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ALCOHOL, DRUGS AND CRIME

Vera's Final Report On New York State's Interagency Initiative

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CHAPTER ONE

OVERVIEW: AN INTRODUCTION TO THE RESEARCH, ITS FINDINGS AND RECOMMENDATIONS

Official attention, at the federal, state and local level, has been focused for some time now on the relationship between drugs and crime. The rapidity of policy change in this area, and the magnitude of public investment in it, make it easy to forget how ambitious New York State's interagency alcohol and drug abuse initiative for inmates and parolees was at the time it was proposed nearly five years ago.

In 1986, the funding for this initiative was just less than one and a half million dollars -- at that time enough to launch the pilot program at the Lincoln Correctional Facility, plan its evaluation, and fund expanded drug and alcohol treatment throughout the State prison system. Three years later, the Executive Budget set aside over two hundred million dollars in capital funds alone to expand drug and alcohol services for criminal justice populations. In 1986, programs like Lincoln's treatment unit seemed profoundly peripheral to the basic work of the Department of Correctional Services (DOCS) and the Division of Parole. By 1990, trying to reduce recidivism by dealing with substance abuse had become everyone's job.

Vera's work on the Alcohol, Drugs, and Crime project began in late 1986, when we were asked by the New York State Legislature to help implement and to evaluate a policy initiative aimed at developing innovative, effective treatment for State inmates and parolees with histories of drug and alcohol addiction. Focusing on continuity of care from prison to the community, the legislation led to the creation of a prison-based pilot program that offered inmates a short-term intensive treatment experience emphasizing preparation for a drug-free transition to the community.

Administered by DOCS, the 37-bed Community Preparation Unit (CPU) was located at the Lincoln facility in upper Manhattan, in part to take advantage of its proximity to the release community of its New York City-bound participants. Integrated into the Lincoln pilot was a formal assessment and referral service run jointly by Parole, and the State Divisions of Substance Abuse and Alcoholism. This service, known as Access, linked Lincoln CPU participants to drug or alcohol programs located in the communities to which they were returning. Central to the innovative nature of the effort, the legislature specified that each of these State executive agencies -- Corrections, Parole, Substance Abuse, and Alcoholism -- break through the walls traditionally separating them and work collaboratively to develop and implement the demonstration program.

The fact that more recent events (particularly the 1989 Omnibus Prison Act) have overshadowed the CPU/Access experiment make the results of this 1986 initiative no less relevant to current program and policy developments. By the time DOCS closed the Lincoln CPU in June of 1990, attention had already turned to the Omnibus Act's drug prison initiative. Nonetheless, an examination of Lincoln's operational record, combined with the findings of the research Vera conducted on men passing through the pilot program, yields a Final Report that is rich with detail about the process of implementing and improving correctional treatment. Numerous lessons from this pilot project can be applied in current, more ambitious efforts.

Many of our views, especially those we hold about the day-to-day work of the Lincoln CPU and Access, have been expressed before, in the three Interim Reports that have preceded this work. Here, we have tried to assemble that reportage and opinion in a series of observations and recommendations that are rooted in quantitative analyses of research outcomes.

The Research. This final report focuses largely on the results of our longitudinal, quasi-experimental study which assessed the post-release success or failure of men who passed through the Lincoln pilot (the experimental group) and men who were members of a comparison group, selected to be statistically similar to the CPU/Access participants. The 462 inmates represented in the two study groups experienced a broad range of treatment regimens while in prison, and they encountered a similarly varied array of community-based treatments upon release. Thus, we were able to perform analyses that assess the efficacy of the different program models reflected in their experience. This study also examines the impact of certain pre-incarceration characteristics, such as severity and type of drug use, demographic and socioeconomic variables, and criminal history. The outcomes used in these analyses include measures of criminal recidivism through one year after release, and relapse, community reintegration, and participation in community-based treatment through the first half-year after release.

In addition to analyses of outcome, and tests of program effectiveness, this research aimed to provide considerable descriptive information not previously available to State policymakers working in this area. For example, using relatively sophisticated self-report techniques with the study sample, as well as with an even larger sample (N=678) of general population inmates, we have been able to estimate that about two-thirds of all State inmates are handicapped by drug problems, and that about one-third have alcohol problems (75% of whom also have a drug problem). Analyses of drug use patterns over time have also confirmed some common perceptions: use of crack increased fourfold when pre-1985 prison entrants were compared to those entering in 1987, while powdered cocaine and heroin use actually dropped about 10% between the early and more recent group. The decrease in reported intravenous drug use was more dramatic -- from about half of the men entering prior to 1984 to one in four recent entrants.

We've also examined DOCS' and Parole's responses to this substantial population of substance abusers committed to their supervision. The research provided notable evidence of the sheer magnitude of this response: About three-fifths of all State inmates spend at least three months attending some kind of drug or alcohol program during their term of incarceration. And three in four parolees are assigned some kind of drug- or alcohol-related condition of parole, with four-fifths of these requiring participation in a treatment program upon release.

However, additional analyses indicated that participation in prison treatment programs and the imposition of parole conditions requiring treatment could be better matched to offenders who exhibit the greatest need for treatment. Given the lack of screening for admission to available in-prison programs, it is perhaps not surprising that attendance in DOCS' popular Alcohol and Substance Abuse Treatment (ASAT) programs was found to be statistically unrelated to participants' treatment need. With regard to the assignment of parole conditions, our analyses indicate that about one-third of the inmates without severe, recent drug history were required by the Parole Board to attend treatment, while 44% of those with such a history were not assigned a treatment condition. These results underscore the need to make better investments of scarce in-prison and community-based treatment resources for offenders most in need of them. In the final chapter of this report, we offer recommendations about how such improvements could be made.

Aside from these and other descriptive findings summarized in Chapter 4, the present report is distinguished from Vera's previous Interim Reports by the inclusion of assessments of the subjects' post-release success or failure. Results of our multivariate analyses of the outcome data are presented in Chapter 5, and further summarized in Chapter 6. Let us preview some of these outcomes and describe some of the resulting recommendations for a more balanced, effective treatment system for prisoners and parolees.

Prison Treatment: A Two-Tiered Approach. Analyses of prison treatment revealed that participation in the State's community preparation pilot program was not associated with greater success during the post-release follow-up period. In somewhat surprising contrast, participation in less formal prison programs, typically run by inmates or volunteers, was associated with more favorable outcomes. When men in these non-ASAT programs were compared to Lincoln participants, to men who attended DOCS-run ASAT programs, and to a group of inmates who did not complete any kind of in-prison drug or alcohol program, they were found to have the lowest rates of rearrest (by 3 to 16%), parole failure (by 5 to 10%) and relapse (by 7 to 10%). The positive effect of participation in non-ASAT treatment programs is substantiated by multivariate analyses of post-release rearrest and relapse, in which numerous pre-treatment variables were controlled (e.g., demographic and socioeconomic factors, substance abuse and criminal history).

In Chapters 6 and 7, we speculate about some of the possible reasons for the rather unexpected impact of non-ASAT treatment, and for the absence of positive post-release outcomes for Lincoln pilot group participants. Taken together, these findings suggest to us that the State should consider developing a two-tiered system of in-prison treatment

programs. The "lower tier" of informal, inmate-run and volunteer-run programs should be made even more widely available; considerable numbers of inmates, many of them plagued by the most serious of substance abuse problems, appear to make good use of these programs. But the inmates who can benefit from these lower-tier programs may already possess the motivation to do so. These programs are not a panacea; treatment alternatives that connect and succeed with inmates who fail in less formal programs must be designed and evaluated.

Correctional agencies are increasingly faced with the task of fashioning treatment responses for offenders with difficult treatment profiles: crack-addicted inmates, who had the highest rates of recidivism and relapse in this study; inmates with severe drug problems who have had virtually no prior experience with drug treatment; and inmates who resist treatment and drop out in high rates from even the best-run programs. Effective treatment of these substance abusers, who may comprise the majority of those in DOCS and Parole custody, requires the further development of intensive "upper tier" prison treatment alternatives.

The lack of favorable recidivism and relapse outcomes for the CPU/Access and ASAT treatment groups, as well as our day-to-day Lincoln experiences and observations, suggest that upper-tier programs must have the requisite resources, as well as a sufficiently strong identity and purpose, if they are to succeed in correctional environments that present numerous natural obstructions to therapeutic progress. In discussing implementation problems encountered by the CPU, we identify several operational resources and characteristics -- such as a clear chain of command and freedom from administrative and staff discontinuities -- that appear necessary to any upper-tier program's success.

In that discussion, we also reiterate the view expressed in our previous reports, that Lincoln's failure to thrive throughout its three years of operation can in part be linked to its limited mission. The CPU's administrators stressed its role as a traditional, prison-based ASAT, which would repeat and restate the 12-Step treatment content that is integral to ASAT programs in upstate DOCS facilities. In our view, the pilot program could have delivered more: The CPU could have taken greater advantage of its capacity to involve families, local treatment providers, and other community-based groups, such as vocational service agencies, in its everyday programming. Additionally, the program's treatment could have focused more directly on helping inmates anticipate and cope with the situations and emotions encountered "on the streets" that place them at risk of drug and alcohol relapse. An important goal of any transition-focused treatment should be to impart strategies and skills aimed to prevent relapse after release.

Community-Based Treatment: A More Balanced System. Our research documents one positive outcome of Lincoln CPU/Access participation: men who passed through the pilot were more likely to attend community-based treatment programs after release, especially during the first few months. The importance of an assured treatment referral from the Access program (which referred virtually all pilot participants to some kind of

treatment) was evident when referrals of the comparison group were examined. Despite having drug histories of equivalent severity (and, for 60% of these releasees, a formal parole mandate to attend treatment), only about 40% of these men were referred to a program by a field parole officer (FPO) or by another source within the first few months after release. Additional evidence from this research suggests that FPOs can be just as effective as Access counselors in linking parolees to post-release programs -- when they make the referrals.

Simply linking a parolee to a program is, of course, no guarantee that he or she will stick with the program, or be advantaged by participation. In fact, data on recidivism and relapse among men who were in treatment at two months after release raises questions about the ability of the treatment network currently available to parolees to retain them and to treat them effectively. Our findings indicate that men participating at the two-month point in drug-free outpatient programs -- the most commonly used modality -- had the same one-year recidivism outcomes as men not in any treatment at the two-month point. (Again, these analyses controlled for subject characteristics.) Men in drug programs at six months post-release, and those who were retained in programs throughout the half-year follow-up had only slightly better outcomes than parolees never in a community-based treatment program.

Our data reveal greater promise of treatment effects from the current array of alcohol treatment programs, and self-help programs in general (either Alcoholics Anonymous, or Narcotics or Cocaine Anonymous). Men in these programs had recidivism rates 20 to 25% below those of the men who were in drug-free outpatient programs or men not in any treatment program at all. Unfortunately, the relatively small number of subjects who attended alcohol treatment and self-help programs prohibits us from drawing firm conclusions about these findings.

In any event, our findings about the impact (or lack of impact) from post-release participation in currently available drug treatment programs, coupled with the overwhelming presence of drug problems among State parolees, should draw attention to the need for strengthening this final, post-release stage of the "treatment continuum." New York State is making dramatic correctional and treatment investments in response to accumulating evidence of the connection between substance abuse and crime. But the current spending plan for the recent Omnibus Prison Act runs counter to the commonsensical view shared by many practitioners: that the real test of an addict's recovery occurs in the community, and that resources must be focused there to establish and maintain that recovery. Of the more than $200 million in capital and operating resources specified in the Omnibus bill, less than 2% was earmarked for the development of community-based, post-release care.

