

126035

Optimization of Legal Supervision
for Chronic Addict Offenders

FINAL REPORT

National Institute of Justice
Grant 86-IJ-CX-0069

UCLA Drug Abuse Research Group
Neuropsychiatric Institute

M. Douglas Anglin, Ph.D., Principal Investigator

Elizabeth P. Deschenes, Ph.D.

George Speckart, Ph.D.

December 22, 1988

126035

**U.S. Department of Justice
National Institute of Justice**

This document has been reproduced exactly as received from the person or organization originating it. Points of view or opinions stated in this document are those of the authors and do not necessarily represent the official position or policies of the National Institute of Justice.

Permission to reproduce this ~~document~~ material has been granted by

Public Domain/NIJ
U.S. Department of Justice

to the National Criminal Justice Reference Service (NCJRS).

Further reproduction outside of the NCJRS system requires permission of the ~~document~~ owner.

NIJ FINAL REPORT

I. Introduction

The goal of the project, "Optimization of Legal Supervision for Narcotic Addict Offenders" was to examine the effects of timing and level of legal supervision in controlling antisocial behavior and promoting prosocial behavior in chronic addict offenders. This research was a continuation of earlier work evaluating the California Civil Addict Program and methadone maintenance programs (McGlothlin and Anglin, 1981; Anglin, McGlothlin and Speckart, 1981). The present study was designed to answer a series of questions: (1) what is the effect of legal supervision on the criminal behavior of addicts?, (2) does legal supervision have time course effects?, (3) what are the differential effects of varying types of legal supervision, e.g. probation, parole, and the intensity of monitoring, with or without urinalysis, or higher or lower number of contacts per month. In addition, causal modeling techniques were used to examine the processes and interaction between these independent and dependent variables over the addiction career.

II. Method

A. Sample

The subjects used for the analyses were obtained by combining four separate groups of subjects who were followed up in four distinct research projects based in Southern California (McGlothlin, Anglin, and Wilson, 1977; Anglin, McGlothlin, and Speckart, 1981; Anglin, McGlothlin, Speckart, and Ryan 1982; McGlothlin and Anglin, 1981). The first group were male patients in the California Civil Addict Program, admitted in 1962-1964. A treatment group of 289 addicts were matched with a comparison group of 292 addicts who had been discharged by writ shortly after admission. Over 88% of the respondents were

interviewed in 1974 and 1975, 225 in the treatment group and 214 in the comparison group.

The second group was a sample of 347 addicts drawn from male first admissions between the years 1971-1973 from Los Angeles, San Bernardino, and Orange County methadone maintenance programs. The sample was selected to study the impact of civil commitment parole status on the behavior of patients receiving methadone; the sample was not, however, necessarily representative of the overall population of admitted patients receiving methadone. Respondents were interviewed during the years 1978 to 1979, an average of 6.6 years after admission.

The third group consisted of male and female methadone maintenance patients selected from rosters of clients active on June 30, 1976, at the clinics in Bakersfield and Tulare, California. The subjects were interviewed during 1978 and 1979, an average of 3.5 years after admission. The fourth group of subjects consisted of those males and females who were active on September 30, 1978, at the San Diego, Riverside, San Bernardino, and Orange County clinics and who were interviewed during the years 1980-1981, an average of 6 years after their admission. The total number of subjects interviewed was 720, including 141 Chicanos, 45 Chicanas, 251 white men, and 283 white women.

Since there were so few Black clients (less than 6% of each sample) and since Black clients constitute a small percentage of California methadone patients (Anglin and McGlothlin, 1984), they were excluded from the present study. In our analyses the first sample was referred to as the "CAP" cohort, the second group as the "Admissions" cohort and the third and fourth groups were referred to as the "Cross-Section" cohort. The samples were generally representative of California methadone maintenance patients. Complete

descriptions of the specific composition of these samples are provided in Anglin and McGlothlin (1984).

