



**Santa Clara Valley Health and Hospital System
Department of Alcohol & Drug Services**

**ALCOHOL & DRUG SERVICES RESEARCH INSTITUTE
SANTA CLARA COUNTY, CALIFORNIA**

**OUTCOME EVALUATION OF THE DEPARTMENT OF ALCOHOL AND DRUG
SERVICES USING PERFORMANCE INDICATORS FROM SECONDARY DATA**

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EXECUTIVE SUMMARY

Over the past three years the Department of Alcohol and Drug Services (DADS) has made arrangements with several county agencies and departments to obtain data about DADS clients for the purpose of this evaluation. It has now constructed a database containing information from Criminal Justice Information Control (CJIC), whose database contains information about arrests, convictions, and incarcerations; Social Services Administration's division of Employment Support, from which was extracted information about public assistance support and Medi-Cal eligibility; and Health and Hospital Systems Valley Medical Center, Ambulatory Care, and Department of Mental Health, from which service utilization was tracked. This report covers adult detoxification, residential, and outpatient clients who were treated in Fiscal Years 1997 to 2000. Their activity in other systems was tracked from the year before their first admission in any given fiscal year to the year after their last discharge from an admission in the fiscal year.

The impact of substance abuse treatment is reflected in the following principal findings:

Goal 1: Reduction or elimination of abusive substance use

- Recidivism rates are low.
- Drug-related arrests and convictions are reduced by more than half when comparing pre- to post-treatment.
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Goal 2: Ability to care for oneself financially

- Public assistance is slightly reduced from pre- to post-treatment.

Goal 3: Mentally healthy

- Receipt of mental health services is down slightly following treatment.

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Goal 4: Ability to care for oneself physically

- While hospitalizations do not decrease, emergency room visits decline from pre- to post-treatment
- Outpatient visit rates increase from pre- to post-treatment, possibly indicating client's awareness of the need to take proper care of themselves

Goal 5: Freedom from legal difficulties

- Arrests and convictions for any crime decline substantially from one year before to one year after treatment

Conclusion: Substance abuse treatment has a significant positive impact on the lives of clients and reduces costs in other county services as well.



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When evaluating client treatment outcomes, the use of secondary data as a substitute for or supplement to collection of data directly from clients is a cost-effective option. Since the goals of our programs include outcomes reflected in data collected by other agencies, it is possible to use them as indicators of the success of a program. This is, potentially, the least expensive method of gathering outcomes data to monitor program performance. It has the advantage of providing measures for all clients, rather than for only a random sample of clients that is typical in outcome evaluations due to cost of interviewing.

Background. The state of Oregon has been a pioneer in the use of secondary data to address substance abuse client outcomes system-wide (Finigan, 1996). Supplementing their client process monitoring system are the following: the Law Enforcement Data System for arrests, the Offender Profile System from the state Department of Corrections, the Adult and Family Services database containing public assistance payments (welfare, food stamps, emergency assistance, etc.), the Office of Medical Assistance Programs (Medicaid), and Children's Services Division. Access to the Employment Division database was denied. They compared information for treatment completers with a matched sample of those who had little treatment, using secondary data from two years prior to three years after treatment completion. Treatment completion was associated with fewer arrests and convictions, fewer incarcerations and incarceration days, reduced use of food stamps, more child welfare case closings, and lower medical expenses.

Other states have followed this route as well, e.g., Washington (Stark, 1998), which was able to gain the cooperation of their Employment Security Department, finding that treatment completers had better employment and earnings outcomes.

There are difficulties with this approach, but potentially it is the most cost-effective approach to program evaluation. The most difficult, and costly, period is during setup. Departmental representatives for each potential data source are contacted, and proper

confidentiality concerns are thoroughly addressed. A multitude of problems appear concerned with the meaning of the data to be used, how it can be merged with departmental data, the timeliness of data entry in various systems, and divergent confidentiality requirements. The quality of the data is a real issue when secondary use is contemplated. These data were not collected for this purpose, so that a thorough investigation of the quality of data collection and input takes place. Coming to an understanding of the meanings of various data elements is necessary: for example, would re-arrest for a probation violation count as a new arrest in the same manner as an arrest for a new charge? However, after the initial setup, the cost of this kind of system is quite low compared to an approach involving client interviews. It is well to keep in mind, however, clients might be arrested or have received services in other counties or from other providers. Coverage is not complete.

Over the past three years the Department has made arrangements with several county agencies to obtain data about clients for the purpose of this evaluation. The following agencies and departments are included: Criminal Justice Information Control (CJIC), whose database contains information about arrests, convictions, and incarcerations; Social Services Administration's division of Employment Support, from which was extracted information about public assistance support and Medi-Cal eligibility; and Health and Hospital Systems Valley Medical Center, Ambulatory Care, and Department of Mental Health, from which service utilization was tracked.

Questions to be addressed using secondary data sources. Goals for our substance abuse treatment programs include not only reduction or elimination of substance abuse, but lack of problems with housing, ability to care for oneself both physically and financially, being mentally healthy, and being in a relatively supportive environment and free of legal difficulties. These goals are reflected in the Performance Based Budgeting (PBB) goals and performance measures. Not all of these goals can be addressed through other agencies' databases, but a number of them can.

Definitions used in this report. Clients who entered the adult system of care from fiscal year 1997 to fiscal year 2000 are the subjects of this report. Only clients entering detoxification, residential or outpatient services are included in this report; Addiction Medicine Therapy clients will be the subject of a separate report. The report uses an unduplicated count of clients from each year of treatment, i.e. if a client returns to the system in a later year he or she will be counted again for that year.