At the conclusion of our research, our view is that the present strategy reflected in the implementation plans for the Omnibus Act might usefully be recast to produce a more balanced treatment continuum. One hallmark of such a system would be parolee-specific community treatment services (linked to parolees' in-prison treatment regimens, whether

upper- or lower-tier) which include a sufficient range of outpatient and residential capacities to meet the diverse and long-term needs of releasees. Several suggestions about the shape of an improved post-release service system are offered in the final chapter of this report. Highlighted here are some of our thoughts about the role of field parole officers (FPOs) and of a field-based Access program in such a system:

- FPOs should be trained to perform routine drug and alcohol assessments, recognize signs of impending relapse, and respond to relapse among parolees. FPOs should act with the knowledge that treatment retention is critical, and that relaxing their supervision of treatment attendance or their monitoring of relapse after the first few months post-release can spell failure. Field office supervisors play a critical role in reinforcing these staff activities.
- When well informed and conducted by trained staff, field office assessments should take priority over Board mandated conditions, which should be simplified (and which might usefully be more consistently based on an objective clinical assessment).
- Wider use of clinical responses to urinalysis results, such as graduated therapeutic sanctions (more frequent FPO visits, regular sessions with field Access counselors, referral to a more intensive level of treatment), should be explored.
- Field Access counselors (or other clinical experts) should be available in field parole offices to assist with especially difficult cases; to identify and inform FPOs of promising, accessible treatment alternatives; and to advise FPOs about the relative merits of particular programs and modalities for certain types of clients.

Other suggestions concern community-based treatment itself:

- Community-based treatment programs should be developed to fit the particular needs and circumstances of parolees. The existing, overburdened treatment programs present obstacles to effective use by parolees and to effective referrals from FPOs. Ex-offender and ex-addict counselors who embody hope for the prognosis of parolees-in-treatment should be included on the staff of these programs.
- Programs that have clearly specified, tightly-administered and well-documented procedures for keeping clients' attendance records and tracking them in different program activities would benefit parolees. Services that incorporate a case management system would appear most desirable.
- Treating the substance abuse problems of parolees without also attending to their housing, vocational, educational, health or general economic problems is futile. Programs for parolees should also routinely engage families in treatment.
- Increased frequency of outpatient visits is another structural feature that may enhance treatment effectiveness. We do not believe that programs can sufficiently engage just-released parolees in their recovery through once-a-week sessions; at least initially, three visits per week should be a minimum.

- Because stable employment is central to the adjustment of just-released parolees, sessions for employed parolees must be offered in evening hours. Sliding fee schedules are a must, and programs should have the capacity to waive charges entirely.
- Finally, in our view, efforts to develop parolee-responsive programs would also benefit from further consideration of one approach largely absent from the current treatment landscape in New York City -- the relapse prevention treatment model (Marlatt & Gordon, 1985). The just-released parolee seems to offer a uniquely promising target for relapse prevention techniques. In this view, the clinical problem at release is one of maintaining the period of putative abstinence imposed by incarceration. Most parolees in the stressed condition of a return to the community are confronted by an alluring array of "cues" which they associate with getting high and which, therefore, can trigger relapse. Treatment which teaches ways to anticipate and effectively cope with these cues would seem to have an intrinsically utilitarian, pragmatic appeal to parolees who consider themselves "cured" simply by virtue of their prolonged, if enforced, abstinence.

A Last Word. We hope that this Final Report can be a tool that helps illuminate and unravel the difficult, tangled problems posed by the powerful connections between drugs and crime. Thanks to the opportunity created by the 1986 State interagency initiative, we believe quite a bit more is known now than when we started out. That does not strike us, given the character of the work at hand, as an insignificant achievement.

We close by underscoring the field's need for credible research findings. While difficult to mount and exasperating to manage once running, multi-year evaluations of program effects need to be put in place. In particular, we agree with those who say that it is past time to begin answering questions about what works, for whom, and under what circumstances. Research on the match between clients and treatment, and research on treatment outcomes have the potential to yield a wealth of policy-relevant data which will be crucial to the State's success in its resource investment strategies over the coming years.

We are grateful to the many people -- inmates, parolees, State officials, and Vera staff -- who have made contributions to this report. Helping to develop the pilot's two operations -- the Lincoln CPU and Access -- took up most of our (and everyone else's) time over the initiative's first two years. Participating in those day-to-day travails made us an unusually close witness to the spirit and determination of State personnel who brought the initiative's legislative purpose to life. Our appreciation for the persistence of these individuals leads us, as we have done before, to underscore what our report is, and what it is not. Our effort to record these complex activities is not a report card. Rather we seek to use the initiative's record as another source of technical assistance: a way for Vera to collect and express some of its ideas about the puzzles and obstacles that confronted the personnel charged with demonstrating, through the CPU and Access, more efficient and just responses to the needs of alcohol and drug-abusing offenders and the crime problems they pose.

CHAPTER TWO
CREATING A PILOT TREATMENT CONTINUUM

In early 1986, the New York State Legislature proposed a $1.3 million addition to the New York State budget to finance a comprehensive alcohol/drug abuse program for inmates and parolees. While providing funds for expansion of existing services, the legislative initiative departed from previous efforts by focusing on continuity of care. Envisioning an ideal "continuum of services," from identification of inmates in need of treatment at entry to the State prison system, through parolees' involvement in community-based programs, the initiative spurred the development of a pilot program targeted to offenders making the vulnerable transition from prison treatment to a drug-free life in the community. What also set the initiative apart from the conventional State-run treatment intervention was its explicit call for interagency collaboration and responsibility: the Department of Correctional Services (DOCS), and the Divisions of Parole, Substance Abuse Services (DSAS), and Alcoholism and Alcohol Abuse (DAAA) were each asked to devote staff resources to the demonstration effort.

This chapter describes this program as it was implemented at the Lincoln Correctional Facility in upper Manhattan. We provide a relatively brief description, as the program's philosophy, operation and month-to-month progress have been documented in copious detail in previous Vera reports. The period covered by this report runs from the program's inception in May of 1987 until February of 1989, when the last members of the experimental or pilot group were released from the program.[1]

Pre-release Services: The Lincoln Community Preparation Unit

After several months of planning, DOCS established the treatment program in May of 1987, at the Lincoln Correctional Facility on 110th St., just off Central Park. The program, officially designated the Lincoln Community Preparation Unit (CPU) was also referred to as the Lincoln ASAT, in as much as its program management fell under the aegis of DOCS' Alcohol and Substance Abuse Treatment bureau, the central office unit responsible for establishing and monitoring DOCS-run ASAT programs for inmates throughout the prison system. The CPU was intended to provide intensive, full-day programming to male inmates who had already succeeded in some drug and alcohol programming in upstate facilities. These men were to be identified and transferred to the

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[1]The Lincoln program continued to operate until June 1990, when DOCS elected to close it, in part because the entire facility was slated for transition to temporary release status.

CPU approximately three months prior to their anticipated release date. The Lincoln Access pilot program was integrated into the CPU, providing assessment and referral services to all participants. The Access pilot, administered by the Division of Parole in collaboration with DSAS and DAAA, is described in the next section of this chapter.

Participant Census and Selection. From about the middle of 1988 through the end of the study period (early 1989), the CPU census was at or above its capacity of 37 participants. For the first year or so of program operation, the census was inconsistent, ranging on a monthly basis from the low-20s to the mid-30s. With some individual exceptions, CPU candidates met the following criteria: prior participation in an upstate ASAT program for at least ninety days; at least twelve weeks remaining prior to release eligibility; agreement to participate in all components of the pilot (day-to-day program activities, as well as the Access program); and an anticipated post-release residence in Brooklyn, Bronx or Manhattan (the boroughs originally served by the Access program). Vera's statistical assessments of the background characteristics of CPU participants (see Chapter 4) indicate that these men were typical of New York City-bound inmates with drug and alcohol problems.

Candidates came to Lincoln from a relatively limited set of ASAT feeder facilities; during the period of data collection five sites accounted for over 90% of the CPU participants.[2] Inmates came to Lincoln with varying degrees of preparation. As noted in past Vera reports, new arrivals attending inmate orientation meetings often reported inadequate or inconsistent perceptions of what to expect as prospective Lincoln CPU and Access clients. In most cases, these candidates' putative ignorance or confusion was diffused in orientation sessions, which were run jointly by CPU and Access staff. In the latter years of the program's operation (and particularly in the Spring of 1989, after research intake was closed), procedures were instituted in feeder sites to improve inmate preparation.[3]

Staffing. The authorized staffing for the CPU included a Senior Counselor (GS22) to serve as a full-time administrator responsible for on-site program supervision; two ASAT Counselors (GS19); two Program Assistants (GS14); and a Stenographer. Due to delays in line approvals and hiring, however, some of these positions remained vacant during parts of the study period. A part-time, temporary administrator and senior DOCS regional staff handled the Senior Counselor responsibilities during 1987 and early 1988, after which the

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[2]These facilities included: Mt. McGregor, Otisville, Collins, Woodbourne and Sing Sing/Tappan. None of the other facilities that sent men to Lincoln accounted for more than 3% of all those referred.

[3]Many of these procedures were consistent with recommendations discussed in previous Vera reports: creating and using better documentation procedures for informing inmates and obtaining their consent to participate prior to coming to Lincoln; developing a one-page description of the Lincoln pilot that can be distributed to candidates at feeder sites; developing a standardized oral protocol covering both the CPU and Access programs, underscoring Lincoln's unique community preparation orientation as well as Access' integral involvement with inmates before release; and additional, routine visits to feeder sites by DOCS and Parole managers to disseminate and discuss these enhanced procedures for Lincoln candidate preparation.

first full-time administrator was appointed. It was during the spring and early summer of 1988 that the program experienced its first stable period of employment, and in December 1988 (approaching the end of Vera's intake data collection period), the program's front-line staff of two counselors and two program assistants reached full strength for the first time.[4] One staffing shortfall evident through most of the CPU's existence was the absence of Spanish-speaking counselors. With the exception of a brief three-month period, efforts to place counselors who could converse with the numerous Spanish-speaking participants were unsuccessful.

Program Structure and Conceptual Foundations. With the exception of participating in facility-wide activities, such as eating meals and meeting visitors, inmates in the program remained intentionally segregated from the general population inmates who occupied the rest of the facility. In this and other respects, the CPU was regarded as a "residential" program, whose participants devoted their entire day to program-specific activities.

The CPU was designed to build upon the positive effects of treatment obtained in previous ASAT participation, and in its most basic approach, the CPU reflected DOCS's more general ASAT model. Based upon the "disease model" of alcoholism advocated by Alcoholics Anonymous, treatment is grounded in the assumption that alcohol or drug addiction is a disease analogous to diabetes. The notion that loss of control over the addictive substance (the "powerlessness" of Alcoholics Anonymous) is inevitable is a fundamental tenet, and hence total abstinence from all addictive substances is regarded to be the only treatment. The disease process is assumed to be active and progressive, even during periods of abstinence. (The tenets of the model have been extended to include virtually any addictive substance or problem; hence Narcotics Anonymous, Cocaine Anonymous, Gamblers Anonymous, etc.)

Beyond this fundamental treatment philosophy, Lincoln CPU programming could be described as including a "core" curriculum that followed a relatively structured schedule of large and small groups focusing on education and counseling, self-help (AA, NA and CA) groups, and individual counseling. In 1988, the CPU added other program elements that were integral to the original plans for the Lincoln pilot. These included family counseling workshops, visits by community-based providers, and pre-release or separation services.