B. Interview Procedure.

The retrospective interview procedure used was adapted in part from a schedule developed by Nurco, Bonito, Lerner, and Balter (1975) and has been described in detail in an earlier report (McGlothlin, Anglin, and Wilson, 1977). Briefly, the procedure involved the preparation, before the interview, of a schematic time sheet that shows all known arrests and intervals of incarceration, legal supervision, and methadone treatment -- data that can be obtained from the criminal justice system and treatment program records. In discussion with the subject, the interviewer first established the date of the first narcotics use on the time chart and then proceeded chronologically over time to the point when narcotics use changed from less than daily use to daily use, or vice versa), or to when the respondent's legal or treatment status changed. Data were then collected on narcotics use, employment, criminal behavior, and certain other variables for that interval. The interviewer repeated this process for the next and following intervals, each recorded interval being initiated by a change in legal or treatment status, or narcotics use, up to the date of the interview. Each interval recorded was homogeneous in terms of narcotics use, legal status, and drug treatment enrollment. Each point in the addiction career of the subject was thus measured in terms of these and other variables.

This method of segmenting the interview has proved quite successful in collecting retrospective longitudinal data covering long periods of personal addict history. Typically, the respondents appeared to have little difficulty recalling for a specific segment whether they were employed, how frequently they were using narcotics, and their costs, and how they were obtaining funds

for their purchases. The procedure required the interviewer to work closely with the respondent to structure the period of concern, using the corroborative information and memory aids at his disposal (e.g, life events and associated dates from previously collected records.)

C. Measures: dependent variables

The dependent variables required to test the proposed models included narcotics use indicators, criminality indicators, legal supervision variables, and methadone treatment variables. Indicators of narcotics use were measured as the percentage of time using narcotics daily, the percentage of time abstinent (no narcotics use), and the average number of "fixes" per day. Three types of criminality indicators were used: income in dollars from property crime, the number of days per month committing property crime and the percentage of nonincarcerated time per month committing property crime. All types of property crime (for example burglary, theft, receiving stolen property) were analyzed separately and were also combined into a single figure for each of these three types of indicators yielding three "total crime" indicators for each time interval. Legal supervision variables were represented by the duration of the supervision period, the number of contacts with the parole or probation officer, the number of urine tests given, and the level of reported strictness of the legal supervision in the given time interval. Finally, percent time or number of months in methadone maintenance treatment within each time interval was included in the analyses.

D. Analyses

Multiple techniques were used in analysis of the data. For the series of five papers directly relating to the optimization of legal supervision three sets of analyses were conducted. First, descriptive analyses, including cross-classification analysis, were run. The criminal careers and associated

social costs of narcotic addiction were examined for the Admissions cohort. Second, a repeated measures analysis of variance (ANOVA) was used to test the effects of sequential legal supervision periods on the dependent variables, narcotics use and crime, and to test the differential effectiveness of various types of legal supervision. In the former analyses the time periods during the addiction career, before legal supervision, during legal supervision and after legal supervision were used. The latter set of analyses examined the difference between supervision with and without urine testing and with and without intensive parole supervision (OPS).

Third, a causal modeling technique (LISREL) was employed to test a model of causal effects and interactions in narcotics use and crime. Dependent variables from several time intervals were incorporated into the model. A three-wave model was tested for quarterly periods during the addiction career. The effects of legal supervision were assessed within these periods as an independent variable.

Other analyses included loglinear modeling of factors in maturing out of addiction and a time series analysis of the effects of methadone maintenance and legal supervision on narcotics use and criminal behavior.

III. RESULTS

The grant has several outcome products, including papers which have been submitted for publication and presentations at professional meetings. To date, four presentations have been given, two papers have been published, eight papers have been submitted to various journals, one to an edited book and one written for NIJ as a Research in Brief. A list of these articles and presentation is included at the end of this report and the articles are summarized below.

A. Summary of "The Efficacy of Civil Commitment in Treating Narcotics Addiction" by M. Douglas Anglin

Data were presented from the California Civil Addict Program (CAP) and from the Admissions and Cross-Section cohorts to assess the effects of civil commitment and methadone maintenance. The choice of measure to evaluate effectiveness of these programs is extremely important. The use of recidivism or relapse rate was not appropriate because these measures would show little change over the long term when actually strong effects could be noted in drug-free and crime-free days. Instead, the research focused on percentage of time incarcerated, percentage of time using narcotics daily, and number of relapses to addiction. Anglin concluded "the most effective civil commitment approach for narcotics addicts is to place them on long term parole, 5 to 10 years, so that their drug use and other behavior can be closely monitored" (p. 16). Methadone maintenance was found to be a useful adjunct to the criminal justice system control of narcotic addict offenders.

