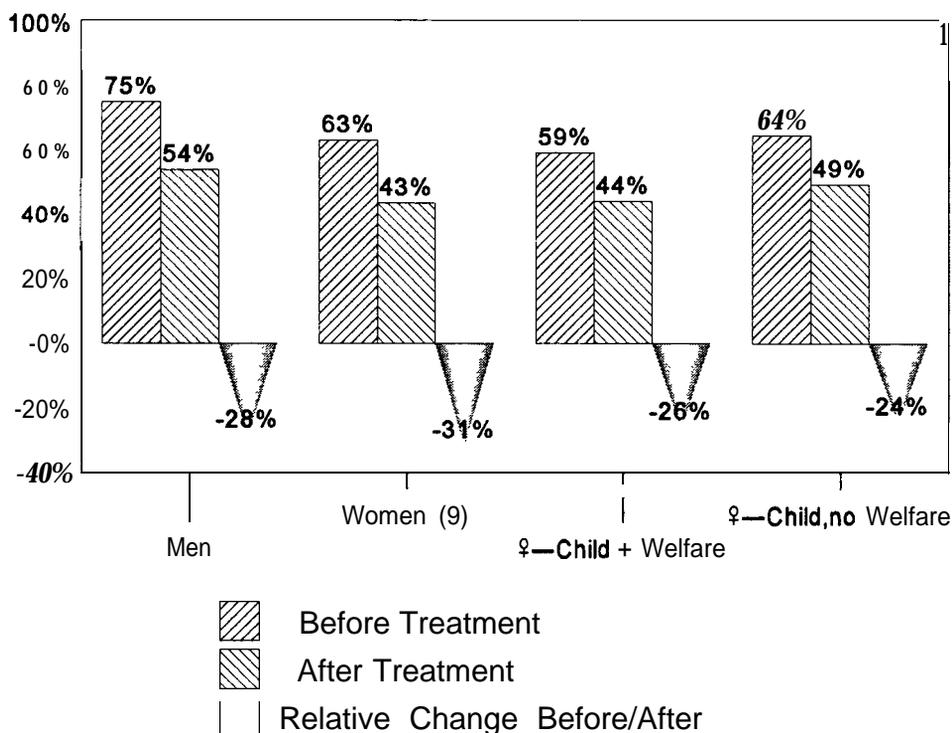


**Figure 4.4 Amphetamines: Change in Use (5+ Times)**



Source: NORC CALDATA

Figure 4.5 Alcohol: Change in Use (5+ Times)



Source: NORC CALDATA

The distribution of “main drug,” based on the drug(s) reported as “reasons the client entered treatment” was similar across the parenting and welfare groups in the total treatment population. About one-half of the treatment population reported heroin as a reason for entering treatment, about one-quarter reported alcohol use, and more than 10 percent reported each of crack, cocaine powder, and amphetamine use. The relative decline in prevalence of use of the main drug (that is, the percentage who used their main drug five or more times per annum) in each parenting and welfaredefined subgroup was about the same as the corresponding decline in the total treatment population.

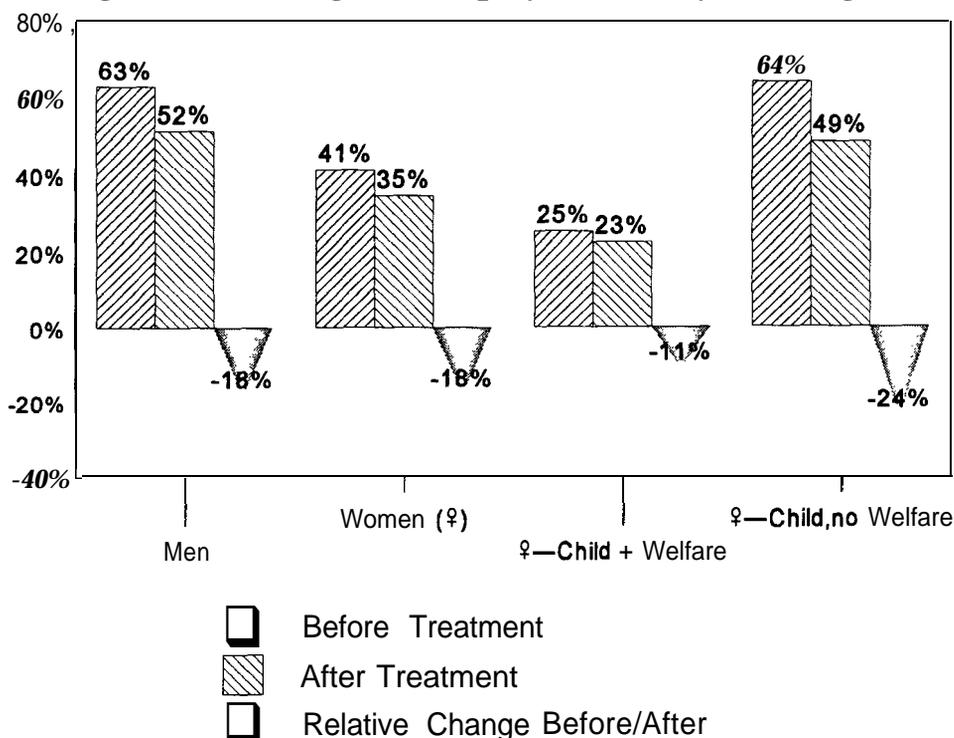
*Income sources and employment*

CALDATA clients reported receiving income from a variety of sources, including full-time and part-time employment, welfare, illegal activities, and disability income. Figures 4.6 and 4.7 present estimates for two of six before-after comparisons we completed regarding income and employment (all figures were adjusted to represent an annual basis). The six measures we analyzed were:

- percentage who received employment income (Figure 4.6);
- percentage who received welfare income (Figure 4.7);
- number of months worked full-time;
- percentage who worked full-time;
- number of months worked part-time;
- percentage who worked part-time.

In the total treatment population, the percentage receiving employment income declined from about 55 percent before treatment to about 45 percent after treatment, a relative decline of about 17 percent in job-holding. Men were much more likely to have worked before treatment than women (63 % of men versus 41% of women), but for both groups, employment declined by a similar proportion. In every subgroup of clients, the percentage receiving employment income (that is, having had a job during the year) appears lower after treatment than before, and it was significantly lower for all women, all men, and for women (as well as men) with children who had not collected welfare. Women who did collect welfare reported the lowest rate of employment before treatment (25%) and a nonsignificant change to 23 percent after treatment. The percentages working full-time, the average number of months they worked full-time, and the part-time statistics are all consistent with the results in Figure 4.6.

**Figure 4.6 Change in Employment (Any Earnings)**

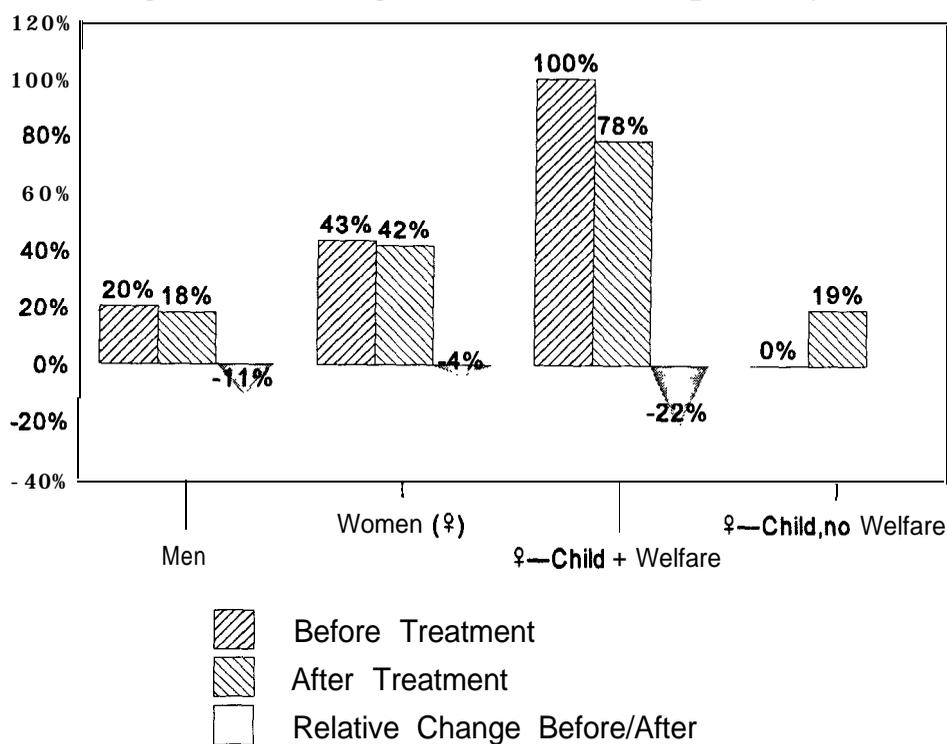


Source: NORC CALDATA

Despite the overall reduction in employment during the time period analyzed in this report, there was no significant change in the percentage receiving welfare income in the CALDATA population as a whole or among men and women considered separately: women were twice as likely as men to have collected welfare in the period after treatment as well as before treatment (Figure 4.7). There were significant reductions in welfare receipt in the subgroups where all members were initially welfare recipients—for example, among women with children who received welfare income before treatment, only 78 percent did so after treatment—but these decreases were balanced by the onset of welfare receipt treatment among the subgroups selected to exclude welfare before treatment.

Both the welfare and employment results are consistent with the generally austere economic trend in California over the period 1991-1993 (see below, Table 5.2), which makes interpretation of treatment effects difficult in the area of employment and income. The problem was that the downward secular trends in the California economy during the period of the CALDATA follow-up—a doubling of the unemployment rate (see Chapter 5) and immense fiscal pressure on the state government—probably obscured any independent positive effects that treatment might have had on treatment clients' prospects for employment and income.