In this report, the year *before treatment* is defined as 365 days before the day of admission to the first treatment episode opened for the reporting fiscal year. The year *after treatment* is defined as 365 days after treatment from the discharge date of the last treatment episode of the reporting fiscal year.

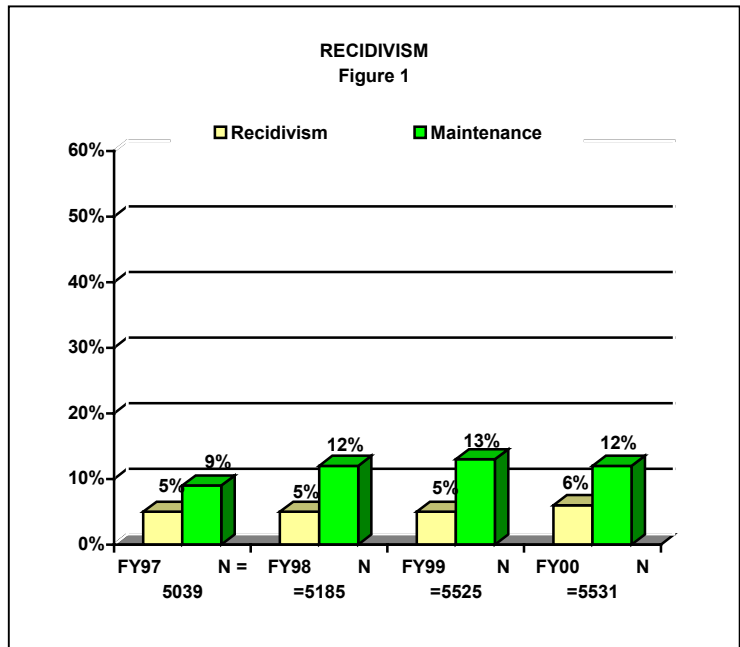
For each performance indicator, both the percentage of clients involved and the rate of use is given. The rate is the number of services, or arrests, that occurred during the time period in question. The latter is not used for recidivism, nor for public assistance or Medi-Cal data.

1). The most important goal for substance abuse treatment programs is a reduction in or elimination of abusive substance use. Unfortunately, we have only imperfect indicators available in secondary data sources.

a). An imperfect measure of the lack of achievement of reduction or elimination of substance abuse is recidivism, a return to the substance abuse treatment system with a level of use equivalent to or more than the previous treatment. This is available from our departmental MIS. 'Frequency of use' is measured at both admission and discharge. A second indicator of level of use is treatment placement. If more intensive services are required for a re-admission, the person has been assessed as having a more severe problem than previously.

FINDINGS

Figure 1 shows the results of the recidivism within DADS. Recidivism is defined as client returning to treatment within one year of discharge with a higher level of drug use or higher level of treatment. For example, a client may have gone through our system of care and been discharged from outpatient services. If he or she returned for detoxification or residential service, or at a higher level of use, it represents recidivism. Other returns to treatment are considered maintenance returns.



- ◆ There are two columns in the graph. The first column is the actual recidivism rate.
- ◆ The second column represents clients returning to treatment for maintenance, i.e. to reinforce skills that had been learned in earlier treatment.

b). Specific arrest and conviction charges are indicative of use of a substance, for example, driving under the influence of alcohol, or use of an illegal drug. This

information is available from county criminal justice records at Criminal Justice Information Control (CJIC).

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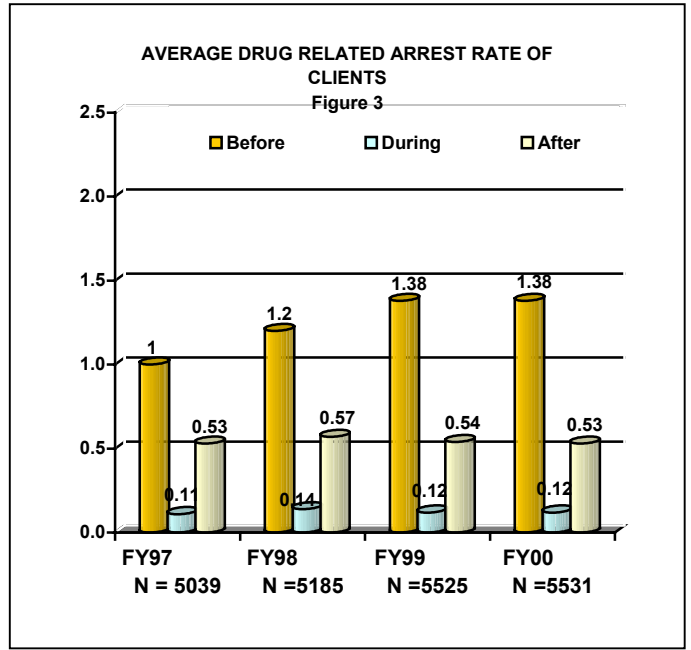
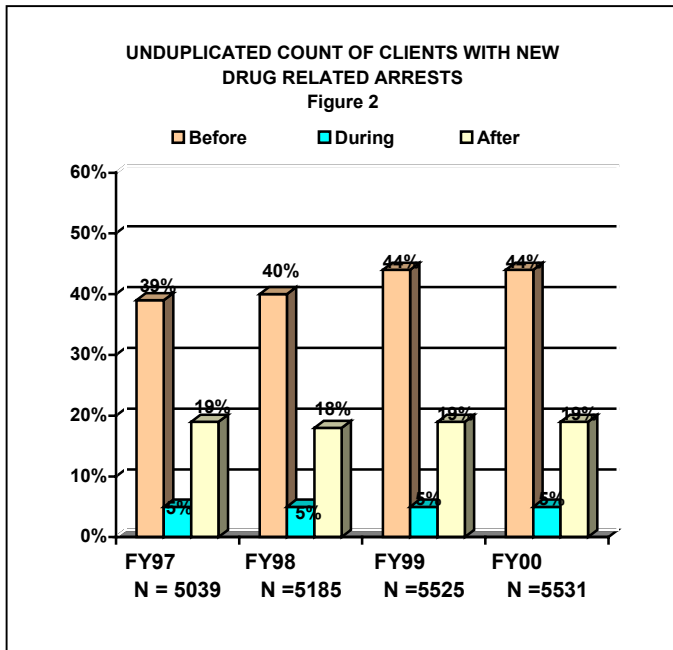