B. Summary of "Pre-treatment characteristics and treatment performance of legally coerced versus voluntary methadone maintenance admissions" by M. Douglas Anglin, Mary-Lynn Brecht, and Ebrahim Maddahian

This study compared addicts coerced into treatment with voluntary admissions to methadone maintenance programs using data from the Admissions Cohort. Over half the sample reported some form of legal coercion as a contributing factor to entering methadone maintenance. Early risk factors, such as gang membership, legal problems, age at first narcotics use were not associated with legal coercion. It was found, however, that those induced to enter the treatment program through legal channels had higher rates of serious property offenses, especially burglary. It appeared that those addicts more often in contact with the criminal justice system were more likely to be legally coerced into treatment programs. After treatment entry there was no difference in during or post-treatment outcomes. The authors concluded that

"satisfactory and effective collaboration between the two systems [criminal justice and drug treatment] in the supervision of a single individual would provide a conjoint environment to produce the best rehabilitative as well as social control ecology for dealing with the narcotic dependent individual" (pp. 17-18).

C. Summary of 'Conditional Factors in Maturing Out: Legal supervision and treatment' by Mary-Lynn Brecht and M. Douglas Anglin

This study was third in a series of papers exploring the relationship between the maturing out process and narcotics addiction. Using data from the California Civil Addict Program (CAP), loglinear modeling techniques were used to test the hypotheses that maturing out is dependent on legal supervision, MM treatment, and ethnicity. Variables were categorized as low or high legal supervision and MM treatment (none or some within the three years prior to interview). The results indicated that methadone treatment may facilitate maturing out, but that legal supervision did not seem to play a role over time. Legal supervision was effective for all age groups. The authors cautioned that self-selection (i.e. those with periods of legal supervision or treatment tend to be at higher drug use levels than those not supervised or treated) may play a role in determining who participates in social interventions and thereby confound the relationship.

D. Summary for 'Criminal Careers and Social Economic Costs of Narcotic Addiction' by Elizabeth Piper Deschenes, M. Douglas Anglin and George Speckart

The first paper in a series of five papers presented a longitudinal overview of the criminal careers of these narcotic addict offenders. Although crime levels were fairly high prior to addiction, addict offenders committed the majority of their offenses during the addiction career and criminality decreased post addiction. Social costs were also highest during the addiction

career for criminal justice system intervention with addict offenders, averaging \$4,000 per subject per year for incarceration. The average total cost for legal supervision (all types of probation or parole with and without urine testing) per subject per year was \$500 during addiction and was somewhat higher after addiction. Probation with urine testing was between \$42 and \$76 after addiction and parole with testing ranged from \$61-\$106 per subject per year. Treatment costs were highest after addiction ceased, but were also high during addiction, averaging \$2,000 per subject per year for methadone maintenance. It is suggested that since treatment and supervision are less costly than incarceration, that if legal supervision is effective in controlling narcotics use and criminal behavior, it would be a more viable alternative.

E. Summary of 'The Effects of Legal Supervision on Narcotics Use and Criminal Behavior over the Addiction Career' by M. Douglas Anglin, Elizabeth Piper Deschenes, and George Speckart

The second paper in the series of five papers presented results from three repeated measures analyses of the Admissions Cohort data. Time intervals "before", "during", and "after" the first, second and third periods of legal supervisions were examined. The findings indicated that legal supervision had an immediate effect in decreasing the percentage of time using narcotics daily and committing property crimes. The effects did not appear to deteriorate over time, except among those chronic addicts for whom further legal supervision was necessary. Even for this group additional periods of legal supervision produced a cumulative effect, increasing the percentage of time abstinent and decreasing the percentage of time using narcotics daily and thereby reducing the percentage of time committing property crime.

F. Summary of 'Differential Effectiveness of Legal Supervision on Narcotics Use and Criminal Behavior' by Elizabeth Piper Deschenes, M. Douglas Anglin, and George Speckart

The effects of different types of legal supervision both with and without urine testing were examined in the third paper of this five paper series. Data from the Admissions Cohort were used to compare the general effectiveness of supervision with testing versus supervision without testing and supervision with testing versus intensive supervision, or Outpatient Status (OPS), from the California Civil Addict Program. Results indicated a racial effect as well as an effect for the type of supervision. Chicanos responded best, i.e. decreased both narcotics use and criminal behavior, to intensive supervision (OPS) with frequent testing. In comparison, the only major difference among whites was between supervision with and without testing. Greater frequency of testing among whites appeared to be related to more extreme behavior for those identified by the CJS as needing higher levels of testing. In summary, these analyses on legal supervision of narcotic addict offenders have demonstrated that legal supervision with testing has an immediate and persistent effect in controlling narcotics use and criminal behavior.