**Figure 4.7 Change in Welfare Receipts (Any)**

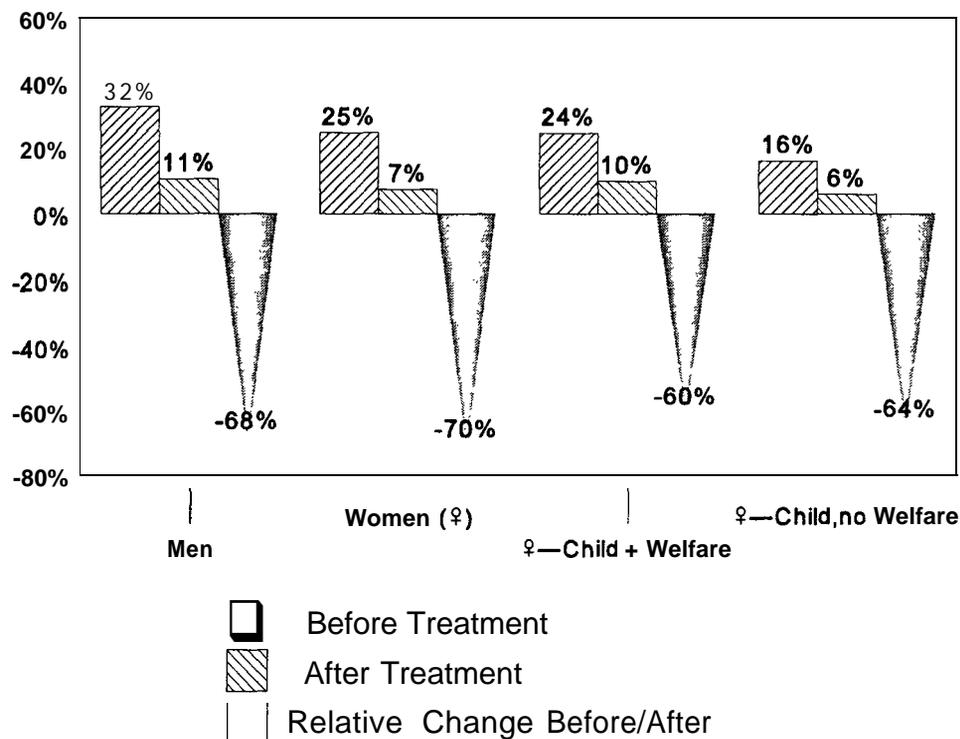


Source: NORC CALDATA

**Crime, health, and living arrangements**

Substance abuse treatment can affect the prevalence and incidence of criminal activity in at least two ways. Treatment can directly affect criminal activity by providing new reference groups and new moral and ethical standards to substitute for reference groups and standards that helped to engender criminal activities in the past. Treatment can also affect criminal activity indirectly by reducing the economic motivations for crime. For example, to the extent that treatment reduces drug and alcohol use, it may also reduce crimes committed to obtain money to buy drugs or alcohol.

**Figure 4.8 Change in Drug Trafficking**

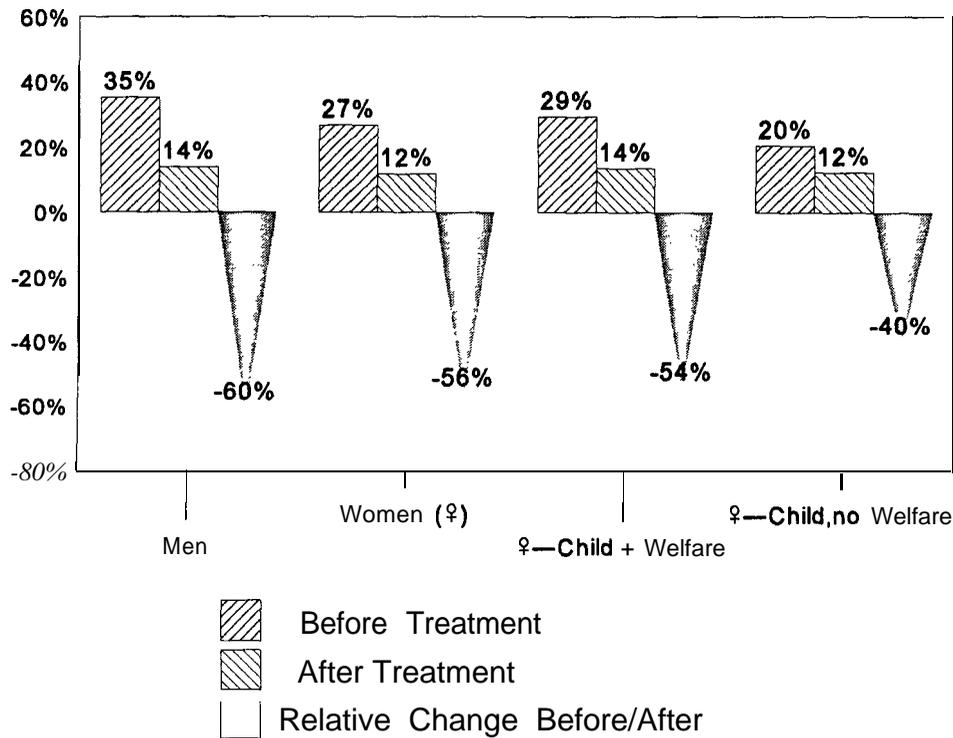


Source: NORC CALDATA

Figures 4.8 and 4.9 report on two major measures of criminal activity: the percentage who sold or helped to sell drugs (the most prevalent form of illegal activity, outside of drug possession per se, in this population) and the percentage who were arrested, booked, or taken into custody.

