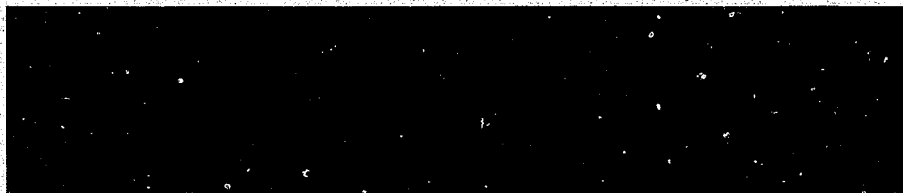
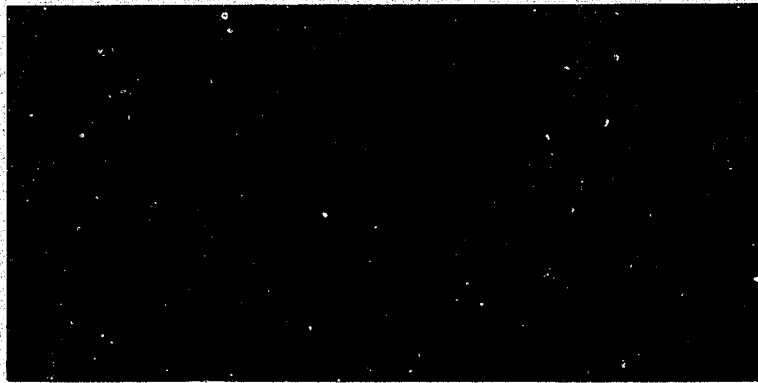


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SOCIAL EVALUATION AND IMPACT STUDY  
OF SANTA CLARA COUNTY  
METHADONE TREATMENT AND  
REHABILITATION PROGRAM

LAW ENFORCEMENT ASSISTANCE ADMINISTRATION  
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### SUMMARY

The Santa Clara County Methadone Treatment and Rehabilitation Program is being evaluated by the Institute under a grant from the Law Enforcement Assistance Administration. A report on the first year of study was completed in June, 1972, and this is the final report for the second year of study. Evaluation is continuing for a third year at a reduced level with funding from the National Institute of Mental Health.

The goals of the evaluation were to determine the impact of the program on the addict population of Santa Clara County in (1) reducing patient drug use, (2) decreasing patient criminal activity, (3) increasing patient social productivity, viz., employment, educational attainment, and (4) generally improving patient social functioning, such as their involvement with family and friends.

The patients studied represented a cross-section of addicts in the county. They were not selected for their potential to succeed in the program, since program criteria are designed to select only hard core addicts. The study population was divided into two basic groups for study. The first or cohort group, consisted of 463 patients who entered the program from its inception in February of 1971 to June 30, 1972. Selection of this group was made because data could be collected on them for an eighteen month period pre and post program admission. For purposes of analysis this group of patients was divided two ways: (1) into those on and off the program at two years from their date of admission, and (2) by "success" and "failure" groups based on crime and earnings data. The purpose was to determine significant differences between and within these groups pre and post program based on the criterion measures of performance. The second study population consisted of all patients admitted when the evaluation staff began data collection on August 1, 1972. Results for both groups are summarized here, along with the results of several special studies of the program.

### The 1970-1971 Cohort Population

Retention Rate. At a minimum of 24 months of program participation for all patients (a maximum of 35 for any), the program retained 45.1 percent of all patients admitted. When those leaving with staff approval (42) and the deceased (5) are added to those retained, the "true" rate becomes 55.3 percent. This rate is not unusual for methadone programs of this size. Using design groups, a "success-no change/on program" rate of 63.9 percent was computed based on criminal activity and wages earned.

### Criminal Activity

Using official GI and I records, the findings of the first year of study were confirmed, with some additional



information. With no significant differences in time at risk, overall arrests and felony arrests and convictions showed significant change in favor of those patients staying on the program. Misdemeanor arrests and convictions showed no significant changes pre and post program. This indicates that not all patients are ceasing their criminal activity, although patients committing offenses who remain on the program have less serious involvement with the criminal justice system (post program). The more important consideration is, however, that patients start the program with significantly different levels of criminal involvement. In comparison between status groups (on-off program), patients who eventually go off the program not only increased their criminal activity, but they were significantly more involved in felony and misdemeanor criminal activity to begin with. In comparisons within status groups, however, patients who remain on the program made some significant gains in outcome performance in relation to their baseline level of criminal activity.

#### Employment and Earnings

Using wage data made available from the State Department of Human Resources Development (base wage files), the findings of the first year were confirmed and augmented. Earnings increased significantly for the majority of patients who remained with the program; however, there were not significant increases in the numbers of employed patients post program. It appears that patients who were working when they started the program became more stable and began to earn more. Patients who went off the program were significantly lower in earnings in the start quarter, although there were no significant differences between status groups when the full year pre program admission (excluding start quarter) was considered. Again, the finding is that patients who went off the program were initially at a less than optimal performance level, and they continued to perform at that level in relation to those who stayed on the program. For the period post program there were significant differences in wages earned by status groups, even though patients who left the program showed a modest improvement in average wages earned. As indicated, there was a significant improvement in wages earned for patients who stayed on the program. There is little question that the maintenance strategy works for patients who stay on the program. Even those who leave show no decreases in average wages earned.

#### Drug Use

These data represents a "shrinking sample," as data was available only for patients who continued on the program. Patients who were classified as "failures" on crime and earnings criteria showed a marked increase in self-reported alcohol use and a marked drop in barbiturate use in their first year on the program.

Since the ethics of program administration did not permit the development of a control group for true comparison purposes, one can only hypothesize that a control group would have performed most poorly on all the criterion variables, doing even worse than those who went off the program. The results show that a significant proportion of the addicts entering a methadone program can be helped, and that the concept of "maintenance" in anticipation of improved performance can achieve results which are probably more favorable than conventional

'drug free' approaches. The thesis that abstinence from drugs is a prerequisite for program success was found to be questionable. The critical factors in program success are increased earnings and decreased criminal activity. The real concern is the extent to which excessive alcohol use might be detrimental to program success.

#### 1971-1973 Population

This represents 410 patients who came on the Program after August 1, 1971, the onset of the Program evaluation. This population was studied using social data instruments introduced by the evaluation group. The retention rate for this population is 60.7% (not a cohort figure). Most encouraging was the finding that self-reported employment rose with time on the program, increasing from one-fifth employed (20.8%) to about one-half employed (51.4%) three months from admission. The "Way of Life Inquiry" was introduced and used to type patients into four categories: hustlers, two-worlders, uninvolved, and conformists. It did not predict retention, as hoped, since all groups left the Program at the same rate.

The heroin epidemic apparently reached its peak in 1969 when 12.1 percent of the patients in this group first started using heroin; this percentage dropped to 3.7 percent in 1970. Perhaps the corner has been turned in the epidemic of heroin use in Santa Clara County.

#### The Total Population

The entire population of 937 patients ever admitted to the Program (including the above groups) from February 10, 1970, to January 31, 1971, was analyzed for demographic characteristics at Program entrance.

Eighty percent (80%) of the patients are male, with a median age of 26.8 years.

Slightly more than half (51.7%) are white, followed by Chicanos (42.8%).

Less than half the patients are married (44.8%), with 29.5% single, 24.5% divorced or separated, and 1.2% widowed.

The median educational level is 11.3 years.

The largest occupational group is semi- and unskilled (28.8%) followed by skilled labor (22.2%) and transportation and service workers (15.7%).

More than four-fifths (82.2%) report they are not working at admission.

The retention rate for the entire population is 55.5% (this is not cohort analysis, i.e., patients with just a few months on the Program are included with those who have been on the Program for two years or more).

The population shows no dramatic or consistent shift in demographic characteristics over time; data by calendar quarter remain fairly consistent. Over the Program's three years, however, there has been a slight increase in the percentage of males and whites admitted. Also, the median age has decreased slightly along with a modest increase in years of education.

#### Other Studies

Included were the following special studies:

##### Education Survey

A survey of patient educational attainment was done for 463 patients, approximately the same group as the cohort population. The intent was to see if completion of college coursework was related to program success. Permission was granted by five local junior colleges and the local Metropolitan Adult Education Program (adult education) to access their records for evidence of educational attainment. Comparisons were between patients who completed units as opposed to those who did not complete units subsequent to enrollment. While there were no significant differences between these two groups, some interesting differences were evident. Patients who enroll and complete units are older, particularly in the adult education group, they tend to remain on the program longer, and they generally withdraw with staff approval when they leave the program. The retention rate is good (about 70% at 24+ months) for the entire student group. Misdemeanor and felony arrests and convictions, while not significantly different between groups, showed decreases for patients completing units. Those who did not complete units were three times more involved in misdemeanor offenses and almost twice as involved in felony convictions at the start of the program. Even with this level of involvement they still showed decreases in criminal activity post program, although these differences were not as great as for patients who completed units. Their offenses also showed an increased severity from pre and post program. Patients who completed units showed no post program drug convictions and no sentences to Department of Corrections institutions, this was not true for those who failed to complete units attempted.

##### The Minnesota Multiphasic Personality Inventory (MMPI)

The MMPI was administered to 126 patients in late 1970 and early 1971 by the Program psychologist, whose conclusions are summarized here:

After six months in treatment these patients were re-tested (if still on the Program). The total group showed a significant decrease in psychopathology on the retest. The most important finding was

that only nine percent (9%) of the patients were classified as normal upon admission, and after six months this increased to 21%. The MMPI will be used more extensively in the third year of evaluation.

##### Community Agency Survey (CASE)

The representatives of six types of criminal justice agencies were polled (63 people) to determine their attitudes toward the Program. They gave the Program overwhelming support as in the first year of evaluation; however, an increased note of concern emanated from their responses in form of constructive criticism of the Program. Much concern was expressed over the addict's commitment to the concept of treatment, the need for increased communication with the Program, and that the Program be "more cooperative" with criminal justice agencies. Narcotic law enforcement officers were most negative toward the Program, with corrections and courts personnel expressing the more positive view. Over half the respondents indicated that the Program had given them a least "some help" in reducing their workload, which is in concurrence with the data on a reduced level of criminal activity on the part of patients.

##### Staff Program Evaluation Questionnaire (SPEQ)

As in the first year of study, staff concerns centered on their own program management problems, which appear to be a continuation of those expressed in the first year. The staff retention rate of 44% over a 22 month period reflects this concern. They are not completely satisfied with their efforts and feel that with proper direction they can improve their work, particularly with some reorganization of the Program (which is now under way). Also of great concern to the evaluators was with the changing nature of the role of the Community Worker, formerly the "addiction specialist."

##### Program Costs

The average cost of treatment per patient per year is \$1,226, up \$71 over the first year due to the increase in the number of clinics. The average cost per year for the first two years was \$1,191, which is well below the average for programs of this type. Almost all cost are provided through State and Federal funds and patient fees. Using techniques developed for assessing the costs of heroin to the addict and the community, an annual saving of \$102,892 in property crime was computed for a population about the size of the cohort (463). The data was not designed for an interpretation of savings to the criminal justice system or for estimates of reduced welfare and other social agency costs. However, the results of the criminal justice agency survey and the data on patient earnings indicate that the program is a benefit to the community in terms of individual improvement and a decreased need for various social agencies.

## Recommendations

Recommendations for program improvement are similar to those from the first year of study. They are based on the information gathered over the full two years of study as well as observation by staff working in the clinics. They are intended to provide constructive suggestions for the continuing development and improvement of the program. These recommendations are as follows:

1. Program Administration. While the efficiency of the program has shown some improvement over the past few years, the lack of a clear organizational structure has continued to create problems which may affect program effectiveness. The staff have continually expressed this as a concern in the interviews. It is felt that the treatment program which is now being implemented will require strong leadership from an individual whose entire time is devoted to program operations, and who has sufficient authority to implement change. The present program coordinator position lacks sufficient responsibility to be effective in operating a program of this size and complexity.
2. Community Workers. The effort to upgrade the quality of indigenous workers is important. However, it is felt that a reduction in or the eventual elimination of this type of individual in favor of those "better qualified" might seriously affect the ability of the program to provide a link to the addict community. More importantly, these individuals provide critical support to individual patients who come to the program. Much of the program's future effectiveness will depend upon continued recruitment of these types of individuals, whose own development as workers is often a critical part of the treatment process.
3. Criminal Justice System. Based on the results of the criminal justice agency survey for both years of the evaluation, there is clearly a need for more interaction, particularly with narcotic law enforcement officers and the courts. As summarized in the first year evaluation report:

The most important recommendation...is that the medical and law enforcement points of view must be reconciled for the program to continue to improve its operation in the county. The type and extent of this relationship should be determined through a meeting of top officials representing law enforcement and criminal justice agencies in the county and the Public Health Department. This group would be able to discuss the issues of clinic security, illegal methadone trafficking, information exchange, the criminal justice system handling of patients, and the coordination of clinic activities with those of other agencies in the county who are concerned with the problem of drug addiction.

As indicated, there is no easy resolution to these problems. Each group perceives the problem differently, and each see the solutions from a perspective which has public support. If these issues could be resolved the program would truly become a 'model' in the community treatment of heroin addicts, particularly if other community agencies were encompassed within that model.

4. Intensified Treatment. As indicated by the outcome data for patients who remained on the program, every effort should be made to keep patients active on the program. Whether this takes the form of more individualized counseling efforts or the provision of more services, such as vocational training, rests with program staff and administration. The principal merit of methadone treatment appears to be that it will bring the addict into treatment, and it will assist him in the initial stages of coping with the habit. Whatever occurs during this initial period of maintenance is critical to the ultimate success of the patient. Hopefully, the program staff will be equipped to provide needed services for all who want them.

## 1.0 PROGRAM BACKGROUND AND DESCRIPTION

### 1.1 HISTORY AND GOALS

The Santa Clara County Methadone Treatment Program has been operated since February 10, 1970 by the Mental Health Bureau of the County Public Health Department. The program is authorized by the Substance Abuse Program of the California Department of Health, and has additional appropriate approvals from other state agencies and the Food and Drug Administration (FDA). The original protocol for research and treatment was developed by Avram Goldstein, M.D., Professor of Pharmacology, Stanford University, in conjunction with County staff. Funding is provided by Federal grant monies, State Short-Doyle and Medi-Cal payments to patients, the local funds from property taxes required for match, and, more recently, patient fees.

After the first year of operation an application was submitted to the Law Enforcement Assistance Administration for two years of funding at the level of \$200,000 per year. The request for funding was due to a variety of factors, including the early success of the program, the need for services for a large population of heroin addicts in the county, and evidence of increased crime rates related to heroin use. It was believed that over 1,000 heroin addicts who met the program requirements were in need of treatment. Program goals included an 80 percent reduction in the heroin use of these individuals, and a resulting decrease in criminal activity and improvement in patients ability to function in the community as useful citizens. A larger goal was the development of an improved methadone program model by which future comprehensive programs could be planned, operated, funded, and implemented in other areas of the state and nation.

In conjunction with the funding of the program and the pursuit of the goals specified above, it was felt that the impact and results of such a county-wide methadone program should be measurable as to its impact on the individual patient, including his family and the community, and in terms of a possible reduction in drug-related crime. These evaluation goals can be summarized as follows:

- To determine the impact of the program on the community - does methadone treatment reduce crime and protect the community?
- To determine the effects of methadone treatment on the patients in the program - do former addicts, now patients, improve significantly with methadone treatment, and how do they improve?
- To describe the program and outline the methods used to achieve success with patients.

These broader program and evaluation goals are stated more succinctly in the program procedures manual:

To combine maximum efficiency and economy in the mass treatment of hard-core heroin addiction with a rigorous research design intended to yield significant information about heroin addiction and about the relative efficacies of alternative ways of using methadone in this condition. The ultimate aim is to rehabilitate the addict and return him, if possible, to a state of abstinence from all narcotics.<sup>1</sup>

The specific philosophy and goals of the program as it is operated are discussed in the "Organization and Procedures Manual," and are summarized here. It is necessary to quote the opening statement:

The purpose of the program is to assist hard-core heroin addicts who wish to give up their heroin habit to do so. Methadone is a pharmacologic tool that does two things: (1) stabilizes the addict's dependence, so he no longer becomes sick several times daily, and so he can stop using heroin without becoming sick; (2) it establishes a cross-tolerance to all narcotics ("blockade") so that heroin use is no longer very rewarding. These two actions make the addict, even when his motivation is ambivalent, amenable to therapeutic intervention. The methadone is not the therapy - it is an incidental (though essential) medicine, which, we hope can eventually be given up.<sup>2</sup>

The Manual goes on to state that this therapeutic intervention is essential "to bring about a change in life style" on the part of the addict, and that this will only work if the program staff are seen by the addict as "helpful, supportive, nonpunitive, and sympathetically interested in him and his problems." This role requires a staff which can combine "concern and sympathy with firmness and good judgement" in helping the addict find "alternative satisfactions to the use of drugs." The addict must learn "how to relate better to people, how to act responsibly, how to have trust and merit trust, how to care for others through steady employment and in other ways."<sup>3</sup>

The program is voluntary and any patient may leave at any time:

<sup>1</sup> Santa Clara County Methadone Program, "Organization and Procedure Manual," revised April 15, 1972, page 1.

<sup>2,3</sup> Ibid., p. 1.

Nurses are authorized to institute withdrawal upon request, and the patient can specify how long the withdrawal period is to be. A clear distinction is made, however, between withdrawal against medical advice, and a withdrawal instituted because patient and staff have agreed that the time has come to try it.<sup>4</sup>

This distinction is also of importance in the research on the program, and will be dealt with in later sections on results.

The program will also accept a patient back at any time without his waiting, guaranteeing him the feeling that the program is consistent with wanting to help him. Finally:

The eventual goal is to taper off methadone and see if patients can lead a successful abstinent life without it. One full year without drug use would seem to be the minimum reasonable period, and many major changes in the patient's life would have to have occurred, to give grounds for thinking abstinence might work after methadone when it didn't work before methadone.<sup>5</sup>

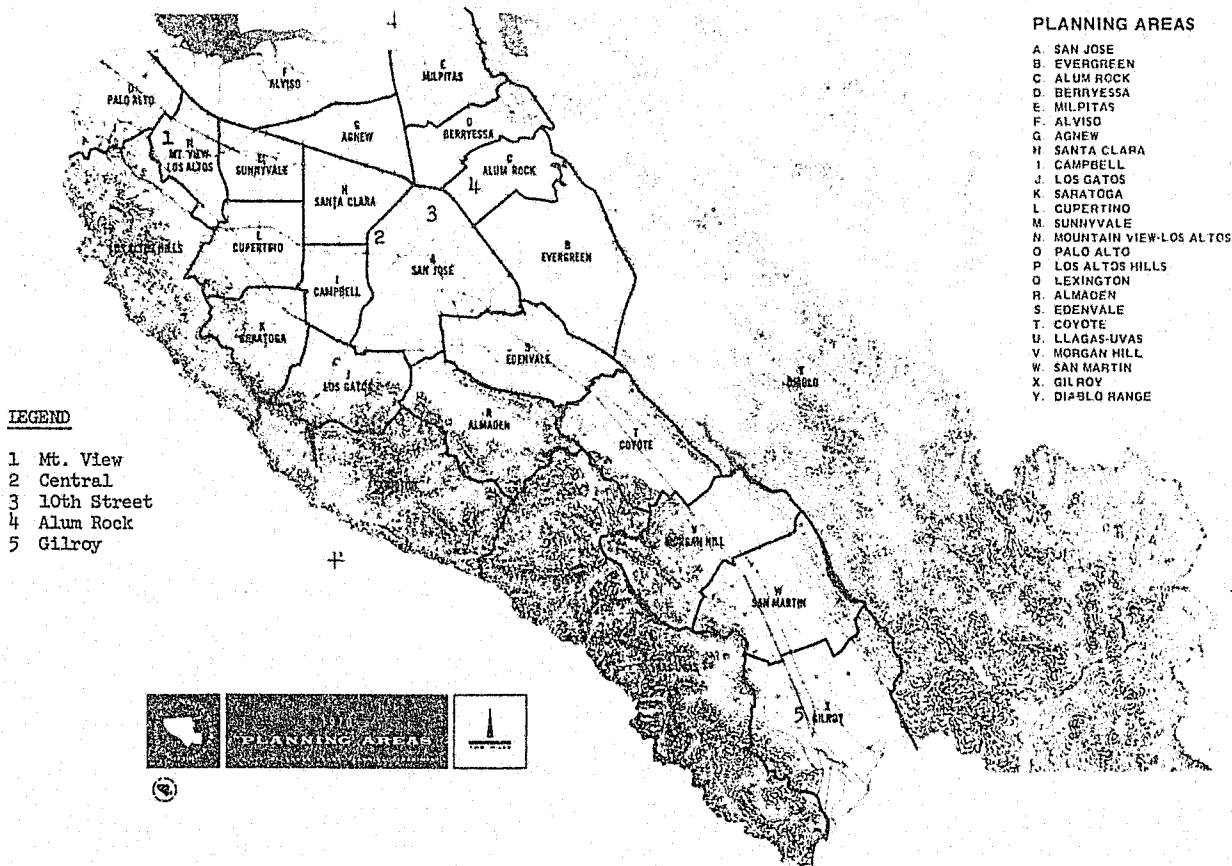
These goals will be discussed in more detail in the results section as they relate to what is happening to patients on the program.

## 1.2 CLINIC STRUCTURE

The location of the five program clinics is shown on Chart 1. Moorpark (Central) (2) was the original clinic and opened February 10, 1970. It is located near existing Health Department (and Mental Health) facilities, and for 10 months was the only methadone clinic in the area. Many of the procedures used in the other four clinics were developed at Central. The second clinic to open (December 7, 1970) was the Alum Rock clinic (4) which is located on the East side of the county in a low-income area. Shortly thereafter, on March 31, 1971, the Gilroy clinic was opened in South County in the town of Gilroy (population: 13,170). This clinic serves a large proportion of Chicanos and patients doing farm labor work. Just over a year later the Mountain View clinic (1) was opened (April, 1972). There were delays due to grant management difficulties, personnel hiring

<sup>4</sup>Ibid., p.2.

<sup>5</sup>Ibid., p.2.



problems, and the difficulty encountered in securing clinic sites. This clinic is located in North county and serves a more affluent area of the county. The last to open, the 10th Street clinic (3), began operations on June 19, 1972. It was originally intended to be located in the West county area; however, it was relocated in the downtown San Jose area after a patient location survey was undertaken by research staff and revealed a high concentration of addicts coming to the program who resided in the inner-city area. Program Community Workers, many of whom are former addicts, concurred in this estimate and indicated that transportation problems to a Westside facility would limit participation. Therefore the fifth clinic was placed in the area supplying the greatest numbers of addicts to the clinics. As each clinic has opened patients have been transferred, at their request, to the clinics closest to their home or job. Program Administrative Staff and central records have been moved to the 10th Street clinic, which is the new Administrative Headquarters for the program.

Each clinic originally accommodated up to 220 patients, although new rulings lowered this number to 175. Clinic populations during the grant period are given in the tables in Appendix A, along with tabular descriptions of the patient population. As the 10th Street Clinic has accepted more patients the population in Central and Alum Rock clinics dropped to the 150 patient level. The specific functions of program staff are described in the First Year Final Report and the Organization and Procedure Manual; the attitudes of staff are discussed in the section on staff program evaluation.

### 1.3 PROJECT EVALUATION

A social evaluation and impact study, including the program audit, is being conducted by the American Justice Institute on contract to the Santa Clara County Public Health Department. To facilitate their identification in the clinics, this research staff took the name "Social Evaluation Research Group" (SERG). The SERG staff, consist of a secretary, research assistant, and a project director. Their activities are supervised by an American Justice Institute Behavioral Scientist who also has responsibility for other contracts in Santa Clara County.

Research staff duties have included the formulation of the final project evaluation design and the implementation of that design, as well as providing technical assistance to the program staff. SERG staff attend general staff meetings and generally participate in the ongoing activities of the clinics. Specific duties involve the design of data collection instruments, data collection, editing, and coding, data processing, data analysis, and the production portions of the quarterly and final reports. The data collection phase has required close contact with head nurses and Community Workers to insure that questionnaires are properly administered at intake and at specified follow-up intervals.

The SERG staff also conduct interviews with program staff and do research on the families of patients. SERG

staff have been very well accepted at the clinics and have received the maximum degree of cooperation from clinic staff and County personnel in collecting data which will adequately assess the impact of the Methadone Treatment Program.

### 1.4 THE PROGRAM

In order to adequately assess the impact of a program it is necessary to understand what it is doing. With the Methadone Treatment Program this is not an easy task because much of the work is done 'on-the-spot' in situations described as 'crisis intervention.' The program at the clinics has been somewhat uneven. While much is being done, there appears to be a need to provide a more intensive treatment effort going beyond a maintenance program. The following describes the program in terms of outreach, patient intake, methadone, supportive services, rehabilitation, and follow-up.

#### Outreach and Community Relations

A number of community and agency outreach programs exist to reach potential methadone treatment candidates. Community outreach includes informative presentations by both professional and para-professional speakers. Local schools and colleges, as well as business and professional clubs, are the primary users of these services. Several newspaper articles documenting progress of the Methadone Program have been published, and staff members have appeared on local television information programs.

Dorothy Littlejohn, of Medical News Media, has filmed the staff and patients at the Gilroy Clinic, and a film of the Alum Rock Clinic operation has also been made. Meetings with various community action programs are held throughout the county at regular intervals. The Methadone People's Organization (M.P.O.), a patient run and community backed organization to air grievances and improve services was given the use of program facilities for specific purposes. Staff works closely with the M.P.O., a group which appeared to have taken over many of the functions of an earlier Patient Council, at the Alum Rock Clinic.

This first effort on the part of the Methadone People's Organization resulted in staff agreement to let them decide all matters of policy on suspensions, clinic hours, vocational counseling, staff hiring, program operations at the Alum Rock Clinic for a period of time in 1972 to see if patients respond better to having these decisions made by the M.P.O. In an effort to measure the patient's attitudes before and after this change a questionnaire to measure these attitudes was designed by the Organization, with the assistance of the SERG staff. It was also administered at the Central Clinic as a control measure to test the validity of the instrument and to see if any real changes occurred at Alum Rock. The results of this effort are reported in Appendix E.

Agency outreach is a multi-faceted effort. Law enforcement and correctional agency representatives are in

close contact with the program due to the sensitive nature of the clinic operation. Open lines of communication and cooperation between criminal justice agencies and the clinics is imperative in order to develop and maintain a smooth working relationship. Therefore, staff have met repeatedly with representatives of law enforcement agencies in an effort to improve communication and outline program goals and objectives. At least a dozen meetings were held with parole agents in 1972 and 1973 due to the increasing referral case load. Meetings with representatives of the county jail (Sheriff's Department) have been held in an effort to improve care of incarcerated patients. A more recent problem has been that of involuntary referrals through the TASC (Treatment Alternatives to Street Crime) program set up by the federal government for narcotic addicts who violate the law.

Other drug abuse treatment agencies, such as Pathways, an abstinence-oriented program, are contacted regularly to streamline patient referrals and reduce possible treatment overlap.

Due to the openings of both the Mountain View and 10th Street clinics, there has been no serious backlog of addicts waiting to enter the program. In the past the waiting list has exceeded 400 addicts, however it is unlikely to rise to that level again. Currently an inactive waiting list consists of primarily those persons whom the staff has been unable to contact, those who are in jail but still potential candidates for treatment, and those who do not meet the criteria for program admission. These factors, coupled with a sudden decrease in the heroin supply or a subsequent law enforcement 'scare', could result in an increase in the program admission rate. Also, the ability of the recently opened clinics to draw addicts from the surrounding locality may increase the admission rate. As of January 31, 1973, the clinics had a treatment population of 457 out of a total of 937 applications from the day the clinics opened (53%).

Other factors which can unforeseeably effect admissions are increased media exposure as well as increased referrals from correctional agencies, including Criminal Justice Diversion Programs such as TASC.

#### Patient Intake

Intake is described in the Organization and Procedure manual as follows:<sup>6</sup>

A heroin addict coming into the clinic for information or to apply for admission is given an Information Sheet and meets with a staff member (usually a Community Worker). A short verbal interview is conducted to determine if the addict appears to meet the minimum admission requirements. The present criteria include (1) a two-year history of hard-core addiction, (2) a confirmed history of two or more failures to remain abstinent after treatment, (3) 18 years of age or older, (4) and a current resident of Santa Clara County. In addition, three successive daily urine tests are required to be

<sup>6</sup>Ibid., excerpted from pp. 6-7.

positive for narcotics, unless a patient is being accepted directly from incarceration by arrangement with parole, probation, or other law enforcement agencies, or directly from hospitalization. Before actually entering the program an applicant will be required to sign various consent forms and to secure written verification that he meets the various criteria for admission to the program. The participant is asked if he is on parole or probation; if so, he is told to contact his parole or probation officer about his intent to join the program.

In addition to the procedures described above (from the manual), precautions are taken to insure that an addict does not attempt to enroll in a Santa Clara County clinic while receiving methadone from an out-of-county program. The staff of local clinics are in touch with representatives of bordering county programs. Reciprocal patient treatment lists are kept and periodic cross-checks of patient photographs are done to prevent the use of an alias. Clinic rules and regulations are discussed with the patient on at least two occasions. Staff and patient expectations, and the mutuality of those expectations, are discussed as are all aspects of the use of methadone, including its possible side effects and what to do about them. The patients must sign a 'Consent for Treatment' form. The one facet of treatment not discussed is dosage level. Since the program utilizes the single-blind method of dispensing methadone, i.e., the patients don't know the size of their dose or the changes made in it, but the staff does, one of the ongoing issues in the program is knowledge of dosages on the part of the patients. The organization and procedure manual is very clear on this:

(patients) may be reassured . . . that their dose is stable, that they are getting sufficient methadone, that dose modifications will be made if required, and so on. A patient is never, under any circumstances, given false information; but it is perfectly justifiable not to give any information, or to give limited (but true) information. We believe - - though we cannot prove it - - that the principle of not revealing dose information is a sound one, even if dose studies are not being conducted. If dose information is available, a process of dose negotiation is opened up, which seems counter to the main goals of rehabilitation.<sup>7</sup>

#### 1.5 STEPS OF RESPONSIBILITY FOR TAKING METHADONE HOME

There are the general rules, but the actual decision for taking methadone home is made by the staff in each case in the best interest of the Program and the individual patient.

It is the patient's obligation to obtain documentation of participation in an educational, vocational or homemaking activity and to notify the staff of changes. This verification must be obtained at least monthly or

<sup>7</sup>Ibid., pp. 18-19.

when there has been a change in status. Authorized staff will make entries in the patient's chart to record status.

#### Take-Home Dosages

A maintenance treatment program shall provide take-home dosages of methadone to a patient only when the patient is satisfactorily adhering to the requirements of his maintenance treatment program, and where daily attendance at the clinic would be incompatible with gainful employment, education, and responsible homemaking.

#### Prohibitions on Take-Home Dosages

No program shall provide take-home dosages of methadone: To any patient whose daily dosage is above 50 milligrams.

#### Satisfactory Adherence to Program Requirements

A patient is deemed to be satisfactorily adhering to the requirements of his maintenance treatment program when he has fulfilled all the following:

- (a) The patient has observed all the rules of the Program.
- (b) The patient has demonstrated substantial progress in rehabilitation by participating actively in treatment program activities.
- (c) The patient is participating in an educational, vocational, or homemaking activity.
- (d) The patient has demonstrated that he has not repeatedly used any illicit drugs improperly.
- (e) The patient has given no indication, including appropriate urinalysis results, that he is misusing his methadone. Misuse of methadone includes sharing, giving away, selling or trading one's methadone dosage, or not ingesting it daily in accordance with Methadone Treatment Program rules.
- (f) The patient has given no indication that he is selling, distributing, or otherwise involved with illicit drugs and their use.

#### Schedule for Take-Home Dosages

Each treatment clinic adheres to the following schedule with respect to providing a patient with take-home dosages of methadone:

##### Step I.

- (a) No take-home Level. No treatment clinic shall provide a patient with a take-home dosage until such patient has satisfactorily adhered to the requirements of his program for at least 30-days.

##### Step II Level.

- (b) After the patient has been on the treatment program for at least 30-days, has reached a stable methadone dosage level, realizes the hazards of handling methadone outside the facility, appreciate the need for caution and safety in the self-administration of methadone, and has satisfactorily adhered to the requirements of his treatment program, such patient may be permitted to attend the clinic six days a week and take-home a one-day dosage supply.

##### Step III Level.

- (c) After at least 180 days of satisfactory adherence to the requirements of his treatment program, the patient may be provided not more than a two day take-home dosage supply. The patient will attend the facility at least five times a week for observed ingestion of the methadone.

##### Step IV Level.

- (d) After at least one year of satisfactory adherence to the requirements of his treatment program, the patient may be provided not more than a three day take-home dosage supply. The patient will attend the clinic at least three times a week for observed ingestion of the methadone.

##### Step V Level.

- (e) After two years of satisfactory adherence to the requirements of his treatment program, the patient may be permitted not more than a three day take-home dosage supply. The patient will attend the facility at least two times a week for observed ingestion of the methadone.
- (f) Nothing in this section shall prevent any clinic from establishing for an individual patient any take-home dosage requirement which is more stringent than is specified in the schedule contained herein.

UNDER NO CIRCUMSTANCE WILL ANY PATIENT BE ALLOWED TO RECEIVE TAKE-HOME DOSES IN EXCESS OF A FIVE (5) DAY SUPPLY.