AA and NA groups were a mainstay of the program's therapeutic efforts throughout the study period. Participants attended three to five AA, NA or Al-Anon meetings per week which were led by AA/NA members from the nearby community. Spanish AA meetings were offered weekly, as was a Cocaine Anonymous meeting. Using leaders from outside the prison, the program hoped to encourage inmates to plan for self-help participation in the communities in which they intended to reside upon release.

[4]Readers are referred to earlier Vera reports which discuss the ramifications of staff instability on program quality.

With some variations, the CPU's large groups followed a "12-week ASAT cycle" developed by the ASAT central office, organized around themes suggested by the Twelve Steps of AA/NA. Large group topics included in this schedule ranged from "promptness and positive thinking" to "pattern and habit." In the large groups Vera observed, discussion was often preceded by the presentation of a video; counselors explored with the group possible relationships between the video and the week's theme. The content of the videos varied greatly, from parable-like vignettes on the evils of substance abuse, to more straightforwardly educational approaches.

The more educationally-oriented large groups involved the presentation of didactic materials relevant to substance abusing offenders and themes of community readjustment, followed by a discussion period. During the last six months or so of the study period, these activities included presentations by outside community-based providers. Described in more detail below, staff from local drug and alcohol treatment agencies, and from other services of potential value to releasees were invited to work with CPU participants on several occasions during this period (and subsequent to Vera's departure from the site). Examples of the latter sessions included workshops by Planned Parenthood and Harlem Hospital's public health unit.

The structure and content of small counseling groups in the CPU varied depending upon the counselor. The two ASAT counselors conducted small groups with 13 persons while each program assistant had eight inmates in his or her group. Generally speaking, themes such as those mentioned above formed the matrix within which discussion took place. A wide range of topics were raised within this context; community preparation issues commonly surfaced in these sessions. Participants discussed such matters as pre-release anxiety, adjustment to the community and family, situations leading to relapse, and, in general, issues that seemed too sensitive for discussion in the larger groups. These meetings were conducted more like traditional therapy groups, with a group of diagnostically similar clients discussing concerns which they had in common. The counselor's role was generally less directive -- emphasis was placed on guidance, facilitation, and the introduction of themes.[5]

Individual counseling sessions offered the greatest opportunity for a discussion of the participant's most intimate concerns, and the potential for establishing a trusting relationship between counselor and inmate. For most of the study period, individual counseling sessions were scheduled at the request of individual inmates; a few participants met with counselors frequently, while most met with counselors only two or three times during their

[5] In Vera's December 1989 progress report (which addressed program developments that occurred subsequent to the Vera study period) we applauded the incorporation of a modular approach to small groups that focused on themes which were relapse prevention oriented. Arranged to take place over the course of thirteen sessions, the themes ranged from "De-addiction and Craving" and "Your Dangerous Situations" to "Looking Ahead: Plans, Goals and Dreams." The implementation of a clinical approach which stressed the importance of anticipating, preventing and minimizing relapse was a welcome, if belated advance.

Lincoln stay. This scheduling was contrary to planned CPU policy, which called for mandatory sessions on a bi-weekly basis; individual sessions were one of the program elements sacrificed as a result of staffing problems. With the resolution of those problems in the latter part of 1988, a mandatory individual counseling schedule was in place during the final half-year of the study period.

Community Preparation Services. Involvement of participants' families in the CPU was another central (perhaps the most central) program element that was largely absent during the first year or so of program operation. A successful family orientation workshop was first held in September of 1988, and the program continued to host similar sessions approximately every three months. Usually lasting two and a half hours, the meetings included joint presentations by CPU and Access staff and varying numbers of guest speakers. Offering education, information and support for family members seeking continued help post-release, program staff invited families to participate in additional, individual family counseling sessions at Lincoln up through the date of the inmate's release.

Pre-release services available to the general inmate population at Lincoln were also incorporated somewhat into CPU programming. Such services included vocational assistance through the South Forty Corporation, which provides vocational counseling, job-readiness workshops, resume development and job referral. Other pre-release services available to Lincoln inmates were the use of the facility's library, which maintains a collection of resource materials, and the educational department which offers G.E.D. preparation and basic skills instruction. As described in previous Vera reports, utilization of these services fluctuated considerably during the time of data collection; again, prior to the latter half of 1988, participation was largely voluntary and there were no formalized procedures for verifying attendance.

In early November of 1988, involvement at Lincoln by members of a community-based treatment providers Task Force began with a visit by representatives of Greenwich House's alcohol program. This and subsequent provider visits generally included presentations and group facilitation from program directors and staff counselors; often they were marked by spirited discussion of "on the street" treatment and reintegration issues. Following the Greenwich House visit, representatives of other alcohol and drug programs conducted similar sessions with Lincoln participants; these were held every two to four weeks. Inmates reportedly enjoyed these presentations because it gave them some measure of input into the post-release treatment process; it was not uncommon for them to solicit the services of a particular program from their Access counselor after a provider visit to the facility.

As mentioned previously, CPU administrators bolstered community involvement by arranging visits from community-based agencies like Harlem Hospital's medical outreach program. Covering a broad range of pertinent public health matters such as family planning and AIDS, the hospital's outreach representative made five two-hour presentations to ASAT participants beginning in December of 1988. Another organization brought in as part of mandatory "separation service" activities was a workshop series run by Planned Parenthood, centering on family and community reintegration issues.

Linkage to Post-release Care: The Access Program

Similar in structure to the previous section, this discussion of the Access program covers such operational issues as staffing and the mechanics of Lincoln referral and post-release case monitoring, as well as more specific substantive issues tracked in previous reports, such as identification of and referral for alcohol problems, treatment mandates for Lincoln participants, and parole officer involvement. Some description of the program's history is also provided.

In 1986, through an informal agreement forged by executives in the Division of Parole and DSAS, counselors from DSAS began working with officers and parolees in the Manhattan Parole office to provide assessment and referral services for parolees in need of drug treatment. The State legislative initiative authorized two significant expansions of this small, experimental Access program. Through the involvement of DAAA, the service was to be extended to parolees with alcohol problems. Second, additional Access counselors were authorized to work with the Lincoln pilot participants, to link these men to community-based treatment before leaving Lincoln, and to follow them post-release to assure this linkage and continued involvement in treatment. In many ways, this service was to be the most innovative component of the continuum of services envisioned by the initiative: While in-prison and community-based programs were relatively commonplace, these services had not been bridged through the proactive efforts of parole officers, community providers and case managers.

Staffing and Administration. Although the legislation stressed Access' role in the Lincoln pilot, addressing the burgeoning demand for assessment and referral services for general population parolees in field offices remained a priority of the Division. Therefore, throughout the study period, Access worked on several fronts, at Lincoln and in the Manhattan, Bronx and Brooklyn borough offices.

By mid-1987, Parole's Access program was staffed according to plan with a Program Coordinator, two drug counselors provided by DSAS, and two alcoholism counselors.[6] In May, two staff teams, each made up of a drug and alcoholism counselor, were in place in the Manhattan and Bronx offices, and in June, 1987, Access counselors began work with the first CPU participants at Lincoln. For most of the first half-year of the program's operation, Access staff spent one day a week at Lincoln. In the spring of 1988, Access counseling teams increased their time at Lincoln to approximately two days weekly; follow-up of

[6]DSAS drug counselors actually began working in parole field offices in January, 1987. The alcoholism counselors joined the effort in the spring of that year, although these staff were not provided by DAAA, as specified in the original legislation. As recounted in previous Vera reports, DAAA's then-director viewed the assignment of the Division's own counselors to the project as inconsistent with agency policy. To fill the alcoholism counseling positions, Parole decided to recruit two parole officers from the Division's own ranks.

released Lincoln participants was conducted by these counselors during the rest of the week in the district offices. While there was some turnover in these staff during the first year or so of the study period, Access coverage at Lincoln was generally consistent.[7] In the fall of 1988, a single DSAS counselor was assigned to work full-time at Lincoln, with part-time assistance from one of the field office alcoholism counselors and supervisory staff. Access opened a field office in Brooklyn in the summer of 1988 (prior to this date, parolees residing in Brooklyn were served out of the Manhattan district office), and Access services were extended to Queens in the fall of 1989. Access commendably maintained Spanish-speaking staff at the Lincoln facility to serve the needs of the many Hispanic participants in the pilot program; the DAAA supervisor and the Access coordinator were Spanish-speaking, as were some of the counseling staff.

Supervisory responsibility for Access was described in an annual interagency "Memorandum of Understanding," which specified a uniquely collaborative management structure for Parole's Access coordinator and clinical supervisors from DAAA and DSAS. Specialized duties of the clinical supervisors included overseeing counselors, providing ongoing in-service training of these counselors, developing arrangements with community-based treatment providers, and organizing and conducting parole officer training.[8] The Access coordinator had oversight responsibilities for all staff activities, ranging from monitoring counselors' case records and post-release transfers to field staff, to moderating and presenting at team meetings, inmate orientations and provider workshops at Lincoln.

Lincoln Assessment and Referral. For the first several months of Access' involvement at Lincoln, the counselor typically met with each participant twice; in the first session, the man's treatment needs were identified, and in the second, he was told the name and location of the program to which he was being referred. Not surprisingly, participants complained about the infrequency and brevity of these meetings; in Vera interviews during this period, half of the men had not yet been informed of their specific treatment referral within five to ten days of release. Inadequate space at Lincoln was a major factor limiting Access' interactions with participants. As more staff were devoted to the CPU in the spring

[7] In addition to counseling staff, an Institutional Parole Officer (IPO) was assigned full-time to work specifically with pilot participants, preparing them for Parole Board appearances, handling the paperwork for these appearances and transferring cases to field personnel upon release. The IPO also conducted interviews with pilot participants at intake and at other times in preparation for release transition; information and insights obtained in these sessions were shared with counseling personnel in team meetings.

[8] For much of the data collection period, the DAAA supervisor was the principal clinical consultant to Lincoln counselors, while also handling some direct counseling duties. He also worked to sensitize both Access and CPU staff to the presence of alcohol problems in men ostensibly diagnosed as drug cases. The DSAS supervisor played a similar, consultative role, but spent much less time at Lincoln. Unlike the DAAA position that was funded by Parole, she was "on loan" to Access through a cooperative arrangement with DSAS, and only had about two days a week to devote to both Lincoln and field Access. In earlier reports we supported efforts to make this key position a full-time, funded personnel line.

of 1988, and particularly when permanent office space on the CPU unit was made available to Access in August of 1988, Access involvement with participants predictably increased. During the last six months of the study period, Access counselors held four or five formal meetings with each inmate, while engaging in regular, informal contact.

Access sessions with participants typically followed a course with several phases. The initial meeting(s) were devoted to assessment; the results of the assessment would then be reviewed with the inmate. Together, inmate and counselor detailed the man's weaknesses and strengths. These were then used to set goals to fit the participant's individual needs and abilities. Finally, appropriate program choices were discussed, and where possible, counselors provided a list of available programs. Given the scarcity of treatment resources, however, proximity to the program was the principal factor dictating referral choice, along with individual treatment needs. A brief, final meeting usually occurred a day or two before release at which point program-contact information was provided to the participant. Access counselors stressed that throughout this entire process they were sensitive to complementing CPU efforts, guarding against inconsistencies with treatment the man was receiving while at Lincoln.