G. Summary of 'Ethnic and gender differences in legal supervision effectiveness in controlling narcotics use and crime' by M. Douglas Anglin, Elizabeth Piper Deschenes, and Mary Booth.

This study, the fourth paper in a series of five, using data from the Cross-Section cohort, replicated earlier analyses, using data from the Admissions cohort, of narcotics addicts. These analyses examined gender and ethnic differences in the effectiveness of legal supervision in controlling narcotics use and crime. Results from repeated measures ANOVAS indicated that legal supervision was effective in reducing narcotics use and criminal

behavior among all four groups. However, Chicano females differed from the other groups, being more chronic offenders and narcotics users and rebounding toward preintervention levels of antisocial behavior after discharge from supervision. In comparison to the Chicano females, legal supervision was more effective in controlling narcotics use by white males and females and less effective in controlling their criminal behavior. A subsidiary analysis, using ANOVA split the first and second legal supervision periods in half and controlled for the effect of methadone on narcotics use and criminal behavior. Results indicated that the increase in percentage of time on methadone decreased daily narcotics use and criminal behavior beyond that decrease produced by legal supervision alone.

H. Summary of 'The Effectiveness of different types of legal supervision on narcotic addict behavior: ethnic and gender differences' by Elizabeth Piper Deschenes and M. Douglas Anglin.

This article, fifth in a series of five, examined the effect of different intensities of legal supervision, defined as probation or parole, both with and without urine testing, and outpatient status (OPS, or intensive parole supervision) from the California Civil Addict Program, on the addiction and criminal careers of male and female narcotic addicts from the Cross-Section cohort. The results which replicated earlier analyses on the Admissions cohort showed that for all groups legal supervision with testing was the most effective form of legal supervision in reducing the percentage of time in daily narcotics use and criminal behavior.

I. Summary of 'Modeling the Longitudinal Impact of Legal Supervision' by George Speckart, M. Douglas Anglin and Elizabeth Piper Deschenes

LISREL modeling techniques were used with data from the Admissions cohort to examine the effects of legal supervision on narcotics use and crime during the addiction career. Two three-wave, four variable models were used

behavior among all four groups. However, Chicano females differed from the other groups, being more chronic offenders and narcotics users and rebounding toward preintervention levels of antisocial behavior after discharge from supervision. In comparison to the Chicano females, legal supervision was more effective in controlling narcotics use by white males and females and less effective in controlling their criminal behavior. A subsidiary analysis, using ANOVA split the first and second legal supervision periods in half and controlled for the effect of methadone on narcotics use and criminal behavior. Results indicated that the increase in percentage of time on methadone decreased daily narcotics use and criminal behavior beyond that decrease produced by legal supervision alone.

H. Summary of 'The Effectiveness of different types of legal supervision on narcotic addict behavior: ethnic and gender differences' by Elizabeth Piper Deschenes and M. Douglas Anglin.

This article, fifth in a series of five, examined the effect of different intensities of legal supervision, defined as probation or parole, both with and without urine testing, and outpatient status (OPS, or intensive parole supervision) from the California Civil Addict Program, on the addiction and criminal careers of male and female narcotic addicts from the Cross-Section cohort. The results which replicated earlier analyses on the Admissions cohort showed that for all groups legal supervision with testing was the most effective form of legal supervision in reducing the percentage of time in daily narcotics use and criminal behavior.

I. Summary of 'Modeling the Longitudinal Impact of Legal Supervision' by George Speckart, M. Douglas Anglin and Elizabeth Piper Deschenes

LISREL modeling techniques were used with data from the Admissions cohort to examine the effects of legal supervision on narcotics use and crime during the addiction career. Two three-wave, four variable models were used

in the analysis. - The addiction career was divided into quarters and the first three and last three quarters constituted the two models. Legal supervision was measured as the number of contacts per month with a parole or probation officer and the number of urine tests per month. Narcotics use was measured in percent time daily drug use per month. Criminal behavior was measured as percent time per month reported committing property crime. The results of the LISREL analysis showed strong longitudinal effects within each variable and concurrent effects between legal supervision, narcotics use and criminal behavior. No cross-lag or causal effects were demonstrated. In this respect, prior legal supervision had no significant effect on future narcotics use or criminal behavior. However, legal supervision with urine testing did suppress both concurrent narcotics use and criminal behavior.