## 1.6 SUSPENSIONS AND DISCHARGES FROM THE PROGRAM

If a patient is suspended or discharged from the Program, as described below, he may first (if he requests it) attend clinic daily for 15 days to have his dosage reduced to zero.

Positive (or "dirty") urines are not reason for dismissal from the program, but the following forms of behavior may lead to the patient's being discharged from the program if his actions endanger the Program, and specifically:

- if he uses or threatens to use physical violence against any staff member or patient;
- if he gives away or sells methadone to any other person;
- if he sells, gives away, buys, possesses, or uses any illicit drug in the clinic or its vicinity.

A patient will be suspended for 30 days:

- if he is absent four days in a single calendar month without advance authorization;
- if staff decides, after careful consideration, that a temporary suspension would be useful therapeutically in improving his motivation or behavior.

A patient who is suspended will not be reported to anyone outside the Program, because he is still considered to be on the program; the suspension is a therapeutic measure, part of the confidential medical records of the clinic.

Although there are individual clinic variations, generally Methadone is dispensed between 6:30 and 11:30 a.m. Monday through Friday. Clinics are open for one hour on Saturday and Sundays. Medication is not given to those patients who do not come to the clinic during regular hours except in unusual circumstances, e.g., illness. In these instances a nurse will take the methadone to the patient's home. Jail medical staff provide methadone for those patients in jail for withdrawal on a ten day schedule. Patients on work furlough from the county jail farm (Elmwood) may be maintained on a regular basis at the clinics. Hospitalized patients are maintained by their physicians using hospital or in-house medication.

As indicated earlier, random urine samples are taken for laboratory analysis and inclusion in the patient's chart. Approximately one patient in five at each clinic is tested each day. Patients entering the program or those who are repeatedly "dirty" may be required to give daily urine specimens. If a patient refuses to give a urine sample a positive result is recorded and no medication is given. Opiates (including methadone and

codeine), amphetamines, barbiturates, and cocaine are detected by urinalysis.

Patients are charged a 'flat' fee for their methadone. Initially fees were charged based on the patient's income level as reported at admission. This system resulted in reports of no employment when this was not the case and did not achieve the result of having the patient pay for a portion of this treatment. In September of 1971, a new policy was instituted regarding fee payment which has worked very well. It requires an initial payment of \$4.00 to pay for the first and last weeks of treatment, which must be paid on the first visit. For patients who qualify for Medi-Cal benefits their costs are paid by Medi-Cal when appropriate identification is obtained. All costs not covered by Medi-Cal or patients fees are paid by Federal, State, and local funds. The present cost per patient is reported in the section on benefit/cost along with other information on the program's costs and savings to the patients and community residents.

### Supportive Services

As indicated, methadone was the primary treatment modality. Adjunctive services were provided largely on an ad hoc basis, or as needed. There are now clearly defined steps in the clinic treatment process. However, the need for a more clearly defined treatment program, and the fourth program year (1973-74) promises improvement through the introduction of NIMH funding specifically for this purpose.

Group counseling and group therapy are now conducted at various points in time, particularly at induction and during orientation, and at critical transition stages (e.g., withdrawal, life crisis). Patients and their spouses are individually counseled concerning the transition from heroin to methadone use in an effort to encourage life style changes. Of particular importance is the introduction of new techniques for dealing with non-drug related problems and crises. Family groups have been instituted which are generally conducted on a weekly basis by a nurse or counselor. From time to time groups have been formed at various clinics to help patients with specific problems; these groups may involve all staff at a clinic (nurse, Community Worker, vocational counselor, or some combination thereof). Program orientation, policy, and philosophy are discussed at any time.

Individual counseling is available at any time with the nurses, vocational counselors, Community Workers, or any combination of staff members. Due to the large numbers of patients at some of the clinics in recent months counseling has been difficult to do on a regular basis. However, follow-up is done with all patients on a quarterly basis, and more often with the newer patients. This involves an interview, administration of a progress questionnaire, and intensive individual counseling as appropriate. Outside visits are made to patients legitimately unable to attend the clinic as required. The following is an example of such a case:

On bedrest for three months, she is seen by an R.N. 90% of the time and an addiction specialist the remaining 10%. This occurs three times weekly. Services include individual counseling, continuing progress questionnaires, urine collection and dosage drinking observation,

making careful observation and clinical judgement regarding patient illness, physical condition, and its implications in relation to her progress on methadone.

One-to-one "rapping" is often initiated on an impromptu, informal basis. While this may appear somewhat superficial it is often quite beneficial as problems are identified and staff can attempt to help the patient deal with them. This type of crisis intervention is done by all staff members and may include individual counseling or assistance by clinic staff, or referral to the appropriate agency for necessary action.

## 1.7 PROGRESS EVALUATION

The progress of patients toward complete rehabilitation is followed by an orderly system of interviews with staff on a private basis. Patients are expected to cooperate in keeping appointments for interviews. Group attendance may also be recommended or required, especially for patients having unusual difficulty giving up established patterns of drug use.

### Rehabilitation

The bulk of the effort to prepare the patient for participation in the non-addict culture, aside from methadone treatment itself, is initiated by the Vocational Services Counselor. Job referrals are done in the private and public sector. Counselors are in contact with the State Department of Human Resources Development (HRD) (employment department), and they refer clients directly or through a computerized Job Bank operated by HRD.

Job training referrals include agencies such as the Work Incentive (WIN) program, the Opportunities Industrialization Center (OIC), MDTA, and other appropriate training and job development programs. Liaison with training agencies to check on patient progress in an important part of the job of the Vocational Services Counselor.

Development of educational and vocational plans with patients, and the assessment of realistic career goals and vocational skills are a function of the Vocational Services Counselors. Counseling support to patients in solving welfare problems (e.g., eligibility, types of assistance) is given, as well as referrals to assistance in resolving legal problems. Other sources of possible financial support, such as specialized city or local community endeavors, are also good referral resources.

Ongoing individual counseling, when requested or required, is another aspect of the Vocational Services Counselors' realm of responsibility.

No training programs currently exist solely for patients. The need for a hobby shop to fill patients free time and provide a small income has been considered. A sheltered workshop is also under consideration, but requirements for space, funds, and staff time are as yet unmet.

### Follow-Up

Due to the nature of the addict life style and program concerns for confidentiality, great care must be used in any attempts to follow patients once they leave the program. Since they are often off the program due to conflict with the law, follow-up can also subject the follower to some degree of personal danger. Therefore, unless the addict voluntarily returns to the program, most information is difficult to verify. The program, and research staff, must rely on the individual or other concerned agencies, such as criminal justice agencies, to maintain and make available pertinent post-program dropout data. In the case of criminal activity and reported earnings, this has been done and is described in the results section of the report. Attempts by social evaluation staff to interview the family or friends of patients on the program have met with suspicion and little real success, as will also be discussed under results. A follow-up study done by the Stanford Narcotics Addiction Research Laboratory is included as Appendix D, as summarized by Dr. Kenneth Meinhardt.

## 2.0 PROGRAM EVALUATION

### 2.1 PURPOSE

The purpose of the evaluation is twofold:

1. To determine the overall success of the program based on program outcome on selected criterion variables, using program status as the basic analytical variable, i.e., whether the patient remained on the program or not.
2. To determine the strength of the relationship between all baseline variables (patient status at intake), and program outcome based on selected criterion variables. This is a prediction model, and provides information on which patients are most likely to do well in methadone treatment as it is presently done, based on their background at intake.

The results reported represent the effects of a primarily maintenance-oriented treatment effort, with little emphasis on conventional addict/patient treatment approaches, such as group counseling and long-term individual counseling. The basic assumption is that all patients received the same level of treatment

effort, which primarily included crisis intervention and vocational counseling as requested by the patients, and the distribution of methadone in varying dosages. The results of the dosage experiments are documented elsewhere, since they were done independently of the present evaluation.<sup>8</sup> The goals of the third year of the program funding are directed more specifically at treatment approaches, and it is anticipated that levels of treatment will be sufficiently diverse at that time to allow for specific measures of treatment impact.

## 2.2 DESIGN

The program evaluation is designed to determine patient outcome on the criteria of criminal activity, social productivity (employment and earnings), drug use, and other criteria related to social functioning (family relationships, friendships, use of time, etc.). Data has been collected on a baseline and follow-up basis for all patients who have entered the program between February 10, 1970 and January 31, 1973. These data are of two basic types: Patient self-report and information from official records.

The major difficulty in the design of the evaluation has been the lack of a control group against which to evaluate outcome criteria performance; all measures of patient progress have been made against the patient's own baseline level of functioning. This was necessary because program staff and administrators felt that the random selection of patients for the program would be unethical from two standpoints: (1) Medical, in that one does not refuse treatment of this nature for purposes of creating a control group, and (2) Political, in that the program is tax-supported and it would be difficult for a governmental agency to refuse treatment to a taxpayer in need, or someone supported by a taxpayer. A third reason is simply that the program was designed to attempt to treat all the heroin addicts in the county who qualified.

### Subjects

The program population was divided into three groups for analysis. These groups are shown in Chart #2 along with the type of data collected and the name of the form or procedure used. For the total population, for example, the primary record is the "Data 4" form, which is the standard entry data collection form used by the Health Department (Santa Clara County Health Department Community Mental Health Services Data Sheet). This form was completed for all of those patients entering during the period of study.

<sup>8</sup>See Avram Goldstein, "The Pharmacologic Basis of Methadone Treatment", in the proceedings of the Fourth National Conference on Methadone Treatment (New York: National Association for the Prevention of Addiction to Narcotics, 1972), pp. 27-32; necessary patient history and progress data were generously supplied by Dr. Goldstein for use in the present study (Stanford University Narcotic Addiction Research Laboratory).

CHART 2. PROGRAM POPULATIONS STUDIED, DATA COLLECTION CATEGORIES, AND SOURCES OF DATA

DATA COLLECTION CATEGORIES	PATIENT/APPLICANT STUDY GROUPS*		
	TOTAL PATIENT POPULATION (N=937) February 1, 1970 - January 31, 1973	ALL 1970 - 1971 PATIENTS (N=463) February 10, 1970 - December 31, 1970	1971-1972 PATIENTS (N=410) August 1, 1971 - January 31, 1973
BASELINE SOCIAL DATA			
-Demographic/Background	Data 4	Data 4	Data 4 **Input Questionnaire-Initial Interview
-Employment	**Input Questionnaire (history)	Data 4	Patient Employment Questionnaire (PEQ)
-Family			Family Initial Background Survey (FIBS); Family Interview (FAIN)
-Stability (Life Style)			Way of Life Inquiry (WOL)
-Census Tract of Residence		1970 Census Data	
FOLLOW-UP DATA			
-Criminal Activity		Official State Records (CII)	Official State Records (CII)
-Drug Use		Monthly Data Summaries	
-Earnings		State Base Wage File	
-Educational Attainment		Educational Records	
-Progress Data		**Progress Questionnaire	Quarterly Individual Progress Summary (QUIPS)
-Stability (Life Style)			Way of Life Inquiry (WOL)

\* The total population of 937 is not included in the two subpopulation because: (1) July, 1971 data was not included in the cohort nor was new evaluation data collected in that month; (2) patients from other programs who were admitted were not included, and (3) some data was not collected in the initial phases of evaluation--data on 91% of all patients (873) has been analyzed.

\*\* Data made available from Stanford University Narcotic Addiction Research Laboratory.

The specific reasons for distributing patients into three population groups for study will be documented below under the discussion of the procedures used and results obtained with each group. The first concern was to develop a population on which extensive follow-up data could be collected for use in determining program impact. This is the 1970-1971 population (N=463), representing entrants during the first seventeen months of program operation. Since data collection began in August of 1971 for the specific purposes of this study, follow-up data could only be collected on the post-August population over a brief period of time. However, the post-August (1971) population is beginning to develop follow-up potential, which is reported on here, and will have the greatest potential for analysis at the end of the third year of study.

#### Data Collection

The system of data collection was organized early in the program by the pharmacological study group.\* Questionnaire completion and interviewing is done by staff community workers (formerly called addiction specialists) at each clinic, many of whom are former addicts or who otherwise know the type of environment from which patients are coming. These individuals are seen as reliable data collectors due to their familiarity with the patient population and their attitudes, language, and life style. Most questionnaires are given to the patient to fill out; persons having difficulty responding are helped by the Community Worker, many of whom speak Spanish and are able to translate difficult items or assist in interpreting the questions.

The Initial Interview, Patient Employment Questionnaire, Family Initial Background Survey, and Way of Life Inquiry as shown in Chart #2 are given to the patient during the week he comes on the program. Thereafter he is given the Quarterly Individual Progress Summary every three months and is re-administered the Way of Life Inquiry every six months for follow-up purposes. The Input Interview is given in the first week and the Progress Questionnaire at the designated weekly intervals of 1, 3, 5, 9, 13, 27 and succeeding three month periods; this data goes directly to the Stanford Narcotic Addiction Research Laboratory.

The collection of data from official records for follow-up purposes will be described below for each population under study, as will be the specific analytical concerns related to the study of each population.

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\* Now Stanford Narcotic Addiction Research Laboratory.

### 3.0 EVALUATION RESULTS

#### 3.1 THE TOTAL PATIENT POPULATION

Baseline data is collected on each patient as they enter the program. This data is based upon patient self report, and is gathered from the patient Short-Doyle charts, particularly the Santa Clara County Health Department Services Data Sheet.

The total Group I population data is shown on Table I through Table X in Appendix A. The tables show also the distribution of the population for the five clinics. This population of 937 patients is based on all the patients that entered the program from its inception, February 10, 1970, through January 31, 1973. Of these 937 patients 455 had dropped off the program as of January 31, 1973; this represents a retention rate of 51.4 percent. In the first year final report, Social Evaluation and Impact Study of Santa Clara County Methadone Treatment and Rehabilitation Program, July, 1972 (L.E.A.A. Grant #71-DF-679), a retention rate of 71.7 percent was reported for the entire population to enter the program at that time. The 51.4 percent current retention is substantially lower than the previous 71.7 percent. Several factors have to be taken into account to adequately explain this difference.

First, the retention rate is not based upon a cohort analysis. The patient who is on the program for nearly three years is counted in the same fashion as the patient who has been on the program for only one month.

Second, sixty patients were withdrawn with staff approval, and cannot be counted as failures. Also nine patients died while they were on the program and cannot be counted as failures except possibly in a medical sense.

The result of this is that the retention rate is raised to 55.5% when those that were withdrawn with staff approval and those that died while on the program are excluded from consideration as either on or off the program.

Other programs report high retention rates. The program evaluated by Dr. Gearing, in New York City, report retention rates as high as 80 percent.<sup>9</sup> On the other hand, programs having less rigorous selection criteria report lower "success" or retention rates. Rosenberg et al report that the retention rate from

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<sup>9</sup>Frances Rowe Gearing, "Methadone Maintenance Treatment Program: Progress Report of Evaluation Through March 21, 1970"; submitted to New York State Narcotic Addiction Control Commission, May 8, 1970.

their waiting list and treatment was approximately 40 percent.<sup>10</sup>

The Santa Clara County program has a retention rate between these extremes. The program does not select patients on their ability to succeed; patients are not excluded from treatment because of possible psychosis, alcoholism, or multiple drug abuse.

Differences exist for heroin addicts and methadone patients across the nation in age, ethnicity, and probably numerous other demographic and personological characteristics. Differences also exist for patients in the Santa Clara County program between various clinics.

There are now five clinics in the county. Three of these clinics have quite similar populations, Alum Rock, Central and 10th Street. All of these clinics are located in San Jose, the county seat and largest city in the county. The patients in these clinics can be examined in Tables I - 10 in Appendix A. The newly opened 10th Street clinic is very similar to the first two clinics to open, Central and Alum Rock. The population of these three clinics are older, more apt to be married, and to contain a higher percentage of females.

The two remaining clinics, Gilroy and Mt. View, show somewhat diverse populations. The Mt. View clinic shows a higher proportion of single, young, caucasian males than other clinics, and more of these patients are working upon admission to the program. They show a lower percentage in the semi- and unskilled occupational categories and a correspondingly higher proportion in the clerical, creative and communication, sales, and professional categories of occupations.

The Gilroy clinic is similar to the Mt. View clinic in that the population is predominately single, young, and male. There is, however, a higher proportion of chicanos, and less of the patients are employed upon admission to the program.

Data in Tables I through 10 offer descriptive information on patients in the Santa Clara County Program that are useful in examining differences between the admissions at the five clinics. They will also allow other heroin addiction programs and methadone programs to compare these descriptions with their own population. These tables, however, do not examine changes in patient characteristics upon admission over time.

In charts 3 and 4, certain entry characteristics of the population are displayed by yearly quarters.

<sup>10</sup>Chaim Rosenberg, Gerald E. Davidson, and Veram D. Patch, "Patterns of Dropouts from a Methadone Program for Narcotic Addicts", International Journal of the Addictions, 7 (1972).

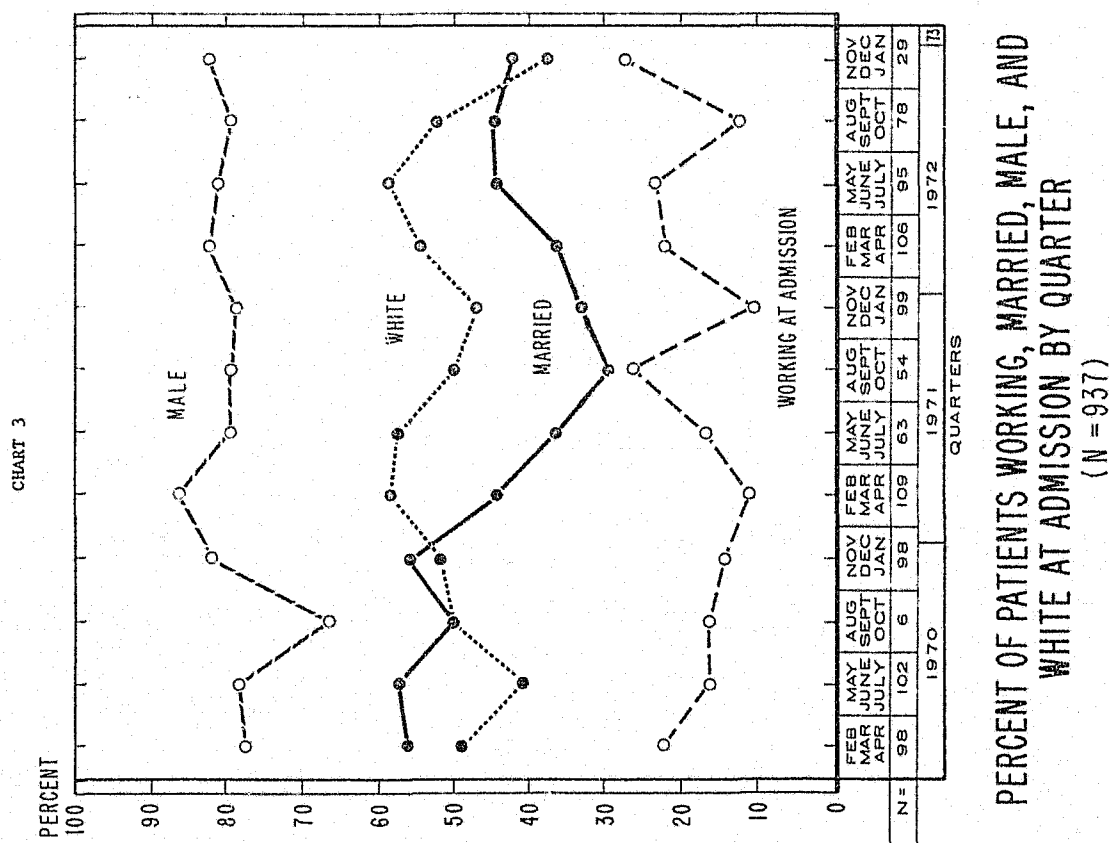
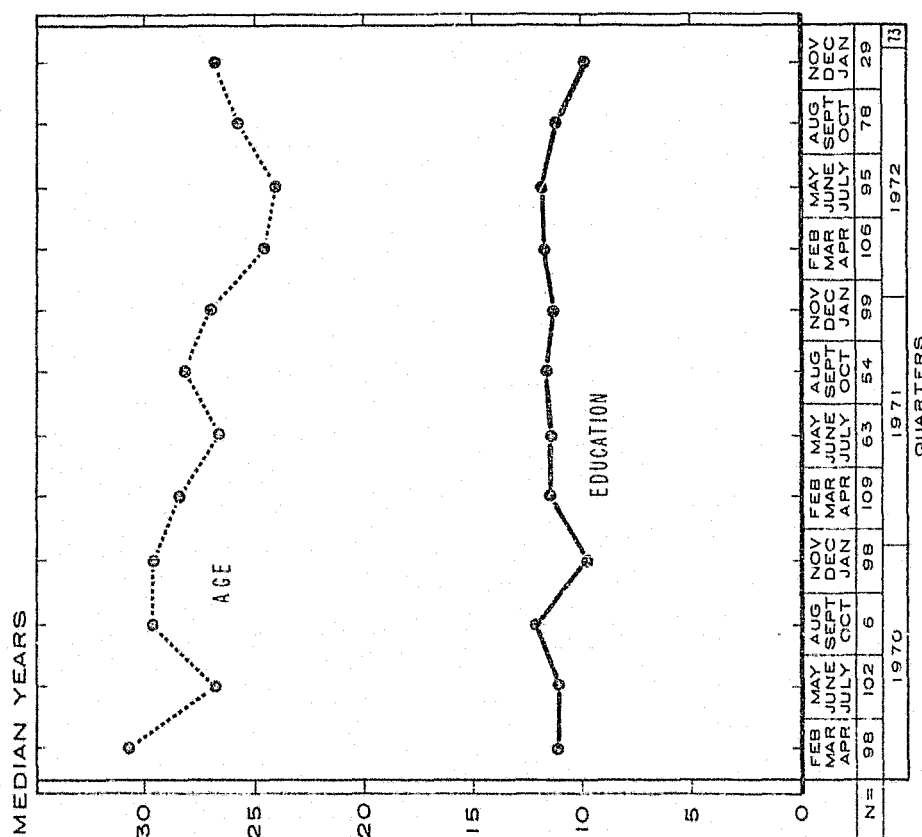


CHART 4



MEDIAN AGE AND MEDIAN EDUCATION LEVEL OF PATIENTS  
AT ADMISSION BY QUARTER  
(N = 937)

The research staff had earlier assumed that as the program became older, the characteristics of the patients would change. It was thought that there would be more families, more caucasians, a higher proportion of unmarried people who would be younger and have a higher level of education. Therapeutic problems were anticipated at the various clinics because this population would be younger and less stable --- and probably less involved in the community.

These hypotheses were largely unfounded, on chart 3 the only noticeable change in admission characteristics being the greater proportion of unmarried patients as the program became older.

There is, but not as great as expected, a slight overall increase in the percentage of males and caucasians, also, the median age decreased slightly and median years of education increased slightly. The percentage of patients reporting themselves employed at admission remained fairly constant; changes from quarter to quarter can possibly be attributed to changing economic and employment opportunities in the area.

### 3.2 THE 1970-1971 COHORT POPULATION

The 1970-1971 cohort population, hereafter referred to as the "cohort," was made up of 463 patients who entered the methadone program between February 10, 1970, the start of the program, and June 30, 1971. This group was selected for analysis because eighteen months of follow-up data is now available on them, as well as data on criminal activity eighteen months pre-program and data on wages up to fifteen months pre-program.

As indicated, the purpose of the analysis was two-fold; first, to determine if the program was successful in reducing criminal activity, reducing drug use, and increasing the social productivity of the patients, and second, to determine which types of patients were most successful on the program from background information on them, i.e., to develop a level of prediction of success.

#### Patient Distribution for Analysis

Since there was no control group against which to compare program participants, it was necessary to distribute the patient population into various groups for analysis. This was done in two ways: (1) by patient status, i.e., whether they were "on" or "off" the program, and (2) by design groups made up of "failure", "no change", and "success" groups based on crime and wage data.

Patient status. In the absence of a control group, the principal analytical technique available was that of making comparisons between patients who began the program and remained on or left with staff approval and

those who began and went off the program at some point. The purpose is first to see if both groups are identical at program admission, and then to see if they differ significantly on outcome measures subsequent to treatment.

In most cases, for example, the population will not differ at the start of their methadone treatment. As treatment progresses, we may hypothesize that patients leaving the program will become a distinct group with significantly different characteristics from those staying on the program. In like manner, we may hypothesize the patients remaining on the program will perform significantly different on the various outcome measures as a result of their decision to stay in treatment; the assumption is that they are getting something out of treatment, whereas those who leave are not.

If both groups started with an equal "chance" of success, other variables may explain why one group did not do so well, and why a group was either on or off the program at a specified point in time. It is not unreasonable to expect that patients going off the program might be in fact "less seriously addicted" than patients staying on the program, and hence they might do better subsequent to program admission whether they stay on or not. Conversely, those staying on might be "more seriously addicted" and even while on the program do more poorly than the others.

Therefore, the first task is to determine whether both groups were comparable at the start of treatment on all variables. If this is the case, and either group performs better, their performance must be looked at in relation to the fact of program participation.

Again, the basic problem in this type of analysis is that we can never really be sure if those who qualified for the program and had been placed in a control group would have done as well as or significantly better than those who did enter the program. As will be shown in the analysis of the data, patients staying on do better than those leaving the program. The untested assumption is that a control population would not do as well as those leaving the program.

Design groups. A second approach used in analysing the data was that of using performance criteria for the selection of program successes and failures. Since the data on criminal activity and earnings encompass both patients on and off the program, it was felt that they should be used in making the success-failure determination. Most important in this regard is evidence of positive or negative movement by the patient on these criteria over the three year period data was collected (18 months pre, 18 months post program). Brill and Lieberman, in their discussion of the Washington Heights Rehabilitation Center (New York) treatment program for narcotics addicts, indicate that one of the primary objectives of the program was "to alter, wherever this was necessary, both attitudes and behavior of the patient in the following areas: (a) work, (b) friendship and hetero-sexual

relationships, (c) family responsibility (d) leisure time and (e) criminality."<sup>11</sup> These were recognized as long-term goals; the most important consideration was some sign of patient movement . . . in a desired direction as a function of his particular needs as well as the situation he brings to the initial consultation . . ."<sup>12</sup> While the present study did not document individualized goals, the concept of positive movement in relation to the criteria established is considered evidence of program success, and negative movement of program failure. Maddux and Bowden, in their critique of methadone evaluations, specifically recommend that employment and criminal activity criteria be used, particularly because the traditional criteria of attainment of a drug-free state do not apply:

Increased legitimate employment and reduced criminal activity seem more appropriate criteria of success with methadone maintenance than substitution of one morphine-like drug for another. These changes in social performance represent plausible consequences of freedom from the hustle for heroin.<sup>13</sup>

They continue by stating that it is unfortunate that investigators continue to use only the data from remaining samples (the problem of the "shrinking N"), and that they do not have sufficient comparison data from which to draw good impressions of success.<sup>14</sup> These problems have been dealt with in this study on the key criterion variables.

Therefore, one task was that of distributing the patient population into groups based on these criteria of criminal activity and earnings. The primary criterion used was criminal behavior (See Appendix F), with refinements based on earnings in the start quarter as opposed to the four subsequent quarters (averaged). The resulting nine "design groups" were arbitrarily assigned names, as follows:

1. Crime-Wage Success, 9 patients, 1.9%: these patients had a conviction in the eighteen month period prior to coming on the program and no more than an arrest up to eighteen months post program; at the same time they made less than \$500 in their start quarter and averaged over \$500 per quarter in earnings for the four quarters (one year) after starting the program.
2. Crime Success, 87 patients, 18.8%: these patients had a conviction pre-program and no more than an arrest post-program; wages were not used as a definer.

<sup>11,12</sup> Louis Lieberman and Leon Brill, "Rational Authority," Chapter 3 in Major Modalities in the Treatment of Drug Abuse, Leon Brill and Louis Lieberman, eds. (New York: Behavioral Publications, 1972), pp. 71-72.

<sup>13,14</sup> James F. Maddux and Charles L. Bowden, "Critique of Success with Methadone Maintenance," Amer. J. Psychiat., 129 (October, 1972), p. 101.

3. Wage Success, Arrest Only, 13 patients, 2.8%: for these patients wages increased as described in "1" above and they had no greater than an arrest pre and post program, often having no arrest.
4. Wage Success, Conviction Only, 9, 1.9%: wages increased as described in "1" above and they had at least a conviction pre and post program.
5. No Change, 238, 51.4%: these patients did not meet any of the success or failure criteria applied, i.e., they "stayed about the same."
6. Wage Failure, Arrest Only, 9, 1.9%: for these patients wages declined from over \$500 in the start quarter to less than \$500 per quarter (averaged) for the four quarters (one year) after starting the program, and they had no greater than an arrest pre and post program, often having no arrest.
7. Wage Failure, Conviction Only, 13, 2.8%: wages decreased as described in "6" above and they had at least a conviction pre and post program.
8. Crime Failure, 78, 16.8%: these patients had no more than an arrest pre-program (i.e., no convictions), and a conviction post-program; wages were not used as a definer.
9. Crime-Wage Failure, 7, 1.5%: these patients had no more than a. arrest pre-program, as in "8" above, and a conviction post-program; at the same time their wages declined as described in "6" above.

These design groups have been combined at various stages of the analysis into three groups (1 through 4, success; 5, no change; 5 through 9, failure) and five groups (1,2; 3,4; 5; 6,7; 8,9) depending upon the degree of definition considered critical to the analytical task.

It is understood that some people will not consider a decrease in criminal activity coupled with increased earning an absolute criterion of "success"; however, these are the data which are most reliable and consistent for patients on and off the program for a period of up to eighteen months pre and post program. Prior to presenting results based on status and design group comparisons, the sources of data on criminal activity and earnings are given; other data sources will be described as results are reported on them.

**Criminal Activity Data.** The source of records on criminal activity was the California Department of Justice Bureau of Criminal Statistics (BCS) and the "rap sheets" of the California Bureau of Identification and Investigation (CII), also in the Justice Department. These records furnish reliable information on an individual's recorded criminal justice system involvement. The greatest problem with these records, aside from the fact that they are for recorded criminal behavior only, is that they are sometimes vague as to the

time of occurrence of the criminal behavior. For example, if an individual is arrested subsequent to his starting the program the arrest may be for behavior which occurred prior to program involvement. Where this was known, the behavior was coded for the period in which it occurred. Similarly, if an individual was arrested pre-program and convicted for that offense after he came on the program it was coded as a pre-program conviction, since it represented behavior prior to coming onto the program. Neither problem was seen as having a major effect on the quality of the data.

Several measures were used to tap criminal behavior. These included the total number of arrests of all kinds, and the number of arrests and convictions by type (vehicle code, misdemeanor, felony, and parole and probation violations). Also included were the number and type of local sentences (summary probation, new additional or regular probation, jail and suspended sentence, jail sentence not suspended, and jail or fine). State level sentences to the California Youth Authority, Department of Corrections, and Narcotic Treatment Rehabilitation Center (CRC), California Medical Facility (Vacaville), and the Department of Mental Hygiene were coded as were Federal prison sentences.

In order to determine the seriousness of criminal behavior both before and after the program, a revised and updated version of the Sechrest Offense Severity Scale (SOSS) was used to classify offenses as to their judged severity.<sup>15</sup> This scale, which is attached as Appendix II, is derived from the offense rankings of correctional staff and inmates of a state prison and from rankings of Santa Clara County jail farm staff and inmates. The jail group were given overlapping items on the scale to see if their rankings agreed with those taken five years earlier (1966) in the state prison; agreement was very high ( $\rho = .94$ ). Some offenses were added to the scale, being placed there while the scale was in use in a probation study, where the investigator found general agreement as to their placement. Most offenses which were coded were the most common ones included in their original and revised scale. These scores have been adjusted by rounding them to the highest digit for use in this study.

Actual offenses were coded, and criminal behavior was also placed on a single continuum as to the single most serious disposition brought about by an individual in a year (see Appendix F). The months incarcerated during the year were also coded, a "month" being any number of days of incarceration in a given month, as were the number of months to the first arrest leading to a conviction. The most important addition to the coding process in the second year was the addition of time at risk pre and post program. It was felt that this was necessary to control for the likelihood that patients classified by status or design groups as "successes"

<sup>15</sup>Sechrest, Dale K. "Comparisons of Inmates' and Staff's Judgement of the Severity of Offenses", *J. of Research in Crime and Delinquency* (January, 1969); see also, Alvin Rudoff and T. C. Esse'styn, Jail Inmates at Work (June, 1971).



or "failures" might be less subject to accurate classification due to their lack of equal exposure in the community.

Employment and Earnings Data. Patient employment is one of the most important signs of improvement in social productivity. When a patient is no longer dependent on the use of heroin, he is much more capable of holding employment, and such employment is generally viewed as a critical first step in his movement away from drug dependency. His judgment is not impaired by the drug; he does not become sick needing the drug; and he is not absent from work attempting to secure the drug, should he be legitimately employed while using. The obvious implication of no legitimate work is that welfare or "hustling" will be used to support oneself. The program places particular emphasis on employment for the patient while he or she is on the program.

Data on employment were available from two sources: (1) the information gathered as part of the pharmacological study, and (2) from data supplied from the "Base Wage File" of the California Department of Human Resources. The data from the latter source was used in the initial classification of cohort patients.

Base wage data is used for calculating unemployment and disability insurance benefits. Paper output from this computer tape produces an individual's earnings for California employees for five calendar quarters, by quarter. Types of employment not covered by this record are (1) government, (2) private household, and (3) certain non-profit organizations. Research staff received permission to access these data for purposes of determining the earnings of methadone patients. The confidentiality of these data has been carefully observed.