Figure 2 and figure 3 show a comparison of new drug related arrests before and after substance abuse treatment within DADS. Figure 2 compares the percentage of actual unduplicated clients and figure 3 compares the drug related arrest rate. The rate reflects the fact that some clients are not arrested at all while other may have several arrests.

- ◆ Over the four-year period, there was an observed increase in clients with drug arrests entering DADS’ treatment system.
- ◆ Despite the increase, the reduction of drug arrests at discharge remained at a steady rate for all four years.
- ◆ In addition, during the client stay in treatment, 95% of the clients remained arrest-free of drug charges. This is an early indication that treatment does work, at least in the treatment setting, in preventing criminal behavior relating to drugs. However, it is important to note that length of stay can range from 1 days to well over 100 days.

- ◆ Figure 3 shows that the arrest rate is substantially reduced for substance abuse clients one year after discharge from treatment

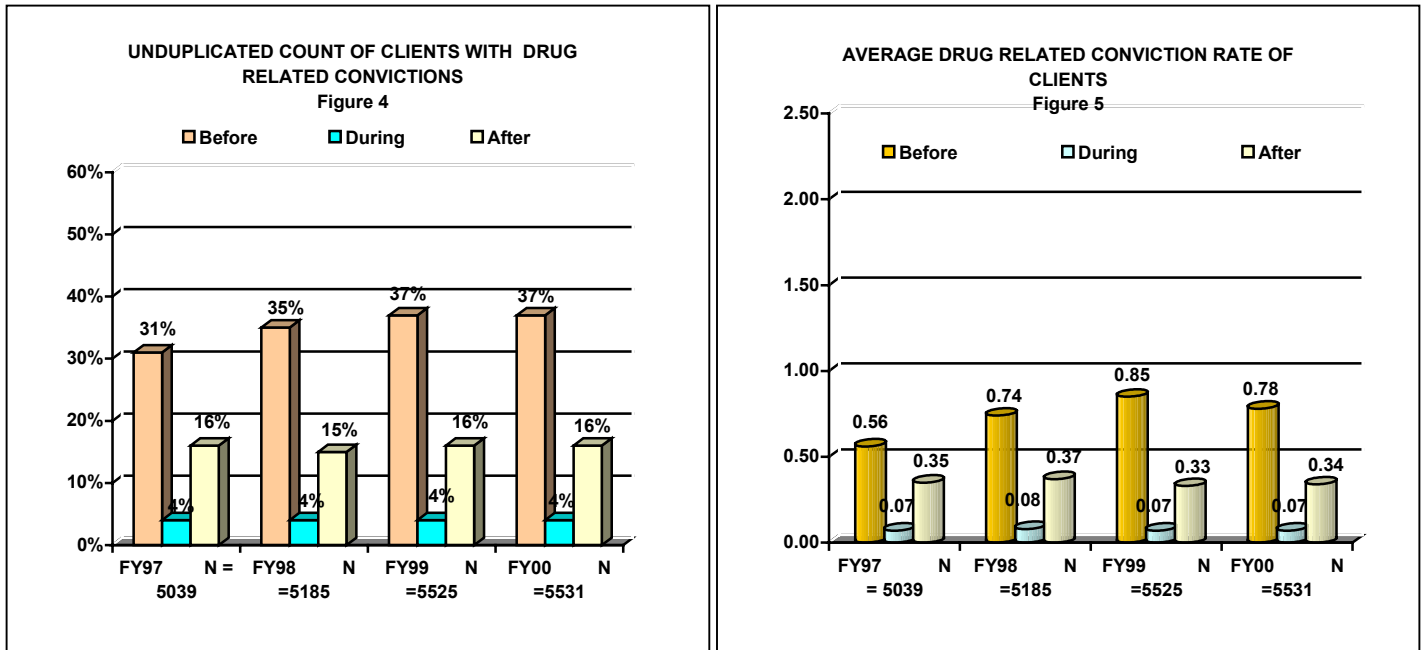


Figure 4 and figure 5 show a comparison of drug related convictions before and after substance abuse treatment within DADS. Figure 4 compares the percentage of actual unduplicated clients and figure 5 compares the drug related conviction rates.

- ◆ The drug related conviction figures show a dramatic drop for clients with drug related convictions and in conviction rates after substance abuse treatment.

2). Being better able to care for oneself financially, through productive work, is a generic goal for all adults. When people abuse substances so badly that they are in need of treatment, they are often not able to maintain their employment and come to us as unemployed individuals. Gaining productive work is therefore a goal of treatment in that this will be of help in order to sustain gains made in treatment of their substance abuse.

In this county, the Social Services Administration has data about our clients who were on TANF/CalWorks or General Assistance, or received food stamps, when they came into treatment and whether or not clients continue to be dependent on public benefits following their treatment. This is an incomplete measure of caring for oneself financially. The next phase of this project is to obtain data from the Economic

Development Department (EDD). At that time we will be able to assess the ability to care for oneself financially over time, by analyzing wages and receipt of unemployment insurance data furnished by EDD.