In each analysis, the “before” measurement pertains to the 12 months preceding the sample treatment episode, and the “after” measurement to the interval between discharge from the sample episode and the CALDATA interview. To enhance comparability, after-treatment measurements were adjusted to a per-annum basis. As with previous domains, we analyzed numerous other measures of criminal activity, such as crimes against property and persons, and other criminal justice sanctions, such as conviction, parole, and incarceration. The two items displayed here are among the most conservative indicators of change.

**Figure 4.9 Change in Arrests**



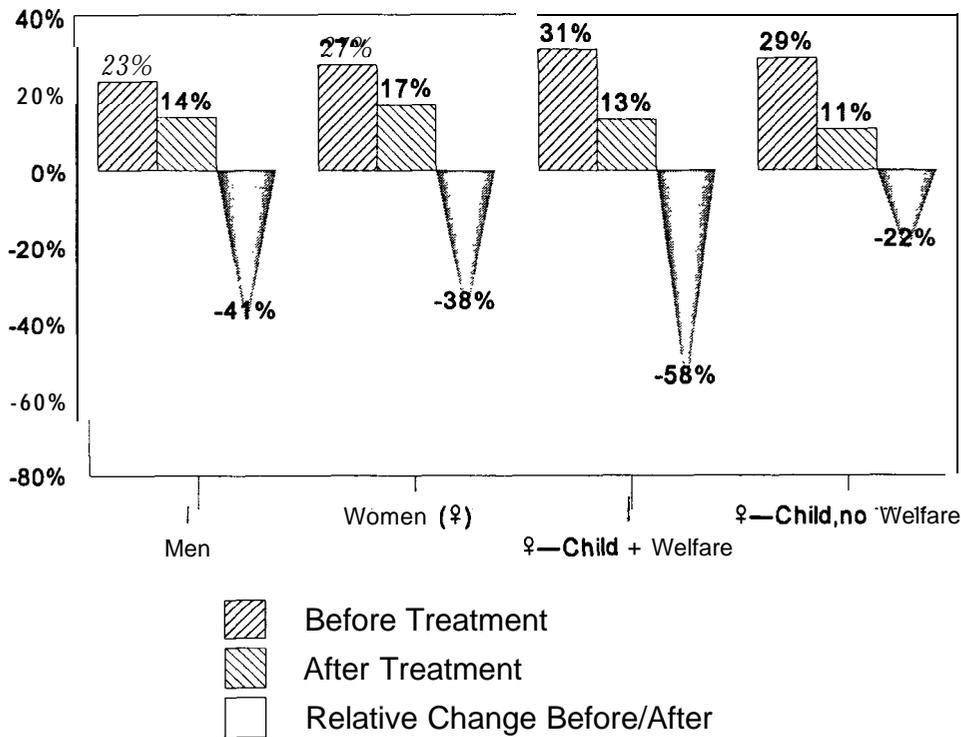
Source: NORC CALDATA

Each measure shows substantial before-after declines overall and among every subgroup. The overall decline was a 68 percent reduction in drug selling and a 60 percent reduction in arrests. Men as a whole and in each corresponding subgroup generated more criminal activity and sanctions than women, both before and after treatment. For neither measure does the change

differ significantly among subgroups of women or men. The fact that potential reductions in criminal activity are lower for female clients than for male clients has an important bearing on Chapter 5's finding that the overall benefit-cost ratio of substance abuse treatment was lower for female clients with children who received welfare income than for the total treatment population.