In order to make the data received as complete as possible, employment records of two kinds were examined to determine earnings not reported in the Base Wage Files. All state employment earnings records for cohort patients were checked, and all Santa Clara County employment earnings records were checked. A high level of cooperation was obtained from both agencies of government in allowing confidential access to these records. Since very little evidence of earnings from these sources was found, it was felt that a check of city employment records in the County would not significantly improve the records, particularly in view of the time and energy involved in manually going through these records. There was no way to recover data on private household or non-profit organizations.

An explanation of the method of collection of base wage data is necessary. When submitting the card requesting these data in a given quarter, the data received was for the five quarters preceeding the quarter before the request was submitted. For the group which started in the first quarter of 1970, it was only possible to get data going back to their start quarter, since the request was made in the third quarter of 1971. When this request was submitted for all those starting in 1970, it was possible to eventually begin to get data on quarterly cohort groups for periods prior to their start quarter. Therefore, in two instances wage data was not fully available for the cohort patients: (1) as cited above, for the first groups of program entrants, and (2) for more current entrants, for whom data was available for all quarters except the

most recent. As will be shown in the results section, data was available for the maximum numbers of subjects between the start quarter and the fifth quarter after starting, although data is available for decreasing numbers of patients at each extreme. For example, for the fourth quarter before starting base wage data is available on 168 of the 463 cohort patients, or 36.3 percent; for the start quarter, 426 patients of 92 percent; the fifth quarter after, 428 or 92.4 percent, and the ninth quarter after, 146 or 31.5 percent. The maximum in any category is about 92 percent because social security numbers were not available for the other patients, or data was not received on them.

### 3.3 RESULTS FOR THE COHORT POPULATION

#### Status Groups and Program Retention

Since retention on the program is often considered a primary criterion of its success, this factor will be dealt with prior to an in-depth consideration of outcome performance. For this comparison, data on patients who all had completed just twelve program months was used (i.e., only their status at the twelfth month was used for all 463 patients). The overall retention rate was 73.9 percent, as seen in Table 1 (The significance of the  $\chi^2$  statistic will be discussed under reasons for leaving the program).

As indicated earlier, retention was also calculated for patients who had completed a minimum of twenty-four months or more (up to 35 months) on the program. While this figure is not strictly comparable to the twelve month figure, it does indicate a drop in retention rate to 55.3 percent "on", (256) which includes 47 patients leaving with staff approval and five deceased\*. The absolute rate is 45.1 percent (209 retained).

Based on their status at a minimum of twenty-four program months, patients who left averaged 13.2 months on the program (range of 1 to 35 months,  $\sigma = 7.5$ ), with about two-thirds leaving between the sixth and the twenty-first months. Those still on the program had spent a minimum of 24 months and a maximum of 35 months (for those starting when the program began) on the program. It appears, therefore, that patients staying on the program had spent about twice as long in treatment as those who left.

#### Design Groups and Program Retention

Another way of looking at program retention is through the use of the design groups. Rather than indicate a simple retention rate of 73.9 percent based on program status, it may be more appropriate to state a "success rate" of 25.5 percent, as shown in Table 1. This rate represents positive improvement on the part of the 463

\*This is the same as for the total population (corrected), 55.5%.

TABLE I

PROGRAM STATUS AT TWELVE MONTHS  
FROM START BY COMBINED DESIGN GROUPS

DESIGN GROUP	Program Status				TOTAL	
	ON		OFF			
	No.	%	No.	%	No.	Percent
Success	97	28.4	21	17.4	118	25.5
No Change	178	52.0	60	49.6	238	51.4
Failure	67	19.6	40	33.1	107	23.1
TOTAL:	342	100.0	121	100.0	463	100.0
Retention Rate:	73.9		26.1		100.0	

$$\chi^2 = 11.29, p < .01, df = 2$$

who entered the program through June 30, 1972; there is a corresponding "failure rate" of 23.1 percent. More important than either of these, however, is the "no change rate" of 51.4 percent, representing 238 patients who did neither worse nor better subsequent to program entry, whether they were on or off the program. In fact, one-fourth (74.8%) of them (178) were still on the program at a minimum of 24 months from admission and are yet candidates for either success or failure. When these groups are combined, a "success-no change/on program" rate of 63.9 percent results (118 successes on or off, and 178 on program, no change patients). This rate would drop to 54.2 percent if patients in the "no change" category continue to leave the program at the same rate for a second twelve months (two years).

If one wished to consider the fact that the entire "no change" group are something other than failures, whether on or off the program at one year, a rate of 76.9 percent could be claimed. It is felt, however, that the 63.9 percent figure is most appropriate since it includes only patients in the "no change" category who are still on the program.

Thus, for the first year of program involvement almost two-thirds of the patients treated can be considered either successfully treated or potential successes based on the criteria of criminal involvement and/or wages earned. It should be clear that this figure is based on the performance of all patients entering the program in a specific period of time and followed for eighteen months, and not on a "shrinking sample" of patients still on the program at that time.

#### Risk Time and Reason for Leaving Program

The reasons patients leave the program are of considerable importance in determining program success. As indicated by Block and Perkins in their study of some failures in methadone treatment, program retention is critical to success.

Death, criminal-legal involvement, incarcerations, and continued drug abuse patterns appear to be great risks for this group of failed patients. We believe this evidence suggests that intensified efforts to retain addicts may be needed in methadone programs.<sup>16</sup>

The reasons patients have left the program and their time in the community will be considered by status and by design group. First, however, there are some general considerations which relate to the total population.

The mean months to leaving the program along with "time to risk", or time in the community, is shown in

<sup>16</sup>Marvin E. Perkins and Harriet I. Bloch, "A Study of Some Failures in Methadone Treatment," Amer. J. Psychiat., 128 (July, 1971), p. 81.

Table 2. The time at risk represents the average number of months the individual spent on the streets in the eighteen month pre and the eighteen month post program entry period. The group which spent the least time on the program was composed of patients who simply vanished with no word to the program staff (N=34). They differ significantly in time on the program from those who withdrew with staff approval and those who withdrew without staff approval.\* Following them off the program was the group which left the area (moved) and advised the clinic; they differ significantly only from those who left with staff approval, as did those who went to jail or prison. It appears that patients who left with staff approval spent significantly more time on the program than all groups except those who withdrew on their own.

Risk time becomes important in considering criminal activity subsequent to program entry. For the total population distributed either by reason for leaving the program, program status, or design groups there are no significant differences between groups on risk time prior to program entry. Subsequent to entry, however, those patients who went to jail or prison differ significantly, as expected, from all groups except patients who withdrew on their own (and this difference was very close to significance at the .05 level). Patients who vanished from the program and those who withdrew on their own showed significant differences on risk time from patients who left with approval. Again, patients leaving with staff approval stand out as a unique group of individuals. They spend more time in the community, increasing their time at risk, and they spend significantly more time on the program prior to their departure. For this reason they are analyzed separately in the following section.

When patients are distributed by status group, time at risk is also significantly different post program, the difference being significant at the .01 level. This is also true when distributed by design groups, the difference in time on the program between success (17.7 months) and failure (14.7) groups being significant at the .01 level. The relationship between failure and being off the program can be seen in Table 1; the  $\chi^2$  test reveals that failure is not independent of being off the program. Since failure is interpreted in terms of criminal activity and decreased earnings, this group of patients appears to have developed some distinct characteristics post program. These characteristics will be discussed at length in the sections on background characteristics, criminal activity, earnings, and drug use.

#### Patients Leaving With Staff Approval

As in the first year of study, patients leaving the program have been analyzed separately due to their completion of a period which might be considered full treatment. Since the number is larger than the first year (42 as opposed to 11), conclusions have more meaning. It is already clear from the data presented in

\*All differences are based on the t-test, .05 being the acceptable level of significance.

TABLE 2

#### REASONS FOR LEAVING THE SANTA CLARA COUNTY METHADONE PROGRAM BY MEAN MONTHS AND TIME AT RISK (AT 24+ MONTHS)

REASON/GROUP	MEAN MONTHS TO LEAVING	TIME AT RISK	
		Pre	Post
REASON FOR LEAVING			
Jail or Prison (103)	13.3	15.2	13.3
Vanished, no contact (34)	11.0	15.1	15.4
Left area, advised clinic (26)	12.6	16.7	17.3
Withdrew, staff approval (42)	17.2	16.3	17.5
Withdrew on own (23)	14.9	15.9	15.5
PATIENT STATUS			
On Program, 24+ months (256)	-	16.2	17.2
Off Program, 24+ months (207)	13.2	15.6	14.6
PATIENT DESIGN GROUP			
Success (118)	15.5	14.8	17.7
No Change (238)	13.5	16.0	15.8
Failure (107)	13.1	16.8	14.7

the preceding section that patients leaving with staff approval are a unique group of patients. They spend time at risk post program than most other groups.

Table 3 presents total arrests and felony and misdemeanor arrests by reason for leaving the program. Marked differences between those leaving with approval and other groups can be seen. The mean number of total arrests per patient is half that of those who left to go to jail or prison pre program and one-third post program. Their rate is half all others except those who withdrew on their own. Much the same situation exists for felony arrests; with misdemeanor arrests the pattern continues at a less drastic rate.

Table 4 presents the mean wages earned by reason for leaving the program. The only statistically significant differences pre program is between patients leaving to go to jail or prison (\$614) and those who vanished (\$1,552;  $t=2.00$ ,  $df = 135$ ,  $p < .01$ ). Post program, patients leaving with approval differ significantly only from those going to jail or prison ( $t = 4.45$ ,  $df = 143$ ,  $p < .001$ ). Other significant differences between groups are for those leaving to jail or prison and vanished ( $t = 1.64$ ,  $df = 135$ ,  $p < .03$ ) and patients who withdrew on their own ( $t = 2.84$ ,  $df = 124$ ,  $p < .01$ ).

Within each group leaving the program, the differences in performance from pre to post program indicate that patients leaving with approval and those leaving on their own improve significantly in wages earned.

The pattern shown here for those leaving with staff approval becomes a dominant theme as the analysis proceeds to the examination of differences between patients on and off the program. Patients leaving with approval have performed better than most other groups in post program performance on criminal activity; however, they began with a better performance record. For wages earned this is not the case; while actual dollars earned per quarter showed considerable differences, only that between jail and prison departures and patients who vanished was significant pre program. Post program differences favored those who left with staff approval and those who withdrew on their own.

An examination of the demographic data on these groups reveals that one-third of the patients leaving with approval are female (33.3%) as are about one-third (30.4%) of those leaving without approval, on their own. This is followed by patients who left the area (19.2%, those who vanished (14.7%, and those who went to jail or prison (12.6%). There is also a slight tendency for these patients to be caucasian. Blacks are most likely to withdraw without staff approval (on their own), and chicanos are most likely to go to jail or prison (44.7%) or vanish from the program (47.1%); while their attrition rate in these categories is only slightly higher than their representation in the population, they are very much under-represented in the groups leaving with staff approval (33.3%) or on their own (26.1%).

Marital status showed a marked difference only in patients who left the area, who were more likely to be married (61.5% as compared to 47.3% in the total population).

TABLE 3  
TOTAL ARRESTS AND FELONY AND MISDEMEANOR ARRESTS  
BY REASON FOR LEAVING THE PROGRAM

REASON FOR LEAVING	PRE PROGRAM (18 Months)						POST PROGRAM (18 Months)					
	Total Arrests		Felony Arrests		Misd. Arrests		Total Arrests		Felony Arrests		Misd. Arrests	
	#	Mean *	#	Mean *	#	Mean *	#	Mean *	#	Mean *	#	Mean *
Jail or Prison (103)	183	1.78	107	1.04	44	.43	221	2.15	125	1.21	50	.49
Vanished, no contact (34)	54	1.59	11	.32	26	.76	53	1.56	28	.82	16	.47
Left Area, Advised Clinic (26)	27	1.04	11	.42	12	.46	37	1.42	15	.58	15	.58
Withdrew, Staff Approval (42)	35	.83	19	.45	10	.24	31	.74	19	.45	10	.24
Withdrew, On own (23)	28	1.22	14	.61	7	.30	25	1.09	16	.70	9	.39
Other (26)	30	1.15	12	.46	14	.54	46	1.77	23	.88	13	.50
TOTAL (254)	357	1.41	174	.69	113	.44	413	1.63	226	.89	113	.44

\* Mean per patient.

TABLE 4  
MEAN WAGES EARNED PER QUARTER BY REASON  
FOR LEAVING THE PROGRAM

REASON FOR LEAVING	Pre-Program		Post Program		$\bar{t}$	p <
	Mean #	S.D.	Mean #	S.D.		
Jail or Prison (103)	614	1,387	665	1,312	.31	N.S.
Vanished, No contact (34)	1,552	2,617	1,520	2,946	.06	N.S.
Left Area, Advised Clinic (26)	591	1,164	1,051	1,519	1.30	N.S.
Withdrew, Staff Approval (42)	1,038	2,027	2,290	3,093	2.57	.02
Withdrew, On Own (23)	956	2,018	1,760	2,777	2.18	.04

Those leaving with approval did not show an outstanding self-reported employment rate upon program entry (22.0%), although they were higher than the norm (16.5%). Patients who vanished from the program reported a 31 percent full time employment rate upon program entry, which is well above the norm. The least employed group were those who left for jail or prison (12.1% full time at entry). Those leaving with approval were less likely to report "no activity" than any other group (48.8% no activity as compared to 66% in the total population), followed by the vanished group (53.1%).

An examination of self-reported drug use (from the pharmacological study) at admission shows no initial differences between groups; missed dosages in the first month are about equal for all groups except patients who go to jail or prison or vanish, both of whom have a very poor record. Patients who leave with staff approval are, however, far less likely to miss scheduled clinic visits in the first month. They tend to be "better" patients from the start, for reasons explained below.

Using the data collected by the pharmacological study group, patients leaving with staff approval were less likely to report a craving ("yen") for heroin during the preceding seven days (at program admission). This was apparently due to the fact that those eventually leaving with staff approval report more heroin use in the past seven days and are more likely to have "fixed" that day (of reporting) or the previous day. This may also explain their better initial attendance record at the clinic. In combination with self-reported data on heroin cost, only patients who leave to go to jail or prison show habits as severe as those who eventually leave with staff approval. They are followed closely by patients who vanish from the program. While these differences are not significant, they do indicate that those leaving with approval may have more motivation to want to get off heroin.

These types of differences raise the very important question on the extent to which the treatment program reduces criminal activity, increases wages, or produces other positive effects in the treated population. In many cases it appears that only patients who were successful post program were also successful in relation to the total population in pre program performance. They are already the "better" people. In short, does the program really impact on those with poor prior performance records? Or do those who are already performing relatively "better" simply stay better or improve? These questions are addressed in the subsequent sections.

#### Background and Demographic Characteristics

The first question is whether cohort patients differ significantly on background and demographic characteristics prior to starting the program. If this is not the case, as will be shown, the next question is they differ in terms of post program performance.

Demographic and background characteristics of the 463 patients by program status at 24 months (or more)

is given in Table 5. The only significant difference is by sex distribution; it appears that more males leave the program than females. There are no significant differences by race, marital status, activity at admission (job, etc.), mean age, education, number of dependents, or self-reported family income. These same comparisons were made by design groups and are shown in Appendix B. No significant differences were observed by design group, even when the extremes of success and failure were tested. Therefore, it appears that the population is very homogeneous in background at entry; we will recall that time at risk also showed no significant differences pre-program, and that there were no significant differences in time to leaving the program by design groups. It is necessary to examine outcome at this point to see if these groups show any differences in performances.

#### Criminal Activity

Since criminal activity is one of the primary criteria for determining design group success or failure, the bulk of the analysis of these data pre and post program will be by status groups. An analysis of the severity of offenses will also be presented to show the significance of differences on this variable.

#### Overall Criminal Activity

The type of arrest and type of conviction eighteen months pre and post is shown in Appendices C-1 and C-2. By inspection it is apparent that pre-program criminal activity is greater for those who have gone off the program, both for arrests and convictions. Increases in arrest activity post program definitely favor those staying on the program; they registered reductions in all categories except forgery, heroin sales, addiction, drunk driving, drunk and disorderly, and non-support. The greatest decreases for this status group were in burglary, heroin possession (down one-third), and miscellaneous misdemeanor arrests. Those going off the program registered arrest increases in almost all categories of crime, with the only marked decrease in the category of receiving stolen property. Most alarming for this group was the three-fold increase in heroin sales and a concurrent doubling in heroin possession arrests. Dangerous drug possession arrests almost doubled, drunk driving arrests more than doubled, and miscellaneous felony arrests almost tripled. While it will be elaborated on in greater detail in the following section, it is important to note that the mean arrests per patient is 45 percent greater pre program for those who will eventually go off, and 144 percent greater post program.

Convictions show generally the same patterns. The greatest decreases in convictions for those remaining on the program were for burglary and miscellaneous felonies (both down almost four-fold), and heroin possession, which was down from five convictions pre program to one post program. At the same time, heroin possession convictions almost doubled for patients leaving the program, and their heroin sales convictions went from two to twenty-two, a 1,000 percent increase! Dangerous drug sales and possession convictions went up noticeably, along with those for robbery, burglary, and drunk driving. The only decreases of note for those leaving the program were convictions for forgery, receiving stolen property, petty theft, and miscellaneous traffic and

TABLE 5  
BACKGROUND CHARACTERISTICS OF COHORT PATIENTS  
AT ADMISSION BY PROGRAM STATUS  
(at 24 Months' Minimum)

	TOTAL POPULATION (N=463)	ON PROGRAM (N=256)		OFF PROGRAM (N=207)		SIGNIFICANCE OF DIFFERENCES*	
PERCENT VALUES	No.	Percent	No.	Percent	No.		Percent
SEX: Males	372	80.7	196	77.2	176	85.0	$\chi^2=4.03, df=1$ significant at .05 level
Females	89	19.3	58	22.8	31	15.0	
RACE: White	233	50.3	130	51.2	103	49.8	$\chi^2=4.77, df=3$ =3 not signi- ficant
Black	26	5.6	9	3.5	17	8.2	
Spanish	200	43.3	114	44.9	86	41.5	
Other	2	.4	1	.4	1	.5	
MARITAL STATUS: Married:	238	51.6	140	55.1	98	47.3	$\chi^2=3.68, df=4$ not significant
Single:	116	25.2	58	22.8	58	28.0	
Widowed:	5	1.1	2	.8	3	1.4	
Divorced:	58	12.6	29	11.4	29	14.0	
Separated	44	9.5	25	9.8	19	9.2	
ACTIVITY AT ADMISSION (Self-Reported)							$\chi^2= .05, df=1$ not significant (cells combined to working-not working)
Full-Time Job	83	18.4	50	20.0	33	16.5	
Part-Time Job	1	.2	-	-	1	.5	
P.T. Job, Housewife	2	.4	-	-	2	1.0	
Part-Time Job	14	3.1	7	2.8	7	3.5	
School Only	19	4.2	9	3.6	10	5.0	
Housewife	46	10.2	31	12.0	15	7.5	
None	285	63.3	153	61.2	132	66.0	

TABLE 5 (Continued)

BACKGROUND CHARACTERISTICS OF COHORT PATIENTS  
AT ADMISSION BY PROGRAM STATUS  
(at 24 Months' Minimum)

MEAN VALUES**	MEAN	MEAN	MEAN	SIGNIFICANCE
Age	29.5	29.8	29.0	t=1.11, df=459, not significant
Education	10.8	10.9	10.7	t=1.30, df=455, not significant
Dependents	1.92	1.89	1.97	t=.41, df=461, not significant
Family Income (Self-reported)	\$382.13	\$367.96	\$402.46	t=.70, df=93, not significant

\* .05 level of significance was used for all tests.

\*\*Significance tested between "On" and "Off" status groups.

misdemeanor offenses. Again, it should be noted that the mean arrest per patient is 28 percent greater pre program for those who leave, and 119 percent greater post program. These differences will become more important as the analysis proceeds.

#### Criminal Activity Comparisons

For purposes of statistical analysis, criminal activity has been grouped in various ways, in a fashion similar to the first year report. Since program success appears to be related to staying on the program, the relationship between crime and program status is important. These data are presented in Tables 6, 7, 8, and 9. The source of these data was described earlier. The individual's status---on or off the program---was coded allowing a minimum program exposure time of 24 months for all patients and a maximum of 35 months (for patients coming on the program as early as February of 1970, at the start of the program). The average time to closing was 13.2 months for those off the program.

As shown in Table 6, the differences in observed arrests as opposed to those expected through application of the X<sup>2</sup> test is significant at the .02 level. A similar result was obtained in the first year; individuals who are off the program appear to be doing worse than expected, and those staying on are doing better than might be expected. The principal difference from the first year is that those eventually go off the program have more arrests prior to coming on the program than those who stay on the program, a difference which will be discussed momentarily.

Arrests and convictions were then analyzed for felony and misdemeanor types of offenses for those on and off the program. All arrests and convictions are not included because minor vehicle code arrests and convictions, parole and probation violations, and arrests which were not clearly classifiable as misdemeanors or felonies were placed in other categories or excluded from specific analysis. This amounted to 221 excluded arrests, most of which were parole and probation violations and minor vehicle code offenses. Table 6 shows misdemeanor arrests and Table 7 shows misdemeanor convictions. Misdemeanor arrests actually increase for both groups. There are not significant differences in either misdemeanor category.

Felony arrests and convictions are shown in Tables 8 and 9. As in the first year, felony arrests indicate that those staying on the program are doing better than expected, and those off the program are doing worse than expected. Felony convictions also show significant differences, which was not the case in the first year of study.

The findings of the first year of study were confirmed. Program patients are not ceasing all criminal activity. Those who remain on the program are still involved with the criminal justice system, but at a decreased level of activity. This is verified in the Criminal Justice Agency Survey; criminal justice system personnel report (independently of these data) that the program has decreased their workload to some degree.

TABLE 6

TOTAL MISDEMEANOR ARRESTS PRE AND POST  
PROGRAM BY STATUS\*

PATIENT STATUS	18 Month Periods:		TOTAL
	Before Starting Program	After Starting Program	
On Program/ Approval/Deceased	62 <sup>a</sup>	82 <sup>b</sup>	144
Off Program	95 <sup>c</sup>	103 <sup>d</sup>	198
TOTAL	157	185	342

$$\chi^2 = .62, p > .05, df=1$$

\* Excluded minor vehicle code violations.

<sup>a</sup>41 Patients, 1 arrest; 7, 2 arrests; 1, 3 arrests; 1, 4 arrests (1.24 per patient).

<sup>b</sup>40 Patients, 1 arrest; 10, 2 arrests; 6, 3 arrests; 1, 4 arrests (1.43 per patient).

<sup>c</sup>47 Patients, 1 arrest; 13, 2 arrests; 3, 3 arrests; 2, 4 arrests; 1, 5 arrests (1.43 per patient).

<sup>d</sup>45 Patients, 1 arrest; 14, 2 arrests; 7, 3 arrests; 1, 4 arrests; 1, 5 arrests (1.51 per patient).

TABLE 7

TOTAL MISDEMEANOR CONVICTIONS PRE AND POST  
PROGRAM BY STATUS

PATIENT STATUS	18 Month Periods:		TOTAL
	Before Starting Program	After Starting Program	
On Program/Approval/Deceased	65 <sup>a</sup>	48 <sup>b</sup>	113
Off Program	68 <sup>c</sup>	57 <sup>d</sup>	125
TOTAL	133	105	238

$$\chi^2 = .12, p > .05, df = 1$$

<sup>a</sup>38 patients, 1 conviction; 7, 2 convictions; 3, 3 convictions; 1, 4 convictions (1.32 per patient).

<sup>b</sup>28 patients, 1 conviction; 7, 2 convictions; 2, 3 convictions (1.29 per patient).

<sup>c</sup>35 patients, 1 conviction; 9, 2 convictions; 2, 3 convictions; 1, 4 convictions; 1, 5 convictions (1.41 per patient).

<sup>d</sup>47 patients, 1 conviction; 3, 2 convictions; 1, 4 convictions (1.11 per patient).



TABLE 8

TOTAL COHORT FELONY ARRESTS PRE AND POST  
PROGRAM BY STATUS

PATIENT STATUS	18 Month Periods:		TOTAL
	Before Starting Program	After Starting Program	
On Program/Approval/Deceased	126 <sup>a</sup>	95 <sup>b</sup>	221
Off Program	151 <sup>c</sup>	204 <sup>d</sup>	355
TOTAL	277	299	576

$$\chi^2=10.86, p < .001, df=1$$

<sup>a</sup>63 patients, 1 arrest; 21, 2 arrests; 4, 3 arrests; 1, 4 arrests; 1, 5 arrests. (1.40 per patient).

<sup>b</sup>45 patients, 1 arrest; 18, 2 arrests; 2, 3 arrests; 2, 4 arrests. (1.42 per patient).

<sup>c</sup>56 patients, 1 arrest; 21, 2 arrests; 10, 3 arrests; 3, 4 arrests; 1, 5 arrests; 1, 6 arrests. (1.64 per patient).

<sup>d</sup>88 patients, 1 arrest; 26, 2 arrests; 14, 3 arrests; 3, 4 arrests; 2, 5 arrests. (1.53 per patient).

TABLE 9

TOTAL FELONY CONVICTIONS PRE AND POST  
PROGRAM BY STATUS

PATIENT STATUS	18 Month Periods:		TOTAL
	Before Starting Program	After Starting Program	
On Program/Approval/Deceased	52 <sup>a</sup>	37 <sup>b</sup>	89
Off Program	61 <sup>c</sup>	101 <sup>d</sup>	162
TOTAL	113	138	251

$$\chi^2= 5.25, p < .05, df=1$$

<sup>a</sup>50 patients, 1 conviction; 1, 2 convictions. (1.02 per patient).

<sup>b</sup>31 patients, 1 conviction; 3, 2 convictions. (1.09 per patient).

<sup>c</sup>41 patients, 1 conviction; 7, 2 convictions; 2, 3 convictions. (1.22 per patient).

<sup>d</sup>78 patients, 1 conviction; 10, 2 convictions; 1, 3 convictions. (1.13 per patient).

Patients remaining on the program are still, however, becoming involved in minor law violations.

### Criminal Justice Activity

Using the mean number of arrests and convictions per patient it was possible to statistically test differences between patients on and off the program first at their pre program performance level (baseline), and then at their post program performance level (outcome). Such tests between groups have already been reported for time at risk, mean time on the program, and wages against those leaving the program with staff approval. In most cases there were no significant differences pre program, but differences appeared post program. These types of tests allow us to say that those staying on the program perform at different levels post program, but they do not allow for a clear expression of the impact of the program on that group. Tests within groups, e.g., for all those staying on the program, allow us to judge the extent to which the group which stayed on the program actually increased in its performance and to see if those increases were significant. If they are, we may attribute some of the increases (and decreases) to program participation. Differences between groups will be considered first.

Differences between status groups on pre program criminal activity already have been indicated in the  $\chi^2$  tables. The mean numbers of arrests pre program are shown in Table 10 for all those categories with significant differences. It appears that the patients differ significantly in their pre program performance on total numbers of arrests, misdemeanor arrests, felony arrests, felony convictions, new sentences (jail and/or probation), and in the severity of all convictions and most serious convictions---most serious arrests is just short of significance at the .05 level.

Post program performance reveals even more significant differences among a greater variety of criminal justice activity classifications. The most important finding is, however, that these are different populations in criminal justice system performance prior to program admission. Patients who stay on the program are "better" to begin with and either remain the same or do better. Patients who eventually leave are "worse" to begin with and either remain so or do worse. The remaining question, therefore, is the extent to which the program improves the post program performance of either group of patients against their own pre program performance.

For those remaining on the program at least 24 months, significant differences in mean criminal justice activity per patient (for base of 256) existed for felony arrests, parole and probation revocations, jail sentences (not suspended), and commitments to the California Rehabilitation Center (specifically for addicts). These differences which are shown in Table 11, were all in the direction of significantly reduced criminal activity. Since these patients spent significantly more time on the program than those who dropped (13.2 months), it is possible to say that program intervention is a factor in the significant drop in criminal activity for this group. The ultimate question is, of course, the extent to which the criminal activity of those who left the program might have been reduced by continued contact. As seen in Table 11, the mean criminal

TABLE 10  
SIGNIFICANT DIFFERENCES IN MEAN CRIMINAL JUSTICE ACTIVITIES (PER PATIENT)  
PRE AND POST PROGRAM BETWEEN STATUS GROUPS\*, AND SEVERITY SCALE MEANS

ACTIVITY	NUMBER PRE PROGRAM				NUMBER POST PROGRAM			
	MEAN		t	P <	MEAN		t	P <
	ON	OFF			ON	OFF		
Total Number of Arrests	.94	1.52	4.05	.0001	.82	1.83	7.57	.0001
Misdemeanor Arrests	.24	.48	3.30	.001	.32	.50	2.44	.02
Felony Arrests	.49	.73	2.76	.01	.37	.99	7.58	.0001
Felony Convictions	.20	.29	1.98	.05	.14	.49	7.34	.0001
Parole/Probation Revocations	.08	.12	1.38	N.S.	.03	.11	3.34	.001
New Sentence-Jail and/or Probation	.05	.11	2.35	.02	.04	.06	.71	N.S.
Jail Sentence (not suspended)	.24	.29	.86	N.S.	.11	.26	3.94	.0001
Calif. Dept. of Corrections	.07	.10	1.20	N.S.	.04	.28	6.80	.0001
Calif. Rehabilitation Center	.05	.06	.32	N.S.	.02	.07	2.80	.01
Months to Arrest	N/A	N/A	N/A		2.20	4.87	5.85	.0001
Months to Conviction	N/A	N/A	N/A		1.92	3.69	4.43	.0001
SEVERITY SCALE MEANS:								
Total Convictions	1.75	2.42	2.52	.02	1.35	3.60	6.90	.0001
Most Serious Arrest	2.21	2.68	1.95	--	1.86	4.12	8.99	.0001
Most Serious Conviction	1.31	1.72	2.23	.03	1.01	2.70	7.69	.0001

\* All means are based on the total population of 463 patients (df=461); means are lower than those cited in  $\chi^2$  tables because all patients are included in base, not just those involved, e.g., 256 (on program) times .94 (pre) yields 240 arrests.

NOTE: N/A = Not applicable; N.S. = not significant.

justice activity per patient off the program increased in almost every category, significantly for total number of arrests, felony arrests, felony convictions, and California Department of Corrections commitments. Only a control group would tell us the extent of this improvement. We can only hypothesize that a control group would have done even worse than those off the program, since they would have had no exposure. There is also an alternative hypothesis, that for some, those in a reduced state of readiness, participation in a Methadone Program may precipitate an increase in negative behavior.

#### Severity of Criminal Activity

Using the severity scale described, there were significant differences between groups pre program on the severity of all convictions and the most serious conviction; the most serious arrest was very close to significance for those on and off the program (Table 11). As confirmed in the data on mean numbers of criminal justice activities, the status groups were different in the severity of their convicted offenses prior to coming on the program. Post program severity rates differed quite significantly for arrests and convictions. An examination of Table 12 shows a reduction only in the most serious convictions within the group staying on the program, although reductions in the direction of significance are apparent for the remaining categories. For patients leaving the program, the severity of their arrests and convictions increases quite significantly. As with mean rates of criminal justice activity, the decreases in severity of crimes committed may be attributed in part to program involvement, since patients going off the program had significantly less involvement and increased the severity of their crimes.

#### Employment and Wages Earned

Patient employment is one of the most important signs of improvement in social productivity. When a patient is no longer dependent on the use of heroin, he is much more capable of holding a job or of improving present job performance. Regular employment is generally viewed as an important step in any type of social rehabilitation, and for the addict it may signify movement away from drug dependency. His judgment is not impaired by the drugs; he does not become sick for need of the drug; and he is less likely to be absent from work due to sickness or attempts to secure the drug, should he be employed while using. The obvious implication of not working legitimately is that welfare or "hustling" will be used for support. The program places particular emphasis on employment for the patient while he or she is on the program.

The sources of the data reported on here have been described earlier. The numbers of patients employed has been tabulated for those on and off the program, and earnings pre and post program are analyzed to determine significant differences between status and design groups.

TABLE 11  
SIGNIFICANT DIFFERENCES IN MEAN CRIMINAL JUSTICE ACTIVITY(PER PATIENT)  
PRE AND POST PROGRAM WITHIN STATUS GROUPS\*, AND SEVERITY SCALE MEANS

ACTIVITY	ON PROGRAM				OFF PROGRAM			
	MEAN		t	p <	MEAN		t	p <
	PRE	POST			PRE	POST		
Total Number of Arrests	.94	.82	1.17	N.S.	1.52	1.83	2.14	.04
Misdemeanor Arrests	.24	.32	1.48	N.S.	.48	.50	.26	N.S.
Felony Arrests	.49	.37	1.99	.05	.73	.99	2.98	.01
Felony Convictions	.20	.14	1.90	N.S.	.29	.49	3.37	.001
Parole/Probation Revocations	.08	.03	2.28	.02	.12	.11	.28	N.S.
New Sentence-Jail and/or Probation	.05	.04	.39	N.S.	.11	.06	1.93	N.S.
Jail Sentence (Not suspended)	.24	.11	3.60	.0001	.29	.26	.55	N.S.
California Department of Corrections	.07	.04	1.06	N.S.	.10	.28	4.75	.0001
California Rehabilitation Center	.05	.02	2.34	.02	.06	.07	.35	N.S.
SEVERITY SCALE MEANS:								
Total Convictions	1.75	1.35	1.76	N.S.	2.42	3.60	3.34	.001
Most Serious Arrest	2.21	1.86	1.82	N.S.	2.68	4.12	5.95	.0001
Most Serious Conviction	1.31	1.01	2.01	.05	1.72	2.70	3.99	.0001

\* All means are based on the total population of 463 patients (df=461); means are lower than those cited in  $\chi^2$  tables because all patients are included in base, not just those involved, e.g., 256 (on program) times .94 (pre) yields 240 arrests.