Transition Teams. Access' commitment to a multidisciplinary treatment approach took a couple of operational forms at Lincoln. For the most part, the interaction between Access and CPU staff was a model of collaboration; this was manifest in weekly team meetings involving the Access Program Coordinator, Access counselors and the IPO, and the CPU administrator and staff (Vera staff attended as observers).

At the team meeting, pilot participants pending release were discussed and program and parole information was exchanged. Topics in these meetings included: the inmate's participation in program activities; the extent of family involvement and supports; the inmate's view of his drug and/or alcohol problem; and his assessed amenability to treatment upon release. The IPO provided an overview of the man's parole conditions (if the inmate has met with the Board prior to the team meeting), the status of his "community prep" (his field PO's investigation of his post-release plans) and any previous history the inmate had with Parole, if applicable. Access counselors who had met with the inmate before the meeting would discuss his or her impressions of the man's treatment needs and tentative plans for post-release treatment were presented. Information about the man's involvement in CPU activities at Lincoln was provided by CPU staff, and incorporated by the Access counselors in their assessment and referral decisions.

Original plans also called for the Lincoln participant's field parole officer, who would supervise him upon release, to be involved in the referral decision and to participate in a team meeting with the inmate and the Access counselor at Lincoln, before the man's release. Over the course of the data collection period, this objective was achieved in about half of the cases, despite determined efforts by Access administrators to increase their frequency. When FPO team meetings didn't occur, typically the FPO missed the Lincoln appointment or wouldn't cooperate in arranging for one. FPOs' absences were attributed in the main to higher priorities elsewhere (such as a violation hearing or an absconder search).

Field Parole officers would typically go to in 1/2 the cases.

Training and Additional Activities. Access also conducted training of field parole staff on a regular basis throughout the project's history. A training agenda was developed and presented jointly by Parole's Access managers and the DAAA and DSAS clinical supervisors. The training comprised a relatively detailed curriculum, ranging from basic education on the addictions (e.g., substance abuse terminology and the different patterns or types of abuse) to more practical wisdom about handling addicts (e.g., dealing with the resistant client and resolving the treatment versus work dilemma).

Access managers also stressed the value of the staff's formal site visits every month or two to different community-based providers. Arranged by the clinical supervisors from DAAA and DSAS, these visits expanded counselors' referral options and served to educate staff who may have had limited exposure to particular modalities or treatment approaches. Additionally, they expanded the range and number of treatment providers familiar with, and willing to commit treatment resources to, parolees. As a partial outcome of the ties forged through these visits, and through the supportive efforts of the provider Task Force noted above, provider visits to Lincoln began to take place on a regular basis during the last few months of the study period.

With steady support from the Bureau of Alcoholism Services of the City's Department of Mental Health (and some early prodding and guidance from Vera), Access administrators took the lead role in forming and continuing the Task Force of community-based treatment providers, created in the spring of 1987. Now comprised of representatives of the various State agencies, the City Bureau, and about a dozen local alcohol and drug treatment providers, the Task Force has provided a unique forum for discussion of various issues that have an impact on treatment services for parolees: sensitizing parole commissioners to provider issues and the effects of special conditions on treatment delivery; techniques to ensure board-mandated treatment; the frequency of alcohol referrals among CPU graduates; community provider participation at Lincoln; confidentiality and communication between providers and parole personnel regarding parolee treatment progress; and, generally, methods of enhancing communication among parole officers, treatment providers and Access.

CHAPTER THREE
IMPLEMENTING THE RESEARCH:
THE STUDY DESIGN AND ANALYSIS PLAN

As an introduction to research findings presented in subsequent chapters, this chapter includes a brief review of the design and methods of the study, along with a discussion of the analysis plan. Earlier interim reports on this project have detailed the research design and methods, so they are only summarized here (a complete design description can be found in Appendix A). The plans implemented for descriptive analyses are also described. Much of this chapter includes an overview of the multivariate analyses of the outcome findings. A description of the statistical techniques that were employed and the rationale for their use is provided, along with the specification of the variables that were the subject of these analyses. These are recounted further in Appendix A.

Organization and Goals

Research Hypothesis, Design and Methods. As detailed in Vera's 1988 and 1989 interim reports, this research was designed to address the central hypothesis that inmates participating in an intensive community preparation treatment program, which includes linkage to community-based treatment, would be more successful after release than a comparable sample of inmates who did not participate in this program. Pilot participants were expected to show lower rates of criminal recidivism and relapse into substance abuse, higher rates of community integration, and greater involvement in community-based drug or alcohol treatment programs in the period after their release from prison.

The design implemented to address this hypothesis included a pilot (or "experimental") group, composed of participants in the Lincoln CPU-Access program, and a comparison (or "control") group chosen from Lincoln's general inmate population.[1] This latter group was selected using a pre-established screening procedure, designed to generate a comparison sample that was similar (and therefore statistically comparable) to the pilot sample.

With the exception of some additional qualitative, process data collected on pilot participants during their stay at Lincoln, the same data were collected on both pilot and comparison subjects. These included drug and alcohol history information collected at a screening interview, and extensive data obtained from DOCS files and in a face-to-face intake interview done just before release. Follow-up information was collected in interviews with subjects and their supervising field parole officers at two and six months post-release. Finally, researchers also obtained arrest record data through one year post-release.

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[1]Because Lincoln served as a pre-release facility in the DOCS system, its general population inmates were officially regarded as Community Preparation - Open Date (C.P.O.D.) inmates, as they had already been granted an "open date" (tentative release date) from the Parole Board.

In addition to testing the hypothesis stated above, the research was designed to yield information on a wide range of factors that had not yet been the subject of formal, quantitative analysis. The primary descriptive targets of this research included the prevalence of drug and alcohol problems, and trends in drug use among the DOCS population; the extent of inmate participation in prison-based drug and alcohol treatment programs and their views of those programs; and the extent of releasees' participation in community-based drug and alcohol programs. Additional research questions were addressed in relational analyses: How close is the match between an inmate's need for treatment and his participation in prison programs? How close is the match between treatment need and the setting of appropriate drug- and alcohol-related parole conditions? To what extent does pre-incarceration drug use predict post-release failure? Does abuse of certain substances (e.g., crack) make one more prone to failure? What other factors, such as a history of vocational, familial, or residential problems are related to failure? Are there motivational factors that predict success? Is participation in community-based programs upon release associated with lowered rates of recidivism? These, and numerous additional questions are considered throughout this report.

Research Implementation: Sample Sizes and Follow-Up Rates. Beginning with screening and intake interviews with comparison subjects in the spring of 1987, intake data collection continued until the early part of 1989; follow-up data collection was completed one year later. With rare exceptions, members of the experimental or pilot group included the first 158 men who attended and were released from the Lincoln CPU/Access program from its inception in May of 1987 through February of 1989.[2] The comparison group included 304 inmates who met pre-specified drug and alcohol history screening criteria, and who agreed to participate at intake. Although 70% of the 678 CPOD (general population) inmates who were screened met the comparison group criteria by having a recent history of drug or alcohol problems, approximately one-fourth of this eligible pool who had an exclusive history of drug problems were randomly excluded from research participation.[3] This was done to ensure that the 300+ comparison sample included an adequate number of alcohol- and poly-abusers for subsequent statistical analyses. (The criteria and exclusion procedures are discussed further in Appendix A.)

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[2]There were ten men who completed the program during this period but were not included in the study sample (six refused to participate in the research, two were held at release on immigration detainers and two were paroled out of state and were unavailable for follow-up). It should also be noted that there were approximately 50 inmates who were initially transferred to the Lincoln CPU during this period but were removed from the program and in most cases returned upstate; these men were not included in the research. Further discussion of this attrition is included in Appendix A.

[3]Self-selection did not appear to be a factor in establishing the comparison group, as only 7% (31 of 474) of inmates who were determined eligible on the basis of substance abuse history elected not to participate in the research. Most of these men asserted that they did not want "to be bothered" with the follow-up interviews after release.

Of the 462 subjects included in the intake sample, 453 (98%) were represented in two-month follow-up interviews by either the releasee's participation in the interview, or by his field parole officer's participation in an interview. The response rate on two-month PO interviews was 96%, representing a total of 444 subjects. About two-thirds (298) of the parolees participated in two-month interviews (this included 9 of the 18 men not represented in the PO interviews).

Overall, 92% of the men (425 of 462) were represented in six-month follow-up interviews. The PO response rate at six months was 90%. However, of the 417 POs who responded in these interviews, 45 could not provide any new data on the subject under their supervision, because the man had been either detained in jail or absconded for the entire period between the two- and six-month interview. Thus, the six-month PO analytic database included a sample of 372, or 81% of the original intake sample. The six-month parolee sample numbered 205, or 44% of the intake sample. The drop in response rate for this group is attributable to the large numbers of men who were detained or had absconded by the six-month point; for the most part, these men were not available for follow-up.[4] If the "failed" (detained or absconded) cases are subtracted from the original intake sample of 462, the parolee response rate at both the two- and six-month points was about 70%.

Although the parolee response rates were relatively high for this type of research, there was concern that those who participated in interviews were not representative, in that this group may have included a disproportionate number of non-recidivists or "successes." Analyses confirmed this suspicion, as, for example, 54% of the 298 parolees who participated in two-month interviews did not recidivate, as compared to an overall success rate of 45% for the entire sample (chi-square=24.2, $p<.001$). The parole officer follow-ups, however, proved representative in this respect, as successes accounted for 46% of the 444 two-month PO interviews (chi-square=2.3, $p>.10$). Compared to the parolee follow-up data, the PO interviews represented a much larger, unbiased follow-up sample. For these reasons, the PO data were used in many of the analyses reported here.

While reminders to subjects and phone calls to FPOs requested interviews at the exact two- and six-month post-release points, the actual scheduling of these interviews varied, depending upon the availability and cooperation of the respondents. On average, two-month PO interviews were conducted 10.6 weeks post-release and the average two-month parolee interview was held 9.9 weeks after release. The six-month PO interviews averaged 28.3 weeks post-release and the six-month parolee interviews averaged 27.8 weeks post-release.

Equivalence of the Study Groups. A series of statistical tests were performed to assess whether the pilot and comparison groups were equivalent on various pre-incarceration (or pre-treatment) characteristics. The results of these analyses (detailed in see Appendix A) indicated that the selection procedure used to identify comparison group

[4] As explained in Appendix A, after nearly a year of trying to locate and interview subjects held at Rikers with mixed success, we decided to terminate attempts to follow-up detained subjects because we could not afford the inordinate amount of staff time this required.

subjects was successful, as the groups were found to be statistically equivalent on such factors as age, marital status, socioeconomic status, drug use and treatment history, and criminal history. Differences between the groups were found on two of the sixteen variables tested. One of these was overall alcohol severity score, on which pilot men had lower scores than comparison men. This is not surprising, given that inmates with alcohol problems were intentionally over sampled in the selection of comparison group subjects. The average length of the comparison group's present incarceration term was also greater than that of the pilot group's by three and a half months; the groups were similar on all other measures of criminal history. The length of present incarceration variable was statistically controlled in all multivariate analyses of post-treatment outcomes, to ensure that its effects did not confound those of other experimental variables. The alcohol history measure (and a number of variables included in the comparative analysis) was similarly controlled, as described in the next section.