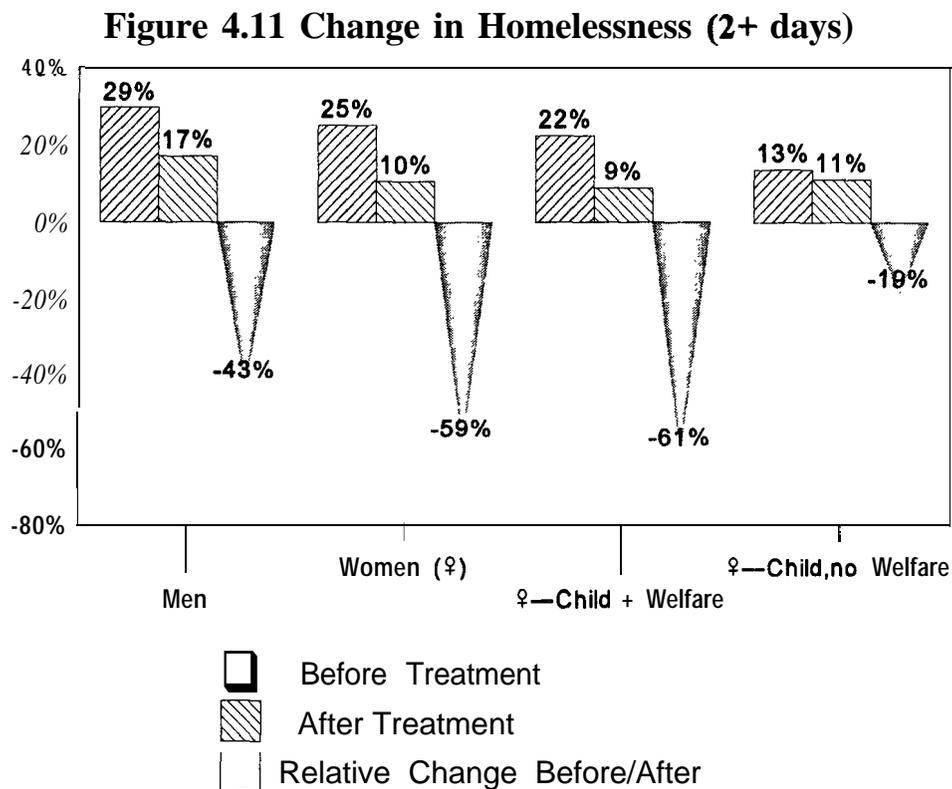
Figure 4.10 presents before-after comparisons for the most costly single indicator of clients' health and health care utilization, the percentage hospitalized for any reason, including physical conditions, mental conditions, or drug-related conditions (including overdose). The percentage hospitalized changed significantly from before-treatment to after-treatment, declining by about 58 percent, from 31 percent to 13 percent. These declines were evenly balanced across physical, mental, and drug-related causes of hospital stays. All of the subgroup changes were significant but none were significantly different in size from each other.

**Figure 4.10 Change in Hospitalization**



Source: NORC CALDATA

Finally, Figure 4.11 presents before-after comparisons of the percentage who were homeless for two or more days (per-annum basis). On the whole, men were more likely to have been homeless than women in each period. Every subgroup experienced less homelessness after treatment, with one exception: women with children who did not receive welfare income. This group had the lowest level of homelessness before treatment and the least proportionate reduction across the CALDATA period. In the subgroup of women with children who received welfare income, the percentage who were homeless for two or more days declined from 22 percent before treatment to 9 percent after treatment.



Source: NORC CALDATA

### **Conclusion**

On the dimensions of drug use, crime, health care, and homelessness, women in CALDATA as a group were appreciably better off after treatment than before, improving to the

### *Treatment for Parents and Welfare Recipients*

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same extent as men; and this result held for women with children and women receiving welfare as well as for other treatment subgroups. On the economic dimensions of employment and separation from welfare dependence, the **CALDATA** groups did not improve, but stayed even in terms of welfare and lost ground on employment-California's severe economic downturn during the study period appears to have swamped whatever positive economic effect the period of treatment might have generated. From the standpoint of public policy, we believe these results encourage the support of treatment options for welfare clients.

## 5. Treatment Costs and Benefits

The components of economic impacts analyzed in this chapter are very similar to those studied as part of the original CALDATA report. This chapter analyzes the costs of treatment and the estimated benefits to taxpayers—an index of economic impacts that includes reductions in the burden of crime, healthcare utilization, and welfare/disability payments. This study did not, and could not, assess certain other economic values pertaining to persons who received welfare income, were raising children, and/or report custody or parenting problems. For example, this study could not ascertain the economic benefits that accrued directly to the children who were in households where parents were treated for substance abuse problems. Such economic benefits could include the prevention of publicly-subsidized out-of-home placements for neglected, abused, impoverished, or involuntarily abandoned children, as well as the long term impact of successfully treated parents on their children’s educational performance, employment productivity, and other dimensions of well-being. These kinds of benefits could have present economic values comparable in scale to the direct effects of treatment. However, we have no good empirical basis for modeling such effects at this time, so we can only recognize their potential importance and recommend that data and methods be developed in future research to assess them.

### *Background on **estimating** benefits*

This chapter discusses the economic costs and benefits of treatment for women and men who relied on welfare income, had children, had parenting or custody issues, or some combination of these. Data analyzed here are based on similar data reported in the first CALDATA report, **Evaluating Recovery Services**. **The** report estimated that, from the perspective of taxpayers, the economic benefits of treatment (totaling over \$1.49 billion) outweighed the cost of treatment (\$209 million) by a factor of 7 to 1. **This** was due mostly to reductions in crime and partly to reductions in healthcare. Economic gains during and after treatment were also slightly offset by increases in the amount of welfare income received by persons during and after treatment. Equivocal employment outcomes in the CALDATA sample resulted in less strong conclusions about the benefits of treatment when viewed from the perspective of society.