NOTE: N/A = Not applicable; N/S = not significant.

### Employment of Patients

It has been established that there are no significant differences in the types of activity (i.e., job, school, etc.) patients are engaged in at the time they start the program, whether they are on or off the program subsequent to admission. For all patients coming on the program, 18.4 percent (83) report that they are working. Self-reported employment rates are higher for those who remain on the program (50, or 20%) or the "success" design group (29, or 25%). In contrast to these figures, by using the base wage data, it was possible to compute the numbers of patients in each quarter pre and post program who were earning wages. These data are given in Table 13. While this is a cumulative count for a three month period, and the self-reported data is for one period in time (at entry) it is interesting to note that 37.8 percent of all patients on whom data was available (426) had reported earnings during their start quarter. This is twice as high as the self-reported employment rate, meaning employment rose from 83 patients (self-reported at any time during their start quarter) to 161 patients working in the start quarter. This seems implausible in relation to the data for the quarters pre and post program, as shown in Table 12. The range of employment from the fourth quarter pre program to the ninth quarter after the program for all patients ranges from 30.1 percent (second after start) to 43.4 percent (second before start), a 13.3 percent spread. It seems unlikely that a doubling of employment would occur in the start quarter, particularly since there is a drop in the numbers of patients employed as they approach the start quarter. These figures stand in contrast to the increases in self-reported employment given in the section on the 1971-1973 population; however, those data represent a shrinking sample of patients.

Regarding the data shown in Table 12, it is evident that employment does not increase markedly for patients, even those who remain on the program. The total number employed is lowest in the second quarter after start (6 to 9 months), and rises from that point on. There does appear to be a modest, but insignificant, drop in the numbers employed for the group leaving the program in relation to the group staying on. In contrast to the latter, patients leaving the program do not regain the proportion employed prior to program admission. In sum, the program is not producing a significant increase in the numbers of patients who are employed. It appears that about the same numbers of individuals are employed pre and post program, with decreases up to the time of program admission, and modest gains in the numbers of employed patients after that time for all patients, although they never reach the pre program level. The group staying on the program shows the greatest increase in employed patients, and there is a steady decline in the numbers of employed patients who leave the program.

### Wages Earned Pre and Post Program

Chart 5 shows the average patient wages earned each quarter before and after program admission for patients on and off the program at a minimum of 24 months. The differences between groups are significant at the .01 level, using the t-test, for all quarters from the start quarter through the eighth quarter; differences for the ninth quarter were significant at the .04 level. Therefore, while there are modest increases in the numbers of patients on the program who are employed, they appear to be significantly increasing their earnings.

TABLE 12

NUMBER OF PATIENTS EMPLOYED BASED ON  
EVIDENCE OF WAGES EARNED BY QUARTER

QUARTER	ON PROGRAM NUMBER			OFF PROGRAM NUMBER			TOTAL NUMBER		
	Total*	Working	Percent	Total*	Working	Percent	Total*	Working	Percent
Fourth Before Start	99	35	35.4	69	29	42.0	168	64	38.1
Third Before Start	134	61	45.5	102	40	39.2	236	101	42.8
Second Before Start	158	70	44.3	121	51	42.1	279	121	43.4
One Before Start	211	80	37.9	169	63	37.3	380	143	37.6
Start Quarter	238	94	39.5	188	67	35.6	426	161	37.8
First After Start	238	93	39.1	188	67	35.6	426	160	37.6
Second After Start	240	73	30.4	188	56	29.8	428	129	30.1
Third After Start	240	82	34.2	188	57	30.3	428	139	32.5
Fourth After Start	240	91	37.9	188	61	32.4	428	152	35.5
Fifth After Start	240	97	40.4	188	47	25.0	428	144	33.6
Sixth After Start	175	72	41.1	142	41	28.9	317	113	35.6
Seventh After Start	133	59	44.4	117	27	23.1	250	86	34.4
Eighth After Start	102	49	48.0	86	26	30.2	188	75	39.9
Ninth After Start	79	37	46.8	67	19	28.5	146	56	38.4

\* The total represents only patients on whom data was available.

CHART 5

# AVERAGE PATIENT WAGES EARNED EACH QUARTER BEFORE AND AFTER PROGRAM ADMISSION FOR THOSE ON AND OFF THE PROGRAM AT 24 MONTHS (MINIMUM)

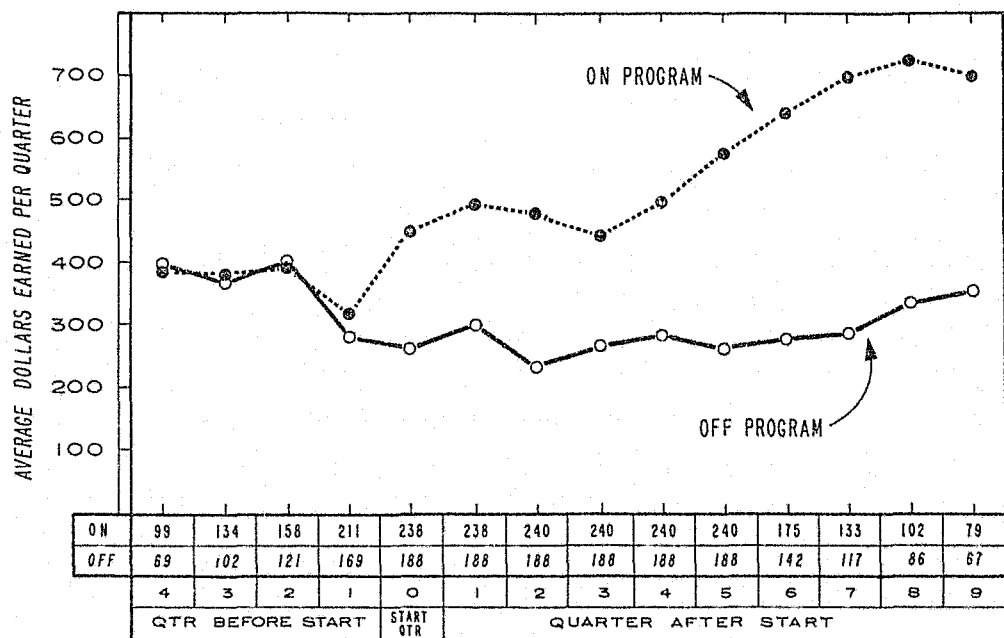


TABLE 13

## SIGNIFICANT DIFFERENCES IN WAGES EARNED PRE AND POST PROGRAM\*

	PRE PROGRAM		POST PROGRAM		$\bar{t}$	$p <$
	MEAN#	s.d.	MEAN#	s.d.		
On Program/Approved/ Deceased	850	1,746	1,786	3,222	5.53	.0001
Off Program	781	1,699	989	1,915	1.15	N.S.
$\bar{t}$	.43		3.14			
$p <$	n.s.		.01			

\* The Pre Program period is for four quarters and the Post Program period is for only four quarters after the start quarter. The means are disproportionately high compared to those shown in Chart 5 because they represent accumulative wages for the total N.

Maintenance has produced significantly increased earnings for this group, while those leaving the program (at about 13 months) have not shown any real increases in earnings.

The significance of increases in earnings is summarized in Table 13. In contrast with the data on criminal activity, there are no differences in wage performance prior to entering the program. Post program there are significant differences in performance for those staying on over two years, and within this group pre to post improvement is significant at the .0001 level. There is little question that the maintenance strategy is working for patients who stay on the program.

The logical conclusion at this point may be that the patients staying on the program are more skilled, and hence are better able to hold jobs. This is not true; 452 of the 463 patients reported on the kind of work they did. There were no significant differences between status groups across fifteen occupational categories. For example, 22.5 percent of those on and 24.1 percent of those off the program reported occupations classified as skilled, craftsman, or foreman (carpenters, checkers, machinists, welders, tool-die workers, etc.); semi- and unskilled labor was reported by 31.7 percent of those on and 36.5 percent of those off (porters, sweepers, stock-boys, farm laborers, etc.). These two classifications made up 57 percent of all occupations reported. The only other category showing a difference of more than two percent is "housewife," with 12.4 percent of those on and 8.4 percent of those off the program. This group made up 10.6 percent of all occupations reported. Transportation and service workers made up 15 of the population and were about 15 percent of those on or off the program. There were no differences in the occupational groupings of the remaining 17.4 percent of the population.

Since there are no differences in background or work skills, it appears that other factors account for the differing outcome on this variable. The variables which account for this performance will be discussed in the section on the use of the regression technique. It is hoped that staff will gain a better understanding of who is in most need of vocational assistance and other types of treatment.

#### Drug Use

The decreased use of heroin and other types of drugs has long been considered one of the prime criteria in assessing the effectiveness of abstinence or "drug free" rehabilitation programs. Warnings in the literature indicate that the greatest period of relapse is in the first year or two after treatment, in which time most studies cite over a 90 percent relapse, or failure rate. Vaillant indicates that these rates then decrease to about two-thirds readmitted from three to twelve years after treatment.<sup>17</sup> In these terms, the real test of any

<sup>17</sup>George E. Vaillant, "A Twelve-Year Follow-Up of New York Narcotic Addicts: I. The Relationship of Treatment to Outcome," Amer. J. of Psychiat., 122 (January, 1966), pp. 727, 736.

TABLE 14  
DRUGS USED TO EXCESS AT PROGRAM START AND AT ONE YEAR, INCLUDING  
URINE TEST RESULTS (POSITIVES) BY STATUS AND DESIGN GROUPS

	STATUS GROUPS (at 24 + months)				DESIGN GROUPS							
DRUGS USED	ON PROGRAM (N=254)		OFF PROGRAM (N=107)		SUCCESS (N=118)		NO CHANGE (N=238)		FAILURE (N=107)		TOTAL	
	Interview	Urines	Interview	Urines	Interview	Urines	Interview	Urines	Interview	Urines	Interview	Urines
HEROIN												
START	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
ONE YEAR	10.2	15.0	23.7	28.4	16.0	25.9	16.8	18.1	8.3	16.9	14.1	19.2
ALCOHOL												
START	21.8	-	13.9	-	13.6	-	22.0	-	14.0	-	18.0	-
ONE YEAR	34.2	-	39.4	-	18.2	-	32.8	-	60.9	-	35.8	-
AMPHETAMINES												
START	10.5	3.2	13.9	2.5	15.3	.0	12.2	1.8	8.8	7.4	12.1	2.9
ONE YEAR	11.8	5.8	12.1	5.6	4.5	4.2	14.1	6.1	13.0	6.2	11.9	5.7
BARBITURATES												
START	37.1	7.7	32.2	8.5	37.3	21.1	29.3	6.3	43.9	3.3	34.7	8.0
ONE YEAR	14.5	3.2	21.2	6.9	36.4	6.3	10.9	4.3	13.0	3.0	16.5	4.4
MARIJUANA												
START	63.7	-	68.7	-	64.6	-	71.5	-	56.1	-	66.1	-
ONE YEAR	59.2	-	57.6	-	68.2	-	56.3	-	56.5	-	58.7	-
OTHER												
START	12.1	3.1*	19.1	5.3	22.0	8.3	13.0	.0	14.0	9.1	15.5	3.9
ONE YEAR	7.9	.0	12.9	1.5	13.6	.0	4.7	.0	17.4	1.7	9.2	.5

\*Cocaine Only, interview data includes all others. NOTE: Interview data is for the first and 53rd weeks; urine data was coded on a monthly basis, i.e., any "dirty" urine (positive test) in a month classified the patient as "dirty" for that month (even though urines were done weekly).

heroin treatment program will be its success over the long term in reducing rates of relapse. While concerned with relapse, the methadone program has placed far greater emphasis on continued treatment and improvement in other areas of social functioning. For this reason, and because doing follow-up interviews with ex-patients is a very time-consuming and costly procedure, only data available on patients still on the program was used in this portion of the analysis.

A follow-up study has been done by the Narcotic Addiction Research Laboratory staff of Stanford University, and will be reported on by them; preliminary results are in Appendix D. Their report indicates that patients who are now free in the community whether on or off the program, are achieving a far better abstinence rate after three years from starting the program (40% retention) than reported by Vaillant. This finding would certainly be in agreement with the results of this study, and supports the notion that the program is having an impact on patients.

Drug use data for patients while on the program was collected from two kinds of clinic records. The first was the record of positive or 'dirty' urine results recorded for each patient from urinalysis reports. The second was the results of patient excessive drug use as self-reported for the pharmacological study. One problem with the latter source is that data on self-reported drug use was not collected until about half the cohort group had come on the program; therefore, only 239 patients (52%) are represented in the data. The problem with the data from urine results is that not all patients received tests on stimulants and depressants in a given month, and the number of tests per patient increased over time. For example, in their first program month 112 cohort patients were urine tested for evidence of barbiturate use. This is 24.2 percent of the total population. At their twelfth month, 67 percent (229) of the 342 cohort patients still on the program were tested for barbiturates. This means that the intake percentage may be less reliable than that taken later due to an increase in program efficiency.

The results of patient self-report at the first and 53rd weeks and urine results at the first and twelfth months is shown in Table 14. The major disagreement on the two sets of data is in the category of amphetamines, where urine test results show increases, and self-report indicates little change in excessive use. While interpretation of the data is limited due to the difference in data sources it appears that there is no overall decrease in the use of drugs, including alcohol. There are only shifts in drug use patterns. For those in the status groups, for example, those who go off the program are involved in twice as much heroin use as those staying on, with increases in excessive barbiturate and other drug use. Patients who stay on the program up to 24 or more months show less comparative heroin use, less of an increase in excessive alcohol use, and a considerable drop in excessive barbiturate use.

While patients are distributed by design group, those classified as "failures," 62.2 percent of whom (67) are still on the program at the twelfth month, show a very marked increase in excessive alcohol use and a very sharp drop in barbiturate use. They also show the greatest self-reported and urine test verified decreases in heroin use. Yet they are unemployed and becoming involved with the criminal justice system. This certainly

negates the thesis that abstinence is the critical factor in program success, since those who are employed (earning money at a high rate) and improving markedly in their criminal justice system performance are the greatest heroin users. It is notable in this regard that their alcohol use is reported as very low with hardly any increase over their first year on the program. They show more decreases in every other drug use category except marijuana use.

In conclusion, while these data represent a "shrinking sample," patients who were classified as program failures were reducing their use of heroin, and reducing excessive barbiturate use during their first year on the program. However, they were increasing their excessive alcohol use. Since program successes did not show the same pattern, in fact showing less reduction in heroin use, it is felt that the critical factors in program success are increased employment and decreases in criminal justice activity. The program produces improvement in these areas for a large number of patients in spite of their continued drug use. The real concern is with the extent to which excessive alcohol use might be interfering with the performance of patients classified as failures. These individuals may be drug-related failures, but not due to heroin. The program staff must find some way of reaching them.

#### Prediction of Program Success

One of the goals of the evaluation has been that of developing some means of predicting patient success based on background information, or other information available on patients prior to their admission.

In order to do this, the stepwise multiple regression technique was used. This technique, which is a more powerful variation of multiple regression, allows for the choosing of independent variables which will provide the best prediction possible with the fewest independent variables. The first step in the process is to choose the single independent variable which is the best predictor of the dependent variable. The second and subsequent independent variables are added to the regression equation to provide the best prediction in conjunction with the preceding variables.

For this study, four dependent variables were selected for use with about 30 independent baseline variables run against each. They were: 1) the design groups as coded into success and failures, 2) status groups, 3) the most serious level of criminal involvement recorded, and 4) wages four quarters after admission.

#### Design Groups

For the nine design groups, which were coded from best (success) to worst (failure) on outcome performance, the best predictor of failure is the seriousness of the individual's criminal activity prior to coming on the program; the correlation with level of criminal involvement (as shown in Appendix F) is .41.

### Status Groups

Thirty-two baseline variables were used with program outcome (on or off) at a minimum of twenty-four months of program activity. The best predictor of going off the program is the number of arrests in the eighteen months prior to coming onto the program, i.e., the more the arrests the greater the chances of going off the program. The correlation coefficient is .19. Some of the other variables which contribute to the regression equation provide interesting correlations with outcome. Higher wages earned during the start quarter does not correlate positively with staying on the program ( $r = -.12$ ). Self-reported excessive alcohol use correlates negatively with staying on the program ( $r = .10$ ), i.e., patients who report using alcohol excessively at admission are more likely to depart the program. This confirmed the findings reported earlier.

### Level of Criminal Involvement

Using the scale shown in Appendix F as the dependent variable (that used in the success-failure determinations for design groups) yielded time at risk as the best baseline predictor of post program criminal involvement. The greater the time at risk pre program the less likely the individual was to become involved in criminal activity post program. ( $r = .20$ ). Excessive marijuana use also correlated highly with post program criminal activity ( $r = .18$ ). Less risk time and reported excessive marijuana use pre program had a multiple correlation coefficient ( $R$ ) of .25 with level of criminal involvement; i.e., they were predictive of a higher level of criminal involvement post program. Wages earned during the start quarter correlated negatively with post program increases in criminal involvement ( $r = -.10$ ); the more money earned in the start quarter the less likely the patient was to become involved in serious criminal activity.

### Wages Earned

This proved to be the most practical dependent variable. What one might expect was true. Patients who reported that they were working or otherwise engaged in productive activity were earning money post-program. A correlation coefficient of .37 existed between positive activity at admission and greater wages earned in the first four quarters post program.

In conclusion, what has been said earlier in the report is verified. More serious criminal activity pre program leads to failure---the patient will probably leave the program, he will not be earning wages and his criminal involvement will continue, probably at a more severe level.

## 3.4 COLLEGE EDUCATION SURVEY

In the months of January, February and March of 1973, a survey was conducted in Santa Clara County at five junior colleges and the Metropolitan Adult Education Program. The intent of this survey was to see if completion of college coursework has any significance with those patients who are grouped as successful on the methadone program. A sample of the methadone population consisted of 463 patients who entered the methadone program up to and including the month of June, 1971. Those patients who had attended a junior college or adult education were not known at the beginning of the survey. It was discovered that the actual number of students from the sample of 463 patients were; 29 patients who started and completed units at a junior college; 24 patients who started and did not complete units at a junior college, and 33 patients who enrolled in classes through the Metropolitan Adult Education Program. There are a total of 86 school enrollees in this post methadone program group. There is an additional group of 14 students who had completed college coursework before entering the methadone program.

The five junior colleges and the adult education program granted the research team permission to obtain coursework information from the permanent records of those students whom we could identify as a patient on the program. The types of data collected included the number of semesters or quarters attended as well as the number of units completed. Other kinds of data collected were; the grade point average, education prior to the program and the kinds of classes taken, such as academic or vocational classes. The sample of 482 patients was listed alphabetically including each person's social security number which was used for positive identification. The method used for collecting this data was the same at each college. It entailed starting with the first person on the sample list and proceeding through the alphabetized records of every person who had ever attended the college. Their personnel at each of the colleges and adult education were cooperative and willing to answer any questions which arose regarding the records.

The only educational data gathered prior to this survey has been patient self-report of the highest grade completed. Several statistical tests were used to measure the differences between students who completed units and students who did not complete units. None of the tests measured a significant difference at the .05 level. The numbers are too small to make percentages meaningful but the percentages do allow for comparison between those who completed college coursework and those who did not complete college coursework.

A comparison of the background characteristics of the group of students who completed coursework with those students who did not complete coursework show no differences based on sex, race, educational level, marital status or number of dependents. Age differences are interesting, however, because 16 (55.1%) students who completed units are in the 30 and over age group as compared to 7 (29.2%) who did not complete units (Table 16). Of those students who attended adult education, 17 (41.0%) were in the 30 and over age group and only 1 (7.1%) in this same age group had completed units pre program.

As mentioned earlier, although it was not significantly different, those students who completed units and



TABLE 15

## AGE BY EDUCATIONAL STATUS

YEARS	COMPLETED UNITS		DID NOT COMPLETE UNITS		COMPLETED UNITS PRE-PROGRAM		ATTENDED MAEP*		TOTAL	
	No.	%	No.	%	No.	%	No.	%	No.	%
18 - 21	4	13.8	4	16.6	2	14.3	4	12.1	14	14.0
22 - 24	6	20.7	7	29.2	7	50.0	3	9.0	23	23.0
25 - 29	3	10.4	6	25.0	4	28.6	9	27.3	22	22.0
30 - 39	11	37.9	7	29.2	1	7.1	12	36.4	31	31.0
40 - Up	5	17.2	-	-	-	-	5	15.2	10	10.0
TOTAL	29	100.0	24	100.0	14	100.0	33	100.0	100	100.0

Mean's Completed Units = 30.0

Pre-Program = 23.8

Did Not Complete Units = 26.8

MAEP = 30.4

\* Metropolitan Adult Education Program

attend adult education tend to remain on the program longer. As shown in Table 16, 7 (50.1%) students who complete coursework as compared to 2 (20.0%) who do not complete coursework leave the program because they withdrew with staff approval. In the pre-program group, 4 (50.0%) students and 5 (33.0%) students who attended adult education also withdrew from the program with staff approval. The retention rate is as follows: 76 percent for those who complete units, 67 percent for those who do not complete units, 71 percent for those who completed units pre-program, and 73 percent for those who attend adult education. Those individual who complete coursework also remain on the program longer and withdraw from the program with staff approval. These factors indicate efforts toward establishing change in one's lifestyle.

Misdemeanor and felony arrests with convictions are higher for the group of individuals who did not complete college coursework both before and after starting the program. Before starting the methadone program, 10.3 percent of those who have completed units committed a misdemeanor. Since this group has been on the program and completed units, this percentage decreased to 3.4 percent. In the group of those who did not complete units, 29.1 percent committed a misdemeanor before the program and the amount of misdemeanor activity decreased to 16.7 percent after being on the program. The same pattern occurred with convicted felony arrest. Felony convictions decreased for the group of individuals who completed units as well as for the group who did not complete units. The completed units group had 20.7 percent of the individuals who committed felony arrest before the program and 3.4 percent of the individuals after being on the program. 33.3 percent of the group who did not complete units had felony arrest pre-program and 25.0 percent post-program. In reference to the group who did not complete their college coursework, although they did not complete units, it is impressive that criminal activity decreased. This may be attributed to being on the methadone program. The program must provide some stability in the lifestyles of those who remain on the program.

The actual types of offenses being committed, the severity of each offense, as classified by the Offense Severity Scale and the most serious dispositions were examined. It was discovered, that for the group who completed units, the total offense weight mean before the program was 3.2 and after being on the program, the mean decreased to 2.0. The total offense weight mean for the group who did not complete units increased. Before the program, the total offense weight mean was 3.6 and after being on the program, the mean increased to 6.5. An inspection of the actual types of offenses showed no convicted drug offenses for the group of individual who completed units, but 12.5 percent of the convicted offenses in the group who did not complete units were drug offenses. Important differences appeared in comparing the dispositions of the two groups. None of the individuals in the completed units group were sentenced to Narcotic Treatment Rehabilitation Center (CRC), or to the Department of Corrections (CDC). In the group of individuals who did not complete units, one individual was sentenced to CDC and two individuals were sentenced to CRC. The fact that these individuals were incarcerated, could account for the reason they did not complete units once they were enrolled in college.

TABLE 16

REASON FOR LEAVING PROGRAM BY EDUCATIONAL STATUS<sup>a</sup>

	COMPLETED UNITS		DID NOT COMPLETE UNITS		COMPLETE UNITS PRE-PROGRAM		ATTENDED MAEP		TOTAL	
	No.	%	No.	%	No.	%	No.	%	No.	%
JAIL OR PRISON	1	7.1	2	20.0	3	37.5	5	33.3	11	23.4
VANISHED	2	14.3	1	10.0	-		3	20.0	6	12.8
LEPT AREA	1	7.1	1	10.0	1	12.5	-		3	6.4
WITHDRAWN STAFF APPROVAL	7	50.1	2	20.0	4	50.0	5	33.3	18	38.3
WITHDREW FROM TREATMENT	2	14.3	2	20.0	-		-		4	8.5
WITHDREW FOR NON-PAYMENT	1	7.1	-		-		-		1	2.1
OTHER*	-		2	20.0	-		1	6.7	3	6.4
DECEASED	-		-		-		1	6.7	1	2.1
TOTAL	14	100.0	10	100.0	8	100.0	15	100.0	47	100.0

<sup>a</sup>Status as of January 31, 1973.<sup>b</sup>Found ineligible, transferred to another program, parole agent insisted on withdrawal.<sup>c</sup>Metropolitan Adult Education Program.

## 4.0 THE MINNESOTA MULTIPHASIC PERSONALITY INVENTORY (MMPI)

The MMPI is an objective self-report instrument that has been used in hundreds of psychological studies. This present study was completed by Lucy Cohen, in partial requirement for her doctorate in Educational Psychology.<sup>18</sup> This section represents an abstract of that study. Generally, Ms. Cohen found that after a short period on methadone maintenance, the subjects in her study improved considerably in terms of their MMPI profiles.

The subjects were male patients that entered the Central and Alum Rock clinics from December 1970 to June, 1971. The design was a pre-test and six month post-test for 126 subjects. Since there was no control group of heroin addicts that had not received methadone, a separate post-test only group received the MMPI after being on the program for six months (no pre-test). There were no significant differences between the experimental post-test and the post-test only group, reducing the effects of maturation and regression.

The experimental subjects were classified into four diagnostic groups on the basis of their MMPI profiles: Normal, Psychopathic, Neurotic, and Schizoid. The entire group profile, on pre-test, exhibited a double-spike 2-4 pattern (psychopathic with depressive overtones). This pattern was the same on post-test, although scale (2), Depression, dropped below the clinical cut-off point.

The total group showed a significant decrease in psychopathology on the post-test for clinical scales (1) Hypochondriasis, (2) Depression, (3) Hysteria, (4) Psychopathic deviate, (7) Psychasthenia, and (8) Schizophrenia.

The proportion of these total group of subjects on pre-test and post-test is shown in Table 17. The most striking result is the percentage of patients falling into the Normal group at post-test, which increased from nine percent to 21 percent. This suggests the effect of a maintenance program in relieving psychological pressures attendant upon heroin addiction.

The Psychopathic group is comprised of three sub-categories, the 2-4 group (Depression and Psychopathic deviate scales as having a high elevation or "spikes" on the profile sheet); the 4-spike group; and the 4-9 group (high on the Psychopathic deviate scale (4) and the Hypomania scale (9)). The latter group showed no change with the 4-9 high points remaining the same. The 2-4 high point pattern showed significant decreases in scales of Depression (2), Hysteria (3) and Psychopathic deviate (4). The 4-spike pattern showed a change to a 4-9 profile pattern (that of a classic psychopath). These conclusions are obviously tentative in nature; the small sample represented here precludes large-scale generalization.

<sup>18</sup>Lucy Cohen, "Personality Changes of Narcotic Addicts in a Methadone Maintenance Program as Indicated by the MMPI". Unpublished doctoral dissertation, University of California, Berkeley, 1972.

TABLE 17

PERCENT OF SUBJECTS IN VARIOUS MMPI DIAGNOSTIC GROUPS\*  
BY PRE-TEST AND POST-TEST\*

GROUP	PRE-TEST PERCENT	POST-TEST PERCENT
NORMAL	9	21
PSYCHOPATHIC		
2-4	21	9
4-Spike	5	4
4-9	4	7
NEUROTIC	29	19
SCHIZOID	14	14
RANDOM	4	11
UNCLASSIFIABLE	14	15
TOTAL	100	100

\* No numbers can be provide for these percentages since none were provided for in the text and cannot be derived from other portions of the data due to changes in Diagnostic groups from Pre-Test to Post-Test.

The Neurotic group improved considerably during the course of six months of treatment. The Neurotic triad, scales 1, 2, and 3, showed a significant decrease. By the same token, there was a decrease in the psychastenia scale (7).

The Schizoid group was high on all the clinical scales of the MMPI on pre-test. After six months, the group showed a statistically significant decrease in all clinical scales of the test, except for the Hysteria (3) scale. This is an impressive indicator of movement toward better mental health for this population which is afflicted not only with heroin addiction but also severe mental illness.

Overall, there was reduction in clinical symptoms for the subjects. What is probably the most striking finding is the large proportion of normal profiles obtained at post-test. This suggests that the relief of the addiction cycle tends to reduce clinical symptoms. It should be noted that to fully appreciate this study, it should be read in its entirety, by a person having at least an elementary knowledge of the MMPI and heroin addiction.

#### 5.0 THE 1971 - 1973 POPULATION

This group of patients represents 410 patients who entered the program from August 1, 1971 through January 31, 1973.

The reason this group is separated from the total population and the cohort population is that in August of 1971, the social data instruments described elsewhere (c.f. first year report, "Social Impact and Evaluation of the Santa Clara County Methadone Treatment and Rehabilitation Program, August 1972) were administered starting with this population.

#### 5.1 GOALS AND TECHNIQUES

The design and basic style of this section of the report differ from the descriptive analysis of the social data instruments in last year's final report. The first year final report dealt with basic percentage differences as a gross indicator of attitudinal traits and success of patients. These differences were examined to produce several specific hypotheses regarding the additional information available from the social data instruments. A more analytic approach was developed.

Descriptive indicators are also to be examined in this section. The number of patients, which increased to 410, made it necessary to describe some specific characteristics of the population. A greater follow up period

was also available to allow for examination of changes over time.

This population is divided into three sub-groups: (I) the total patients admitted from August 1, 1971 through January 31, 1973, (II) those patients who remained on the program long enough for self report follow up information to be collected on them, and (III) and of 101 patients upon whom official criminal records were secured.

## 5.2 POPULATION DESCRIPTION

Entry characteristics of the total 1971 - 1973 population (sub-group I) are shown in Table 18 in comparison with the total patient population. There are no apparent differences between the two groups.

Referring back to Chart 3 and Chart 4, it appears that there are some changes in this 1971-1973 population over time. To observe these changes, the charts must be examined from August 1971 to the right hand margin.

The percentage of males is constant over this eighteen month period; the percent of Caucasians increased for a nine month period then declined. Over the same nine month period the median age of patients shows a corresponding drop then a rise. The only steady trend is the increase in the percent of married persons.

## 5.3 CHARACTERISTICS OF PATIENT RETENTION

Table 19 shows the characteristics of patients in the Post-August population that remained on the program versus those that did not. This is not a cohort analysis, in other words patients were not analyzed for a standard period of time, e.g. one year. The patients in this population had between one month and eighteen months to drop off the program. Patients who dropped off the program because of staff approval, or who died while on the program were not counted for either program retention or as drop outs.

The appearance of the patients that remained on the program is that they were mainly Caucasians, a little older, and more are females or are married. A greater percentage were working upon admission and started using heroin at a latter age.

## 5.4 PRELIMINARY INVESTIGATION OF THE HEROIN EPIDEMIC IN SANTA CLARA COUNTY

In order to assess the epidemic of heroin addiction in the county, it is important to determine when patients first started using heroin. This was figured by subtracting the age a patient first started using heroin from his chronological age at admission, and then subtracting this figure from the year the patient was

admitted to the program.

Chart 6 shows the percent and number of patients that started using heroin in a particular year. The peak year for the epidemic was 1969 when 12.1 percent of the patients in the Post-August 1971 population started using heroin. From 1961 through 1969 there is a steady increase when patients started using heroin (267 or 70.3%). This corresponds very closely with information Jaffe reports on federal treatment programs.<sup>19</sup>

There is a substantial drop from 1969 to 1970 from 12.1 percent to 3.7 percent. Perhaps the corner has been turned in the epidemic of heroin addiction in Santa Clara County. This may be a result of the selection criteria, for to be on the program in 1970, an addict would have to verify evidence of addiction dating back to 1968. A greater period of follow up will be necessary in order to determine if this is a correct assumption.

The rest of the patients in the post-August group (113 or 29.7%) started using heroin between 1927 and 1960. This sample is based on 380 patients; the majority (74.5%) entered the program in 1972.

## 5.5 WAY OF LIFE INQUIRY (WOL)

Way of Life Inquiry (WOL) is based on the work of Meyer et al. The thesis of the study is to determine if narcotic addicts could be placed into a scientific typology. This typology could be used as opposed to the cultural stereotype of narcotic addicts that Meyer and associates describe as "... an aggressive, obsessive, dangerous dope fiend who eschews constructive, conventional activities and is enmeshed in a life of crime"; or as "... a rejected, dependent sick person who needs and craves treatment."<sup>20</sup> In a systematic manner, a scientific typology was developed by Meyer and associates to try to show that neither stereotype is a true portrayal of a narcotic addict.

The data collected on this 52-item form is designed to answer questions about the patient's relationships with others, especially his family and friends, and the degree of conventional as opposed to criminal activity he engages in with them. Answers are weighted to a formula devised by Meyer and associates, and a four-fold

<sup>19</sup>Harris, George T. Interview with Dr. Jerome H. Jaffe. Psychology Today, August, 1973, pp.68-85.

<sup>20</sup>Alan S. Meyer, Richard Brotman, and Alfred M. Freedman, "Continuities and Discontinuities in the Process of Patient Care for Narcotic Addicts" (Final Report to the Health Research Council, New York, New York, April, 1965), pp.77-78. Richard Brotman and Alfred Freedman, A Community Approach to Drug Addiction. U.S. Dept. of H.E.W., S.R.S., J.D. Publication No. 9005.