J. Summary of "Reexamining the effects of legal supervision on narcotics addiction and property crime" by George Speckart, M. Douglas Anglin and Elizabeth Piper Deschenes

This article, which has been submitted for an NIJ Research in Brief (RIB), presented an overview of the research findings from studies conducted by the UCLA Drug Abuse Research Group on the effects of legal supervision and treatment on narcotic addiction and crime. The RIB combined results of analyses using ANOVAS and LISREL modeling on the effectiveness of legal supervision. The results indicated that legal supervision, in the form of probation or parole with urine testing, was effective in decreasing daily narcotics use and property crime. These effects were immediate and persistent. Furthermore, it was shown that legal supervision has a concurrent, but not long-term suppressive effect on antisocial behavior. The authors concluded that: "the accumulation of evidence on both legal supervision and treatment effects points to the conclusion that the efficacy

of legal supervision could be appreciably enhanced by requiring successful performance in drug treatment programs as a condition of probation or parole."

K. Summary of "Long-term and short-term impact of methadone treatment and legal supervision on narcotics use and crime" by Keiko Powers, Yih-Ing Hser, Dominique M. Hanssens, and M. Douglas Anglin.

This study examined, at an aggregate group level, the effects of legal supervision and methadone maintenance on narcotics use and criminal behavior over time using the Cross-Section cohort. The long-term and short-term relationships between five outcome variables (no narcotics use, daily narcotics use, crime activity, methadone maintenance, and legal supervision) were tested using equilibrium regressions. The results indicated that these variables form a cointegrated system, that is these behaviors were interrelated over time. Specifically, increased narcotics use was associated with increased level of criminality, and there were long-term benefits for methadone maintenance in the reduction of narcotics use and criminal behavior. However, a positive relationship was found between legal supervision and narcotics use. It is suggested that the positive relationship between legal supervision and narcotics use is a reflection of the legal system response. In conclusion the authors stated that the strong evidence of MM treatment effectiveness "combined with the importance of legal coercion in linking individuals to treatment suggest that compulsory treatment should be considered for chronic narcotics addicts convicted of crimes." [The results] "further support the use of legal pressure to compel entry and retention in drug abuse treatment" (pp. 30-31).

L. Summary of "Longitudinal patterns of alcohol use by narcotics addicts" by Yih-Ing Hser, M. Douglas Anglin, and Keiko Powers.

A typology was developed for narcotic abusing offenders based on ethnicity, gender, parental alcohol problems, and opiate and alcohol use onset

sequence. Addicts were sampled from a corrections-based drug-free treatment program and from several methadone maintenance treatment programs whose clients had significant criminal records. Overall, a high prevalence of alcohol use was found in both samples across several stages of the addicts' careers. Many addicts were also using non-narcotic drugs and marijuana concurrently. Generally, levels of use of these substances, as well as alcohol use, decreased as the narcotics addiction career began. Unlike other drug use, however, only alcohol consumption increased whenever a decrease occurred in narcotics use. The alcohol- and narcotics-related behavior of the groups derived from the typology were examined in detail. A pattern of early onset of heavy alcohol consumption before initial narcotics addiction was more common among Chicanos and was associated with a positive parental alcohol history. Women addicts typically had a much lower alcohol consumption level than their male counterparts. Among the 160 deaths of the original 581 addicts followed during the 20 years of the study, alcohol-related deaths accounted for 17.5% of the total.