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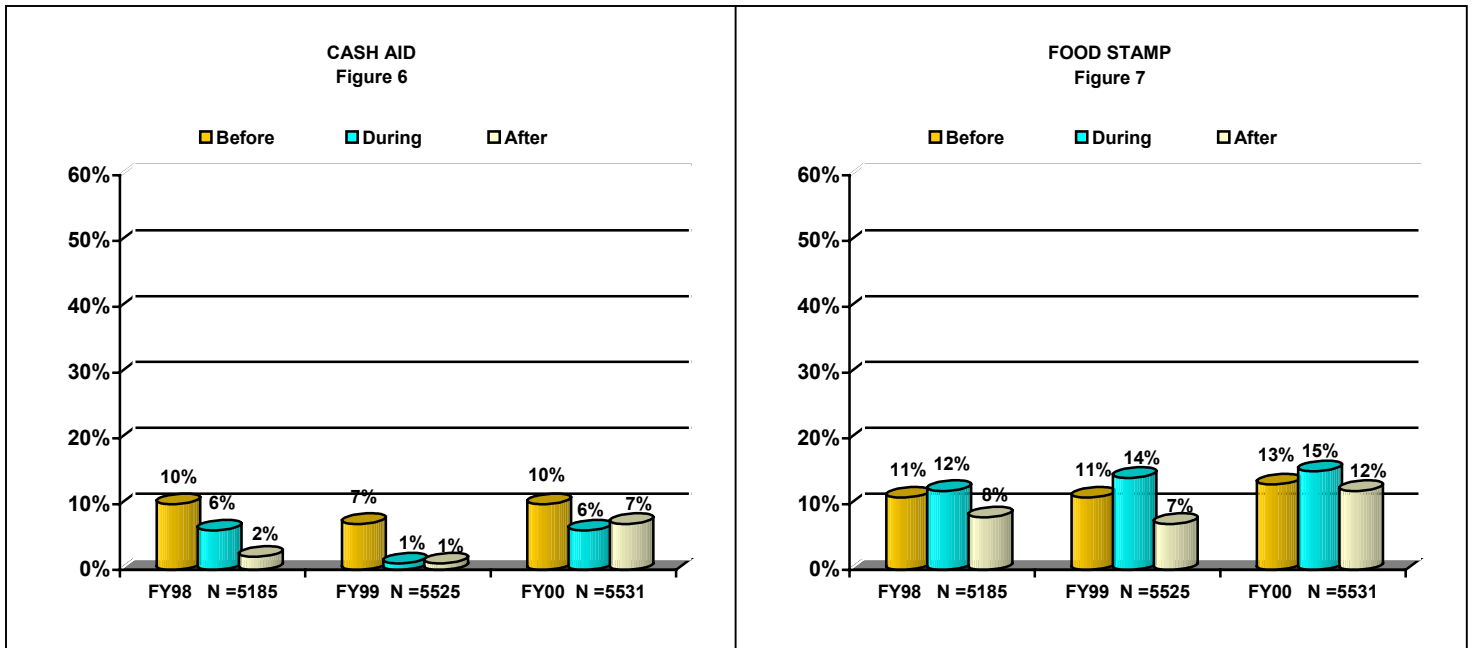
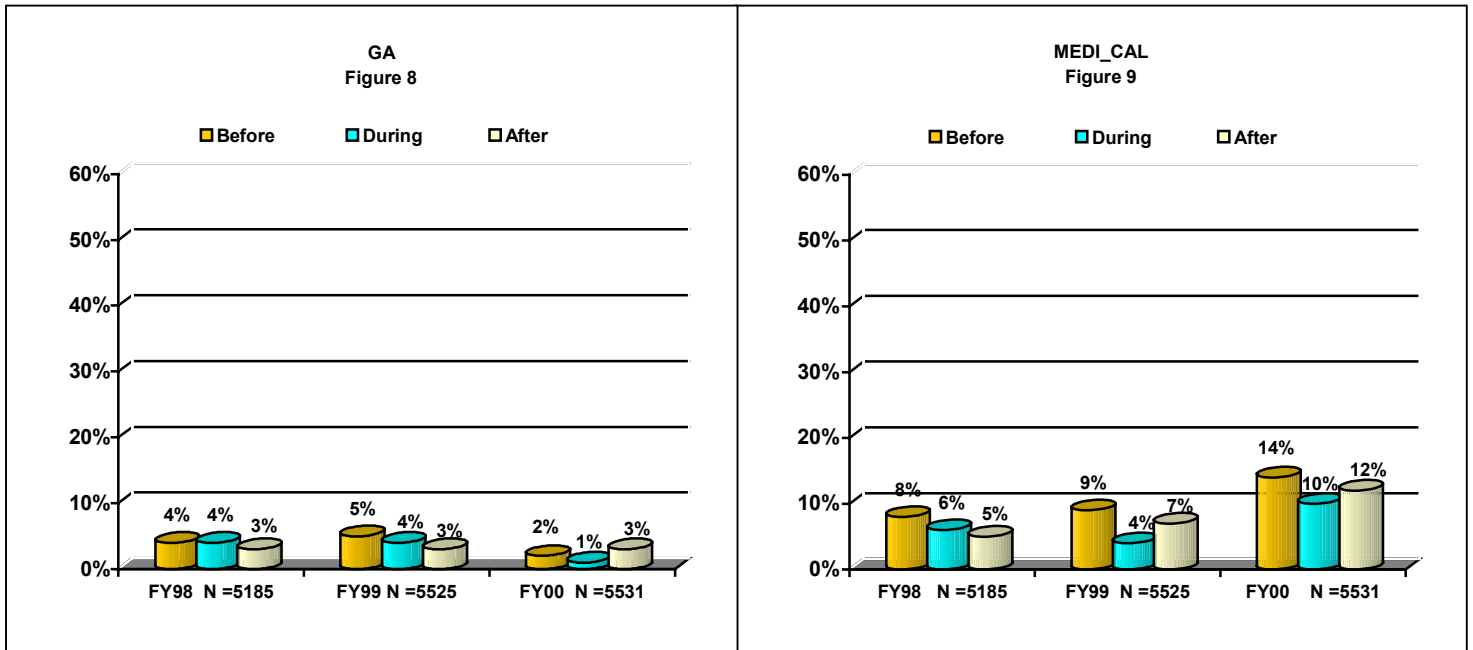