TABLE 18

ENTRY CHARACTERISTICS OF THE TOTAL POPULATION AND  
THE 1971 - 1973 POPULATION

CATEGORY	GROUP I	GROUP III
SEX: Male	80.8%	80.0%
Female	19.2%	20.0%
RACE: White	51.7%	52.2%
Black	5.2%	5.1%
Spanish Surname	42.8%	42.7%
Other	.3%	0.0%
AGE: Mean Years	28.5	27.3
EDUCATION: Mean Years	11.0	11.1
MARITAL STATUS: Married	44.8%	40.3%
Single	29.5%	32.8%
Widowed	1.2%	1.5%
Divorced	14.9%	15.6%
Separated	9.6%	9.8%
DEPENDENTS: Mean Number	1.6	1.3
WORKING AT ADMISSION: Yes	17.8%	19.7%
No	82.2%	80.3%

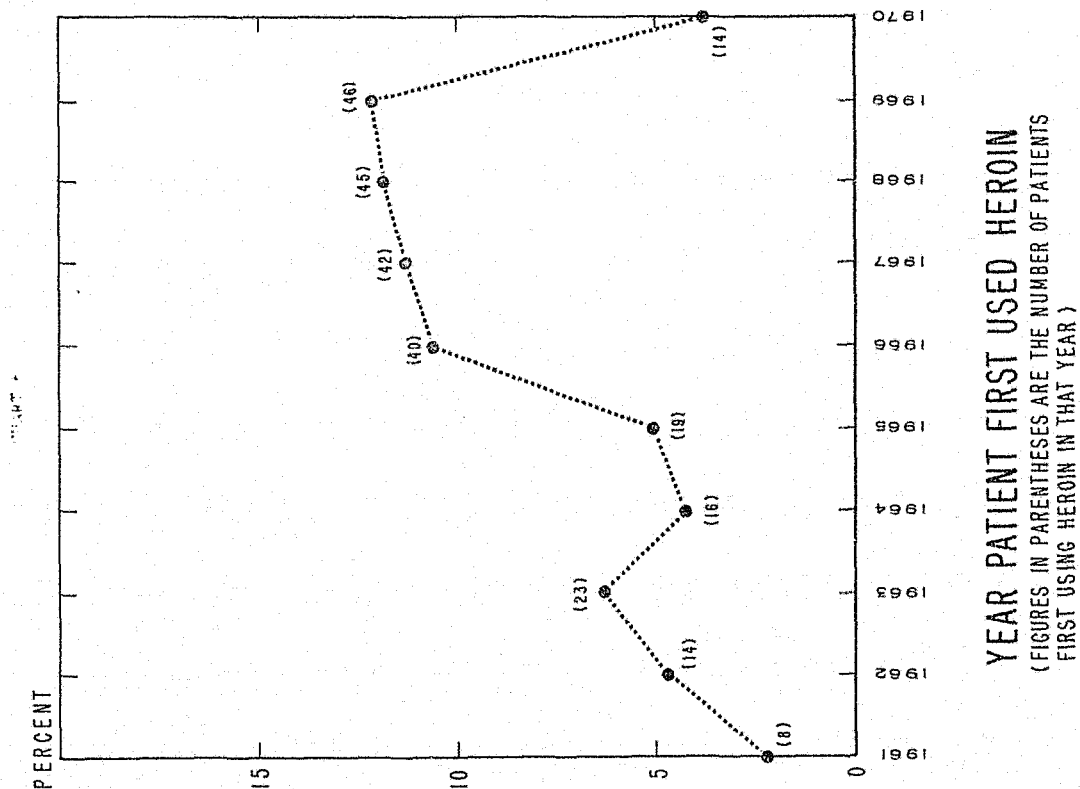


TABLE 19  
ENTRY CHARACTERISTICS OF THE 1971 - 1973 POPULATION

CATEGORY	1971 - 1973 POPULATION AS OF JANUARY 31, 1973	
	ON PROGRAM	OFF PROGRAM
SEX: Males	79.1%	81.5%
Females	20.9%	18.5%
RACE: White	53.8%	47.2%
Black	4.4%	5.6%
Spanish Surname	41.8%	47.2%
AGE: Average Years	27.4%	26.8%
EDUCATION: Average Years	11.1	11.1
MARITAL STATUS: Married	40.3%	39.7%
Single	32.7%	34.2%
Widowed	1.6%	1.4%
Divorced	16.1%	15.1%
Separated	9.3%	9.6%
AGE FIRST USED: Average Years	19.0	18.3
WORKING AT ADMISSION: Yes	19.8%	16.7%
No	80.2%	83.3%

classification system for addicts is produced based upon the independent dimensions of criminality and conventionality. The four types they developed are: "conformists" -- high on conventionality and low on criminality; they are most likely to be workers, family men, and active in normal social relationships. "Two-worlders", who are high on both criminality and conventionality, are living in a situation which expresses some degree of conflict. The "uninvolved" are low on both conventionality and criminality; they appear to resemble those persons whose withdrawal from society has been called a retreatist pattern. The "hustlers" fall basically into the cultural stereotype of the narcotic addict; they are high on criminality and low on conventionality; for them the hustle to make money for the next fix becomes a major characteristic of the adaptation to life as an addict.

In the Meyer study a typology of narcotic addicts was discovered; the data collected on patients at this point in the Santa Clara County Methadone Maintenance Program support Meyer and associates. A single stereotypic methadone patient is not found. Meyer and associates split their sample into those who were high and those who were low on each of their two dimensions - resulting in groups nearly equal in size. This median cutting point method is shown in Table 20. Three-quarters (76.5%) of the patients fall outside the common stereotype of the "hustler".

Validation of the four types of narcotic addicts is provided by Meyer and associates. In the Santa Clara County Program the use of the WOL involved several objectives. Does the typology fit the patients on a methadone maintenance program? If it does, then is it possible to predict outcome, i.e., success or failure on the program, from the Way of Life Inquiry?

The first question is answered yes and no; the Way of Life has a type of face validity, making it an interesting tool for defining addicts. The information presented in the first year final report, coupled with the results of Meyer *et al*, show that the Way of Life portrays a useful typology of addicts. It has, however, several faults. If it is a composite measure of the independent measures of criminality and conventionality, it should have a high correlation with actual behavior.

Criminal records were coupled with the Way of Life typology and the relationship does not appear that strong. The amount of arrests pre program accounted for by each type is as follows: conformists 27.7 percent; two-worlders, 23.4 percent; uninvolved, 11.7 percent, and the hustlers 37.2 percent. Examining Table 21 shows that this corresponds closely to the percent of conformists, but not to the percent of hustlers and two-worlders. The hustlers and the two-worlders should have had by far the highest percentage of number of arrests pre program, but this was the case only for the hustlers, not the two-worlders.

As to whether the Way of Life predicts program retention, the answer is no. The four types were retained on the program in the following percentages: Conformists, 65.5 percent; Two-Worlders 65.0 percent; Uninvolved, 66.1 percent; and Hustlers, 60.7 percent. All four types dropped off the program in nearly the same frequency. The type least likely to go off the program were the hustlers, which is the reverse of expectation. Hustlers should depart with greatest frequency.

TABLE 20

TYPES OF LIFE STYLE ADAPTATION AS MEASURED BY WAY OF LIFE  
(Using Median Cutting Points to Separate High from Low Values)

		CONVENTIONALITY		
		High	Low	
CRIMINALITY	Low	"Conformists" 28.9% (112)	"Uninvolved" 14.5% (56)	(168)
	High	"Two-Worlders" 33.1% (128)	"Hustlers" 23.5% (91)	(219)
		(240)	(147)	(387)

The Way of Life does not appear to hold any promise of predicting program retention; it also seems to lack a clear cut relationship to objective "hard" data.

#### 5.6 METHADONE PATIENT ARREST RECORDS

For a sub-sample of the Post-August population that entered the program from August 1, 1971 through January 31, 1972, official criminal records were made available from the California Department of Justice, Bureau of Criminal Identification and Investigation (C.I.I.). This sub-sample was composed of 101 patients who had been on the program for a long enough period to enable a one year follow-up to be made (Sub-group III).

The crime data on Table 21 shows the various types of crimes the patients were arrested for one year before they started the program and one year after starting the program. As is expected the highest proportion of crimes fall into drug offenses and property crimes. The proportion of patients that are arrested for crimes against persons is small, but in view of the severity in which these crimes are viewed by society this behavior is significant.

#### Crime Pre and Post

Pre and Post methadone comparisons were done for the entire sample regardless of their program status, i.e., if they were on or off the program on January 31, 1973. Comparisons were made between total arrests, felony arrests, misdemeanor arrests, and time at risk. As indicated earlier, time at risk is a concept used in the analysis to discern the amount of time a subject is free to engage in criminal activity. A person coming to the program immediately after a four year prison term will not have much time at risk to commit a crime. By the same token a person who enters the program with a serious court case due to be dispositioned, may find himself sentenced to jail or prison for a long period of time shortly after entering the program. To compensate for this, the criminal records were examined and the time during the year the person was serving sentences that were not suspended was recorded. The amount of time served is subtracted from the time-frame (one year in this case) to arrive at a time at risk figure. This is surely a rough estimate of the time a person is at risk to commit crimes, but it is the best measure available at the present time.

The time at risk was greater for the patients after they were on the program in comparison to before they started the program. This was figured as a constant. The time at risk constant was then used to weigh felony, misdemeanor, and total arrests of the patients before they were admitted to the program (pre). Each pre arrest received a weight of 1.1938 times the actual number of arrests. Correlated t-tests were then performed between

TABLE 21

ARRESTS ONE YEAR BEFORE AND ONE YEAR  
AFTER METHADONE TREATMENT

TYPE OF CRIME	BEFORE		AFTER	
	No.	%	No.	%
MURDER	-	-	1	1.1
ASSAULT				
Assault with Deadly Weapon	1	1.1	3	3.3
Assault and Battery	-	-	2	2.2
Resisting Arrest	1	1.1	-	-
PROPERTY				
Burglary	7	7.5	16	17.9
Grand Theft	2	2.2	-	-
Forgery	4	4.4	7	7.8
Receiving Stolen Property	2	2.2	2	2.2
Auto Theft	-	-	1	1.1
Petty Theft	6	6.5	10	11.1
Miscellaneous	2	2.2	-	-
DRUGS				
Possession of Narcotics	5	5.4	3	3.3
Selling Narcotics	2	2.2	2	2.2
Possession Dangerous Drugs	6	6.4	2	2.2
Possession of Marijuana	3	3.2	-	-
Selling Marijuana	1	1.1	-	-
Miscellaneous	9	9.7	5	5.5
DRUNK DRIVING	3	3.2	8	8.9
ALL OTHER TRAFFIC	15	16.0	13	14.5
NON-SUPPORT	1	1.1	-	-
DRUNK AND DISORDERLY	4	4.3	3	3.3
PROSTITUTION	3	3.2	1	1.1
ALL OTHER	16	17.0	11	12.3
TOTAL	93	100.0	90	100.00

pre and post methadone program for felony, misdemeanor, an total arrests. There were no significant differences between pre and post program arrests. For this sub-sample of patients their criminality was not effected by time, nor was the criminality of the entire sub-sample effected by program intervention. However, this does not take into account the effect the program may have on the patients that it manages to retain.

#### Arrests of Patients On and Off the Program

The patients in this sub-sample who remain on the program showed a marked reduction in the number of arrests compared to those who left the program. Only patients who left the program with staff approval and those who died while on the program were not used in this analysis.

Table 22 shows the change in total arrests for both groups one year before methadone and one year after methadone. Those patients that remain on the program are arrested less than those patients that leave the program. The mean number of arrests per patient arrested goes down from 1.94 to 1.63 for the patients remaining on the program. The mean number of arrests for the program drop outs goes up from a mean of 1.56 arrests per patient arrested to 2.24 arrest per patient arrested.

The difference between the two groups is highly significant ( $\chi^2=12.43$ ,  $p < .01$ ). The results are quite clear, those patients that remain on the program show a significant decrease in arrests compared to those that leave the program.

The number of subjects being only 101, no analysis of difference between groups before and after was done in reference to felony or misdemeanor arrests.

#### Actual Criminal Activity Versus Self-Report

It is interesting to examine the self-report of persons about some past behavior and to compare that with what actually occurred. For the sub-sample of 101 patients there was available not only their official criminal records, but also a self-report of criminal activity.

The actual question that the patients responded to was: Number of times arrested and charged IN PAST YEAR\*  
A. 0, B. 1, C. 2, D. 3-5, E. More than 5.

This information was a written self-report by the patient during the week of admission to the program. Table 24 is very surprising; the similarity between the self-report and the actual number of arrests is very striking.

\* This information was supplied by Dr. Avram Goldstein of Stanford Narcotic Addiction Research Laboratory, from his Input Interview.



TABLE 22  
TOTAL ARRESTS - 1971 - 1973 POPULATION BASE ON A ONE YEAR BEFORE AND  
AFTER STARTING METHADONE MAINTENANCE PROGRAM

PATIENT STATUS	Before Starting Program	After Starting Program	TOTAL
On Program January 31, 1973 (N=63)	66 <sup>a</sup>	39 <sup>b</sup>	105
Off Program January 31, 1973 (N=32)	25 <sup>c</sup>	47 <sup>d</sup>	72
TOTAL	91	86	177

$$\chi^2=12.43 \quad df = 1 \quad p < .01$$

a 16 patients 1 arrest; 11 patients, 2 arrests; 3 patients, 3 arrests; 2 patients, 4 arrests; 1 patient, 5 arrests; 1 patient, 6 arrests: Total = 66 (1.94 per patient arrested).

b 15 patients 1 arrest; 5 patients, 2 arrests; 3 patients, 3 arrests; 1 patient, 5 arrests: Total = 39 (1.63 per patient arrested).

c 10 patients 1 arrest; 4 patients, 2 arrests; 1 patient, 3 arrests; 1 patient, 4 arrests: Total = 25 (1.56 per patient arrested).

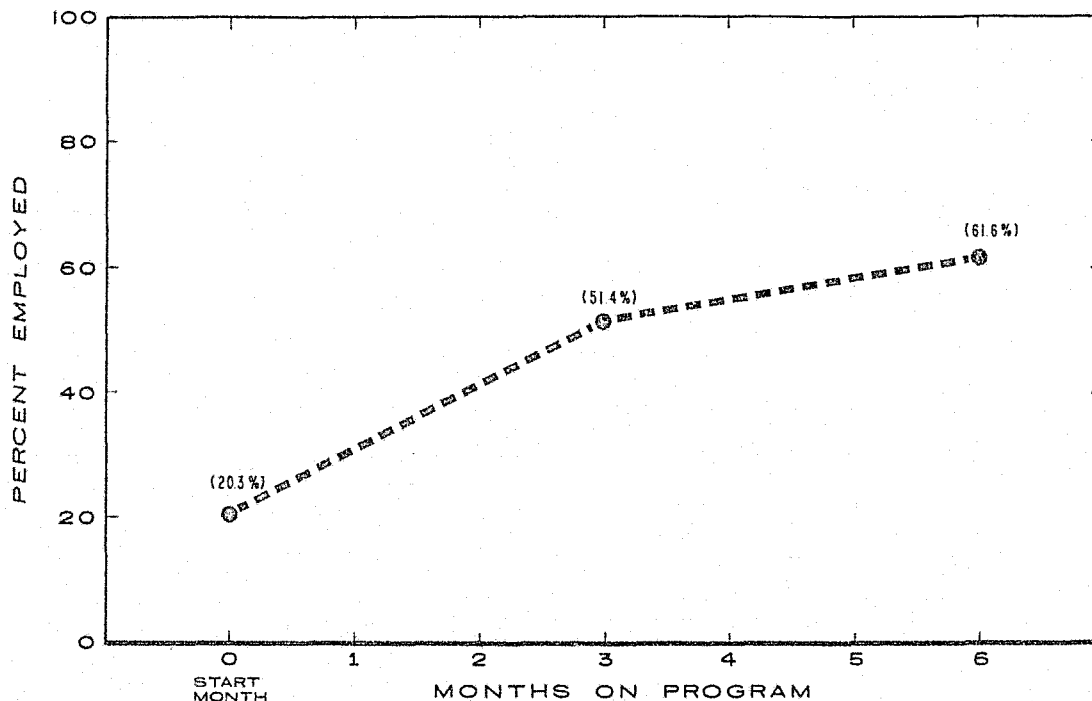
d 9 patients, 1 arrest; 4 patients, 2 arrests; 5 patients, 3 arrests; 2 patients, 4 arrests; 1 patient, 7 arrests: Total = 47 (2.24 per patient arrested).

TABLE 23  
NUMBER OF ARRESTS BY SELF-REPORT  
AND  
ACTUAL CRIMINAL RECORDS

CATEGORY	SELF-REPORT		ACTUAL RECORD	
	No.	%	No.	%
Number of times arrested and charged in past year				
0	46	45.5	47	46.5
1	34	33.7	29	28.7
2	9	8.9	15	14.9
3 - 5	10	9.9	9	8.9
More Than 5	2	2.0	1	1.0
TOTAL	101	100.0	101	100.0

# PATIENTS EMPLOYED BY TIME ON PROGRAM

( FOLLOW-UP INFORMATION FROM Q.U.I.P.S., N = 138 )



Apparently, upon admission to the program patients reveal a good memory and do not try to falsify their criminal activity. The non-punitive approach of the clinics toward prior activities of the patient, plus the fact that the perspective patients are interviewed by ex-addict counselors probably contributes to their honesty. What is not reported here, however, is the type of crime for which they were arrested and the severity of that crime.

## 5.7 SELF-REPORT OF PATIENT EMPLOYMENT

The patient's self-report of employment is gathered every three months by the Quarterly Individual Progress Summary to patients remaining on the program.

Based on self-report of a sample of 138, 20.3 percent were working upon admission to the program. After three months on the program this percent rose to 51.4; and after six months on the program 61.6 percent of this sample of patients were employed. This graphically displayed on Chart 7.

In analysing data on patients employed in a methadone program it must be remembered that this is based on a "shrinking sample."<sup>21</sup> For those patients that were off the program, there is no record for employment, so that the gain from 20.3 percent to 61.6 percent is not as spectacular because it only includes those who have managed to remain on the program. The figure from the cohort study based on earnings for all patients probably reflect a true picture of the employment situation. Unfortunately, there are no figures available for those patients that were off the program during the six month period for this sample. Had there been, the employment figure might approximate that for the cohort group. In this sense, the data presented in the analysis of the 1970-1971 cohort is a much better index of patient employment because it is based on objective data, not self-report.

## 5.8 FAMILY INTERVIEWS (FAIN)

Family interviews were started in March of 1972. As reported earlier, ten interviews were initially conducted, but reluctance on the part of both patients and their families led to the introduction of a mail survey. This was begun in December, 1972 and continued until March of 1973. The results of both the interviews and mail survey will be reported herein.

Patients are asked, upon entering the program, to sign a Family Interview Permission Form. After approximately six months, the families are mailed the Family Interview questionnaire, with a return envelope included. The form explains that the wife or husband, or father or mother if the patient is not married, are to answer:

<sup>21</sup>Maddux and Bowden, p. 101.

the questions. If none of these individuals are available, a person the patient has indicated who has "important socio-economic ties and frequent emotional contact with the patient" can complete the form.

A total of 132 families were sent both an Initial Survey Form and a second follow-up questionnaire after approximately a six week interval. Forty-four were received (33.3% return rate), plus the eight personal interviews equaling fifty-two subjects. Over three-fourths of the patients were on the program at the time they were surveyed.

The intent of the interview is to assess the extent to which family life styles have changed subsequent to the patient's coming on the program. The respondent is asked to indicate degrees of change in the patient's behavior both in and outside the family, as well as give an opinion of the program itself. Since no data on the attitudes of the families or "significant others" of methadone patients currently exists, any contrasts or comparisons will have to be made in terms of studies dealing with families of heroin addicts.

For analytical purposes, the responses of the families were merged with the patient's baseline and follow-up data to determine if the actual patient behavior did in fact coincide with judgments of the family as to individual success on the methadone program.

Since the family is the basic socializing unit, providing what Goode<sup>22</sup> calls "emotional maintenance", and since many adult addicts remain unusually dependent upon their family of origin (Vaillant)<sup>23</sup> one can hypothesize that any treatment (methadone) not viewed favorably by family members would meet with lessened success. When asked their feelings about the county methadone maintenance program, 52.9 percent (27) of those responding to FAIN said they were "very happy" with the program. Another 23.5 percent (12) said they were "happy" about the methadone program, while only 3 respondents (5.9%) were "unhappy". The remainder (9, or 17.3%) were ambivalent. At the same time, nearly three-fourths (36, or 72.0%) of those surveyed said their feelings toward the patient had become much more accepting (36, or 52.0%) or a little more accepting (10, or 20.0%). 28.0 percent said their feelings had stayed the same, and no one felt they had become less accepting of the patient. These figures speak well of the methadone program for this group, even considering that the responses came from family members.

It is also interesting that family members were aware of patient arrests and reported them in the FAIN interview. This helps lend an objectifying element to the study.

<sup>22</sup>F.N. William J. Goode, "The Sociology of the Family" in Sociology Today, Robert R. Merton, Leonard Bloom and Leonard S. Contrell, eds. New York: Basic Books, 1959.

<sup>23</sup>F.N. George E. Vaillant, "Twelve Year Follow-Up of New York Narcotic Addict: I The Relation of Treatment to Outcome," Amer. J. Psychiatry 123: 585-591, 1966.

Taylor et al,<sup>24</sup> in their study of the wives of addicts, reported that wives were optimistic about the future only if their husbands were drug free at the time they were asked their opinions. Our findings tend to support this in that 66.7% (8) of the wives surveyed were much more or a little more accepting of their husbands, while 4 (33.3%) said their attitudes had remained the same since their husbands had discontinued heroin use and entered the methadone program.

The patients included in the FAIN survey showed some differences in demographic characteristics when compared to the total program population for the first year report. More males are included in FAIN, as well as a larger proportion of whites. Spanish surname patients are under-represented, a factor which was encountered when the initial personal interviews were started, and eventually led to the mail survey. The mean age (25.6) is below that of the total population, but the mean number of years of education is higher.

The FAIN population has more single persons, and as would be expected, fewer dependents. It appears that parents were more likely to respond to FAIN than wives or husbands. The mean income is somewhat higher for those whose families responded to the family interview. Of the twelve patients who left the program more of the FAIN sub-group left the program with staff approval, the first indication that family support, as indicated by the overwhelming vote of confidence given the methadone program, may play a major role in patient success. The relationships these patients established with the program appears to have been better than generally found.

Therefore, what is indicated by the FAIN is a younger, white, male, single population, better educated and earning more wages than the total population, but receiving support from either their families and/or primary reference group, and consequently doing better on the methadone program. While other methadone studies,<sup>25</sup> have indicated the older, married, long term addicts doing better on methadone, our preliminary findings would indicate when family support is introduced as a variable, patients will do better.

Table 24 lends a great deal of support for the methadone program from those families receptive to completing the FAIN survey. While one can only speculate as to the attitudes of the individuals who refused to answer the questionnaire, it seems that the emotional support given patients is reflected in the outcome of treatment (i.e., reason for leaving program - withdrew with staff approval, follow-up, etc.).

<sup>24</sup>Susan D. Taylor, Mary Wilbur, and Robert Osnos, "The Wives of Drug Addicts," Amer. J. Psychiatry, 123, 5, 1966

<sup>25</sup>Carl D. Chambers, Dean V. Babst, and Alan Warner, "Characteristics Predicting Long-Term Retention in a Methadone Maintenance Program" Proceedings Third National Conference on Methadone Treatment, Nov. 14-16, 1970, New York, New York.

## 6.0 STAFF PROGRAM EVALUATION

This is the third time in the two years of study that the Staff Program Evaluation Questionnaire (SPEQ) has been used. These interviews with staff were done in August of 1971, when the evaluation group began data collection, May of 1972, and again in May of 1973. The questions asked were designed to answer the following questions:

1. What are staff feelings about the causes of addiction and they way it is handled in American society?
2. What are the opinions of staff members as to the usefulness of what they are doing, i.e., is the program effective?
3. What improvements do staff feel are needed?
4. How do staff members feel about their jobs, i.e., their supervision, benefits, and opportunities?
5. Finally, what is the background and training of the staff?

SERG staff conducted all interviews. The SPEQ questionnaire was abbreviated after the first two administrations to shorten the length of the interview and to focus on more important questions, two questions were added.

Twenty-five staff members were interviewed in 1971, 27 in 1972, and 37 in 1973, showing increases in the size of staff over this period. Of the original 25 staff members interviewed, 16 remained in 1972 (64%) and 11 (44%) by 1973. Thus, staff had a turnover rate of 56% in a 22 month period, mostly for personnel directly involved with patients. This in itself cannot be considered desirable for a treatment program; reasons for it are suggested by the staff members themselves in their responses to questions about the management and organization of the program.

The responses to questions have been organized to provide data in the following major areas: staff background, general attitudes toward the drug problem, opinions of the criminal justice system handling of addicts/patients, and staff observations on their own program as to its effectiveness and its needed improvements. Responses were analyzed in two ways, based first on comparisons between all staff from the baseline interviews (August, 1971) to the most current interviews (May, 1973). In order to assess the attitudes of the eleven "long-term" staff members, their responses were analyzed separately in order to compare them with the total staff.

TABLE 24  
PATIENT BEHAVIOR SINCE METHADONE

TYPE OF BEHAVIOR	More than Before		The Same		Less than Before		Does Not Apply	
	No.	Percent	No.	Percent	No.	Percent	No.	Percent
Helping around house	34	68.0	10	20.0	-	-	6	12.0
Playing with kids	18	38.3	9	19.1	-	-	20	42.5
Staying home	36	73.5	5	10.2	3	6.1	5	9.6
Attending church	6	13.3	13	28.9	-	-	26	57.8
Making new friends	19	44.2	16	37.2	6	14.0	2	4.7
Talking with others	31	66.0	12	23.1	4	8.5	-	-
Being affectionate	30	61.2	15	30.6	4	8.2	-	-
Sleeping	23	48.9	10	21.3	13	27.7	1	2.1
Health problems	9	20.0	16	35.6	14	31.1	6	13.3
Working	27	54.0	12	24.0	5	10.0	6	12.0
Trouble with law	1	2.1	6	12.8	26	55.3	14	29.8
Interest/Education	23	48.9	13	27.7	3	6.4	8	17.0
Watching television	21	45.7	19	41.3	5	10.9	1	2.2
Attempting to find work	27	58.7	6	13.0	3	6.5	10	21.7
Down or irritable	8	16.3	11	22.4	29	59.2	1	2.0
Gambling	-	-	5	10.6	3	6.4	39	83.0
Using alcohol	6	12.5	8	16.7	17	35.4	17	35.4

### Staff Background

The greatest change in age groupings during the first two years of program operation is that the number of females on the staff increased, particularly in the over 35 group, while there has been a corresponding decrease in male employees. Educational levels of staff were highest in the 1973 group, with a distinct improvement in the category of those with "some college. While 52 percent of the staff had only a high school diploma in 1971, by 1973 just 18.9 percent had only up to a high school diploma.\* This type of improvement is encouraged by the County and in upgrading the skills of the community workers in particular. About forty percent of all staff have a B.A. degree or better, although this rose to over half in the 1972 survey (56%), declining to 43 percent in 1973. These figures include nurses with hospital nursing school training, a group which has also shown a rise and decline over the two year period; five nurses now have this type of training. The greatest increase in those now going to school is for those seeking Associate in Arts degrees from local community colleges. The increase has been from 12 percent (3) to 32 percent (12) for the two year period, and most are the Community Workers.

The ethnic distribution of the staff is improving, i.e., it is beginning to more closely approximate that of the patients. There is still much room for improvement, however, as caucasians make up 73 percent of the staff (27), down from 80 percent in 1971. The greatest increases in minority personnel are in the oriental and black groups---numbers of chicano staff have declined.

The job classifications of the staff are as follows: administrative and supervisory, 9 (25.7%); line (staff nurses and vocational counselors), 11 (31.4%); community workers (formerly addiction specialists), 10 (28.6%); clerical staff, 5 (14.3%)---two were not classified. The most notable change has been the decrease in community workers, from 44 percent in 1971 to 29 percent in 1973. The meaning of this decline will be discussed later. These categories of staff are used at various points in the analysis of staff attitudes.

### Opinion of the Criminal Justice System

Just as members of the criminal justice system were asked to render an opinion on the program, program staff were asked to render an opinion of the system. They were asked to rate the job being done by the police in dealing with the heroin problem in the County. Their rating went from 84 percent 1971 to 97 percent in 1973 stating

\*It is recognized that percentages are not appropriate for groups of less than 50 subjects; they are used here primarily for comparative purposes on populations of different sizes.

"fair to poor." A similar rating was found for the courts---88 percent to 97 percent over the two year period. When asked if the courts have been too lenient, too severe, or generally fair in dealing with addicts, there was a modest trend toward seeing the courts as more fair, although the majority of the staff still saw them as too severe---56.8 percent in 1973, down from 73.7 percent in 1971.

When staff were asked how their cooperation might be improved between themselves and criminal justice system personnel, the top-ranking opinion over the two year period was for criminal justice personnel to "reduce the punitive aspect and place more emphasis on sickness and rehabilitation, a position supported by about one-third of all staff members. This was followed by a concern for "standardizing the operational process" to reduce overlap in services provided by criminal justice agencies. Third-ranking was the need for an increase in the accuracy of communications between both agencies. These issues are discussed further in the section on the criminal justice agency interview.

### The Causes of Addiction

Staff members were first asked to express their views on the nature of the heroin problem, viz., its causes and societal reaction to the addict. All of the causes of heroin addiction stated were ranked for each of the three interviews. "Peer pressure" was ranked as most important in the first and second years, and "poor environment" was ranked most important in the third year, showing the greatest increase in rated importance for the three ratings (from 32% in 1971 to 54% in 1973). "Escape from social reality" was third-ranked and showed an increase for the two year period. Decreasing importance was assigned to curiosity (something new and different) and having a poor family situation. When staff were asked to state the major cause of addiction if they had to choose from personality problems or outside social problems, they responded as shown in Table 25.

TABLE 25  
MAJOR CAUSE OF ADDICTION-STAFF RESPONSES

MAJOR CAUSE	1971		1972		1973	
	Number	Percent	Number	Percent	Number	Percent
PERSONALITY PROBLEMS	10	40.0	15	55.6	17	45.9
OUTSIDE SOCIAL PROBLEMS	9	36.0	6	22.2	7	18.9
BOTH EQUALLY*	6	24.0	6	22.2	13	35.1
TOTAL	25	100.0	27	100.0	37	100.0

\* Volunteered Responses

In this table we see a definite shift out of both categories to both causes equally, which were volunteered responses. It is of considerable interest that long-term staff members, i.e., those who have been with the program through all three interviews, are consistent advocates of the "personality" explanation. While 40 percent of the original 25 (10) stated this cause, 56.3 percent of the sixteen remaining in 1971 and 63.6 percent of the eleven remaining in 1973 stated this cause. In short, staff who stay with the program see the cause of heroin use as primarily rooted in the personality of the patient. For these staff members there is probably a necessity to see the problem as being "within" the individual, since there is apparently no effective way to deal with "outside social conditions". Also, the program has become increasingly oriented toward psychotherapeutic, or "psycho-social", styles of treatment, and the retention of staff members with this orientation is not surprising.

A further indication of the psychotherapeutic orientation of staff is in the data on the percent of patients needing intensive individual counseling. Since the first interview there has been a marked shift to greater numbers of patients in need of such counseling, as shown in Table 26. While this shift is just short of being significant at the .05 level ( $\chi^2$  test), it does indicate a strong preference for the use of psychotherapeutic techniques.

Staff were also asked to express an opinion as to what actually happens to the addict in our society, choosing between three alternatives. "Punishing the individual addict" was consistently indicated as most emphasized in American society. This was followed by an emphasis on "Protecting society from crime he might be committing", and finally by "Rehabilitating the addict so that he might become a productive citizen". The concern for punishing the individual addict is in clear agreement with their attitudes toward the criminal justice system and their treatment orientation.

TABLE 26  
PERCENT OF PATIENTS NEEDING INTENSIVE INDIVIDUAL  
COUNSELING

PROPORTION	1971		1972		1973	
	Number	Percent	Number	Percent	Number	Percent
Not Sure	-		-		1	2.7
Less Than 1/4	10	40.0	6	22.2	2	5.4
1/4 to 1/2	5	20.0	8	29.6	9	24.3
1/2 to 3/4	5	20.0	8	29.6	10	27.0
Over 3/4	4	16.0	5	18.5	14	37.8
All	1	4.0	-		1	2.7
TOTAL	25	100.0	27	100.0	37	100.0

$\chi^2 = 5.79$ ,  $p < .10$   $df=2$  (combined cells at 1/2).

In conjunction with the above question, staff were asked to indicate the primary emphasis of the program in terms of goals that might be accomplished. As expected, the primary emphasis was on "Rehabilitating the addict...", followed by "changing community attitudes and conditions which contribute to heroin addiction," and "Protecting society ...". Responses indicated a much stronger agreement on program goals than on societal alternatives for dealing with the addict. Over three-fourths of all staff members were in agreement on the ranking of goals for the entire two year period, while about one-half were in agreement on the ordering of societal alternatives. Over 90 percent of the long-term staff in 1973 selected rehabilitation and changing community attitudes.