The Analysis Plan

Analyses addressed two broad agendas. One was basically descriptive, encompassing new information on drug and alcohol problems and their treatment among prisoners and parolees in New York State. The other agenda was reflected in the research design and centered on the hypothesis that participants of the Lincoln pilot program would be more successful after release than comparable non-participants. Secondary to this main hypothesis were several research questions about the efficacy of in-prison and post-release programs in general, and about the impacts of other factors, such as drug and alcohol history or parole conditions, on post-release success.

Results of various descriptive analyses are provided in Chapter 4 and Appendix B. These include the estimated prevalence of drug and alcohol problems in the DOCS' population (based on data collected from the screening sample); detailed information on background characteristics of inmates identified as drug and alcohol abusers (i.e., members of the research sample); the type and extent of drug and alcohol use among these inmates and changes in use over time; the extent to which inmates attend different kinds of in-prison treatment programs, their length-of-stay in the programs and their views of the usefulness of the programs; the use of drug- and alcohol-related parole conditions by the Parole Board; and the degree to which treatment attendance and parole conditions are appropriately matched to inmates' need for treatment. Many of these findings, presented in detail in earlier reports on this project, are updated and summarized here. The background data are also used to test the representativeness of the research sample; Chapter 4 includes a comparison of characteristics of the study sample with similar DOCS data available on large samples ($N>10,000$) of recent releasees. Chapter 4 also offers a more complete account of parolees' involvement in community-based drug and alcohol programs than has been available in previous reports. Based on follow-up interviews, these include findings on sources of referral, types of programs attended, lengths of stay, and parolees' reports on the effectiveness of these programs.

The results of analyses on post-release outcomes are presented in Chapter 5. The first of these is a series of analyses of criminal recidivism, including rearrest and other kinds of parole failure occurring during the first year after release. A separate set of analyses examines post-release outcome as reflected in a measure of the degree of community reintegration. Other analyses address two outcome indices that are important to the goals of prison treatment programs -- rates of relapse into drug and alcohol use, and participation in community-based treatment programs.

Multivariate Statistical Techniques. As discussed in earlier reports, one of the major benefits of the research design was the ability to assess the impacts of Lincoln participation on post-release outcomes, while controlling for other factors which could also contribute to those outcomes. In part, these factors were controlled through careful selection of the comparison group. As shown in findings presented earlier, comparison and pilot subjects are equivalent with regard to many important pre-treatment variables, including demographics, socioeconomic indicators, drug use, and criminal history. Therefore, any observed post-release differences between the two groups cannot be attributed to these pre-existing factors.

Additional controls over these potential "confounding" variables can be obtained through use of multivariate statistical techniques. These techniques, such as the multiple and logistic regression analyses reported here, permit an assessment of the relationship between a single independent (or predictor) variable (such as pilot vs. comparison group membership) and a dependent (or criterion) variable (such as post-release arrest outcome) while statistically controlling for the effects of other variables (e.g., age and arrest history). In the present analyses, these multivariate statistical techniques are of particular value in exploring the role of predictor variables which could not be controlled by the research design, such as participation in prison treatment programs other than Lincoln, and drug- and alcohol-related parole conditions.

A series of analyses were thus planned, specifying different outcomes as dependent or criterion variables. Each of these were analyzed separately in terms of their relationship with a set of predictor variables, which included the central experimental variables (Lincoln participation, other prison treatment participation, etc.), as well as other, confounding variables (prior criminal history, age, etc.). The predictor variables used in these analyses were pre-selected, either on the basis of theoretical importance (such as the pilot-comparison group variable) or a known association between the predictor variable and a criterion variable, as revealed in preliminary correlational analyses (described below). Additionally, when the regression analyses identified a significant association between two variables, bivariate tests were done on these variables to elucidate the direction and magnitude of this relationship.

Specifying the Outcome Measures. A detailed description of the outcome measures and their scoring is included in Appendix A. The analyses examined two criminal recidivism outcomes, post-release arrest and a more encompassing index of parole "failure," defined as any arrest, a technical violation of parole, or absconsion from parole supervision.[5] Official New York State criminal history records ("rap sheets") and interviews with supervising parole officers served as data sources for the recidivism outcomes. A uniform follow-up period of one year after release was used in collecting the recidivism data; arrests or violations subsequent to the one-year cut-off were ignored. In the principal analyses presented in Chapter 5, these recidivism outcomes were dichotomized as arrest-no arrest, and parole failure-no failure (inclusive of arrest), assessed over the one-year follow-up period. In additional analyses the arrest and failure outcomes were assessed at two other post-release points, on either side of the date of the subject's two-month interview. These dichotomous dependent (or criterion) measures were analyzed using logistic regression (also known as logit analysis).

Studies of correctional interventions are frequently criticized for relying exclusively on official records in measuring program impacts; therefore, an index of community reintegration was created and assessed as a separate post-release outcome. This measure, like the relapse and treatment participation measures described below, was based on data obtained in follow-up interviews. In all three of these analyses, information from the parole officer interview rather than the parolee interview was used to construct the outcome or criterion measure employed in multivariate tests. The rationale for this choice centered on the fact that the PO interviews represented a larger, and, in a significant way, unbiased sample when compared to the parolee data. As noted previously, the parolee sample over-represented "successful" cases, because men who were arrested and detained, or had absconded, were generally not available for interviews. This was not the case with PO interviews, which were missing for less than 10% of the subjects.

To assess community integration, a simple, cumulative five-point scale was created to reflect positive involvement and stability in residential, vocational and familial areas. The community integration scores obtained at each of the two follow-up points were averaged into a single measure for the principal analysis of this outcome, reflecting reintegration over the first six-months post-release. Because the five-point reintegration index approximated a continuous, interval-level variable, multiple regression analyses were performed on this particular criterion measure.

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[5]More detailed analyses of the nature and disposition of post-release arrests and violations were not performed because an assessment of the arrest disposition data revealed that only about half of these arrests had been disposed and entered as such on the official arrest records at the time the data were collected. Thus, an analysis of conviction outcomes would have been limited to a small number of cases. Moreover, it is possible that subjects who were arrested but had cases that were not yet disposed differed in some systematic way from those who had cases disposed within the one-year period, thus biasing an analysis of conviction results.

In addition to criticism about excessive reliance on official recidivism records, practitioners also understandably claim that correctional outcome studies do not assess the very behaviors that are the target of their interventions. While criminal recidivism serves as an important "bottom line" outcome, relapse into drinking and drug use, and continued participation in treatment programs after release are two outcomes that are nearest to the goals and intents of drug and alcohol treatment.

In the analysis of relapse, the criterion variable was a composite index that took into account the type and frequency-of-use of different drugs and of alcohol over the six-month follow-up period. At both the two- and six-month follow-up points the relapse measure combined PO reports of post-release drug use and problem drinking on a five-point scale. The highest (or "worst") of the two- or six-month scores was used for the overall relapse outcome, since relapse into heavy drug or alcohol use at any time during the six-month follow-up period is a sign that treatment has not achieved a fundamental goal. In the multivariate analyses, the five-point scale was more sensitive because of its range and variance; however, many of the bivariate analyses of relapse are described in terms of a dichotomous index, which collapsed scores of 2 or below into 0 and scores of 3-5 into 1. On this measure, a relapse is defined as weekly or more frequent use of a "major" drug (crack, cocaine, heroin, illegal methadone, PCP or some combination of these), or "problem" or "uncontrolled" drinking.

The treatment attendance outcome measure was a simple dichotomous variable, with scores of 1 representing steady attendance in a community-based drug or alcohol program (including self-help groups such as AA and NA), and 0 representing no or irregular attendance. On this measure, subjects were coded as attending if they were participating at both the two- and six-month interview periods, and the rest (including men attending at only one of the two periods) were coded as not attending.

Assessing Outcomes at Different Points Over the Follow-up Period. Each of the five outcomes was investigated over three different post-release periods. In each case the principal analysis assessed the outcome over the entire follow-up period. As detailed above, this was one year post-release for the criminal recidivism outcomes, and for the reintegration, relapse and treatment participation analyses, this was the six-month follow-up period reflected in post-release interviews. Additional analyses assessed each outcome over the first two months post-release (corresponding to the two-month follow-up interview conducted on each subject, which actually averaged about two and one-half months post-release), and then the remainder of the follow-up period. Thus, in the latter analysis the recidivism outcomes were assessed from three-to-twelve months post-release, and the other outcomes were assessed from three-to-six months post-release.

These period-specific analyses afforded an examination of the timing of the impacts of different pre-release predictor variables.[6] It was possible to determine from these

[6]At some point in the future, if resources permit, these data will be subjected to a survival analysis (also termed event history analysis). In addition to taking into account the occurrence of the event (e.g., rearrest), survival analysis also makes use of information about the time periods between events, thus providing a potentially more powerful statistical method for analyzing these data.

analyses, for example, whether prison treatment participation or drug severity history had differential impacts at early and later points in the post-release period. One might hypothesize that prison treatment would effect recidivism or relapse soon after release, but that its impacts would attenuate with time. A severe drug or alcohol history, on the other hand, might not effect outcomes immediately upon release, but might have impacts at a later post-release point.

Data Reduction and the Pre-Release Predictor Variables. The first set of multivariate analyses utilized pre-release data, obtained in intake interviews and from official records, as predictors of outcome. Subsequent analyses also assessed the predictive power of post-release data on outcomes; follow-up data thus could serve as both outcomes and predictors, depending upon the analysis.[7] A strategy for reducing the multitude of potential predictor variables obtained in interviews and from official records was necessitated in part by standard limits on the number of variables that can be used in multivariate analyses (as determined by sample size), but also as a means of organizing and simplifying the analysis and presentation of results. The intake interview, which included over 450 variables, was the primary focus of data reduction analyses, although the follow-up interview data were similarly analyzed and reduced.

The data reduction process involved two stages. Initially, composite indexes were constructed. Examples include measures of drug and alcohol problem severity, calculated from responses to individual questions about type of substance and frequency of use, and socioeconomic status, calculated from educational and vocational history items. After both the intake and follow-up data were compressed in this way, several relational analyses were performed. On the basis of these analyses, variables that were consistently unrelated to the outcome measures, and variables which were statistically redundant with other predictors, were excluded from subsequent multivariate analyses. These data reduction procedures are described in more detail in Appendix A.

In performing both the preliminary data reduction analyses and the multivariate analyses, it was useful to divide the predictor variables into content areas or groups, representing sets of variables. Four variable groups were distinguished for the pre-release data: (A) background information; (B) criminal history; (C) status on various characteristics in the year prior to the current incarceration; and (D) events occurring during this incarceration.

In the final multivariate analyses the background data set A included four variables: age, race/ethnicity, socioeconomic status (SES), and history of familial drug and alcohol abuse. The criminal history content group (B) included six variables: number of arrests as a juvenile; number of prior jail terms; a 5-point scale representing most serious prior

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[7]For example, in assessing the impacts of the Lincoln CPU/Access program (a pre-release predictor variable), post-release drug relapse served as an outcome -- as an indicator of the program's success in keeping its clients off drugs. From another perspective, however, it was also important to know what factors predict recidivism, and one would expect post-release drug relapse to be such a predictor. Thus, in analyzing recidivism as an outcome, drug relapse at two months was assessed as a predictor to test this relationship.

conviction (1=A felony, 2=B felony, etc.); number of prior drug-related arrests; whether the current conviction was for a drug charge; and length of the present incarceration. Four variables were in set C, which represented the subject's status in the year before incarceration: severity of alcohol problem; severity of drug problem; prior residence (1=private residence, 2=shelter, SRO, treatment program or homeless); and number of weeks unemployed in the prior year. (Appendix A provides additional information on the scoring of predictor variables.)