Figure 6 to figure 9 show the trend of substance abuse clients and their assistance from social services agency for fiscal year 1998, fiscal year 1999, and fiscal year 2000. Fiscal year 1997 was not included in this section of the report because the data were not available.

- ◆ There is an overall reduction rate in the rate of cash aid from pre-to-post treatment for the three reporting years, less so for FY2000.
- ◆ The reduction in rate is the same for food stamp recipients. FY2000 had the lowest reduction rate. This is an indication monitoring needs to continue in future fiscal years.



- ◆ The number of clients receiving General Assistance (GA) sometime during the period is low overall, and shows a very slight reduction from pre- to post-treatment in the first two years. In FY 2000 the proportion of clients receiving GA increases slightly after treatment.
- ◆ With Medi-Cal, the reduction from pre-to-post treatment is about the same for all three fiscal years.
- ◆ It must be noted that for FY2000, there is an overall increase in substance abuse clients receiving social services assistance. This maybe due to the dramatic rises in the unemployment rate in the county (See SSA's Employment Support Initiative, Nov. 2001).

3). Another goal of treatment is to ensure that a client has a positive sense of well-being, or at least is not in psychological distress.

This can be measured imperfectly by examining their usage of county mental health services. Being mentally healthy can be measured in a very gross sense by lack of contact with the mental health system. Information from the Santa Clara Valley Health and Hospital System mental health databases can be accessed in order to assess whether or not clients improve, in terms of decreased utilization, after their substance abuse treatment.

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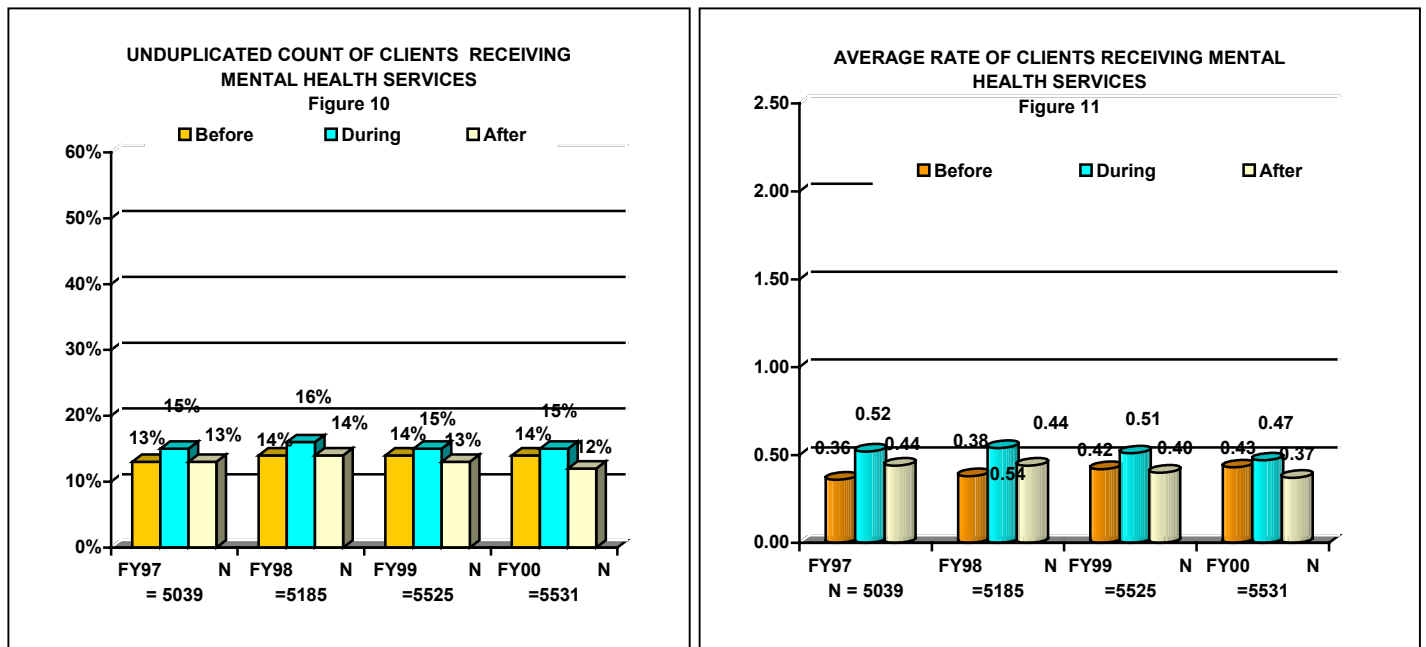


Figure 10 and figure 11 show substance abuse clients' activities in the mental health system before and after substance abuse treatment.