#### The Treatment Program

Staff were asked to argue for the use of methadone in rehabilitating addicts. Responses were rank-ordered for the three interviews. The fact that methadone is "essential to non-addiction in that it provides the necessary impetus to kick heroin" was selected by about 40 percent of all staff each year. This finding also holds for long-term staff at about 40 percent each year. Second-ranked was that "methadone works---it is much more successful than other programs," indicated by about one-third of all staff, including long-term staff. Third-ranked was the argument that "normal functioning is possible" with methadone, but this argument was declining in favor of methadone becoming "acceptable to society, or legal." These patterns are identical for long-term staff.

At another point staff were asked to state how successful they felt most non-methadone (i.e., abstinence) programs for heroin addicts have been. Apparently staff opinion of such programs has improved with time. While only one in ten says they are very successful, the percent indicating "somewhat successful" has improved from 36 and 37 percent in 1971 and 1972, respectively, to 51.4 percent in 1973. Long-term staff are not likely to agree, but the trend is the same. This attitude is borne out in responses by four-fifths of all staff in each year who say that methadone in combination with other types of treatment (counseling, education, training, etc.) is most likely to help the patient to become free from heroin use.

#### Treatment Emphasis

Staff were first asked to indicate the extent to which treatment of patients was emphasized at their particular clinic, followed by an explanation of the types of treatment being done at that time and an indication of their success. These types of treatment are shown in Table 27 for the three interviews. Individual counseling is indicated by the largest majority of staff in each year, followed by group therapy and vocational counseling and services. The greatest increase appears to be in the provision of recreational activities. The percent of staff indicating that these programs were "somewhat successful" rose from over half (54.5%) in 1971 to almost three-quarters (73%) in 1973, although those indicating "very successful" dropped from 18.2 percent to

TABLE 27

TREATMENT BEING DONE AS INDICATED BY  
PROGRAM STAFF

TYPE OF TREATMENT	1971		1972		1973	
	Number	Percent	Number	Percent	Number	Percent
GROUP THERAPY	22	88.0	14	51.9	27	73.0
INDIVIDUAL COUNSELING	19	76.0	22	81.5	30	81.1
VOCATIONAL COUNSELING AND SERVICES	16	64.0	17	63.0	26	70.3
EMERGENCY CRISIS INTERVENTION	3	12.0	3	11.1	6	16.2
OUTSIDE REFERRALS	3	12.0	2	7.4	7	18.9
RECREATIONAL ACTIVITIES	1	4.0	-	-	12	32.4
DETOXIFICATION	1	4.0	-	-	-	-
NOTHING AT ALL WORTHWHILE	1	4.0	1	3.7	5	8.1
OTHER	2	8.0	1	3.7	14	37.8

8.1 percent in the same period. The extent to which staff felt that treatment of patients was emphasized at their clinic did not change radically over time, with other half indicating "some, but not a great deal." Some of the reasons for these less than unanimous responses are discussed in the section on program administration.

One important aspect of program treatment is the determination of what is important in keeping the addict/patient free from heroin use. In order to assist in establishing program goals, this question was asked. Responses were ranked for all three interviews. "Finding stable family relationships" was consistently selected by one-fifth of the staff, followed by "finding stable social relationships," which was consistently selected by about one-sixth of all staff. On the decline was "finding a good job," although it was still selected by 13.5 percent of all staff (down from 20% in the first year). "Being accepted by the community" took the sharpest drop, down from 24 percent in 1971 to 2.7 percent in 1973. Consistent with the treatment orientation, the greatest increase in responses was in "having a professional counselor to help him," up from 4 percent to 18.9 percent of all staff. Apparently the stability of family and social life and the assistance of professional counseling have emerged as the most important goals in the treatment program. These goals appear to be consistent with the treatment plan developed for the 1973-1974 program year:

The experience of this Program and many others nation-wide clearly indicates that a minimum services maintenance program of indefinite duration is not adequate. A program has a clear obligation to offer a system of intensive psycho-social treatment services tailored to individual needs so that motivation for a socially-productive and drug-free life-style can be developed by patients. Inner strengths such as confidence in one's ability, dignity, self-respect, pride in family, home, or job appear to be necessary for successful withdrawal from methadone and eventual total self-reliance.

All staff were asked the question: "If you could make any changes you wanted to improve the program, what would you change first? What new programs would you want to set up? The top-ranking response was "Administrative reorganization---increase responsiveness and leadership" (32.4%, up from 24% in 1971), followed by "More groups---broader range of emphasis" (24%, down from 32% in 1971). A smaller patient to staff ratio was seen as desirable, and the need for intensive individual counseling for patients was re-emphasized.

#### Program Operation

What is the capability of the program for meeting these future goals? What do they mean by the statement that "administrative reorganization" would be the most desirable program improvement? In the staff interviews, an attempt was made to assist program administration by providing information on staff problems and possible solutions, as suggested by staff members themselves. Probably the most often heard complaint was that the program needed better organization and more emphasis on patient treatment as opposed to just maintenance. This requires administrative leadership, a concept which was discussed in some detail in the first year report. As

stated by a former program medical director:

... each staff member had a rather individual approach to therapy, and we had not developed means for exchanging ideas so as to develop some common goals. Again no one staff member emerged with such special skills as to provide really outstanding leadership in this area.<sup>26</sup>

As recently as September of 1973, an independent observer's impressions of the program over a four day period yielded the following statement:

The problems that are being faced by the program are in many ways inherent in any methadone treatment program because of the controversial nature of methadone. Concomitant with this in your specific situation is a lack of a clear organizational structure and supervisory responsibility. This situation filters down to your staff members and then to your patients in terms of bad moral, lack of creativity, little actual therapy, inaccurate charts and a feeling of lack of progress. Along with this is the problem of ambivalent staff feelings about the use of methadone in drug treatment and long term use of maintenance.<sup>27</sup>

This observer continues by indicating that strong leadership for the program is imperative at this time.

In an effort to pinpoint areas of staff effectiveness, they were asked to indicate who they felt had the greatest influence or least influence on the patient while he is being maintained. As expected, most staff groups voted for themselves each year, although the clinic director was very clearly seen as having the least influence on patients (other than clerical help). This increased trend over the two year period. The community workers were never seen as having the least influence on patients, and employment counselors and head nurses were rarely chosen in this category. The community workers are slightly favored over nurses in providing the greatest influence (excluding their own votes), followed by the nurses.

<sup>26</sup>Graham Beaumont, M.D., "Notes on the Physicians' Function in a Methadone Maintenance Program (Unpublished, April, 1972).

<sup>27</sup>Allan Rabinoff, PhD., quoted from a letter to Mr. F. S. Stark, Program Coordinator; he is with National Drug Abuse Consultants.

#### Community Workers

An entire section of the questionnaire was devoted to the way in which other staff members view the role of the Community Worker, formerly called "addiction specialist." Since many of these individuals were former addicts, their status on the program staff is very important, and they have been a subject of concern to program administration. Their actual number in relation to the program size is now less than in 1971; at that time they made up 44 percent of the staff (1) and in 1973 they made up 27 percent (10) of the total staff. When asked how helpful the Community Workers are, all other staff (excluding the community workers)\* were supportive, although the proportion indicating "a very helpful" has dropped from 71.4 percent in 1971 to 25.9 percent in 1973, a significant decrease; this decrease for long-term staff. Over 90 percent of all (non-Community Worker) staff indicated "very helpful" or "somewhat helpful." When asked if more or fewer Community Workers were needed, the proportion indicating "more" dropped from 64.4 percent in 1971 to 51.9 percent in 1973; long-term staff dropped to 38 percent. For the first time, three staff members (11.1%) indicated that fewer were needed. As in each interview, non-community worker staff were asked to indicate how the job of Community Worker should be changed. There was a radical shift in emphasis in the 1973 results. Staff felt that these workers should be provided more in-service job training and outside educational opportunities, up from 20 percent to 50 percent. They felt that more counseling ability should be required of these individuals when they are hired, suggested by 37 percent of the non-worker staff for the first time in any of the interviews. This is quite a switch from 1971, when the primary concern, expressed by 40 percent of the non-Community Worker staff, was that these staff members have more patient contact and be less involved in patient urine supervision and related tasks; 15 percent of all staff now suggest this change. All of these trends are confirmed in long-term staff responses.

In anticipation of this change in attitudes, a new item was added to the survey in 1973. Staff were asked to indicate the most important contribution the community workers make to the program. Responses from non-community worker staff rank as follows: "have personal experience (can develop rapport and relate to patients)," 41%; "successful role model," 30%; "train staff in addict lifestyle and knowledge of problem," 22%; "liaison between staff and patients," 11%; and "their counseling ability," 7%. Long-term staff stressed the personal experience aspect (63% of 11) followed by their ability to train staff (38%), with few of the other types of responses.

Another new question had to do with the increasing trend to hire community workers who are not ex-addicts or stabilized program patients. They were asked to indicate if this shift in hiring would be helpful in carrying out the program goals. Seventy percent (70%) indicated that this move would be "very helpful." Only 15 percent felt that it would be "hardly helpful."

\*Community Workers were not asked to respond to these questions.



Regarding the use of Community Workers, it is probably wise for the program to pursue an upgrading in the quality of indigenous workers. However, it is felt by the evaluator that there are some dangers in doing so. In the initial stages of the program, the Community Workers, then called "addiction specialists," were almost entirely ex-addicts who were "clean", many of whom were on Methadone at the time of their employment. In spite of their professional limitations and the problems involved in having them supervise urine collection, they provided an important link to the addict community. They were an important aspect of the program's outreach into the addicted population. Most importantly, they provided support to individual patients who came onto the program. They were not only the models for those who would be successful on the program, but they were capable of interpreting the program to the uninitiated, allaying their fears, and helping them find the services offered by the program as well as other social agencies. To do away with this type of communication and support can only be detrimental to the program's effectiveness in the future.

#### Job Rewards and Problems

In an effort to assist the administration in working with program staff, the staff were asked to list some of the rewards and some of the problems and frustrations they encounter. "Seeing patient improvement" has consistently been indicated by about 60 percent of all staff as being quite rewarding, followed by "personal improvement and gratification." However, the latter category has shown a drop from 60 percent to 23 percent of all staff so indicating from 1971 to 1973. These trends are quite similar for long-term staff (11 people), although there is a stronger emphasis on "seeing patient improvement", (81% indicating in 1973). When asked to state problem areas on the job (frustrations, etc.), the prime concern was with "Administrative disorganization---an unresponsive bureaucracy," as indicated by 35 percent of all staff, which was the same as the first interview (36%). Patients were no longer seen as difficult to work with, and there were much fewer complaints about not having adequate staff to do the job. "Lack of communication between all staff levels" has replaced these as the second most important problem, indicating by 19 percent, followed by a new category: "no goals for overall program," stated by 14 percent of all staff in 1973.

#### Staff Training

Since staff complaints were being heard, it was felt that their efforts at self-improvement should be assessed. Difficulties in program administration would not preclude continued improvement in job skills, particularly in the development of treatment skills. A preliminary question dealt with what they felt was most important in helping them perform their job at the clinic. While "life experience" and other diverse responses (previous work experience, personal philosophy, personality, etc.) were indicated by about two-thirds of all patients in 1971 and 1972, "work experience at the clinic" was indicated by 43.2 percent of all staff at the third interview (1973). Since staff longevity has increased, this shift was not unexpected. However, the rate of staff turnover indicates that there may be more actual learning going on at the clinics. Staff were then asked what kinds of formal

(in-service) training they felt could be most helpful to them on the job. Knowledge of group therapy techniques was clearly indicated as most important in 1973 (the question was revised from earlier), being chosen by 35 percent of all staff. This was followed by a need for increased knowledge of the addict life style (22%) and sensitivity training (14%).

Had staff sought such training? Were they currently enrolled in school or pursuing a training program of some kind? "None" was indicated by 80 percent of all staff in 1971, 54 percent in 1972, and 60 percent in 1973. There appears to have been some improvement in the numbers taking training. The greatest shift by type of training program, for those doing so, was from "in-service training" to degrees or non-degree oriented coursework. Degree-oriented coursework consisted largely of Community Workers getting A.A. degrees (8, or 73% of the 11 staff involved), and increased from 12 percent in 1971, to 27 percent in 1972, and 32 percent of all staff in 1973.

#### Conclusions

Staff turnover is greater than that considered desirable, particularly in the categories of staff who interact most closely with patients. Program staff have a clear idea of their overall goals, and they wish to see patients receive more individualized and group treatment using psychotherapeutic techniques. They want more training in group therapy techniques specifically. Their greatest concern, which has not varied over the two year span of the evaluation, is that program administration achieve a better level of organization. This concern has been verified by the evaluators through personal observation, discussion, and interaction with program staff. A former medical director concurs in this as does another outside observer. Strong leadership is required for the program to continue to improve in the delivery of services and the ultimate rehabilitation of heroin addicts. Concurrent with improvement in this area, the role of the Community Worker should be more clearly defined and implemented. They are most capable of communication with and support of the addict who is a potential patient, and they can contribute the most to his becoming a patient who takes full advantage of all the services of the program and the community.

#### 7.0 CRIMINAL JUSTICE AGENCY SURVEY

An integral part of any social service program is to maintain maximum cooperation and communication with other agencies with whom their clientele become involved. As in the first year of study, criminal justice agency personnel (countrywide) were again asked to respond to a criminal justice agency questionnaire (CJASE) regarding their attitudes toward the program. It was used in April and May of 1973. It is anticipated that the results of this survey can be used to help eliminate areas of conflict and assist in developing cooperation between the program and local criminal justice agencies. Ultimately, the program would benefit.

### Survey Design

The following questions were considered critical to this aspect of the study; they include some more general questions on drug abuse in the county which it was felt might be useful to other agencies working with this problem:

1. From their perspective, do they feel Methadone treatment is effective, locally and nationally?
2. Has the program appreciably reduced their workload?
3. Has the program increased their ability to handle the drug problem?
4. Has their attitude toward the program changed over time; i.e., do they see the program as worse or better than it was earlier?
5. How can the program be improved, particularly cooperation between the program and their agency?
6. What are the causes of heroin addiction, and what is the addicts' commitment to treatment?
7. What are their estimates of the number of addicts in the County, both 'hard-core' and those 'chipping'?
8. What are their estimates of Methadone being diverted from the program into the community?
9. What types of action do they recommend regarding different types of drug abuse in the County?

The four page questionnaire used were personally delivered to a representative of each criminal justice agency who was asked to distribute them to appropriate respondents. Each questionnaire had a stamped, self-addressed envelope attached to be returned to American Justice Institute offices in San Jose. Respondents were advised that all individual responses were confidential. The exception to the above procedure was an interview requested by Judge James B. Scott of the Superior Court who felt he should respond to the evaluator personally regarding his role in the addiction problem in 1971 and 1972. This interview is reported separately.

Sixty-three representatives responded, as compared to sixty-two for the first year. In the second year, however, respondents were more equally distributed among different agencies, as follows: State Parole Division, 22 (34.9%, agents involved with drug caseloads); County Adult Probation Department, 15 (23.8%, officers with caseloads only); the District Attorney's Office, 7 (11.1%, Deputies handling drug cases); Public Defender's Office, 7 (11.1%, Deputies handling drug cases); Superior Court, 1 (3.2%, Judges handling drug cases); County

Narcotics Officers from 6 jurisdictions,\* 10 (15.9%). The results obtained were more representative than those obtained the first year, which included fewer narcotic officers, and no public defenders or judges. While this survey will be discontinued in the third year of research due to lack of funding, it is hoped that it can be continued by another agency. It is recommended that this be the case.

### Survey Results

For purposes of preserving the anonymity of responses by department and to facilitate interpretation, responses were grouped into three departmental categories: Corrections---parole and probation (37, 58.7%); Courts---public defender, district attorney, judges (16, 25.4%); Narcotic law enforcement\*---varied jurisdictions (10, 15.9%).

### Overall Views

Respondents were asked to express their views concerning the concept of methadone maintenance treatment (ignoring how it is actually being done). Over three-fourths of those responding (75%) felt that methadone was either a "very good" (22%) or a "good" (53%) idea as a treatment for addiction. Department rank on the same categories was Courts (87%), Corrections (81%), and Law Enforcement (44%). Regarding the Santa Clara County Program, fifty percent of those responding felt the program "discourages use of heroin." Corrections and Courts took a much stronger view, with fifty-six percent of each department indicating the program discouraged use, while Narcotic Law Enforcement split between "encourages use of heroin" (40%), with only twenty percent indicating it discouraged use.

Some reasons given by those who felt the program encouraged heroin use (10 respondents) were: That "Methadone treatment allows individuals to experiment with heroin, hence methadone is merely a safety valve" ---11.1% of total respondents; "the program leaves 'pushers' free to sell drugs and continue a life of crime" ---6.3%; the clinics provide a meeting place for dealers and their customers" ---6.3%; "poor control and supervision of the program encourages heroin abuse" ---3.2%; "a lack of punitive action against positive urinalysis results ("dirty" urines indicating heroin use)" also put the program in a position of encouraging heroin use ---1.6%.

\*Jurisdictions represented are San Jose Police Department (4), County Narcotics Bureau (2), Sheriff's Department, Gilroy P.D., Santa Clara P.D., Campbell P.D.; this is half the jurisdictions in the County, making up 59% of the County population.

These views represent a small portion of the total population; whether or not they are statements of fact is problematical. Much work is needed by clinic staff to either change attitudes based on erroneous information, or to rectify existing problems encouraging criticism.

The reasons given by those who felt the program (31 respondents) discouraged heroin use are more encouraging: "Methadone is an alternative to heroin use and offers treatment to those who desire it"---17.5% of total respondents; "Methadone is a specific and positive treatment as it satisfies a physiological need"---12.7%.

Of the 34 percent who answered that methadone maintenance neither encouraged nor discouraged the use of heroin, 4.8 percent felt it merely perpetuated a drug-oriented life style; 3.2 percent (two respondents) thought that addicts make no long range plans, so consequently methadone maintenance treatment represented no initial alternative; one respondent (1.6%) felt that not enough "treatment" existed, that is, methadone blocked the craving for heroin but a psychological need still existed; another respondent felt that methadone is just a substitute and doesn't really deal with the problem.

It is evident that there are several and diverse reasons for saying that the program encourages use or, neither encourages nor discourages the use of heroin in the community. Many of the statements appear as constructive criticisms of the program, and if taken as such could be the basis for a continuing dialogue with community criminal justice agencies, particularly law enforcement groups. Overall, the responses indicate support for the program in achieving the goal of reduced heroin usage in the community. This conclusion is supported by the responses on program assistance achieving department goals. Over half (59.3%) felt the program was "a great deal of help" (6.8%) or "some help" (52.5%) in achieving overall department goals. Again, Corrections and Courts were more likely to fall in these categories (72% and 60%, respectively), while Narcotic Law Enforcement officers significantly disagreed in this regard ( $X^2$  test, p. .01) with sixty-seven percent indicating "no help." In achieving specific treatment goals, Corrections and Courts again are high with over half indicating "a great deal of help" or "some help." Narcotic Law Enforcement responses indicated "not applicable" or "no help" for the most part, which is in keeping with their non-treatment orientation. Finally, when asked if their work load was being reduced through program effort, over half (55.8%) specified they were receiving "a great deal" or "some" help. While there were no significant differences by department, sixty percent of the Narcotic Law Enforcement respondents indicated "no help." Three (30%) did indicate "some help." Corrections and Courts again group together to indicate reductions in workload (60% and 63%, respectively).

Probably the most important aspect of these figures is that for achievement of overall department goals reductions in workload, increases in positive response are evident from the survey done in 1972. In terms of overall department goals, positive responses are up fourteen percent; there is also a thirteen percent increase in those indicating "a great deal" or "some" help in reducing their workload. There was even a modest increase in achieving specific treatment goals---3%. Therefore, it is evident that in spite of criticisms leveled at the program, it continues to make a significant impact on the criminal justice system, at least at the level of corrections and the courts.

As a final verification of this conclusion, respondents were asked to indicate if their "overall attitude toward the work of the clinics" has gotten better, worse, or remained the same since it opened in February of 1970. About one-fifth (21%) said "better", half (49%) said "remained about the same," and the remainder (30%) said "gotten worse." The principal shift from the first year was from "same" (12% decrease) to "gotten worse" (9% increase) with a three percent increase in "better." This shift was not significant ( $X^2$  test), and it does not appear to effect their attitudes about the help the program provides them; however, it does indicate the need for program staff to make some of the improvements being suggested. Respondents were asked to indicate how they felt the program might be improved. The issue of greatest importance was the need for compulsory counseling and improved services (other than just methadone) as expressed by eighteen percent of the respondents. As the program enters its third year of federal funding, considerable emphasis has been placed on this goal. A similar percentage considered inter-agency communication and the ability to understand the nature of each other's goals and functions necessary for program improvement. This concern was expressed elsewhere in the CASE responses. Other concerns expressed by about ten percent of the respondents (in each case) were for more emphasis on withdrawal from methadone (now being done by program staff), closer patient supervision in terms of attendance and continued drug use, less staff overprotectiveness in listening to and supporting the "addict" (staff defines as "patient"), and for more cooperation in allowing criminal justice agency personnel to be able to contact and arrest patients if the need arose. The latter three concerns underscore the differences in philosophy between the medical and law enforcement perspective, and stress the need for continuing dialogue between leaders in these respective professions.

A somewhat smaller group (8%) wanted ex-addicts removed from the staff and/or program admissions screening committee, a direction toward which the program is presently moving. The issue of the use of ex-addicts as "addiction specialists" in the program has been a matter of debate since the onset of the program. Therefore, CASE respondents were asked specifically to respond to the question, "Do you feel that using ex-addicts who are on methadone as Community Service Aides (Addiction Specialists) in the clinics is a good idea?" Forty-four percent said "No," thirty-seven percent "Yes," and nineteen percent said "Don't know." Again, Corrections and Courts respondents were in very close agreement, but no Narcotic Law Enforcement officers answered in the affirmative, with seventy percent indicating "No." These attitudes are in apparent agreement with those of program staff, and currently only drug free (including methadone-free) Public Service Workers (formerly Community Service Aides or Addiction Specialists) are being considered for program employment. Other points touched on by respondents as improvements include a shorter waiting period for new admissions, smaller, more individualized clinics, with increased effort in providing professional ancillary counseling services. Also, it was suggested that more job placement and job counseling be made available to patients. Some other ideas, though not necessarily within the realm of the methadone program, run the gamut from a detoxification program for addicts to legalization of heroin.

It is important to note, as indicated in the staff program evaluation that some of the suggestions made are already in effort or in the process of being implemented. Even more encouraging would be the development of an informational board (committee) to discuss and explain program operations, including the scope of present program activities. Such a board would include representatives from corrections (parole, probation, the jail), the

courts (including the public defender and the district attorney's office), and narcotic law enforcement. The model for such a group exists in the existing Santa Clara County Law Enforcement Drug Council, which coordinates narcotic law enforcement in twelve jurisdictions in the county. As methadone treatment becomes more refined, i.e., develops more diverse and in-depth treatment programs, a method should exist for informing criminal justice agencies as well as various county social agencies of the offerings of the program, and these social agencies might well be a part of this board, or council.

In order to make a determination of respondent's feelings about the continued existence of the program, they were asked to indicate whether "the present Methadone Program is adequate for handling the heroin addiction problem in the county, or should it be enlarged, cut back, or discontinued?" Over half (52.5%) of all respondents said "should be enlarged." When "adequate as is" is included, over three-quarters of all respondents are supportive of the program (78.7%). While there are no significant differences by department, again the Law Enforcement respondents stand alone in that one-third want to see the program discontinued (3 respondents), one-third "enlarged" and twenty-two percent see it as "adequate as is." The program appears to have the support of about half the law enforcement community as represented by these ten specialists in narcotics law enforcement (who make up about one-third of the total of such officers in the county). In comparing these results with those from the first year's survey, the percentages are about the same overall; departments were not individually treated on this attitude in the first year.

#### Improved Cooperation

In an effort to let clinic staff know how the criminal justice community feels they may better cooperate in dealing with the problem of heroin addiction, some questions were asked about their contact with the program and how they felt cooperation could be improved.

Regarding staff contacts, the helpfulness of staff vary according to the position of the persons dealt with. This is shown in Table 28. Administrators have seemingly improved their rapport with criminal justice agency representatives. The adjudged helpfulness of nurses has dropped, while the Community workers are still viewed as the least cooperative. It might be noted at this juncture that feelings in this area are somewhat reciprocal. When asked if using ex-addicts as staff members was a good idea, forty-four percent of the CASE interviewees replied in the negative. Another nineteen percent were unsure, while thirty-seven percent did think that the use of ex-addicts in clinics was in fact a good idea. The issue of communication and cooperation in inter-agency dealings has been stressed previously. Suspicion and antagonism serve the needs of no one, particularly clinic patients and potential patients. Increased effort by all parties concerned is needed.

In an effort to determine specific areas where more effort could be made to facilitate cooperation between the methadone program and criminal justice agencies, respondents were asked for suggestions on how this could be

TABLE 28

#### HELPLEFULNESS OF STAFF

CONTACTS	First Year						Second Year					
	Admin.		Nurses		C.W.'s		Admin.		Nurses		C.W.'s *	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Very Helpful	11	29.0	16	42.1	10	27.0	13	38.2	11	29.7	9	25.7
Somewhat Helpful	14	36.8	13	34.2	10	27.0	13	38.2	17	46.0	10	28.6
Hardly Helpful at All	13	34.2	9	23.7	17	46.0	8	23.6	9	24.3	16	45.7
TOTAL	38	100.0	38	100.0	37	100.0	34	100.0	37	100.0	35	100.0

\* Community Workers were formerly called "Addiction Specialists."

accomplished. The results indicate that a liaison effort between the program and criminal justice agencies was stressed by forty percent (25) of the interviewees, particularly corrections personnel (57%). Respondents felt that each other's goals and limitations should be kept in mind, and more trust by program staff was necessary. Working closer with concerned agencies in policy making was emphasized by eleven percent (7) of the CASE subjects, while ten percent (6) thought more rigorous enforcement of limits dealing with drug use and irregular attendance should be initiated. The same number felt that an up to date list of patients in treatment should be provided, but if implemented this would be in violation of federal guidelines dealing with release of confidential patient information. Five respondents (7.9%) believed the staff to be too possessive concerning patients, and consequently this "paranoia" allows the staff to be duped by patients. Five respondents also wanted to be able to meet or apprehend patients at or near the clinic. Faster action in accepting parolees onto the program was deemed necessary for upgrading cooperation by three respondents (4.8%), and two (3.2%) felt that more counseling and rehabilitation efforts were needed. On a more positive note, six percent (4) of those surveyed had no complaints, and a smaller group (3.2%, 2) said a vehicle to keep them abreast of research developments would be helpful.

While it is readily apparent that not all of the measures suggested for improving cooperation could be, or even should be instituted, more dialogue is needed to improve relations between local criminal justice agencies and the Santa Clara County Methadone Program, and these suggestions at the very least provide a starting point for this to occur.

#### Addiction Cause and Program Commitment

In addition to questions related specifically to the program, more general questions were asked. Two of these dealt with the causes of addiction and the numbers of heroin addicts committed to ridding themselves of the habit through participation in the program.

Respondents were first asked to write down what they thought were "the three or four main things that lead people to heroin addiction; that is, the main reasons people become "addicts." These unstructured responses were classified thirteen ways. Respondents most often specified "personality problems arising from feelings of insecurity or inadequacy---42, 66.7%". "Peer group pressures" were listed by 57.1 percent (36), while over one-third (25, 39.7%) specified "the desire to escape social pressure or social reality." "Poor environment" and "poor family situations" also were mentioned by one-third and just over one-fourth of the respondents, respectively. While Corrections and Courts respondents were in very high agreement on the ordering of these reasons, eighty percent of the Law Enforcement personnel ranked "drug availability" as the primary reason for heroin addiction, followed by "personal insecurity" (50%) and "escape from social reality" (30%). "Peer group pressure"

\*NOTE: Respondents could select more than one category, hence percentages are always based on the total population.

and poor environment" were each indicated by twenty percent and "poor family situation" by none. Other factors cited by all groups were "curiosity" (24%), a "lack of positive goals" (11%), "feels good" (10%), "lack of a real deterrent" (8%), "progression from lesser drugs (6%), a "drug-oriented society" (5%), and "other" (11%).

Respondents were then asked for a more structured type of response as to the causes of heroin use: "If you had to choose, would you say that an individual's own personality problems or the outside social conditions an individual is raised in are the major cause of most people becoming heroin addicts? (check one)." The same question was asked of methadone staff, as indicated in the earlier section. Since both groups were asked to respond in 1972 and 1973, it is possible to examine attitudes across time and for each year as shown in Table 29.

TABLE 29

INTER-AGENCY COMPARISON OF CAUSES OF ADDICTION FOR 1972-1973				
CAUSE	METHADONE STAFF		CRIMINAL JUSTICE STAFF	
	Number	Percent	Number	Percent
<u>1972</u>				
Personality problems	15	55.6	47	75.8
Outside Social problems	6	22.2	8	12.9
Both equally (volunteered)	6	22.2	7	11.3
<u>1973</u>				
Personality problems	17	45.9	37	58.7
Outside Social problems	7	19.0	13	20.6
Both equally (volunteered)	13	35.1	10	15.9
Other (depends on the individual choice)	-	-	3	4.8

While personality problems are ranked highest for each year, which is in agreement with the unstructured responses, there appears to be a shift out of that category for both groups. For methadone staff, it is to "both equally," and for criminal justice system staff it is to "outside social problems" or "both equally". Once again, the Narcotic Law Enforcement respondents, when examined separately, differ in their responses from Corrections and Courts respondents. Of all groups, they are most likely to indicate "outside social problems"---44.4%, while Courts respondents are most likely to indicate "personality problems"---75%. However, these differences are not statistically significant ( $X^2$  tests for all groups, and between Narcotic Law Enforcement and staff respondents).

In conclusion, Corrections and Court respondents stress rather traditional and treatment-oriented reasons for addiction; the narcotic officers had a more practical rationale, citing heroin availability as the major cause, or explanation which appears quite closely related to the type of work they do. Obviously, if drugs were less available, the reasoning goes, there would be fewer people turning to them to resolve those problems of personal insecurity or inadequacy, if indeed these feelings do lead to heroin addiction. A more intriguing possibility, which is being suggested more strongly in recent literature on the subject, is that anybody may become involved in heroin use regardless of their personality problems, feelings of insecurity or inadequacy, or what have you, if drugs are made available. The recent widespread use of marijuana suggests that drug abuse may easily prevail among a wide spectrum of personality types of all levels of intellectual sophistication if it is available. This may also be true of heroin. To the extent that it is available among groups who already have a myriad of social problems, as verified in this report, it will indeed appear to be a problem of personally or socially troubled individuals. In fact, it can become anyone's problem if enough exposure is made. The rather high incidence of opiate use in the medical profession is clear enough evidence of this, as is the use of opiates by respectable, middle-class "young people-made-soldiers" in Viet Nam.<sup>28</sup>

Regarding the commitment of heroin addicts to treatment in the methadone clinics, respondents were asked to give an "estimate of the percent of Methadone Program patients" falling in the categories shown below:

Committed to getting rid of the habit.....	22%
Not really committed, but just trying something new.....	31%
Totally uncommitted, using the program to suit their own needs.....	32%
Other (forced by families or criminal justice agencies to join programs; want help, but still have need to use heroin, etc.).....	15%
<b>TOTAL</b>	<b>100%</b>

These percentages indicate that while methadone treatment is generally viewed in a positive light, criminal justice system personnel in contact with patients are skeptical of the reasons addicts initiate this treatment. When responses are distributed by department there are no significant differences between groups.

<sup>28</sup>See Charles Winick, "Physician Narcotic Addicts," *Social Problems*, (Fall, 1961), 174-186; Jerome Char, "Drug Abuse in Viet Nam," *Amer. J. Psychiat.*, 129 (October, 1972), pp.123-125; Avram Goldstein, "Heroin Addiction and the Role of Methadone in its Treatment," *Arch. Gen. Psychiat.*, 26 (April, 1972), pp. 291-297.

#### Numbers of Addicts, Methadone Diversion, and Treatment Alternatives

In order to improve the understanding of the drug problem in Santa Clara County, three additional questions were asked. These dealt with the numbers of heroin addicts in the county, the amount of methadone being diverted to the streets, and with suggested approaches to the drug problem in the county.

Numbers. Many formulas exist for assessing the numbers of heroin addicts in a given community. Initial program estimates placed the number of heroin addicts in the county at 1,000 based on .001 percent of the total county population of about one million residents. While this figure is impossible to verify, it was felt that criminal justice system estimates (N=37) might be an important first step in gaining some idea of their understanding of the significance of the problem. The figures reported here, while possibly overstated, appear to agree with other indicators of the magnitude of the problem, particularly the numbers of addicts who have been treated since the methadone program began and figures on those either currently engaged in various forms of treatment or actively seeking treatment in public and private heroin addiction treatment programs. The estimates for 1972 and 1973 are shown in Table 30. Estimates for 1972 were based on the mean and are considered much less reliable than those for 1973 for three reasons: (1) they were based on less diverse representation from the criminal justice system and (2) estimates were more disparate, i.e., more "guessing" appeared to have taken place, and (3) it was not felt that the difference between specifying hardcore and all kinds of users was clear on the questionnaire. The 1973 estimates are based on the median response, which was felt to be more accurate than the mean due to the wide disparity in a small number responses.