The three major categories of substance abuse-related economic impacts (and benefits) are crime, health, and productivity. This study applies the standard “cost of illness” methodology to calculate economic impacts of drug and alcohol abuse for the years before and after treatment and the period during treatment. Average costs for specific behaviors are applied to **client-**reported engagement in those behaviors.

***Avoided costs equals “benefits.”*** Calculating the benefits of treatment entails a comparison of the economic impacts of treatment clients before treatment with their impacts during and after treatment. When economic impacts either during or following treatment are lower than the baseline costs, a “benefit” is said to exist. Conversely, when economic impacts during or following treatment are greater than the baseline, benefits take on a negative value.

***Costs to Taxpaying Citizens*** includes losses to individuals who do not engage in drug abuse or related behavior. For these people, loss of earnings for a drug or alcohol dependent person is of less concern, but the value of theft losses or the amount of money expended on welfare and disability for drug and alcohol dependent persons is viewed as a tangible cost. While most substance abusers do pay taxes to some extent, the largest part of the tax bill is borne by those that are not substance abusers. The following components **define** costs to taxpaying citizens as measured in this analysis:

- **Criminal Justice System Costs:** the cost of police protection services, prosecution, adjudication, public defense, and corrections (incarceration and parole/probation).
- **Victim Losses:** victim expenditures on medical care, repairs of damaged property, and lost time from work that result from predatory crimes.
- **Theft Losses:** the estimated value of property or money stolen during a crime, excluding any property damage or other victim losses.
- **Health Care Service Utilization:** the economic value of inpatient, outpatient, and emergency medical care and inpatient and outpatient mental health care that could have been avoided.

- **Income Transfers:** transactions in which resources are moved from non-substance abusing law-abiders to others via gifts, public assistance, or public and private disability insurance.

There clearly are other types of “cost” borne by taxpayers and society that are not represented in this study. For example, it is not possible at present to estimate:

- decrements in household productivity or responsibility among substance abusers;
- social impacts on family and friends;
- short-term and long-term impacts on children in the care of substance abusers who may, as a result, suffer greater risk of neglect, abuse, poverty, abandonment (including involuntary abandonment due to incarceration), or other forms of deficient parenting.

Analysis of **CALDATA** indicates that many **CALDATA** clients who received welfare income before, during, or after treatment also received some income legitimate full- or part-time employment. However, it is not possible at present to disentangle the sequence of employment and welfare receipt.

The remainder of this chapter presents the costs and benefits of treatment for different subgroups. The chapter concludes with an analysis of changes in crime, healthcare, and income from welfare, productivity, and employment among **CALDATA** clients.

#### *Costs and benefits of treatment to taxpaying citizens*

The benefits of treating the **CALDATA** population, as viewed by taxpayers, outweighed the costs of treatment regardless of whether a treatment recipient was male or female, received welfare income, had children, or reported parenting concerns. The cost and benefits to taxpayers of treatment provided in California are summarized in Table 5.1 and analyzed separately for women and men, and for subgroups of interest within gender. We first discuss the average cost of treatment and average length of stay per episode of treatment, followed by economic impacts before treatment and savings during and after treatment. Total savings and benefits divided by

costs are presented last. It is important to note again that the potential intergenerational benefits of treatment-savings in health care, social services, and remedial or other special educational services to children of substance abusers-are not included in this analysis. These benefits would accrue more to treatment of women than men because of their higher incidence of child rearing responsibilities.

- On average, a **CALDATA** treatment episode cost about \$1,361.
- Treatment for men cost about 5 percent more on average than for women, and about 25 percent more than the average cost of treatment for women with children (\$1,088). These differences reflected the lower percentage of women in residential treatment settings, which were about 5 to 8 times more expensive per week than outpatient treatment, and their shorter stays in treatment, particularly in residential settings.
- The average cost of a treatment episode was nearly identical for women with children who did and did not receive welfare income.
- On average, a **CALDATA** treatment episode lasted 95 days (for those discharged from treatment-in other words, excluding continuous methadone clients).<sup>1</sup>
- The average treatment episode lasted 96 days for women with children, 90 days for women who received welfare income, and 80 days on average for women with both children and welfare income. These lengths of stay are appreciably shorter than for women who did not have children (137 days), did not receive welfare income (136 days), and women who had no children, no welfare income, and no other parenting/custody problems (167 days).
- In the year before treatment, treatment recipients imposed costs on taxpayers of \$22,787, including the economic cost of crime, health care, and welfare/disability receipt.
- Women in general imposed a lower economic burden in the year before treatment than men, averaging \$18,000 to \$19,000 for most women. Women with children who received welfare income cost taxpayers about \$18,000 whereas women with no children, welfare income, or parent/custody issues cost about \$15,000.

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<sup>1</sup> These analyses are based on persons discharged from treatment only, and do not include “Continuing Methadone Maintenance.”