The fourth and final set of pre-release variables, events occurring during the incarceration, included the pilot-comparison study group variable and other variables of major interest. This set D was divided into two subsets of variables to address specific research questions. One group included three variables: the presence or absence of parole conditions specifying attendance in drug or alcohol treatment; the subject's stated plans to attend treatment programs upon release; and the extent to which the subject expected to resume use of drugs and alcohol upon release. These latter two variables are traditional indicators of motivation for recovery.

The last subset of variables in this content group are the in-prison treatment variables. With the exception of the study group variable (0=Lincoln pilot, 1=comparison group), which was built into the study design, the construction and analysis of prison treatment variables depended upon how the study sample was distributed on in-prison treatment factors, such as the numbers of men attending different types of programs, and their length of participation in programs. This approach was necessary because it was not feasible to select subjects a priori on any treatment dimension other than Lincoln CPU/Access participation. Preliminary analyses explored the viability of different prison treatment variables, guided by a particular interest in the effects of attendance in different types of programs, and of differing lengths of treatment participation. The results of these preliminary analyses of prison treatment, and a description of variables selected for inclusion in the multivariate analyses are presented in the beginning of Chapter 5.

Post-Release Variables as Predictors. Analyses of the pre-release predictors represent the conventional means of studying program impacts, with the "post-" information (post-release or post-treatment) serving as outcomes, or the standards by which impacts of the intervention are assessed. The results of these analyses, therefore, are interpreted in conventional ways in Chapters 5 and 6, with conclusions about the post-release impacts of prison treatment and other factors of interest. Breaking somewhat from convention, however, further analyses of the post-release information were also performed.

For reasons described in previous discussions of the PO and parolee follow-up data (and reviewed in Appendix A), the analyses of post-release predictors were limited to two-month parole officer data. Analogous to the pre-release analyses, these data were used to predict criminal recidivism over the twelve-month post-release period, and reintegration, relapse and treatment attendance over six months. Additional, supplementary analyses compared the ability of the two-month variables to predict recidivism, relapse and attendance at the two-month point, and their ability to predict these same outcomes measured after the two-month point.

Similar to those performed on the pre-release information, preliminary data reduction analyses yielded a manageable number of two-month PO variables for use in multivariate analyses. These variables were divided into two distinct sets, and entered in a hierarchical sequence. The first set (POST-A) included four variables: the PO's estimate of the extent of the subject's drug use; number of times the parolee changed residence since release; amount of time the parolee was unemployed since release; and the parolee's involvement in a vocational program. The second set of post-release variables (POST-B) included four measures of the parolee's status in community-based drug and alcohol treatment programs. Two of these variables related to involvement in a drug program, and two in alcohol programs. For both drug and alcohol programs, dichotomous variables were created to express "no show" to a program referral and regular attendance in a program. (These variables are described further in Appendix A.)

Hierarchical Regression Models. While the six content groups (A, B, C, D, post-A, post-B) aided in organizing the data reduction process, their creation was most useful in the regression analyses, where each group served as a distinct variable set which was entered in an ordered, hierarchical fashion in the regression models (Cohen & Cohen, 1975). In the first step of the typical hierarchical analysis of pre-release predictors, all the variables in set A (background information) were entered. As detailed in Appendix A, only variables in this set which met a pre-determined statistical criterion were selected for entry in the regression model. With these variables in the equation, the set B variables were considered. This process was repeated for the third and fourth sets (C and D), respectively. Similarly, in the separate analyses of the impacts of post-release predictors, these were assessed only after significant variables contributing from the pre-release sets (A-D) were first forced in the model. (Logical variations of this sequential ordering are described in Appendix A.)

This combination of hierarchical and forward selection procedures for variable selection takes into account both temporal and theoretical, or hypothesis-specific, rationales in specifying the final regression model. Entering variables in a temporal order (i.e., demographic and childhood information prior to criminal history, and both of these prior to information about the period immediately before incarceration) permits one to draw more definitive conclusions about the effects of the later-entered variables on the dependent variable, because the model statistically controls for the effects of the temporally prior variables entered earlier in the model. Using this temporal hierarchy, the impacts of being employed in the year before incarceration, for example, can be discerned independently from ("controlling for") the impacts of lifetime educational and vocational achievement (SES, in the present data), race and age.

The theoretical rationale for this hierarchical model primarily concerns the last variables entered in the pre-release analyses, taken from set D. These "events occurring during the incarceration" variables are, obviously, temporally subsequent to variables represented in sets A, B and C. Additionally, these variables are of central import to this research, which was designed to test the theoretical hypothesis that these variables would

have an impact on the criterion variables above and beyond the impacts of other variables. Entering these variables last in the regression model, controlling for those already found to be significantly related to the criterion variable, is a simple and elegant way of performing this test.

CHAPTER FOUR
DESCRIBING THE RESEARCH SAMPLE: BACKGROUND CHARACTERISTICS AND EXPERIENCE IN PRE- AND POST-RELEASE TREATMENT

Included in this chapter is a broad range of descriptive information on the study sample. With the focus of the present report on outcome findings, much of the discussion in this chapter is an update or summary of results presented in previous reports. Most of these results are concerned with characteristics of the study sample, including a diversity of demographic and background data, their criminal history, and alcohol- and drug-related history. A more detailed description of these findings is included in Appendix B. Using information supplied to us from DOCS, a comparison of the Vera study sample to DOCS' general inmate population is also presented. These analyses support early, tentative impressions that the present sample is representative of New York City-bound inmates with drug and alcohol problems.

The chapter goes on to briefly summarize information presented in earlier Vera reports on the extent of participation in prison treatment programs, and the results of a simple "matching" analysis, of whether men who appeared most in need of treatment were attending prison-based programs, and whether these same men were getting appropriate drug- and alcohol-related parole conditions. The chapter closes with data not presented previously on the involvement of recently-released parolees' participation in community-based treatment programs.

The results described in this chapter were taken from the intake interview completed on all 462 men who entered the research at Lincoln. While most of the data reported here were based on subjects' self-reports in the interview, some information was taken from the DOCS file on each case. On many items, such as demographic data and in-prison program involvement, the information was taken preliminarily from files, and then validated in interview inquiries. In all but a few cases, the descriptive results are presented for the entire intake sample of 462 subjects. When preliminary group comparisons indicated that the comparison and pilot samples differed on a particular data item, the descriptive analysis was done separately on the two groups; these occasions are reported as such in the text.

Characteristics of the Research Sample

Background. The "Research Sample" column of Table 4.A displays some of the background characteristics of these subjects. A majority of the sample was either black (53%) or Hispanic (39%). Of the 184 Hispanic subjects in the sample, 165 said they were of Puerto Rican origin. The rest of the sample were either white (8%) or classified as other (1%). Two-thirds of the sample spoke English only and 29% of them were bilingual in Spanish and English; 3% could only speak Spanish.

Table 4-A

COMPARISON OF THE RESEARCH SAMPLE WITH DOCS RELEASEES

Variable	Research Sample (N = 462)	DOCS Releasees
Ethnicity/Race[1]		
Black	52.8%	49%
Hispanic	39.1%	30%
White	7.9%	21%
Other	.2%	–
Age[1]		
16-18	1.5%	2%
19-20	6.6%	8%
21-24	18.6%	23%
25-29	30.5%	26%
30-34	23.0%	18%
35-39	10.9%	11%
40-44	5.3%	6%
45-49	2.6%	3%
50-64	.9%	2%
65+	.2%	–
Marital Status[2]		
Never Married	51.1%	56.5%
Married	10.6%	16.4%
Common-Law	16.6%	19.0%
Divorced/Separated	20.6%	4.7%
Widowed	1.1%	.6%
Education[2]		
Elementary	5.4%	5.6%
Junior High	36.4%	40.5%
High School	55.7%	52.2%
Some College	2.6%	1.7%
Months of Incarceration, Present Term[1]		
Prison Time	Median = 19	Median = 21
Jail + Prison Time	Median = 24	Median = 25
Conviction Charge at Commitment[1]		
Robbery	34.6%	29%
Drug Offenses	25.7%	24%
Burglary	15.3%	17%
Grand Larceny	5.2%	5%
Weapons	5.0%	5%
Other	14.2%	20%

[1] DOCS data based on 1987 releasees; base N = 12665 with some missing data on individual items.
[2] DOCS data based on 1986 releasees; base N = 10389 with some missing data on individual items.

The average age of these men at release was 29.4 (sd=7.1) with the range extending from 18 to 67 years. About half of the subjects had not obtained either a high school diploma or a G.E.D. On average, the subjects completed 9.7 years (sd=1.7) of schooling, and, according to available DOCS information, their average grade-equivalent reading score was 7.4 (sd=3.0).

Including common-law arrangements, about one-fourth (27%) of the men were married, while just over half of the men (51%) had never married. About three in five men reported having children and 19% reported having three or more children. The subjects had spent a median of 3 years at the last place of residence. Just over one-third (35%) of the subjects resided in the borough of Brooklyn, while about one-fourth lived in Manhattan (24%) or the Bronx (27%) just prior to incarceration for the present offense.

When asked to rate several aspects of their social and familial life, more than half of the men consistently judged relationships with family and friends as good or very good. However, objective DOCS records and more detailed background queries yielded a somewhat contrary picture. Files on prison visits showed that three-quarters of the men averaged 2 or fewer annual visits from family or friends during the present incarceration. Forty-three percent of the men reported alcoholism in other family members and one-third reported the existence of drug problems in their family. About 37% of the men reported that some other member of their family had at one time been involved in criminal activity.

While most men (92%) reported having held a full-time job at some point in their lives, one-third reported that their longest held full-time job was a year or less. Over half of the men (51%) were not working prior to the present incarceration. Including "spot jobs," part- and full-time work, either "off the books" or legitimate employment, the average number of weeks worked in the year prior to this incarceration was 29. Of the 73% who reported any employment in the prior year, their median employment income for that year was $8,000. The median income for the entire sample (including those who did not report employment) in the year prior to incarceration was $5,644 (mean=$8,773, sd=$10,795). About three-fifths of the men reported illegal income in Vera interviews; the median annual (prior year) income reported from illegal activities was $29,000, while the average was $43,295.

DOCS files and interviews with inmates yielded information about medical and psychiatric history. The most common medical problems reported were gunshot or stab wounds (43%) or accidents (36%) of one kind or the other. About one-fifth of them took some kind of non-psychiatric medication on a regular basis, and 17% had spent one or more days in a prison hospital during the current incarceration. References to psychological problems were found in 19% of the inmate files. Less than half of these cases (6%) had taken medication for psychological ailments, and about the same number of men (6%) men had had at least one psychiatric hospitalization in the past.

Criminal History Information. Approximately 42% of these men had been arrested at least once as a juvenile (mean juvenile arrests=1.2). The average age at which their first adult arrest occurred was 19.9, and the mean length of their arrest record, from this first arrest up to the most recent arrest prior to the present incarceration, was 7.6 years.

The sample had an average of 7 prior arrests (sd=5.2) and 5.2 total convictions (sd=3.9). Three-fifths of the men had at least one prior jail term, with 39% having served two or more jail terms. About half of the men (46%) had served one or more prison sentences prior to the present term.

All conviction charges were reviewed to assess each subject's most serious charge at any point during their criminal history (including the present commitment). Similar proportions of men had been convicted of B (27%), C (31%) and D (31%) felonies. Three percent had histories that included an A felony conviction, and 8% had had E felony convictions. About half the entire sample had at least one prior drug-related conviction, and 28% had two or more such convictions.