TABLE 30

#### CRIMINAL JUSTICE SYSTEM ESTIMATES OF "HARDCORE" HEROIN ADDICTS AND "USERS" IN SANTA CLARA COUNTY: 1972-1973

CATEGORY	ESTIMATED NUMBER	
	1972 (N=35)	1973 (N=37)
Hardcore heroin addicts in the county---at least two years addicted, not just "chipp(y)ing"	1,916	2,375
Heroin users of all kinds, including those above	5,216	6,875

In another study being conducted by American Justice Institute, the evaluation of the Santa Clara County Narcotics Bureau, the current figure of 2,375 hardcore addicts received some verification. The Narcotics Bureau

keeps a file on suspected or actual drug-involved individuals in the county. From this file, ten percent of all cases recorded were sampled, a total of 1,275 individuals out of 12,750 on file. Each case used in the study was involved in either use or sales of a drug, and the particular type of offense recorded in the file was coded for analysis. Over 95 percent of the cases used had booking numbers on their file card, i.e., they were arrested for the type of offense indicated or (rarely) a lesser offense---the more serious type of involvement was used in the analysis. Of the 1,275 cases, 1,225 were "in county" (50 out of county cases were excluded from in-depth analysis). Of these, 231 were classified as being involved in heroin use or sales (or both), a projected total of 2,310 countywide. While this is only 65 less than the criminal justice system estimate of hardcore addicts in the county, the figures are not strictly comparable because the Bureau figure includes dealers who may not be users. It seems safe to conclude, however, that there are probably about 2,000 addicts in Santa Clara County who are candidates for the methadone program. As of January, 1973, the program had put 937 addicts on methadone.

Methadone Diversion. Since one of the major issues surrounding the use of methadone for the ambulatory treatment of addicts is the diversion of this narcotic to the streets, criminal justice agency respondents were asked to state the "percent of the Methadone dispensed at the clinics you feel is being illegally diverted to the streets?" Overall, the mean estimate is 20.9 percent is being diverted. The quality of this estimate can be judged by the range of opinion, ranging from one percent to 63 percent, and the standard deviation of 15.4 percent (two-thirds of all responses between 5.5% and 36.3%). Responses by department are shown in Table 31, and indicate that Narcotic Law Enforcement respondents are in closer agreement and do not range as high as other groups in their overall estimates, even though about 80 percent of all groups estimate under 30 percent diverted. These estimates are slightly higher than those made in 1972, but not statistically significant ( $\chi^2=.715$ ,  $p<.05$ ); again, this may be an indication of criminal justice system concern over program performance. However, of the total respondents, fewer (46, 73%) responded to this item than in the previous year (62, 100%), which may only mean that those who felt they had knowledge of the amounts diverted were responding and that the figures are more reliable. It is suggested that the latter is probably the case. Regardless, there is legitimate concern over the diversion of methadone to the streets. Many of these concerns are being met through new state and federal guidelines regarding "take-home" dosages of methadone. The program has responded with a new type of bottle and capping procedure which should help eliminate the illegal diversion of clinic methadone.

There is no good way to know the real amounts of clinic methadone being diverted, or how much which is being sold as program methadone is really from a clinic---putting something in a clinic bottle and selling it does not make it program methadone. No matter what techniques are used, some methadone will be diverted and will probably displace the sale of some other kind of illegal drug. The problem is not the types of drugs being used on the streets as much as it is the fact of their use.

Approaches to Drug Problems. As another part of the effort to improve the understanding of the drug problem in the county and to determine criminal justice system personnel attitudes toward the problem, they were asked to

TABLE 31

PERCENT ESTIMATE OF METHADONE ILLEGALLY DIVERTED  
TO THE COMMUNITY BY DEPARTMENT

PERCENT DIVERTED	CORRECTIONS (PAROLE, PROBATION)		SUPERIOR COURT D.A., P.D.		NARCOTIC LAW ENFORCEMENT		TOTAL	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent
0 - 10	11	36.7	7	63.6	1	20.0	19	41.3
11 - 20	6	20.0	2	18.2	2	40.0	10	21.7
21 - 30	7	23.3	-	-	1	20.0	8	17.4
31 - 40	1	3.3	1	9.1	1	20.0	3	6.5
41 - 50	5	16.7	-	-	-	-	5	10.9
51 - 60	-	-	-	-	-	-	-	-
61 - 70	-	-	1	9.1	-	-	1	2.2
TOTAL	30	100.0	11	100.0	5	100.0	46	100.0





sentencing about 90 percent of all felony cases, including the majority of addict defendants for that period. Regarding the methadone program, Judge Scott states that "I had observed a considerable number of methadone sale cases, sharing of methadone by addicts with other non-methadone addicts and incidents of drug-narcotic activities of some people involved with the methadone program."

Judge Scott indicated that he had an appointment to visit the Methadone Clinic in mid-1971, an appointment which was broken by clinic staff for no apparent reason and never re-newed. He has never been inside a County methadone clinic. The interview with him indicated that he had very little solid information about the program. His general impression of the program was "definitely negative"---not merely "not positive," or equivocal, but definitely negative. The primary reason for this is given as the "overprotectiveness" of the program staff regarding the program patients. This sentiment is very similar to that expressed by law enforcement and corrections respondents. The feeling is that the program expects far more from the court than it is willing to give in return. The primary contact of the judge with the program over the two year period was the receipt of letters from program staff in support of various defendants who were patients on the program. Probation officers he felt were not given full information regarding the performance of patients while on the program, particularly with respect to urine tests and actual program progress.

He definitely felt that ex-addicts had no place working in the program as they were only exposed to a milieu which would lead to their continued participation in the addict drug culture.

Regarding the reasons for addiction, this Judge felt that over the two years of his experience with addict cases, his views had changed. At first he felt that addiction was a physiological problem; he now sees it largely as a personality disorder, the use of heroin being a symptom of this disorder. Over time, he began to feel that the primary motivation of the addict-defendant for rehabilitation was directly related to the amount of time he would have to spend off the street in prison or the California Rehabilitation Center (addict civil commitment program). Hence, the Methadone Program had a specific appeal for those who wanted to stay in the community. He indicated that addicts would be better discouraged from drug use "in some way" other than through rehabilitation programs, presumably through punitive measures, until they manifested some degree of motivation. The problem is how to recognize that motivation and to act on it.

Since one of the primary goals of the Methadone Program is to maintain addicts as patients and encourage their individual initiative in remaining drug free, becoming employed, and becoming law-abiding, productive citizens, it seems likely that the program could have been of far greater help to this judge in helping him to recognize and act on that motivation when it occurred. This will not be accomplished through letters to the judge on specific cases, most all of which are favorable and hence meaningless to him. He must understand the program's operation and its goals. Most important, he must have independent access to the data on patient progress, or some assurance that the information he receives from other sources, such as Adult Probation, and including that from various clinics, is valid. As long as the program is wrapped in a cloud of secrecy, its judgements and recommendations regarding patients in court will be of little value to the judiciary. This arrangement would seem

to defeat the ends of both agencies, and in the end to do the maximum harm to the individual patient.

### Conclusions

From their perspective, do they feel methadone treatment is effective, locally and nationally?

There was overwhelming support for methadone treatment as an effective approach in the treatment of heroin addiction, regardless of how it is now being done in the county. Support for the local program was positive, with the most negative view being expressed by Narcotic Law Enforcement officers.

Has the program appreciably reduced their workload?

Over half of the respondents indicated that the program was giving them "a great deal" or "some" help in reducing their workload, with Narcotic Law Enforcement again the most negative in this regard. An overall increase was noted over the first years' survey, however, has the program increased their ability to handle the drug problem?

These questions were phrased in terms of meeting their overall and specific departmental goals. Corrections and Courts respondents were most likely to indicate that they were receiving "a great deal" or "some" help from the program in meeting overall departmental goals, with Narcotic Law Enforcement officers in significant disagreement. On helping to meet specific treatment goals, over half of the Corrections and Courts respondents indicated that the program was giving them "a great deal" or "some" help in this regard. Narcotic Law Enforcement responses were not considered in this category, since they do not do treatment. In spite of criticisms leveled at the program, it continues to make a significant impact on the criminal justice system, particularly in the area of Corrections and the Courts. Has their attitude toward the program changed over time; i.e., do they see the program as worse or better than it was earlier?

While there was no decrease in those stating that the program had gotten better, there was a shift in responses from "remained about the same" to "gotten worse." While this shift was not statistically significant, and does not appear to affect criminal justice system attitudes about the help the program provides them, it does indicate the need for program staff to make some of the improvements being suggested, as discussed in the following question.

How can the program be improved, particularly cooperation between the program staff and their agency?

Criminal justice respondents felt that the greatest need for program improvement lay in compulsory counseling and improvement of services (other than just methadone), a need which is being met by the program in its third year of funding. A similar proportion considered inter-agency communication and the ability to understand the

nature of each other's goals and functions necessary for program improvement. This concern was expressed repeatedly in the CASE responses, particularly where questions of increased cooperation with program staff were addressed. Increased communication and cooperation with program staff are required for these criminal justice agencies to feel comfortable with the program. The majority (just over half) felt the program should be enlarged, rather than cut back or continued as it is, which is similar to the first years' results.

What are the causes of heroin addiction, and what is the addicts' commitment to treatment?

The primary reason given for heroin addiction was "personality problems arising from feelings of insecurity or inadequacy," followed by "peer group pressure" and "the desire to escape social pressure or social reality." Narcotic Law Enforcement respondents, however, placed "drug availability" at the top of the list, following about the same sequence thereafter. In comparison with staff over a two year period, there was a shift from "personality problems" to "outside social conditions" or "both equally" on the part of both groups. It is suggested that drug availability may really be a more significant factor than previously thought.

When asked about the heroin addict's commitment to treatment, criminal justice system personnel indicated a healthy level of skepticism about the commitment of the addict population to the concept of methadone treatment as did Judge Scott of the Superior Court. They appear to be saying that while the program is a good thing and has potential as a treatment tool, the individual "addict-turned patient" must make the final determination of his success or failure.

What are their estimates of the numbers of addicts in the county, both 'hardcore' and those 'chipping'?

For the second year CASE respondents were asked to estimate the numbers of addicts and users in the county. The median estimate of 'hardcore addicts' for 1973 was 2,375, with a total of 6,875 heroin addicts and users of all kinds (including the 2,375). The addicts are those judged to meet program criteria and are potential candidates for the program. This figure received some verification from a study currently being done by AJI of the Santa Clara County Narcotic Bureau. It appears that there are probably no less than 2,000 hardcore addicts in the county, and if the figure on those who are using is in any way close to reality the problem will not lessen in the near future.

What are the estimates of methadone being diverted from the program into the community?

Respondents estimated that about 21 percent of the program methadone is being diverted into the community in illegal sales, with 80 percent of all departments indicating under 30 percent. New state and federal guidelines on "take-home" dosages and better procedures at the clinics have been implemented to deal with this problem, which, in reality, may be as pervasive as indicated by criminal justice system personnel. There is no good way to find out the truth of the matter.

What types of action do they recommend regarding different types of drug abuse in the community?

As a more general question, respondents were asked to state their approach to all problems of drug abuse in the county. Overall, "education programs" and "better treatment programs for users" were the preferred choices, although Narcotic Law Enforcement officers again differed in their responses. They were more likely to stress "stricter penalties" or certainly no relaxation of existing penalties for drug abuse. They were again shown to be least supportive of the methadone treatment concept as well as "better treatment programs for users" in other drug abuse areas.

## 8.0 ADDICTION COST TO ADDICT AND COMMUNITY

The purpose of this section is to describe the costs of heroin addiction to the addict and to the community and to make a determination of how much money the program may be saving the community. While there is no way to accurately assess the value of a human life or the value to the community of that particular individual who is helped by the program, it is possible, within limits, to determine various cost benefits derived from the existence of a methadone program in the community. This chapter deals with program costs, estimates of the cost of heroin to addicts coming into the program, savings to the community in reduced property crime committed to support a habit, criminal justice system savings, and savings in relation to program costs.

### Program Costs

The cost per patient per month and the cost per patient per visit are shown below. These figures are based on the unduplicated patient count for the first 22 months, and thereafter (a 2 month period) on the open case-load at the end of the month. The unduplicated count for February and March 1973 was not available as the county Program Evaluation Research Team, which supplied the information, changed their data collection form at that time. The figures total as follows for this period (April 1, 1971 - March 31, 1973):

	First Year	Second Year	2 Year Average
Cost per <u>Annum</u>	\$1155.12	\$1225.92	\$1190.52
Cost per <u>Month</u>	96.26	102.16	99.21
Cost per <u>Week</u>	22.21	23.57	22.89
Cost per <u>Visit</u>	6.13	6.71	6.42

The above figure is based on \$449,265 spent from April 1, 1971, to March 31, 1972, and \$648,906 spent between April 1, 1972 and March 31, 1973. (Total - \$1,098,171). This period was chosen because it encompasses the opening of three clinics, and is representative of the cost of operating all five clinics in the county. When the \$46,854 collected in patient fees is deducted from the total, (a \$2.00 weekly fee as of 9/1/71), a savings of \$3.66 per month for the first 12 months and \$4.69 for the second 12 months is realized. It should be noted that the amount of money collected through patient fees roughly equals the amount costed to county taxpayers; the remainder being supplied through state Short-Doyle and Medi-Cal funds, as well as federal monies.

Expenditure fluctuations are accounted for by variations in personnel pay periods, irregular billing by the County General Services Administration for rent, janitorial, maintenance and repair services, and the additional cost of opening and staffing new clinics.

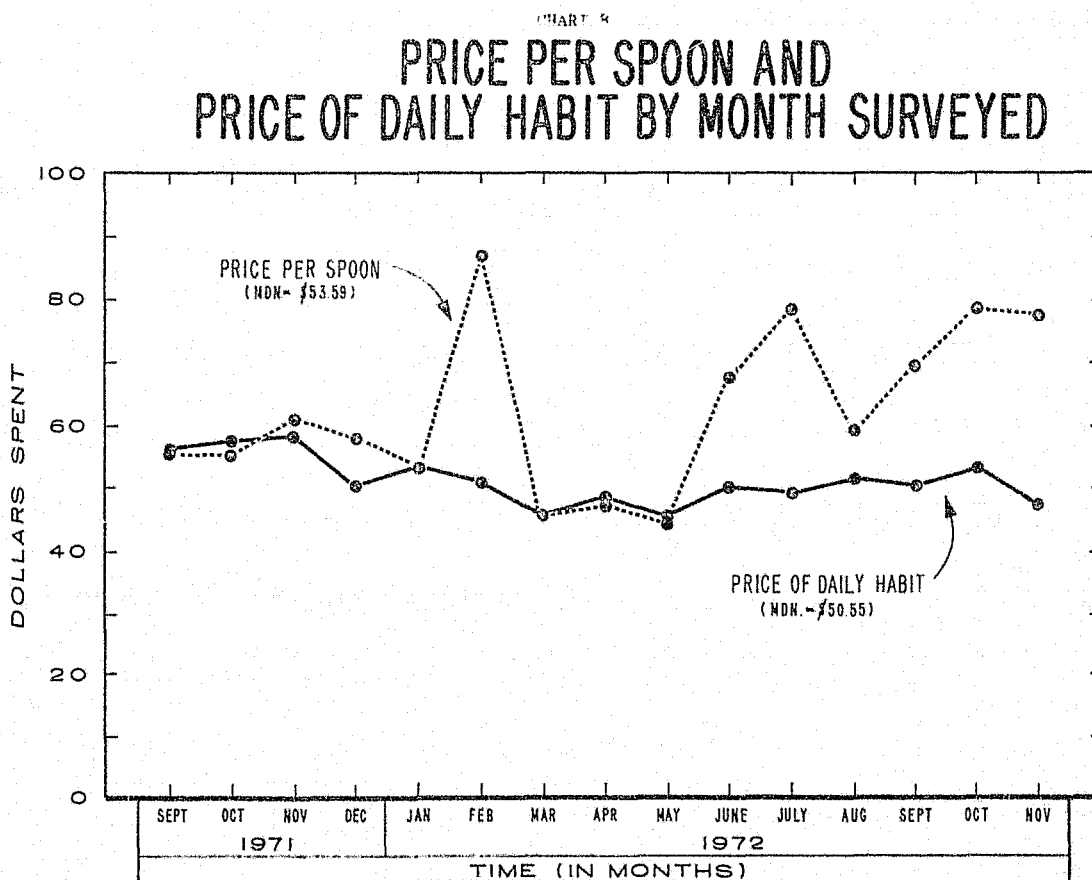
The overall treatment costs have escalated slightly for the second year (April 1, 1972 to March 31, 1973) when compared to the first 12 months costs were examined. The increased overhead required in opening new clinics in Mt. View and at 10th Street account for the rise in cost. These figures will be used in subsequent cost comparisons.

#### Heroin Cost Estimates

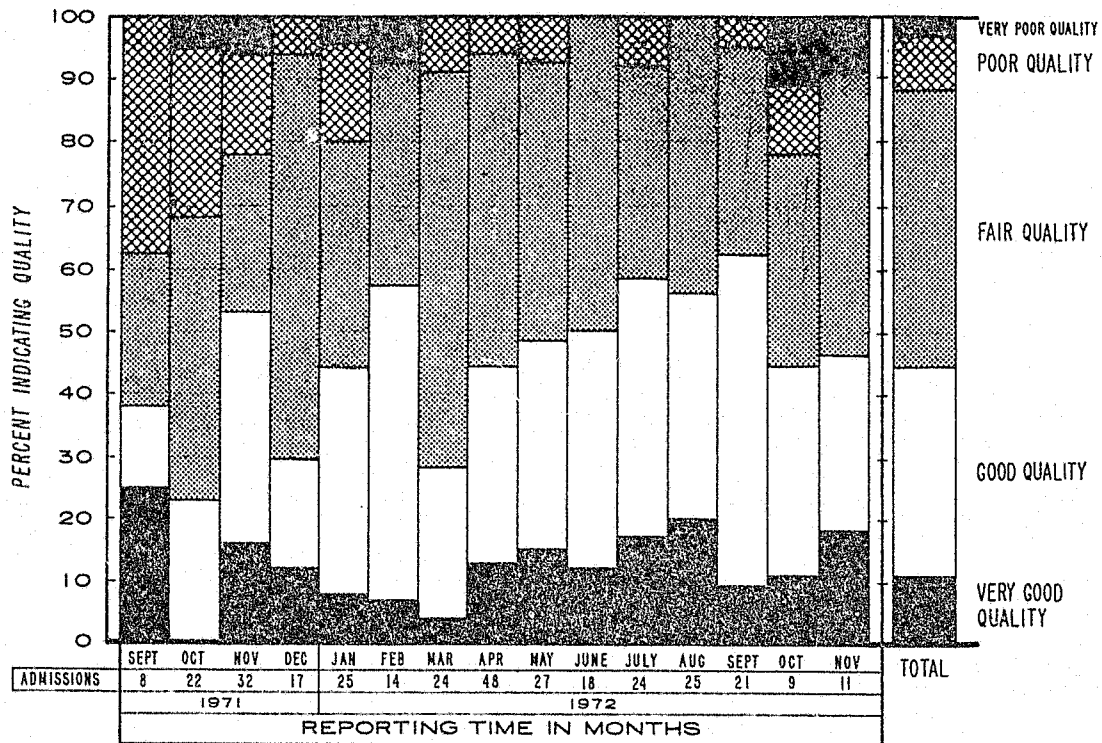
New patients being admitted to the program were asked to describe the price and quality of the heroin they were using at the time they were admitted to the program and for the previous year. This was done for two reasons: to determine the magnitude of the local heroin problem and the degree to which the price and quality of heroin can be estimated from addict respondents, and to provide price estimates for use in computing the costs of heroin use to the addict and the community.

#### Price and Quality

The median dollar cost of a habit per day, as shown in Chart 8, is reported to be \$50.55, ranging from \$6 to \$375 per day. The median price of a spoon of heroin (about two grams, or 1/32 ounce of heroin) was reported to be \$53.59, ranging from \$10 to \$88 per day. Thus the average daily habit is about one spoon per day, and the cost of a quarter spoon, the usual 'buy' is \$13.39. Patients reporting at admission indicated no consistent changes in heroin price over the year prior to their admission. This seems clear from Chart 8, wherein price per spoon and for a daily habit (reported at admission) were seen as relatively stable. The greatest fluctuation is in price per spoon, which appears related to the quality of stuff used as shown in Chart 9. As one might expect, as the price goes up the quality also goes up. Quality remains fairly consistent over time, with 44 percent of all admissions indicating "good" or "very good" quality, and 12 percent indicating "poor" or "very poor" quality. The validity of addict self-report in these matters is, of course, subject to speculation; however,



# QUALITY OF HEROIN BY MONTH SURVEYED



self-report on criminal activity, drug use, and employment appear valid.

## Community and Addict Costs

This section on program cost benefits is based on the work of Holahan<sup>29</sup> Using figures derived from the work of the Hudson Institute in New York City, where they developed data based on interviews with ex-addicts and police officers, Holahan has developed a formula for computing the cost of heroin addiction to the community. This formula is stated as follows:

$$C = 365 [(1-d) NTX (af + b + w)]$$

- Where C = the gross amount of funds obtained annually from various sources for heroin purchases;  
 N = number of heroin addicts  
 d = the percentage of all heroin consumed by the addict population, which is obtained for services rendered in the distribution network---i.e., pushing;  
 T = average percentage of the year heroin is consumed by addicts;  
 X = average cost of drugs per day to the addict population;  
 a = the proportion of funds spent on heroin that comes from property crime;  
 b = the proportion of funds spent on heroin that comes from prostitution;  
 w = the proportion of funds spent on heroin that comes from legitimate sources---i.e., work, public assistance, family, or friends; and  
 f = the factor by which the amount stolen must exceed the amount yielded by a property crime. (A stolen good must be transferred from the thief to a fence to a final consumer. The thief receives only a fraction of the market value of the market value of the good. To obtain a given target yield, an addict can be expected to steal a given amount, depending on the fencing discount, and the proportion of value stolen that is property and not cash).

This formula is further broken down into formulas for computing the amount of money spent by addicts each year ( $C_H$ ) and the cost to victims of property crime committed by addicts ( $C_V$ ) as follows:<sup>30</sup>

<sup>29</sup>John F. Holahan, "The Economics of Heroin," in *Dealing with Drug Abuse* (New York: Praeger Publishers, 1972), pp. 296-299 (fns. 28, 36).

<sup>30</sup>Ibid.

$$C_H = 365 [N(1-d) TX]$$

where

$C_H$  = net annual expenditures for heroin;  
N, d, T, X, are defined above.

$$C_v = 365 [(1-d) NTX (af)]$$

where

$C_v$  = cost to victims of addict property crime;  
d, N, T, X, a, f, are as defined above.

In order to use these formulas, Holahan had to make a series of assumptions about the values to be used. His assumptions were based primarily on the work of the Hudson Institute in New York City. Since it was not felt that these values were truly representative of a West Coast population, it was decided to use figures based on the work of Lerner et al in San Francisco.<sup>31</sup> They questioned 1,514 patients seen at the Haight-Asbury Free Medical Clinic (Heroin Detoxification Section) between November 1969 and March of 1971. They report, for example, that heroin costs were less than \$45 per day for 54.6% of their population, between \$45 and \$100 for 39.7%, between \$105 and \$200 for 4.6%, and over \$200 per day for only 1.1%. They indicate that these individuals spent, over a two year period, \$29 million per year on their heroin habits. The percentages used in the following computations are based almost entirely on their breakdown of this \$29 million expenditure (approximately 2,590,000 "bags" of 1-2% pure heroin).

The Holahan figures have one other difficulty. Money-raising activities are divided into only three categories: property crime, prostitution, and legitimate earnings. The categories of earnings based on pushing or dealing drugs and miscellaneous techniques (hustles) are added based on the work of Lerner et al. The new figures used are as follows:

N=463

d = 45%; meaning that this much heroin is obtained for services rendered. This figure is the same as that used by Holahan.

<sup>31</sup>Steven E. Lerner, Ronald L. Linder, and Irving Klompus, "The Cost of Heroin to the Addict and the Community," J. of Psychedelic Drugs, Vol. 4 (Fall, 1971) pp. 99-103.

T = 70%; the average percentage of the year heroin is consumed by addicts.

X = \$25; average cost of a habit per day. This figure is based on retail price estimates for heroin as of December 30, 1970, in the Los Angeles area, as developed by the Bureau of Narcotics and Dangerous Drugs, and given by Holahan. It is a low estimate and assumes that patients on the program are doubling their estimates of the size of their habits (\$50.55 per day). This reduction is based on data collected on the weekly cost of a habit as reported in the input interview.

a = 34%; Holahan uses 62%. Using figures from Lerner et al, which were developed in San Francisco in 1970, for thievery, burglary, and miscellaneous rip-offs, 34% seemed the better figure. About that percentage of the present study population was convicted of these types of crimes.

b = 14%; Holahan uses 31%, but Lerner's figures appear more realistic for the present population. They are also in closer agreement with Cushman's figures for New York City (about 10%).<sup>32</sup>

w = 31% from welfare and legitimate jobs, as taken from Lerner et al; Holahan's figure is 7%.

p = 17%, the proportion of money made pushing or dealing drugs for profit as estimated by Lerner et al; Holahan provides no figures in this category.

m = 4%, the proportion of money raised through other sources, e.g., "loans" from friends or family, other hustles; Holahan provides no figures in this category.

f = 2.77, the factor by which the amount stolen exceeds the amount yielded by a property crime, based on the following formula:

$$\frac{(\% \text{ real property theft}) (\$1) + (1\% \text{ cash stolen}) (\$1)}{1/3} = \text{fencing factor}$$

This formula assumes that real property is fenced at one-third its value, and that cash crimes, such as robbery, make up a portion of this factor even though fencing is not involved. Using Lerner's figures, property crime was found to make up 87% of all property crime, and cash crimes remaining 13%. This yields a property theft factor of 2.77. The Holahan figure is 2.60, assuming more robbery (20%).

<sup>32</sup>Paul Cushman, "Methadone Maintenance in Hard-Core Criminal Addicts," New York State J. of Medicine, Vol. 71 (July 15, 1971), p/ 1770.

If it is assumed that the total countywide heroin population which is eligible for the program is 2,375 individuals, as reported in the section of the criminal justice agency survey, the gross amount of funds obtained annually from various sources for heroin purchases is \$13,349,875. Net annual expenditure for heroin, exclusive of overall costs, is \$8,343,670; the \$5,006,205 difference represents the reduction in value of goods stolen and converted to cash at one-third their value. The actual amount spent on heroin is distributed as follows:

property crime	\$2,836,848
prostitution	1,168,113
dealing, pushing	1,418,424
legitimate	2,586,538
miscellaneous	333,747
<hr/>	
Total	\$8,343,670

The annual cost to the victims of property crime is \$7,843,052.

The question is whether or not the existence of the methadone program has made significant reductions in these levels of activity in Santa Clara County. The average population on the program over a two year period was 459 patients, or about the same as the 463 patients in the cohort population. On an annual basis this would mean a one-fifth reduction in the total cost of the heroin problem to the community. This would be of particular importance in the area of property crime, and would yield a \$553,185 reduction in a population the size of the cohort, if all patients stopped committing property crimes. Is this the case with the cohort group? For those who remained on the program for two years, there was a 28 percent reduction in property crimes (robbery, burglary, grand theft, petty theft, auto theft) in the eighteen months following their program admission, meaning an annual rate reduction of 18.6 percent, assuming an equal drop each year. This amounts to a saving of \$102,892 annually.

In the same manner, this reduction would presumably reduce, or has the potential to reduce, criminal justice system costs due to a significantly decreased number of felony arrests and convictions for patients who stay on the program. As indicated in the section on the criminal justice system agency survey, there is a perceived reduction in effort based upon the existence of the program. Since data was not collected specifically on this aspect of patient behavior, it is not possible to definitively state what the extent of savings to the local criminal justice system were. An example of this type of study is that of Cushman, which was cited earlier.

Rather than consider savings to the system alone, it is also possible to consider the financial status of patients who remain on the program. The data on earnings show significant improvement, meaning they are presumably better able to support themselves and their families. Data was not gathered on the numbers leaving the welfare rolls, although it can be assumed that this must have occurred in light of the earnings recorded for those remaining on the program.

In conclusion, the program cost \$648,906 in the period from April 1, 1972, to March 31, 1973. About one-sixth of this is paid for by reductions in property crime which directly affect the population of the county. The data do not allow for a statement as to the savings to the criminal justice system. Such a statement would probably not reflect actual reductions anyhow, since a reduction in workload is not automatically realized as a system saving. Based on the present data showing significant reductions in felony arrests and convictions, the results of the criminal justice system agency survey, and other studies, it appears that significant savings can be realized due to the existence of the program. Finally, the significant improvement in patient earnings lead one to believe that individuals who are staying on the program are better able to support themselves and their families and are probably less of a burden to social agencies such as welfare (or social service).

APPENDIX A  
MARITAL STATUS BY CLINIC

	CLINIC LOCATIONS											
	CENTRAL		EAST VALLEY		GILROY		MT. VIEW		10TH ST.			
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
MARRIED	191	50.2	112	44.3	34	32.7	50	38.1	33	49.2	420	44.8
SINGLE	90	23.6	76	30.0	48	46.2	49	37.4	13	19.4	276	29.5
WIDOWED	7	1.8	3	1.2	0	0.0	0	0.0	1	1.5	11	1.2
DIVORCED	48	12.6	45	17.8	10	9.6	20	15.3	16	23.9	139	14.9
SEPARATED	45	11.8	17	6.7	12	11.5	12	9.2	4	6.0	90	9.6
TOTAL	381	100.0	253	100.0	104	100.0	131	100.0	67	100.0	936	100.0

APPENDIX A  
EDUCATION BY CLINIC

YEARS	CLINIC LOCATION											
	CENTRAL		EAST VALLEY		GILROY		MT. VIEW		10TH ST.			
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
0-8	41	10.7	26	10.3	18	17.3	1	0.8	5	7.5	91	9.7
9-11	161	42.2	116	45.8	45	43.2	57	43.5	34	50.7	413	44.1
12	123	32.2	86	34.0	32	30.8	52	39.7	24	35.8	317	33.8
13-16	57	14.9	25	9.9	9	8.7	21	16.0	4	6.0	116	12.4
TOTAL	382	100.0	253	100.0	104	100.0	131	100.0	67	100.0	937	100.0

Mean = 11.0

Standard Deviation = 1.9

Range = 0-16

Median = 11.3

APPENDIX A  
AGE BY CLINIC

YEARS	CLINIC LOCATION											
	CENTRAL		EAST VALLEY		GILROY		MT. VIEW		10TH ST.		TOTAL	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
18-21	39	10.2	29	11.5	36	34.6	30	22.9	5	7.5	139	14.8
22-29	173	45.3	119	47.0	44	42.2	70	53.5	38	56.6	444	47.4
30-39	130	34.0	77	30.4	22	21.2	24	18.3	18	26.9	271	28.9
40-49	33	8.6	24	9.5	1	1.0	7	5.3	6	9.0	71	7.6
50-71	7	1.9	4	1.6	1	1.0	0	0.0	0	0.0	12	1.3
TOTAL	382	100.0	253	100.0	104	100.0	131	100.0	67	100.0	937	100.0

Mean = 28.5

Standard Deviation = 7.4

Range = From 18 to 63

Median = 26.8

APPENDIX A  
RACE BY CLINIC

RACE	CLINIC LOCATION											
	CENTRAL		EAST VALLEY		GILROY		MT. VIEW		10TH ST.		TOTAL	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
WHITE	195	51.0	140	55.3	34	32.7	86	65.6	29	43.3	484	51.7
BLACK	25	6.6	9	3.6	1	1.0	11	8.4	3	4.5	49	5.2
SPANISH SURNAME	161	42.1	104	41.1	67	64.4	34	26.0	35	52.2	401	42.8
OTHER	1	0.3	0	0.0	2	1.9	0	0.0	0	0.0	3	0.3
TOTAL	382	100.0	253	100.0	104	100.0	131	100.0	67	100.0	937	100.0



APPENDIX A  
SEX BY CLINIC

SEX	CLINIC LOCATION											
	CENTRAL		EAST VALLEY		GILROY		MT. VIEW		10TH STREET		TOTAL	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
MALE	302	79.1	208	82.2	85	81.7	110	84.0	52	77.6	757	80.8
FEMALE	80	20.9	45	17.8	19	18.3	21	16.0	15	22.4	180	19.2
TOTAL	382	100.0	253	100.0	104	100.0	131	100.0	67	100.0	937	100.0

APPENDIX A  
WORKING BY CLINIC  
(AT ADMISSION)

	CLINIC LOCATION											
	CENTRAL		EAST VALLEY		GILROY		MT. VIEW		10TH ST.		TOTAL	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
YES	78	20.5	37	14.7	14	13.5	30	23.3	7	10.4	166	17.8
NO	303	79.5	214	85.3	90	86.5	99	76.7	60	89.6	766	82.2
TOTAL	381	100.0	251	100.0	104	100.0	129	100.0	67	100.0	932	100.0

APPENDIX A  
OCCUPATION BY CLINIC

	CLINIC LOCATION											
	CENTRAL		EAST VALLEY		GILROY		MT. VIEW		10th ST.		TOTAL	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
WHITE COLLAR - PROFESSIONAL	4	1.1	1	0.4	0	0.0	3	2.3	1	1.5	9	1.0
CLERICAL	10	2.6	4	1.6	2	1.9	8	6.1	3	4.5	27	2.9
CREATIVE & COMM.	2	0.5	1	0.4	1	1.0	4	3.1	1	1.5	9	1.0
SALES	7	1.8	6	2.5	2	1.9	6	4.6	2	3.0	23	2.5
TRANSPORTATION & SERVICE	54	14.1	40	16.4	21	20.4	19	14.5	12	17.9	146	15.7
SKILLED LABOR	102	26.7	52	21.3	17	16.5	19	14.5	16	23.9	206	22.2
SEMI & UNSKILLED	119	31.1	66	27.0	40	38.8	25	19.1	17	25.3	267	28.8
FARMER	1	0.3	0	0.0	0	0.0	0	0.0	0	0.0	1	0.1
SOCIAL SERVICE (Non-Prof.)	3	0.8	0	0.0	3	2.9	3	2.3	0	0.0	9	1.0
HOUSEWIFE	46	12.0	15	6.2	4	3.9	10	7.6	5	7.5	80	8.6
STUDENT	17	4.5	22	9.0	8	7.8	4	3.1	2	3.0	53	5.7
OTHER (LEGAL)*	6	1.6	0	0.0	1	1.0	2	1.5	1	1.5	10	1.1
UNKNOWN	1	0.3	2	0.8	0	0.0	0	0.0	0	0.0	3	0.3
NOT WORKING	10	2.6	35	14.4	4	3.9	28	21.3	7	10.4	84	9.1
TOTAL	382	100.0	244	100.0	103	100.0	131	100.0	67	100.0	927	100.0

\* Other legal occupations (e.g., fisherman, retired, animal trainer, military).