Table 5.1 Costs and Benefits to Taxpaying Citizens

	Treatment cost	Length of Stay (Days)	Impact Before	Savings During	Savings After	Total Savings	Benefit cost Ratio
<b>Women</b>							
Children	\$1,088	96	\$1,826	\$1,163	\$3,145	\$4,307	3.96
Welfare	\$1,283	90	\$1,834	\$807	\$2,462	\$3,268	2.55
Children + Welfare	\$1,082	80	\$1,805	\$495	\$2,418	\$2,913	2.69
Children/No Welfare	\$1,105	121	\$1,858	\$2,351	\$34,373	\$6,724	6.09
No Child, Welfare,	\$1,757	167	\$14,996	\$2,641	\$3,857	\$6,497	3.70
<b>Men</b>							
Children	\$1,207	93	\$1,923	\$1,253	\$4,091	\$5,343	4.43
Welfare	\$1,538	76	\$2,960	\$1,260	\$9,079	\$10,340	6.72
<b>TOTAL</b>	<b>\$1,361</b>	<b>95</b>	<b>\$22,787</b>	<b>\$2,082</b>	<b>\$8,037</b>	<b>\$10,118</b>	<b>7.43</b>

- Reductions during treatment and after treatment in costly behaviors “saved” taxpaying citizens \$10,118 in total, but the largest savings were among men who had higher pre-treatment economic impacts.
- Savings were lower among women with children compared to women without children (\$4,307 vs. **\$7,008**), among women who received welfare income compared to women who did not receive welfare income (\$3,268 vs. **\$7,419**), and among women who had children and received welfare income compared with those who had neither (\$2,913 vs. \$6,497).
- Despite lower overall savings among women with children and/or welfare, the benefits of treatment outweigh the costs of treatment by 2.5 to 1 (welfare recipients) and 2.7 to 1 (women with children and who received welfare income). While these returns on investment are smaller than found among women without children, welfare, or either, the treatment was still strongly cost-beneficial.

### **Specific costs and benefits: crime, health care, and productivity**

The economic impacts of crimes committed by **CALDATA** clients were generally lower among women compared with men.

- Pre-treatment economic impacts for crime were also lower among women with children and women who received welfare income compared with their counterparts.
- While there was a 42 percent drop in crime related costs from before to after treatment among all **CALDATA** clients, women with children had lower improvement than women without children (25 % versus 42 %) and women who received welfare income had lower improvement than women who did not receive welfare income (22% versus 42 %). Women who had children and/or received welfare income **started** with lower costs associated with crime, but had lower proportionate **reductions in** crime committed.

The costs associated with health care utilization averaged about \$3,200 before treatment for all **CALDATA** clients. Health care constitutes a relatively small share of the economic cost of substance abuse imposed on taxpayers (14 %).

- Women who received welfare income had lower health care costs than women who did not receive welfare income, but had substantially greater increases in health care costs in the year after treatment compared with their counterparts (20% versus 3 %). This difference may be a result of a greater awareness of health problems or greater stability to follow through and complete courses of medical care as a result of the alcohol or drug treatment contact.
- While women with or without children did not substantially differ on pre-treatment health care costs (3,000 vs. **\$3,300**), women with children virtually did not change their health care costs from before to after treatment (-4 %), whereas women without children increased health care costs by 15 percent.
- Women with children and who received welfare income used \$2,200 worth of health care before treatment, and increased this use by 12 percent in the year after treatment. Women with neither children nor welfare typically used \$3,600 worth of health care in the year before treatment, but decreased this use by 13 percent in the year after treatment.

We analyzed in more detail the proportion of **CALDATA** clients who received welfare, disability, and legitimate earnings either before, during, or after treatment, and the average amount received by those receiving any of these funds. The key findings are as follows:

- Welfare eligibility and receipt were dynamic. About 30 percent of women who received welfare income before treatment received no welfare income in the year after treatment, while about 16 percent of women who received no welfare income before treatment began receiving welfare income during and following treatment. Overall, there was a slight net decrease in welfare receipts, matching a nonsignificant slight decrease in the overall percentage who received welfare payments.
- About 60 percent of the women who were raising children received welfare income in the year before treatment, compared with 20 percent of women with no children. For both subgroups, this proportion increased somewhat during treatment then dropped after treatment.
- Women with children received an average of \$5,400 in welfare income in the year before treatment and about \$5,100 in the year after treatment, while women with no children received on average \$2,500 in welfare income before treatment and \$3,000 in the year after treatment.
- **In** no population subgroup studied were more persons employed either full- or part-time after treatment than before treatment. Rates of employment either stayed the same or dropped during and following treatment compared with before treatment. For example, employment among women with children dropped from 35 percent before treatment to 29 percent after treatment. Moreover, 26 percent of women who received welfare income in the year before treatment also received earnings from full- or part-time employment during some part of that year, and 24 percent of women who received welfare income before treatment received earnings from employment in the year after treatment.

These generally disappointing employment results, presented in the first **CALDATA** report, may be at least partially explained by concurrent changes in the California labor market.