- ◆ There was a slight increase in substance abuse clients receiving mental health services during substance abuse treatment for all fiscal years. This was followed a slight decrease after substance abuse treatment.
- ◆ For mental health services, the rate refers to the number of episodes that were opened during the period in question, rather than the number of services received. This rate increased during treatment and decreased slightly following treatment .

4). Physical illness can hinder a client's ability to benefit from a substance abuse treatment experience.

Another aim for treatment programs for adult services is to improve the physical health status of clients. The degree to which a client is physically ill can be imperfectly measured by the lack of hospitalizations and emergency room visits, and secondarily by the lack of non-routine care in outpatient clinics. Information about length of stay and diagnosis can be used to assess severity and to rule out diagnoses that are well beyond the ability of the DADS treatment system to address. Information from the

Santa Clara Valley Health and Hospital System's medical and outpatient clinics will be used.

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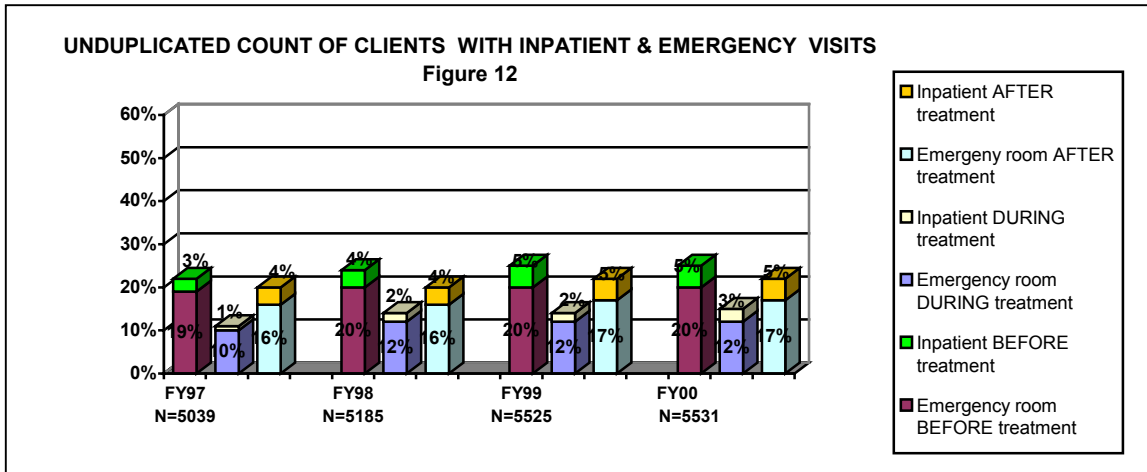
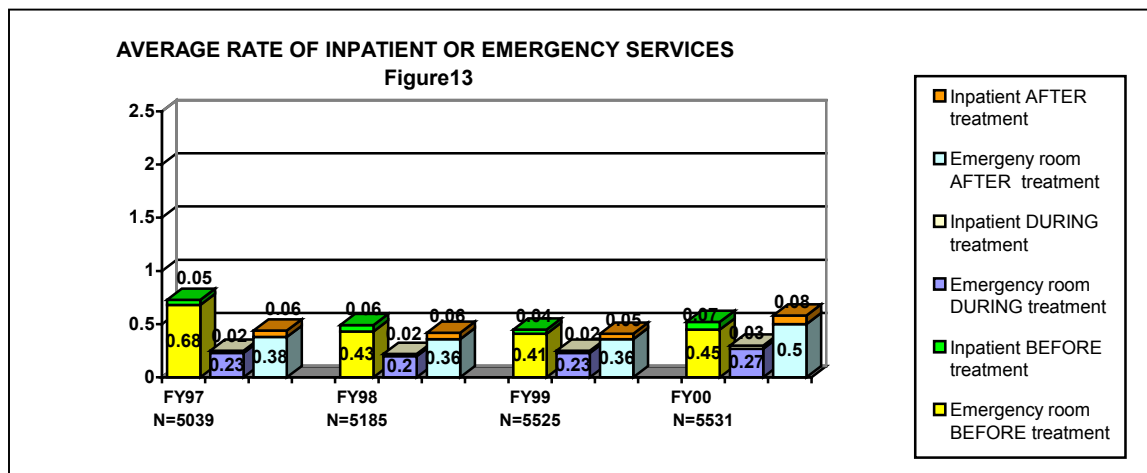


Figure 12 and figure 13 illustrate the rate of clients receiving inpatient and emergency care at Valley Medical Center before and after substance abuse treatment.



- ◆ There is a slight increase in the number of clients receiving inpatient hospital services for fiscal year 1997, but there were no changes for the other three fiscal years.
- ◆ Emergency room services, on the other hand, drop slightly from pre- to post-treatment, involving about 20% of DADS clients in the year prior to treatment and 17% in the year after treatment.

- ◆ There is a decrease in emergency room rates after treatment for fiscal year 97, 98 and 99, and a slight increase in emergency room service rate for fiscal year 2000.
- ◆ There were no significant changes in the rate of inpatient services for all four fiscal years.