More detailed information was collected regarding the present incarceration. The median time served in the State system for this incarceration was 19 months, and total time served (adding jail to the prison time) was 24 months. About one-third of the men (35%) were serving time for a D felony, which was the most common felony charge at conviction. B felony convictions accounted for 22% of the cases, and similar numbers of men were serving time for C (23%) and E (19%) felony convictions. Two percent of the sample were serving time for an A felony. The present conviction was also assessed by type of charge. Robbery was the most frequently occurring charge, present in 36% of the cases. About one-fourth (26%) of the men were serving time for a drug conviction, while 15% had been convicted of a burglary charge. Grand larceny and weapons charges were the next two most common conviction charges, which were each present in 5% of the sample.

Alcohol and Drug-Related Information. Screening sample data were obtained on 678 inmates about to be released from Lincoln's general population; this sample is likely representative of NYC-bound DOCS inmates. On the basis of several self-report measures (see Appendix A), it was estimated that about two out of three men in this sample had a drug problem, while one out of three had an alcohol problem. About one-fourth of the sample abused both drugs and alcohol; 38% had a drug problem exclusively, and 7% had an alcohol problem only. Analyses indicated that the proportion of inmates with drug problems increased about 8% over the period of our data collection. Increases in the proportion of inmates using drugs or alcohol while engaged in criminal activity were even more dramatic; drug use rose from 54% to 71%, while alcohol use went from 28% to 38%.

Compared to the screening sample, more complete drug and alcohol results were available on all 462 members in the research sample.[1] As indicated below, these men appear to be representative of city-bound inmates with drug and/or alcohol problems. Almost all the research subjects (92%) reported using drugs at least a few times a month,

[1]The scoring of drug and alcohol measures used with the research sample are described in Appendix A, along with a more detailed discussion of these findings.

and nearly three out of four men (72%) were classified as "regular users" of drugs, reporting weekly or more frequent use a "major drug" such as heroin, powdered cocaine (cocaine hydrochloride or HCL) or crack, or, in rare cases, PCP or other hallucinogens, or illicit methadone or other opiate derivatives (the "regular" designation for weekly or more frequent use is similar to that used in the TOPS research, Hubbard et al., 1989). Daily use of these drugs were reported by about half the sample and one-fourth reported use of two or more of these major drugs per day.

Cocaine HCL, the most commonly used drug, was used regularly (at least weekly) by 56% of the sample, and over half of these men (and 35% of the entire sample) reported daily cocaine use. Regular use of heroin was reported by 35% of the men (26% reported daily use), and regular crack use by 20% (daily use by 13%).[2] One in five men identified cocaine as their primary drug problem, while 18% said heroin was the problem, and 13% pointed to crack as their primary problem. Another 8% said their primary problem was "speedballing," a mixture of cocaine and heroin.

An analysis of drug use trends in this sample revealed that crack use more than quadrupled over time, from 8% among subjects who began incarceration in 1985 or earlier, to 36% of those entering in 1986 or 1987. Proportions reporting daily cocaine use went from 26% among the 1983 and earlier entrants, to about 40% among the 1985 entrants, and back down to 24% among the most recent entrants. Daily heroin use showed a similar drop of about 10% between 1985 entrants and more recent cases. Taken together, these findings suggest crack may be taking the place of cocaine and heroin among some users. Proportions of men reporting intravenous drug use also dropped significantly, from a pre-1984 high of 53% to 24% among the 1986-87 entrants.

Just over one-third of the sample were judged as having severe problems with alcohol.[3] Twenty-eight percent reported consuming an average daily amount of alcohol equivalent to a quart of wine, eight bottles of beer or six strong drinks of liquor. Many of these men abused both alcohol and drugs: 17% showed some evidence of poly-abuse, and another 24% were found to have severe problems with both drugs and alcohol.

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[2]The incidence of crack use in this sample must be viewed in light of the fact that about half the sample were reporting on drug use prior to 1986 (when crack use flourished), when they began the present incarceration.

[3]The two study groups differed somewhat on the alcohol measures, with alcohol problems being more prevalent among comparison men. This was not surprising, given that, as discussed in Appendix A, men with alcohol problems were intentionally "oversampled" when the comparison group was selected. On the alcohol composite measure, 40% of the comparison group was judged as having severe problems, as compared to 31% of the pilot men. This latter figure is probably more typical of the population of city-bound inmates with a history of substance abuse problems.

Subjects were also asked about the connection between their drug and alcohol use, and their commission of crimes. More than half of the men (60%) said they had used drugs "most of the time" while committing crimes, while 30% reported frequent heavy drinking while committing crimes. Fifty-four percent of the men reported ever committing crimes to support a drug habit, while one-third said their crimes were nearly always motivated by a need to buy drugs.

Given their extensive involvement with drugs and alcohol, this sample had a surprising lack of exposure to treatment for these problems. Seventy percent of the men had never been to a drug or alcohol treatment program (including self-help groups like AA and NA) outside of prison. One-fourth of the men had some experience with a drug program, and only 13% of the sample had more than a single admission to a drug program. Methadone maintenance, drug-free residential and detoxification programs were equally represented in the drug treatment admissions; about 10% of the sample reported at least one admission to each of these modalities (men could report attendance in more than one modality). Involvement in alcohol programs was even less common. Only 22 men (6%) reported one or more admissions to these programs and about half of these had only a single admission. Almost all of these alcohol treatment admissions were either for detoxification or AA groups.

Comparing the Research Sample to DOCS' General Inmate Population

To determine the extent to which the research sample was representative of general population inmates, the study sample was compared to DOCS releasees on assorted demographic and criminal history data supplied from DOCS' central office. The most appropriate comparative information readily available from DOCS were data on all first-time releasees for the years 1986 (N=10,389) and 1987 (N=12,265). Because the majority of the study sample were actually released in 1988 (about one-third were released in 1987), the most recent (1987) data were used in the comparisons when available. (DOCS reports that changes of at most a few percentage points would be expected from year to year in the data reported here.) Comparisons were made on distributions for ethnicity/race, age, marital status, education and current conviction charge. These comparative distributions are summarized in Table 4-A.

The ethnic or racial breakdown of the DOCS releasees and the research sample differed in one anticipated respect. In both samples, blacks accounted for approximately half of the group. There was a slightly higher percentage of Hispanics in the study sample. Four out of every ten parolees in the study sample were Hispanic compared to three out of ten in the DOCS releasee group. The difference in the proportion of whites in the two groups was most evident. While whites were 21% of the DOCS population they constituted only 8% of the study sample. The under-representation of whites in the study sample was expected, and is likely due to fact that this sample was limited to releasees from New York City. This may also account for the greater proportion of Hispanics in the study sample.

Age distribution of the study sample was very representative of the larger DOCS releasee population. A correlational analysis of the two distributions across the ten intervals of age ranges indicated high degree of similarity ($r=.97$, $p<.0001$). The age distributions converted into terciles of age ranges 16-24, 25-39, and 40-65+ showed the comparability of the two sets of data. For the lowest range (16-24), 33% of the DOCS population and 27% of the study sample fell within this range. The middle range of 25-39 covered 55% of the DOCS population and 64% percent of study sample. Eleven percent of the DOCS releasees and nine percent of the study sample fell in the upper range of 40-65+.

The study sample was also similar to the DOCS population in terms of marital status. Slightly over half of the DOCS releasees were "never married" and comparable proportions of the study sample indicated the same. Six percent more of the releasees were married and two percent more had common-law marriages. These slight differences anticipate the larger difference in the divorced/separated category; 21% of the men in the study sample said they were divorced or separated, as compared to 5% of the general releasees. This difference may be due to the fact that the DOCS data are obtained at commitment, while the study sample is reporting marital status just prior to release. That is, many men who reported being married when entering prison may have regarded themselves as separated from their former spouses by the time they had finished serving their prison term.

As shown in Table 4-A, the educational level of the two samples were equivalent. The proportion of men who completed at least some high school was just over half in each group, and the proportion whose highest grade completed was in the junior high years differed by only 4% between the two samples.

Two measures relating to the present incarceration were used in the comparisons. The incarceration terms served by the two samples were quite similar, as the total median time served in the present term differed by only one month between the groups, and by two months when state prison time alone was assessed. The two samples were also compared on the most common commitment offenses reported in the DOCS data (any accounting for 5% or more of the DOCS releasees). Slightly more than one-third (35%) of the study sample were serving sentences for robbery, while this was true of slightly less than one-third (29%) of the releasee sample. About one-quarter of both groups were serving sentences for drug offenses. Very similar proportions of men in the two samples had been convicted of the other charges shown in the table.

In sum, there was considerable consistency between the study group and the larger releasee population. One notable demographic difference was the under-representation of whites in the study sample. The is likely due to the study sample being limited to New York City-bound releasees. Whites are most commonly committed to DOCS from upstate communities and return there. The proportion of men reporting that they were divorced or separated (21%) was four times higher in the study sample. This may be attributable to the different times at which these data were reported by the inmates.

Overall, however, comparisons of the study sample to the larger population of releasees on data readily available from DOCS revealed a high degree of similarity. The results suggest that the study sample is a representative sample of the population of men returning to New York City from State prison. It is likely, therefore, that findings arising from this research cannot be attributed to sample selection bias.

Participation in Prison Treatment Programs and Drug- and Alcohol-Related Parole Conditions

Information on the subjects' participation in alcohol and drug treatment during the current incarceration was obtained from interviews and reviews of individual DOCS file. The descriptive data of interest here are largely limited to the comparison group's experience prior to their transfer to Lincoln (where they were held briefly before being released). With regard to both prison treatment and parole mandates, the experiences of these comparison men are likely typical of NYC-bound State inmates with drug and alcohol problems. The prison treatment experiences of pilot group men, on the other hand, were different just by virtue of their selection for the Lincoln pilot program. One might also anticipate that the parole board could make different decisions about drug- and alcohol-related conditions knowing that these inmates were in a pilot treatment program.

Treatment participation data collected in the screening interview, while minimal, were of interest because they were obtained on a large sample (N=678) of inmates thought to be representative of inmates returning to the NYC area. The screening results indicate that about three-fourths of these men attended some kind of in-prison treatment during the present incarceration. Of those who participated in one or more programs, the median time spent in treatment was about four months. Compared with the entire screening sample, a slightly greater proportion of comparison group subjects attended one or more programs (79%), and their attendance was typically for longer periods (the monthly median was six). Using a criterion of 12 or more weeks of program attendance coupled with successful termination, 61% of the comparison group satisfactorily completed some kind of drug or alcohol treatment program.

Participation in Non-ASAT Programs. In keeping with the system DOCS used in classifying drug and alcohol treatment programs during the course of this study, we distinguished subjects' participation in the Department's ASAT programs from participation in other less formal, inmate- or volunteer-run treatment programs. Most attendance in drug or alcohol treatment by comparison group men was in non-ASAT programs, which included self-help groups such as NA and AA. Two-thirds of the comparison men spent some time in such programs. Using the same criterion described above, just over half of the comparison group (52%) successfully completed non-ASAT programs. These programs are ubiquitous in the DOCS system; the comparison group attended programs located in 38 different correctional facilities.