REFERENCES

- Anglin, M. Douglas, William H. McGlothlin and George Speckart (1981). The Effect of Parole on Methadone Patient Behavior. *American Journal of Drug and Alcohol Abuse* 8(2):153-170.
- Anglin, M. Douglas and William H. McGlothlin (1984). Outcome of narcotic addict treatment in California. In Frank M. Tims and Jacqueline P. Ludford (eds.), *Drug Abuse Treatment Evaluation: Strategies, Progress, and Prospects*. Research Monograph 51. Rockville, Md.: National Institute on Drug Abuse, pp. 106-128.
- Anglin, M. Douglas, William H. McGlothlin, George Speckart, and Timothy M. Ryan (1982). *Shutting off methadone: The closure of the San Diego methadone maintenance program*. Final Report, NIDA grant DA02577.
- McGlothlin, William H. and M. Douglas Anglin (1979). Effects of Closing the Bakersfield Methadone Clinic. In Louis S. Harris, (ed.) *Problems of Drug Dependence*. National Institute on Drug Abuse Research Monograph 47. Rockville, Md.: Department of Health, Education and Welfare.
- _____ (1981). Shutting Off Methadone: Costs and Benefits. *Archives of General Psychiatry* 38:885-892.
- McGlothlin, William H., M. Douglas Anglin, and Bruce D. Wilson (1977). *An Evaluation of the California Civil Addict Program*. Services Research Issues Series. Rockville, Md.: National Institute on Drug Abuse.
- Nurco, David N., Arthur J. Bonito, Monroe Lerner, and Mitchell B. Balter (1975). Studying addicts over time: Methodology and preliminary findings. *American Journal of Drug and Alcohol Abuse* 2:185-188.

LIST OF PRESENTATIONS, PUBLICATIONS AND ARTICLES IN SUBMISSION

Presentations

- Anglin, M. Douglas. Optimization of legal supervision for the chronic addict offender: Interim Report. NIJ Conference April, 1987
- Anglin, M. Douglas. Optimization of legal supervision for the chronic addict offender: Interim Report. NIJ Conference April, 1988
- Deschenes, Elizabeth Piper. The Effect of legal supervision on narcotic addiction and criminal behavior. American Society of Criminology meetings, November, 1987.
- Deschenes, Elizabeth Piper. Differential effectiveness of legal supervision in controlling narcotics use and criminal behavior. Association for Criminal Justice Research (CA), March, 1988.

Publications

- Anglin, M.D. (1988). The efficacy of civil commitment in treating narcotics addiction. In C. Leukefeld and F. Tims (Eds.), NIDA Monograph series, vol. 86, pp. 8-34. Reprinted in Journal of Drug Issues, 18(4):527-545.
- Anglin, M. Douglas and George Speckart (1988). Narcotics use and crime: A multisample, multimethod analysis. Criminology 26(2): 197-233.

Articles in Submission

- Anglin, M. Douglas, Elizabeth Piper Deschenes and George Speckart. The effects of legal supervision on narcotics use and criminal behavior over the addiction career. Submitted to Criminology.
- Anglin, M. Douglas, Elizabeth Piper Deschenes, and Mary Booth. Ethnic and gender differences in legal supervision effectiveness in controlling narcotics use and crime. Submitted to Criminology.
- Anglin, M. Douglas, Mary Lynn Brecht, and Ebrahim Maddahian. Pre-treatment characteristics and treatment performance of legally coerced versus voluntary methadone maintenance admissions. Submitted to Criminology.
- Brecht, Mary-Lynn and M. Douglas Anglin. Conditional factors in maturing out: Legal supervision and treatment. Submitted to Criminology.
- Deschenes, Elizabeth Piper, M. Douglas Anglin and George Speckart. Narcotics addiction: Related criminal careers and social economic costs. Submitted to Criminology.
- Deschenes, Elizabeth Piper, M. Douglas Anglin and George Speckart. Differential effectiveness of legal supervision on narcotics use and criminal behavior. Submitted to Criminology.

- Deschenes, Elizabeth Piper and M. Douglas Anglin. The Effectiveness of different types of legal supervision on narcotic addict behavior: ethnic and gender differences. Submitted to Criminology.
- Hser, Yih-Ing, M. Douglas Anglin, and Keiko Powers. Longitudinal patterns of alcohol use by narcotics addicts. Submitted for Volume VIII of Recent Developments in Alcoholism, edited by Marc Galanter.
- Powers, Keiko, Yih-Ing Hser, Dominique M. Hanssens, and M. Douglas Anglin. Long-term and short-term impact of methadone treatment and legal supervision on narcotics use and crime. Submitted to Management Science.
- Speckart, George, M. Douglas Anglin and Elizabeth Piper Deschenes. Modeling the impact of legal supervision on drug abuse and crime. Submitted to Journal of Quantitative Criminology.
- Speckart, George, M. Douglas Anglin and Elizabeth Piper Deschenes. Reexamining the effects of legal supervision on narcotics addiction and property crime. Submitted to NIJ Research in Brief.