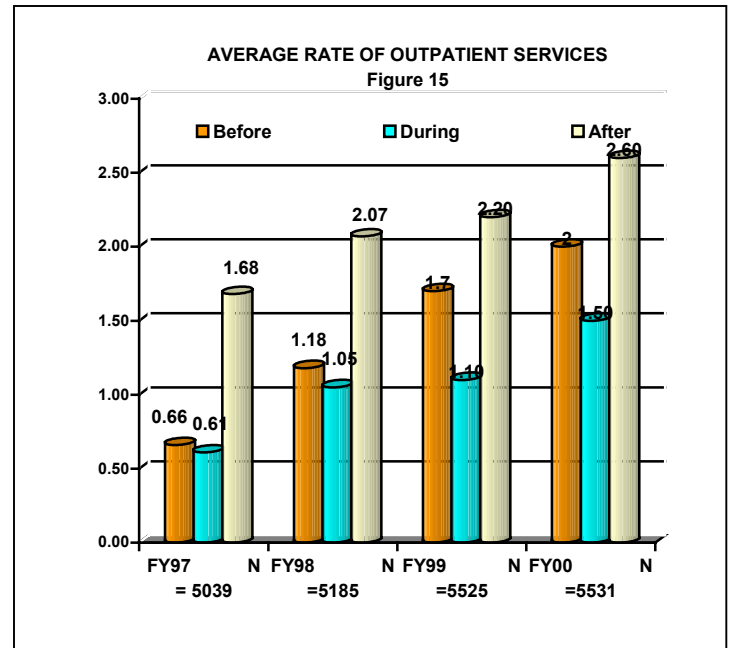
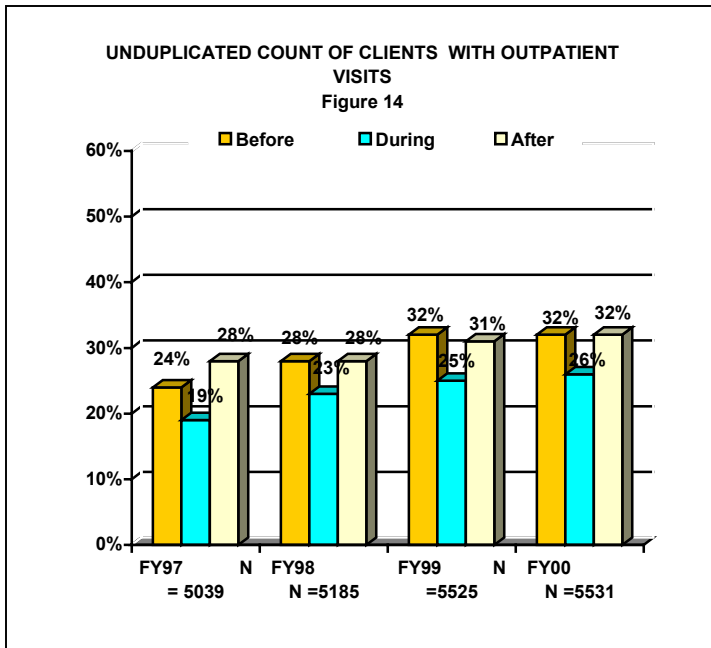


Figure 14 and figure 15 illustrate the rate of clients receiving outpatient care at the VMC ambulatory care sites before and after substance abuse treatment.

- ◆ Figure 15 shows an increase in the outpatient service rate for substance abuse clients after treatment. This could be an indication that clients learn to take care of their medical need properly.
- ◆ While the rate of services had a strong increase, the client count remained at the same level before and after substance abuse treatment (see fig.14). This may further support the premise that clients are learning to take proper care of their medical needs.

5). Treatment for substance abuse should reduce crime significantly, not only for drug use offenses but for those charges that are associated with substance abuse -- when pharmacological effects contribute (e.g., violence), when users are motivated by need to buy substances (e.g., theft), and drug distribution-related offenses and other criminal offenses.

Many of our clients (well over half of all adult clients) are referred by criminal justice sources, or are on probation or parole. Legal difficulties can be measured by contacts with the criminal justice system - arrests by city police officers across the county, bookings, convictions, incarcerations, warrants and jail time served. This report includes data on arrests and convictions. Convictions for offenses committed prior to treatment are included in the pre-treatment counts and rates.

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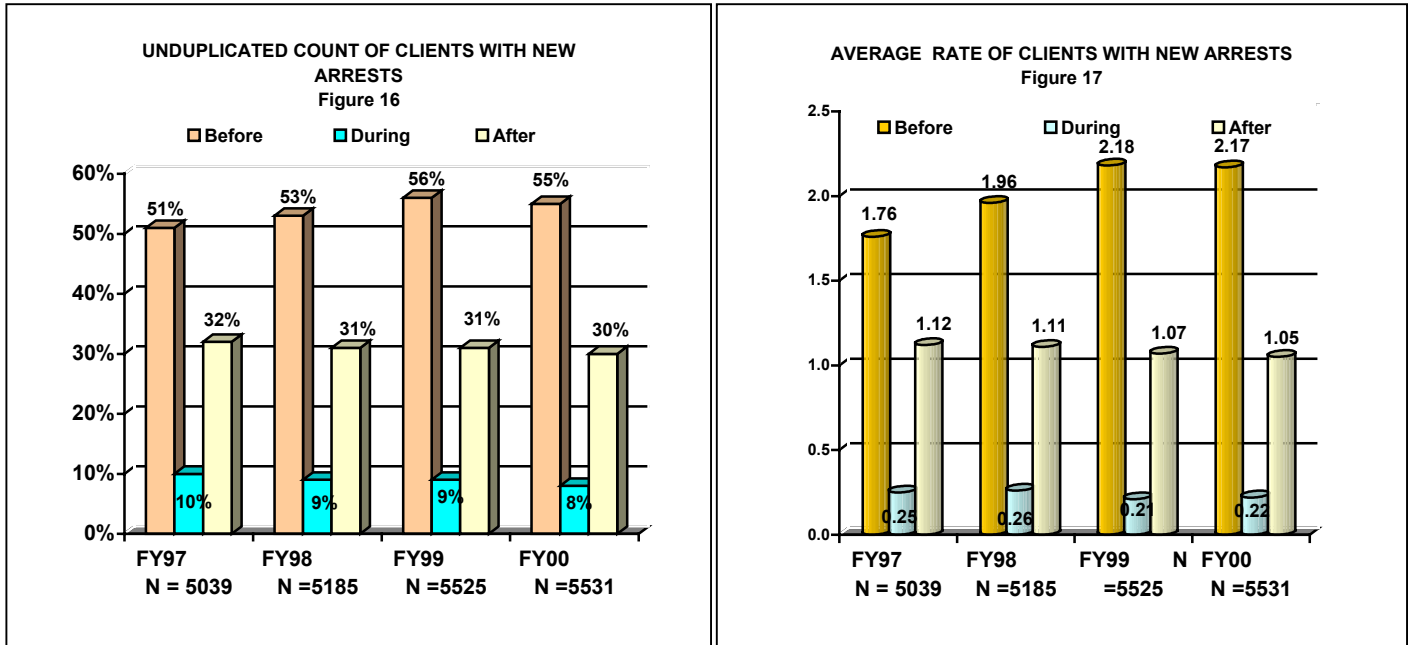