- Table 5.2 shows a statewide downturn in employment in California over the study period. The unemployment rate steadily increased from 5.6 percent in 1990, the “baseline” year for most **CALDATA** clients, to over 9 percent in 1992/1993, the “follow-up” period for most **CALDATA** clients.
- These patterns are apparent for men and women; data from the Los Angeles and San Francisco **MSAs** also show the same trend.
- Substance abusers, if employed, tend to be employed in blue collar and lower-wage paying jobs that are disproportionately affected by employment fluctuations. More study of California’s unemployment and the **CALDATA** population are needed to help understand the apparent worsening of employment among substance abusers noted in **CALDATA**.

**Table 5.2 Unemployment in California, 1989 - 1993**

	Number Unemployed	Total	Percentage Unemployed			
			Men	Women	Los Angeles	San Francisco
1989	737	5.1	5.1	5.1	4.7	3.3
1990	823	5.6	not avail.	not avail.	not avail.	not avail.
1991	1119	7.5	7.9	7.1	5.8	3.3
1992	1382	9.1	9.4	8.6	8.0	4.8
1993	1407	9.2	9.7	8.7	9.7	6.1

Source: U.S. Bureau of Labor Statistics, *Geographic Profile of Employment and Unemployment*. Multiple editions; U.S. *Statistical Abstracts*, multiple editions. 1990 Gender and MSA data not available at present.

**Conclusion**

The benefits of treatment as measured from the point of view of taxpayers, including reductions in crime, transfer payments, and health care expenditures, outweighed the costs of treatment for men and women and for those who received welfare income, were raising children prior to entering treatment, or expressed parenting concerns as a reason for seeking treatment. An average treatment episode lasted about three months, cost about \$1,400, and yielded benefits to taxpayers during and after treatment worth about \$10,000, with the greatest share of benefit deriving from reductions in the economic burden of crime. The measured benefit to taxpayers exceeded the cost of treatment by 6 to 1 for women with children who did not receive welfare and 2½ to 1 for women with children who did receive welfare. Benefits were lower among women than men, and especially among women who were parents or received welfare, principally because women, especially those with children or receiving welfare initially committed less crime than men.

The role of treatment in moving persons from economic dependency to greater self-support was difficult to evaluate in CALDATA, because overall unemployment rose steadily in California throughout the period under study, from about 5.6 percent to 9.2 percent, and the treated population largely worked in occupations that are disproportionately affected by employment

fluctuations. Nevertheless, from the standpoint of social welfare policy, particularly as it bears on families, we believe these cost/benefit calculations provide clear encouragement for **the** support of treatment.

## 6. Summary

The alcohol and drug treatment population in California, a microcosm of the country as a whole, is heterogeneous. Treatment participants who received welfare, were women, lived with children, lost custody of their children, or entered treatment due in part to parenting concerns, each comprised a minority relative to those who lacked these characteristics. Those with more than one of these characteristics were an even smaller group: for example, women with children in the household who received welfare were about 11 percent of the overall treatment population. However, among women in treatment specifically, the raising of children, losing and regaining custody of them, and supporting them with welfare benefits were very important and highly clustered: nearly two-thirds of women in treatment who had children in the household were recipients of welfare.

Even though the treatment programs were not as a rule oriented heavily toward these particular subsets of concerns, it is important to know whether treatment was effective with these subgroups, particularly since welfare programs and other social services are now being cut loose from older regulatory moorings. Decision makers need empirical compasses to help direct them in steering scarce resources toward the best interests of the clients they are charged with serving and the taxpayers who are footing the bill.

**CALDATA** provides some conclusions that should prove useful in this decision making. Treatment populations proved to be heterogeneous in a number of ways. No one substance was dominant. Heroin, alcohol, cocaine (including crack), and amphetamines were the most common problems, and the programs treated them all with some degree of success-cocaine most successfully, heroin least so. Success in treatment, as most commonly measured, meant reducing substance use and other criminal behavior that was strongly associated with it, particularly drug sales and acquisitive crimes. Treatment also affected medical and housing status, yielding declines in homelessness and hospitalization.

On all these measures, treatment was productive. Not everyone improved, but many did. Not everyone stopped using drugs or committing crimes entirely, but a significant number did, and others cut back substantially. Those who stayed longer in treatment, reaching more of the therapeutic goals set out at the beginning, improved more than those who left after briefer exposures. The picture on measures of income and earnings was not quite as good. It appeared that treatment could more easily help the client change his or her own behavior, as symbolized by drug consumption, than affect market outcomes such as employment and economic dependency.

**With** regard to most measures of treatment outcome-reducing substance use and crime, homelessness, and hospitalization-treatment worked as well for women with children, women on welfare, and women in general as it did for men. Overall, treatment paid for itself and then some, paying taxpayers back about 7 to 1. The major benefits were in reducing the burden of crime. Lower but still positive ratios of benefits to costs (between 2 and 3 to 1) accrued for women who received welfare and women with children who were on welfare. The economic benefits were lower largely because these women did not engage in as much pre-treatment criminal behavior. None of these calculations took into account the effects on children of living with parents who were in recovery rather than continuously addicted-or of not living with these parents at all. Treatment studies to date have not undertaken the very complex task of estimating these intergenerational benefits and costs.