APPENDIX A  
REASON FOR LEAVING PROGRAM BY CLINIC

	CLINIC LOCATION											
	CENTRAL		EAST VALLEY		GILROY		MT. VIEW		10th STREET		TOTAL	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
IN JAIL OR PRISON	76	37.5	65	49.3	21	38.8	16	32.0	7	41.2	185	40.7
VANISHED	30	14.9	18	13.7	9	16.7	10	20.0	4	23.5	71	15.6
LEFT AREA	26	12.9	14	10.6	16	29.6	5	20.0	2	11.8	63	13.8
WITHDRAWN STAFF APPROVAL	32	15.8	16	12.1	4	7.4	7	14.0	1	5.9	60	13.2
WITHDREW FROM TREATMENT	20	9.9	5	3.8	3	5.6	7	14.0	3	17.6	38	8.4
WITHDREW FOR NON-PAYMENT	6	3.0	6	4.5	0	0.0	0	0.0	0	0.0	12	2.6
OTHER <sup>1</sup>	9	4.5	4	3.0	1	1.9	3	6.0	0	0.0	17	3.7
DECEASED	3	1.5	4	3.0	0	0.0	2	4.0	0	0.0	9	2.0
TOTAL	202	100.0	132	100.0	54	100.0	54	100.0	17	100.0	455	100.0

<sup>1</sup> Found ineligible, transferred to another program, parole agent insisted on withdrawal Standard Deviation = 7.4

If closed, months on program: Mean = 10.5 Range = 1-34 months

Median = 7.9

APPENDIX A  
NUMBER OF PERSONS DEPENDENT ON INCOME EXCLUDING PATIENT  
BY CLINIC

NUMBER OF DEPENDENTS	CLINIC LOCATION											
	CENTRAL		EAST VALLEY		GILROY		MT. VIEW		10TH ST.		TOTAL	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
ZERO	118	30.8	126	49.8	49	47.1	61	46.5	27	40.2	381	40.7
ONE	71	18.6	36	14.2	16	15.4	28	21.3	14	20.9	165	17.6
TWO	71	18.6	21	8.3	9	8.7	15	11.5	13	19.4	129	13.8
THREE	53	13.9	34	13.4	15	14.4	15	11.5	3	4.5	120	12.8
FOUR-FIVE	51	13.4	27	10.7	11	10.6	10	7.6	7	10.5	106	11.3
SIX-NINE	18	4.7	9	3.6	4	3.8	2	1.6	3	4.5	36	3.8
TOTAL	382	100.0	253	100.0	104	100.0	131	100.0	67	100.0	937	100.0

Mean = 1.6

Standard Deviation = 1.9

Range = 0-9

Median = 1.0

APPENDIX B  
BACKGROUND CHARACTERISTICS OF COHORT PATIENTS  
AT ADMISSION BY DESIGN GROUPS

PERCENT VALUES	TOTAL POPULATION (N=463)		SUCCESS (N=118)		NO CHANGE (N=238)		FAILURE (N=107)		SIGNIFICANCE OF DIFFERENCES*
	NO.	PERCENT	NO.	PERCENT	NO.	PERCENT	NO.	PERCENT	
SEX: Males	372	80.7	101	85.6	188	79.3	83	78.3	$\chi^2=2.49$ , df=2 not significant
Females	89	19.3	17	14.4	49	20.7	23	21.7	
RACE: White	233	50.5	55	46.6	118	49.8	60	56.6	$\chi^2=3.58$ , df=6 not significant
Black	26	5.6	7	5.9	15	6.3	4	3.8	
Spanish	200	43.3	55	46.6	103	43.5	42	21.0	
Other	2	.4	1	.8	1	.4	-	-	
MARITAL STATUS:									$\chi^2=4.59$ , df=8 not significant
Married	238	51.6	59	50.0	125	52.7	54	50.9	
Single	116	25.2	31	26.3	61	25.7	24	22.6	
Widowed	5	1.1	1	.8	3	1.3	1	.9	
Divorced	58	12.6	12	10.2	28	11.8	18	17.0	
Separated	44	9.5	15	12.7	20	8.4	9	8.5	
ACTIVITY AT ADMISSION- (Self-Report)									$\chi^2=4.74$ , df=2 not significant (cells combined to working-not working).
Full-time Job:	83	18.4	29	25.0	36	15.6	18	17.5	
Part-time Job, School	1	.2	1	.9	-	-	-	-	
Part-time Job, Housewife	2	.4	1	.9	-	-	1	1.0	
Part-time Job	14	3.1	3	2.6	8	3.5	3	2.9	
School Only	19	4.2	6	5.2	10	4.3	3	2.9	
Housewife	46	10.2	7	6.0	24	10.4	15	14.6	
None	285	63.3	69	59.5	153	66.2	63	61.2	

\* .05 level of significance was used for all tests.

APPENDIX B (Continued)  
BACKGROUND CHARACTERISTICS OF COHORT PATIENTS AT  
AT ADMISSION BY DESIGN GROUPS

MEAN VALUES**	TOTAL	SUCCESS	NO CHANGE	FAILURE	SIGNIFICANCE
	POPULATION (N=463)	(N=118)	(N=238)	(N=107)	OF DIFFERENCES*
	MEAN	MEAN	MEAN	MEAN	
AGE	29.5	30.7	29.0	28.9	t=1.79, df=217, not significant
EDUCATION	10.8	10.7	10.9	10.8	t=.57, df=218, not significant
DEPENDENTS	1.92	2.16	1.83	1.88	t=1.04, df=223, not significant
FAMILY INCOME (Self-Reported)	\$382.13	\$413.42	\$367.73	\$374.14	t=.62, df=51, not significant

\* .05 level of significance was used for all tests.

\*\* Significance tested between "success" and "failure" groups.

APPENDIX C  
TOTAL COHORT ARRESTS PRE AND POST  
PROGRAM BY STATUS

PATIENT STATUS	18 Month Periods:		TOTAL
	Before Starting Program	After Starting Program	
On Program/Approval/Deceased	240 <sup>a</sup>	211 <sup>b</sup>	451
Off Program	315 <sup>c</sup>	379 <sup>d</sup>	688
TOTAL	549	590	1,139*

$$\chi^2 = 6.48, p < .02, df=1$$

\* Totals are greater than Tables D & F because more than 4 arrests are included here.

NOTE: "On Program" includes those leaving with staff approval (42) and deceased patients (5).

<sup>a</sup>72 patients, one arrest; 38, 2 arrests; 12, 3 arrests; 6, 4 arrests; 5, 5 arrests; 1, 7 arrests; (1.79 per patient).

<sup>b</sup>68 patients, one arrest; 27, 2 arrests; 8, 3 arrests; 7, 4 arrests, 6, 5 arrests; 7, 1 arrest (1.80 per patient).

<sup>c</sup>49 patients, one arrest; 42, 1 arrests; 20, 3 arrests; 9, 4 arrests, 6, 5 arrests; 2, 6 arrests, 3, 7 arrests; 1, 8 arrests; 1, 15 arrests (2.36 per patient).

<sup>d</sup>63 patients, one arrest, 47, 2 arrests; 24, 3 arrests; 18, 4 arrests; 6, 5 arrests, 4, 6 arrests, 3, 8 arrests; (2.29 per patient).

Excludes vehicle code, parole/probation violation. Not clean misdemeanor/felony.

NOTE: In all of these tables the Mean arrest figure is only for patients who have been arrested.

APPENDIX C-1  
TYPE OF ARREST BY PROGRAM STATUS FOR 18 MONTHS  
PRE AND 18 MONTHS POST PROGRAM

OFFENSE	ON PROGRAM				OFF PROGRAM				TOTAL			
	Pre		Post		Pre		Post		Pre		Post	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
Robbery	2	.8	-	-	1	.5	8	3.9	3	.6	8	1.7
Assault	7	2.7	6	2.3	16	7.7	15	7.2	23	5.0	21	4.5
Property Crime												
Burglary	41	16.0	25	9.8	39	18.8	48	23.2	80	17.3	73	15.8
Grand Theft	6	2.3	5	2.0	6	2.9	4	1.9	12	2.6	9	1.9
Auto Theft	2	.8	1	.4	3	1.4	1	.5	5	1.1	2	.4
Forgery	13	5.1	14	5.5	14	6.8	19	9.2	27	5.8	33	7.1
Receiving Stolen												
Property	3	1.2	1	.4	20	10.0	10	4.8	23	5.0	11	2.4
Petty Theft	24	9.4	23	9.0	26	12.6	25	12.1	50	10.8	48	10.4
Drug Crimes												
Heroin-Possession	16	6.3	6	2.3	9	4.3	17	8.2	25	5.4	23	5.0
Sales	6	2.3	8	3.1	10	4.8	30	14.5	16	3.4	38	8.2
Addict(or Visiting)	2	.8	3	1.2	1	.5	2	1.0	3	.6	5	1.1
Marijuana-Possession,												
Production	8	3.1	4	1.6	10	4.8	8	3.9	18	3.9	12	2.6
Furnishing, Sales	3	1.2	-	-	6	2.9	4	1.9	9	1.9	4	.9
Dangerous Drugs -												
Possession	8	3.1	7	2.7	8	3.9	14	6.8	16	3.4	21	4.5
Sales	2	.8	4	1.6	3	1.4	3	1.4	5	1.1	7	1.5
All Other Drugs	17	6.6	17	6.6	11	5.3	13	6.3	28	6.0	30	6.5
Drunk Driving	11	4.3	19	7.4	7	3.4	20	9.7	18	3.9	39	8.4
All Other Traffic	28	10.9	24	9.4	22	10.6	25	12.1	50	10.8	49	10.6
Non-Support	1	.4	5	2.0	6	2.9	10	4.8	7	1.5	15	3.2
Drunk & Disorderly	5	2.0	16	6.3	17	8.2	20	9.7	22	4.8	36	7.8
Sex Crimes	2	.8	-	-	-	-	1	.5	2	.4	1	.2
Miscellaneous-Felony	6	2.3	4	1.6	5	2.4	13	6.3	11	2.4	17	3.7
Misdemeanor	24	9.4	11	4.3	39	18.8	38	18.4	63	13.6	49	10.6
TOTAL	237		193		279		378		516		551	
MEAN ARRESTS PER PATIENT	.93		.75		1.35		1.83		1.11		1.19	

NOTE: Percents based on total number in each population; status at a minimum of 19 months from program start for all patients, and up to 36 months for some.

APPENDIX C-2  
TYPE OF CONVICTION BY PROGRAM STATUS FOR 18 MONTHS  
PRE AND 18 MONTHS POST PROGRAM

OFFENSE	ON PROGRAM				OFF PROGRAM				TOTAL			
	Pre		Post		Pre		Post		Pre		Post	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
Robbery	1	.4	-	-	1	.5	3	1.4	2	.4	3	.6
Assault	2	.8	-	-	5	2.4	5	2.4	7	1.5	5	1.1
Property Crime												
Burglary	11	4.3	3	1.2	13	6.3	20	9.7	24	5.2	23	5.0
Grand Theft	1	.4	2	.8	3	1.4	4	1.9	4	.9	6	1.3
Auto Theft	-	-	1	.4	1	.5	2	1.0	1	.2	3	.6
Forgery	10	3.9	13	5.1	14	6.8	10	4.8	24	5.2	23	5.0
Receiving Stolen												
Property	4	1.6	2	.8	6	2.9	3	1.4	10	2.2	5	1.1
Petty Theft	29	11.3	14	5.5	26	12.6	20	9.7	55	11.9	34	7.3
Drug Crimes												
Heroin-Possession	5	2.0	1	.4	6	2.9	10	4.8	11	2.4	11	2.4
Sales	2	.8	3	1.2	2	1.0	22	10.6	4	.9	25	5.4
Addict(or Visiting)	2	.8	1	.4	-	-	-	-	2	.4	1	.2
Marijuana-Possession												
Production	7	2.7	4	1.6	3	1.4	5	2.4	10	2.2	9	1.9
Furnishing, Sales	2	.8	-	-	2	1.0	1	.5	4	.9	1	.2
Dangerous Drugs -												
Possession,	7	2.7	3	1.2	4	1.9	6	2.9	11	2.4	9	1.9
Sales	1	.4	1	.4	-	-	2	1.0	1	.2	3	.6
All Other Drugs	10	3.9	10	3.9	5	2.4	6	2.9	15	3.2	16	3.4
Drunk Driving	7	2.7	11	4.3	7	3.4	11	5.3	14	3.0	22	4.8
All Other Traffic	29	11.3	16	6.3	23	11.1	17	8.2	52	11.2	33	7.1
Non-Support	1	.4	2	.8	2	1.0	3	1.4	3	.6	5	1.1
Drunk & Disorderly	9	3.5	10	3.9	15	7.2	14	6.8	24	5.2	24	5.2
Sex Crimes	-	-	1	.4	-	-	-	-	-	-	1	.2
Miscellaneous-Felony	4	1.6	1	.4	2	1.0	7	3.4	6	1.3	8	1.7
Misdemeanor	20	7.8	10	3.9	30	14.5	23	11.1	50	10.8	33	7.1
TOTAL	164		109		170		194		334		303	
MEAN ARRESTS PER PATIENT	.64		.43		.82		.94		.72		.65	

NOTE: Percents based on total number in each population; status at a minimum of 19 months from program start for all patients, and up to 36 months for some.

## APPENDIX D

### The First 100 Methadone Treatment Patients

Ken Meinhardt, M.D.

Serapio Ortiz is conducting a careful follow-up study of the first patients admitted to this program, starting in February 1970. He has furnished me with preliminary data on the first 100 patients admitted. I found it quite interesting and so am passing along a brief summary of the data. Since Serapio is continuing with the next 100 patients now, I assume there will be a later report coming from Dr. Goldstein's office that will be more thorough than this note.

The time interval from admission to treatment to the time of the follow-up study is a little over three years. Patients not in treatment now were contacted in the community, and their current use of heroin determined by their statement and in most cases by testing a urine specimen voluntarily given.

Forty patients are still in treatment here, and two more have transferred to other programs. Twenty-three of those still in treatment here are free of heroin use (58%). The rest show evidence of some continued narcotic use.

Twenty-seven of the 100 are in jail. Thirty patients are living in the community and not in methadone treatment. Seven are living in this area but couldn't be located, three apparently moved, and five more were known to have moved and some information about them was obtained. Of those located either here or away (20 patients), the evidence is that 14 are not using heroin (70%).

Only one patient has died, of injuries from an automobile accident. (One death per year per 100 addicts from overdosage, etc., is reported to be expectable on street heroin).

Looking at the same data from the point of view of current heroin use without regard to current treatment status, there are 72 patients not in jail or dead, and so free to use or not use heroin. We have information on 60 of these (84%). Of these, 62% are free of heroin use (37 patients) at the present time.

KM/cph

## APPENDIX E

### THE METHADONE PEOPLE'S ORGANIZATION AND SEVER

The Methadone People's Organization (MPO) was developed in June, 1972, at Alum Rock Clinic, formerly called East Valley Clinic. MPO was formed by patients in an attempt to improve patient-staff interface, air patient grievances, and subsequently improve and upgrade services rendered to program members. The MPO was allowed to introduce a variety of changes in program policy, such as longer dispensing hours and patient consultation on matters of program policy. The SERG staff, with assistance from MPO staff members, devised a questionnaire, (SEVER) to tap patient attitudes on a number of pertinent issues before and after MPO activity. Patient views concerning staff, treatment policies, fee policies, dosage levels, and other variables were included in the questionnaire. Research staff, and program staff as well, felt that the MPO efforts presented an opportunity to see if any changes in patient attitudes could be achieved by a non-staff group acting in their behalf. Another reason for the survey's importance is that patients have never been asked their opinions in a systematic (scientific) way.

Research design of the SEVER (Survey of East Valley Experimental Reorganization) instrument provided a three month follow-up to determine if MPO participation had an impact on patients at the Alum Rock Clinic. Central Clinic patients were used as a control population to see if any real changes occurred at Alum Rock as measured on the SEVER questionnaire. No other clinics were surveyed. Prior to MPO activity, survey response included 98 patients from Alum Rock, and 103 patients from Central Clinic. In the follow-up situation, 65 (63.1%) Central Clinic patients were retested, but only 39 (39.8%) Alum Rock patients answered the SEVER questionnaire a second time. Analysis is based upon responses of those individuals who completed the questionnaire initially and were retested after three months.

While much worthwhile data was collected with SEVER, space and time limitations prevented an analysis of all items. Only issues of current or future import, as ascertained by the SERG staff, are dealt with.

#### Fairness of Program Rules

The attitudes of patients concerning enforcement of the program rules by staff can be viewed as a measure of overall program satisfaction. As indicated in Table I, those "agreeing" or "agreeing strongly" that rules were enforced fairly went up at Alum Rock, (55.2% test and 63.2% retest). Those "undecided" at Alum Rock Clinic went down (18.4% test and 2.6% retest), with a corresponding increase by respondents "disagreeing" or disagreeing strongly"

APPENDIX E (Continued)

(26.4% test and 34.2% retest). Central Clinic, the control group, showed nearly the same increase by those patients "agreeing strongly" (45.2% test and 52.3% retest). Ambivalence went up slightly (18.8% test and 20.0% retest), but those in disagreement dropped (36.0% to 27.7% at retest). While Alum Rock showed greater patient satisfaction with the rules, overall, than did Central Clinic patients, the percentage increase on rules enforcement between Alum Rock and Central are about the same; however, "disagree" and "disagree strongly" categories show increase for Alum Rock pre and post over Central Clinic due to movement from the undecided category. There is more polarization of feeling from Alum Rock, which is not true at Central.

TABLE I  
Program Rules Fairly Enforced by Staff

AGREEMENT	Alum Rock				Central			
	Test		Retest		Test		Retest	
	No.	%	No.	%	No.	%	No.	%
Agree Strongly	5	13.2	1	2.6	8	12.4	6	9.2
Agree	16	42.0	23	60.6	21	32.8	28	43.1
Undecided	7	18.4	1	2.6	12	18.8	13	20.0
Disagree	5	13.2	11	28.9	14	21.9	11	16.9
Disagree Strongly	5	13.2	2	5.3	9	14.1	7	10.8
TOTAL	38	100.0	38	100.0	64	100.0	65	100.0

\* The number of respondents may vary as some patients left items blank.

Fairness of Dosage Policy

The fairness of dosage policy, quite a sensitive area, showed an interesting trend. During the period between test and retest, rumors circulated, mostly at Central Clinic, that staff were manipulating dosage levels. As expected, the retest showed substantially less agreement at Central concerning fairness of dosage policy than did the initial test (22 patients-33.7% test and 13 patients-20.4% retest), indicating that dosage policy was felt to be more unfair at Central. Undecided respondents at Central increased from 16.9% (11) at test to 28.1% (18) at

APPENDIX E (Continued)

retest. as did patients "disagreeing" and disagreeing strongly" that dosage policy is fair (32 patients-49.2% test and 51.5% retest). Alum Rock, in contrast, showed little movement of respondents concerning dosage policy when the SEVER instrument was readministered. Those "agreeing" or "agreeing strongly" fell slightly from 36.8% (14) at the initial test, to 34.1% (13) at retest. Ambivalent responses dropped slightly also, from 15.8% (6) initially to 13.2% (5) at follow-up. Some increase in patients "disagreeing" or "disagreeing strongly" was noted (18 patients-47.7% test and 20 patients-52.7% retest). In this instance the MPO seem to have mitigated a potentially disruptive issue. The sensitivity of the SEVER instrument is also pointed up with the above question.

TABLE II  
Present Program is Helping Patients (Other than Methadone)

AGREEMENT	Alum Rock				Central			
	Test		Retest		Test		Retest	
	No.	%	No.	%	No.	%	No.	%
Agree Strongly	-		-		2	3.1	-	
Agree	5	13.2	7	17.9	10	15.6	18	28.1
Undecided	11	28.9	16	41.1	21	32.8	23	35.9
Disagree	14	36.8	8	20.5	14	21.9	11	17.2
Disagree Strongly	8	21.1	8	20.5	17	26.6	12	18.8
TOTAL	38	100.0	39	100.0	64	100.0	64	100.0

Program Services

The need for increased services (other than Methadone) is clearly evident when patient responses to the SEVER

question "Present program is helping patients" (other than methadone) are examined (Table III). Only two individuals (3.1%) as the table shows, agreed strongly at either test or retest, that efforts other than methadone were helpful. These respondents were at Central Clinic. By far, the greatest number of patients were dissatisfied with the program's offerings, and little improvement was noted at follow-up. Increases were greater during the test-retest time period at Central Clinic, indicating a lack of significant impact by MPO.

TABLE III

Methadone Alone is Helping You

	Alum Rock				Central			
	Test		Retest		Test		Retest	
	No.	%	No.	%	No.	%	No.	%
Agree Strongly	10	25.6	5	13.2	20	31.3	11	16.9
Agree	17	43.7	21	55.2	30	46.8	33	50.9
Undecided	2	5.1	6	15.8	8	12.5	9	13.8
Disagree	3	7.7	3	7.9	6	9.4	6	9.2
Disagree Strongly	7	17.9	3	7.9	-	-	6	9.2
TOTAL	39	100.0	38	100.0	64	100.0	65	100.0

Methadone Help

Closely related to the previously discussed issue is the question, "Is Methadone alone helping you?" This question was included as being more generally related to patient attitudes toward the program and will be used in comparison with other population attitude data. Table III shows patients currently feel that "the chemical is the cure." Nearly two thirds of the patients at Alum Rock and over 3/4's of the patients at Central Clinic "agreed" or "agreed strongly" with the above issue in the test situation (Alum Rock 27 patients-63.9% and Central 50 patients-78.1%). As can be seen (Table III) the agreement dropped somewhat at retest for both groups. Alum Rock had an increase in undecided at

TABLE IV

Addiction Specialists Treat You Fairly

Agreement	Alum Rock				Central			
	Test		Retest		Test		Retest	
	No.	%	No.	%	No.	%	No.	%
Agree Strongly	9	23.1	3	7.9	16	25.4	13	20.3
Agree	16	41.0	30	78.9	32	50.7	36	56.2
Undecided	5	12.8	2	5.3	10	15.9	12	18.8
Disagree	5	12.8	2	5.3	3	4.8	1	1.6
Disagree Strongly	4	10.3	1	2.6	2	3.2	2	3.1
Total	39	100.0	38	100.0	63	100.0	64	100.0

TABLE V

Vocational Counselors Treat You Fairly

Agreement	Alum Rock				Central			
	Test		Retest		Test		Retest	
	No.	%	No.	%	No.	%	No.	%
Agree Strongly	3	7.7	2	5.1	4	6.2	5	7.7
Agree	11	28.2	20	51.4	22	33.8	17	26.2
Undecided	5	12.8	7	17.9	24	37.0	30	46.1
Disagree	9	23.1	5	12.8	6	9.2	8	12.3
Disagree Strongly	11	28.2	5	12.8	9	13.8	5	7.7
Total	39	100.0	39	100.0	65	100.0	65	100.0



retest, but this was offset by a decline in the number of patients in disagreement that methadone was helping them. "Undecided" Central respondents remained nearly the same (8-12.5% test and 9 - 13.8% retest), yet those in disagreement nearly doubled.

#### Staff Fairness

Tables IV and V both deal with the fairness of treatment patients feel they receive from certain staff, in this instance vocational services counselors and addiction specialists. As the tables indicate at Alum Rock, a very large increase in patient satisfaction with staff occurred. Over a 20% increment was observed at Alum Rock between test and retest, concerning fairness of vocational counselors (Table V). A corresponding drop in the number of dissatisfied respondents occurred with a slight rise in ambivalence. Addiction specialists, the primary contact between the staff and patients, were given a vote of confidence, as almost 87% (86.8%) of patients "agreed" or "agreed strongly" that the addiction specialists gave them fair treatment. As can be seen in Table V, a drop in satisfaction with the vocational counselor at Central Clinic took place between the initial test and follow-up. For a portion of this time, no permanent counselor was available. "Undecided" Central Clinic respondents increased somewhat and patients in "disagreement" that vocational counselors treatment was fair decreased. Satisfaction at Central with the treatment by addiction specialists remained nearly constant (Table IV) with a slight rise in the number in agreement with the item, and also a rise in the "undecided" category.

#### Conclusions

SEVER indicates the MPO made some gains in improving patient perceptions of staff at Alum Rock Clinic over a three month period of time. Increased satisfaction with both the vocational counselors and addiction specialists is readily apparent. Attitudes became polarized about issues concerning the overall program policies and treatment methods; here respondents were influenced away from "undecided" answers. It is noteworthy that the Methadone People's Organization has been functionally disbanded since the follow-up portion of SEVER was collected. However, as the clinics attempt to move in the direction of intensified counseling and individual services, the need for a group able to adequately express the patient needs will become more and more important.

#### APPENDIX F

##### LEVEL OF CRIMINAL INVOLVEMENT

#### CODES

- 00 No Arrest
- 01 Arrest - no Conviction
- 02 Conviction - Fine and/or Suspended Sentence
- 03 Conviction - Continued Probation
- 04 Conviction - New Probation Grant or Extension
- 05 Conviction - Jail or Fine
- 06 Conviction - Jail Only
- 07 Conviction - Continued Probation and Jail (not suspended)
- 08 Conviction - New Grant or Extension and Jail (not suspended)
- 09 Conviction - Revoke Probation, Jail not Suspended
- 10 Convicted - Committed to DMH (Department of Mental Hygiene)
- 11 Convicted - Committed to CYA (California Youth Authority)
- 12 Convicted - Committed to CRC (California Rehabilitation Center)
- 13 Convicted - Committed to CDC (California Department of Corrections)
- 14 Convicted - Committed to Federal Prison

# APPENDIX G

## STATEMENTS BY FAMILY INTERVIEW RESPONDENTS

- Jerome .....He is on a Methadone program and doing very well.
- Kim.....Kim came off the program clean within a 6 month period and has remained so. We appreciate the program efforts---sure much could be gained from interviews with those closely associated in home life with participants of the program.
- Wayne.....The program has done wonders for Wayne--he is now going to school. I'm all for the program, it's a pity there isn't more programs like it. Wayne has tried other programs but nothing else worked.
- Tom.....We were always accepting of Tom in that we loved him and wanted to help him, but we couldn't seem to reach him. That attitude has changed since his being on the program. We don't know if he has any new friends. He has, however, stopped going around with or seeing any of his old friends who were using drugs. He still has broken sleep sometimes. We think it's worry about going to court. He, and we, don't want him to get off the program for any reason. We are hoping the probation department will recommend a fine or stiffer probation so he doesn't get sent to jail and lose the program and his job.
- Lawrence.....He has completed the methadone program and has been self-sustaining for almost 10 months. We will always be grateful for what the methadone program has done for us. God bless you all!
- Trinidad.....I think the methadone program is fine in helping them get off heroin. But what is the use really? They get just as addicted and they seem just as loaded (drowsy). You should (after curing them from heroin) try to get them off methadone as soon as possible. For one reason that it is really bad for their health and the main reason is that most all the patients that go there just use the clinic for a place to meet their friends. My husband has made more friends than ever from going to the clinic. They are all a bunch of no-goods. If you want to cure them from heroin you have to stop their association with heroin addicts!! There should be some more rules made that the patient has to take his medication and leave. That means no loitering outside either!

## APPENDIX G (Continued)

- Robert.....All of the members of the family were very pleased with the way Robert has been reacting to this program. We're very thankful there's such a thing and hope many other young people with this disease will get the opportunity to try and help themselves. He's gained a lot of weight he looks good.
- Gary.....I believe this program has saved his life and my sanity.
- R.I.....Instead of just physical treatment I think you should try to find out why these people used drugs in the first place. Any try to eliminate these problems. I don't feel being around other addicts is good for the patient. When one or more of these people are talking together there's nothing else on their mind but dope. You should try to keep them away from each other. Your program isn't perfect but it's 100% better than anything else has been. Right now he is serving his 4 months in jail and trying to withdraw from methadone. He says it's so much harder than withdrawing from heroin. Another suggestion for your program is teaching the family of these people the best way to help the ones they love. So often by not knowing which way to turn you can push these people to take drugs even more.

## APPENDIX H

COMBINATION SCALE FOR S.T.I.R. INCLUDES  
ELMWOOD AND VACAVILLE TOTALS

<u>OFFENSE</u>	<u>MEDIANS**</u>	<u>ADJUSTED SCALE</u>
<u>Child Molesting*</u>	9.78	9
Murder, 1st*	9.75	9
Forcible Rape*	9.67	9
Kidnapping*	9.56	9
Kidnap--robbery or ransom	9.54	9
Robbery, 1st--real gun*	8.73	9
Possession of Heroin for Sale	8.61	9
Escape with force*	8.27	8
Narcotic Sale	8.20	8
Assault with a deadly weapon	8.09	8
Incest	7.95	8
Murder, 2nd	7.95	8
Attempted murder	7.94	8
Arson*	7.85	8
<u>Possession of Dangerous Drugs for Sale</u>	7.38	7
Habitual criminal	7.32	7
<u>Maintaining a place where narcotics are used or sold</u>	6.91	7
Sex Perversion	6.69	7
<u>Possession of Heroin</u>	6.25	6
Cruelty towards child (beating)		6
<u>Non-Support of children</u>	6.12	6
Robbery, 1st--toy gun	5.89	6
Burglary, 1st	5.84	6
<u>Extortion</u>	5.67	6

## APPENDIX H (Continued)

<u>OFFENSE</u>	<u>MEDIANS**</u>	<u>ADJUSTED SCALE</u>
<u>Burglary</u>	5.40	5
<u>Drunk driving</u>	5.40	5
Rape by trick, etc.	5.39	5
TFT, potential menace	5.19	5
Driving under influence of drug		5
Lewd and lascivious	5.15	5
Robbery, 2nd	5.14	5
Attempted robbery	5.12	5
<u>Embezzlement</u>	5.12	5
Manslaughter*	5.10	5
<u>Inciting to riot</u>	5.04	5
Abortion*	4.98	5
<u>Assault and Battery</u>	4.87	5
Parole violator at large, known crime	4.85	5
Glue sniffing		5
<u>Fraud</u>	4.79	5
False prescription		5
<u>Forgery</u>	4.76	5
<u>Battery and/or assault on a Peace Officer</u>	4.74	5
<u>Possession of narcotic paraphernalia</u>	4.70	5
<u>Contributing to the delinquency of a minor</u>	4.63	5
Possession of gun--ex-con	4.62	5
Narcotics, possession	4.57	5
False imprisonment		5
<u>Possession of dangerous drugs</u>	4.43	4
Indecent exposure		4
Burglary, 2nd	4.33	4
Forgery, \$300 plus	3.96	4
Misuse of credit card		4
<u>Drinking in a car</u>	3.54	4

## APPENDIX H (Continued)

<u>OFFENSE</u>	<u>MEDIANS**</u>	<u>ADJUSTED SCALE</u>
Grand Theft*	3.38	3
Hit and run--injury		3
<u>Possession of Marijuana for sale</u>	3.30	3
Perjury		3
<u>Receiving stolen property</u>	3.19	3
Auto Theft*	3.12	3
<u>Non-support of wife</u>	2.83	3
Attempted burglary, 2nd		3
Escape without force	2.75	3
Vagrancy, lewd	2.69	3
Outraging public decency		3
TFT, behavior problem	2.62	3
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Fictitious or NSF checks	2.11	2
<u>Violation of probation</u>	2.05	2
Resisting arrest		2
Filing false report		2
Hit and run--property		2
Joyriding (temporarily taking car)		2
Conspiracy		2
Reckless driving		2
Contempt of Court		2
Addict		2
<u>Possession of Marijuana</u>	1.75	2
Rape, statutory	1.74	2
Forgery, \$100	1.59	2
<hr/>		
<u>Prostitution</u>	1.48	1
TFT, Criminal not prosecuted	1.46	1
<u>Disturbing the peace</u>	1.42	1
Parole violator at large, no crime	1.38	1

## APPENDIX H (Continued)

<u>OFFENSE</u>	<u>MEDIANS**</u>	<u>ADJUSTED SCALE</u>
Speeding		1
<u>Driving without a license</u>	1.30	1
Petty Theft*	1.20	1
<u>Drunk in public</u>	1.20	1
<u>Vagrancy</u>	.94	1
Tampering with vehicle		1
Visiting place where narcotics used		1
Possession of alcohol by minor		1
Selective Service violation		1
Malicious Mischief		1

\* Offense rated at both Elmwood and Vacaville, Vacaville medians used.

\*\* Where there are no median values reported, the offense was estimated by correctional personnel to be the Adjusted Scale value assigned.

UNDERLINED: Offenses rated at Elmwood.

**END**