Figure 16 and figure17 show the total arrest of clients before and after substance abuse treatment.

- ◆ The percentage of clients with new arrests prior to treatment is over 50% and increases slightly over the four years observed, while arrests following treatment drop to less than a third of the clients in all four years.
- ◆ There is a large decrease from pre-to post in the total new arrest rate for all four fiscal years.

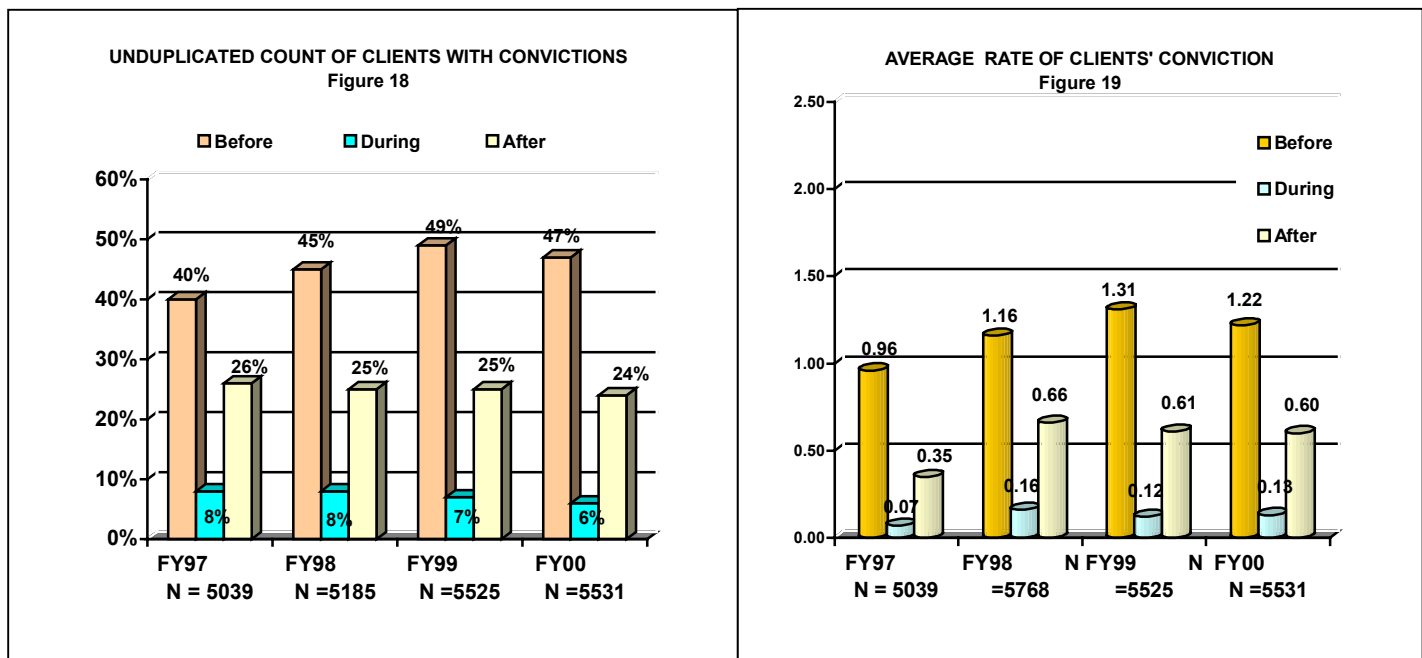


Figure 18 and figure 19 show the total convictions of clients before and after substance abuse treatment.

- ◆ There is a substantial decrease in conviction rates and total client count for all four fiscal years.
- ◆ This is an indicator that substance abuse treatment does reduce criminal behavior. Note that most reduction is due to drug-related convictions (as discussed on pages 4-5).

CONCLUSION

Based on the four fiscal years' results, it is a safe conclusion to say that substance abuse treatment within the DADS system has had a significant positive impact on the lives of the clients and, therefore, on the Santa Clara County as a whole.

The benefit to the substance abuse clients who successfully complete treatment can be summarized as an overall improvement in quality of life and ability to live productively and independently. These clients are better equipped to maintain sobriety. They are also less likely to participate in criminal activities or socially detrimental behavior. The resulting benefit to the county systems is a reduction in substance abuse related crimes and a reduction in the demands made on public resources including social services, police, jails, and county medical resources. These results are preliminary. Further analysis is needed to calculate the cost savings to the system and to develop model predictors of success for the treatment system. In addition, the establishment of this ongoing monitoring system for the performance based secondary outcomes data will help with the overall improvement of the county substance abuse treatment system.