The most common type of non-ASAT program were those with a drug-abuse treatment orientation; 30% of the comparison group attended these programs. Other non-ASAT programs included AA meetings, attended by 16%; NA groups, attended by 14%; and programs that addressed both drug and alcohol problems, attended by 8%. The typical participant spent about five months in these programs. Most participants offered favorable assessments of these programs' effectiveness. Using a 1-to-5 rating scale, with 1 being "extremely helpful" and 5 "of no use at all," half of the men gave the highest score to the program's potential for helping them "to stay straight or sober" after release and another 20% judged the program a 2.

Participation in ASAT Programs. About one in four comparison subjects attended an ASAT program during their incarceration; most of these (and 20% of all comparison group men) spent at least three months in them. Similar to the less formal programs described above, the median length of ASAT participation was five months. About two-thirds of the ASAT participants went to "outpatient" (or "modular" or "drop-in") ASATs, while the rest attended a "residential" ASAT. According to inmate reports, non-residential ASATs averaged 4.7 program activities weekly, with group counseling (mean=1.8 weekly) and educational meetings and seminars (mean=1.4 weekly) being the predominant activities. In these programs, the men averaged under one AA and NA/CA weekly meetings (.68 and .35, respectively). Participants of residential programs reported about twice this number of weekly program activities. ASAT participants rated their programs slightly higher than those in non-ASATs; 61% of the participants (vs. 50% in non-ASAT programs) judged the program "extremely helpful," and a similar number, 17%, rated the program a 2.

Alcohol- and Drug-Related Conditions Parole. One quarter of the men in the comparison group had no conditions relating to drug, alcohol or poly-abuse. More than half of the remainder (about 40% of the total sample) had exclusively drug-related conditions; about half of these (20% of the sample) had two or three conditions. Most commonly, multiple drug conditions included a mandate to attend treatment and a requirement for drug testing (urinalysis). Considerably fewer men (12%) were given conditions exclusively dealing with alcohol, but almost all of these received multiple conditions. This reflects parole boards' tendencies to couple alcohol abstinence with a mandate for AA attendance or outpatient treatment. Finally, just under one-quarter of the group were given a poly-abuse condition, including 10% with multiple conditions (typically substance abuse counseling and urinalysis, or both a drug- and alcohol-specific condition).

More specific analyses of these data revealed that 60% of the comparison group received mandates to attend treatment of some kind. The substance-specific breakdowns yielded about the same proportions noted above: 30% specified drug treatment, about one-fifth identified "substance abuse" (or a combination of alcohol and drug) treatment, and 13% specified alcohol treatment. Other drug and alcohol conditions appeared less frequently, and were almost always paired with a treatment condition. Mandates for "drug testing" or urinalysis were set for about one-third of the comparison group. "Drug alert"

60% -

conditions, which are simply a means for the board to "alert" field parole officers and their superiors to a parolee's drug abuse history, were specified for 22% of the men. In about one-third of cases with treatment conditions the board added the phrase "at the parole officer's discretion" to the treatment mandate.

Matching Inmates to Prison Treatment and to Parole Conditions: How Well Matched? Given the scarcity of treatment resources for offender populations on both sides of the prison wall, it is only sensible that inmates most in need of treatment should be the ones attending prison-based programs, and being assigned conditions requiring participation in post-release community-based programs. The adequacy of the current system for making this match between needs and services was assessed using data described above. In contrast to the more purely descriptive information presented previously in this chapter, this analysis, as well as the parole condition analysis which follows, was intended to yield conclusions about the need for developing and improving the needs-service match.

Data available from screening interviews (N=678) indicated that four out of five men (81%) who met Vera's criteria for having a recent drug or alcohol problem attended a treatment program during the present incarceration; a smaller, but still sizable proportion (54%) of those who did not meet these criteria also attended programs. The more detailed data obtained from the comparison group (N=301) revealed the same pattern with regard to drug problems. Overall, men with more severe drug abuse histories were more likely to attend treatment during the present incarceration than those with less severe drug histories. However, although this relationship (between drug abuse severity and prison treatment attendance) was statistically significant, its magnitude was modest. Eighty-three percent of those with severe drug problems had attended some kind of substance abuse treatment; 70% of those with less severe drug problems had done so. No attendance difference was observed for those with alcohol problems; 83% of those in the most severe categories went to a program -- as did 77% of those without a severe alcohol problem.

Further analyses revealed that abuse severity was related to attendance of non-ASAT programs, but bore no relationship to ASAT attendance. Almost three-fourths of the most severe drug abusers attended a non-ASAT program, compared with 58% of those in low severity categories. This difference was not evident in ASAT programs, where about one-fourth of those in both the low and high severity groups attended. Again, alcohol problem severity was unrelated to attendance in either non-ASAT or ASAT programs.

With regard to the setting of parole conditions, the results similarly suggest that "appropriate" matching is occurring, as individuals with the greatest need for treatment and who pose the highest risk of relapse are typically assigned drug-related conditions. However, while these results suggest the boards appropriately differentiate among individuals in setting conditions, more detailed statistical analyses suggest this process could be improved. For example, 44% of those with evident treatment need -- those judged as having severe drug problems -- did not get a treatment condition of any kind. Additionally, the group of men who were given treatment conditions (and who presumably will be referred to scare community-based treatment slots) included some 20% to 30% of non-severe cases -- cases with no obvious need for treatment on the basis of their abuse history.

Taken together, these results demonstrate mixed success; inmates most in need of treatment have a slightly greater chance of attending prison programs and being assigned parole conditions to attend post-release treatment. On the other hand, the matching of inmates to treatment and treatment conditions could be much improved. An objective, comprehensive assessment completed on all inmates at classification (or perhaps at individual facilities) would be useful for both selecting high-need cases for prison program and for assigning appropriate parole conditions.

It is notable that non-ASAT programs appeared to be more efficient in serving those in need -- the findings suggest that abuse history is related to attendance in these programs, but not ASAT attendance. Given the high demand for ASAT programs (virtually all of which had waiting lists at the time of the study), a more efficient allocation of ASAT resources could be accomplished by routinely targeting high-need inmates. The same case can be made for better matching of treatment need to parole conditions. As board members increasingly recognize and respond to burgeoning drug problems among releasees, the supply of community-based program slots can't keep pace with demand. Our preliminary findings have already affirmed the importance of condition setting on post-release treatment participation; a superior method of matching board mandates to parolees' needs should not only make the difficult tasks of Parole Board members and parole officers easier, but with improved, parolee-specific community-based programming, it may also contribute to reductions in relapse and criminal recidivism.

Participation in Community-Based Treatment After Release

Returning to more straightforward descriptive findings, results reported in this section concern comparison group information collected in the two- and six-month follow-up interviews with parole officers. With post-release treatment participation being a central focus of the pilot effort, the pilot groups' behavior in this area was influenced by the Lincoln (especially Access) experience. Therefore, the comparison group presents a much more representative base for descriptive information on the typical New York City releasee's involvement in community-based treatment. Although notable differences between the pilot and comparison groups on treatment participation are raised in this section, these differences are the subject of more elaborate analyses presented in later sections of this report.

The PO interviews were selected as the source of these data because, as discussed in Chapter 3, more subjects were represented in PO interviews than parolee interviews, and the PO follow-up sample is unbiased, including representative numbers of both successful and failed cases. Inspection of these data, however, did reveal considerable consistency between PO and parolee reports of treatment participation. In reporting some of the data below we cite parolee data for comparison purposes. Parolee data are also reported when no comparable information was obtained in the shorter PO interviews.

Treatment Participation at Two Months Post-Release. Just over one-third of the comparison men were referred to a drug or alcohol program at some point between release and the two-month interview (typically done 10.5 weeks post-release). About 80% of all the referrals were to drug programs (including self-help groups like NA); therefore, about one-fourth of the entire comparison sample had a drug program referral. Just under 10% of the total sample were referred to an alcohol program. Of the 79 men who were given drug treatment referrals, 10 received a second referral (presumably after the first failed), and 2 were given additional referrals. One of the 24 men with alcohol program referrals was given a second referral.

The outpatient and self-help modalities accounted for nearly all of both the drug and alcohol program referrals. Seventy percent of all drug referrals were to outpatient drug-free programs, with NA (Narcotics Anonymous) or CA or a similar self-help program specified in 20% of the comparison group drug referrals.[4] Despite the fact that one-fourth of the men reported a severe history of problems with heroin, only one subject was referred to a methadone maintenance program over the first two months post-release. This finding is consistent with the widely-held impression that parole officers are loath to make referrals to these programs; Parole officials also report that many parolees are opposed to attending methadone maintenance programs. A total of six men were referred to residential programs for drug treatment. The outpatient and self-help figures were reversed with regard to alcohol referrals. Of the 28 comparison group alcohol program referrals described in two-month interviews, 70% were to AA groups, with the remainder going to outpatient programs.

In almost all of the parole officer interviews, the POs themselves were cited as the primary source of treatment referrals of these comparison group subjects. More specific questioning in the parolee interviews supported the notion that POs were primarily responsible for treatment referrals, but self-referrals, and, in rare cases, alternative referral agents were also cited in parolee interviews. For both drug and alcohol referrals, parolees credited POs as the source of about 60% of all treatment referrals. About one-third of the alcohol referrals and 18% of the drug referrals were described as parolee self-referrals. On the drug referrals, family or friends were cited by 7% of the parolees as the referral source, and an equal proportion of men cited the field office Access program as the referral agent.

According to PO interviews, 19% of the comparison men were regularly attending a drug or alcohol program at the time of the two month interview. This represents an attendance rate of just over 50% of all those referred to programs. Attendance rates for alcohol and drug referrals were similar; 58% of the men referred to alcohol programs and

[4]One clear difference between pilot and comparison groups concerned referral to self-help groups. While 20% of all drug referrals in the comparison group were to self-help groups, only 3% of the pilot men received such referrals. Similar differences were evident in alcohol program referral practices. This is undoubtedly attributable to Access, which discouraged self-help referrals as a lone treatment option, preferring to refer men to more formal outpatient programs. We return to this issue in Chapters 5,6,and 7.

51% of the men referred to drug programs were participating at the time of the interview. With the exception of "no shows," which accounted for 19% of the drug program referrals and 8% of the alcohol referrals, other types of outcomes for drug and alcohol referrals occurred in similar proportions. Approximately 13% of the men referred to treatment were reported as irregular participants and 10% had attended for one or more sessions but dropped out. Contrary to the common belief that it is difficult to gain admission to community-based programs because of overcrowding, only 3% of the referrals were reported to have been denied admission by the program and 4% were pending placement in the program (in most cases on a waiting list).[5]

The parolee interview data were remarkably consistent with the PO reports on treatment attendance. Twenty percent of the comparison parolees interviewed at two months post-release (as compared to 19% according to POs) were reported in treatment. This included 54% of all alcohol program referrals (vs. 58% according to POs) and 46% (vs. 51%) of the drug treatment referrals. Given this consistency, the more detailed parolee data were explored further. Of those reporting any attendance, comparison group parolees averaged 5.3 weeks in alcohol programs and 4.8 weeks in drug programs between release and the two-month interview. Over 70% of the parolees referred to alcohol programs judged these programs as very helpful or somewhat helpful (rating the programs with scores of 1 or 2 on a 5-point "how helpful" scale), while 18% rated them "not at all helpful" (a 5). Ratings of drug programs were only slightly less favorable; 60% of the men referred to these programs saw them as helpful, while one-fourth judged drug programs as not so helpful.

Parolees were also asked about their motivations for attending post-release programs. The most common response, offered by 63% of the men, was that they were mandated to attend by Parole; only one in five men said he was motivated by a need to deal with his drug or alcohol problem. Men who were not in treatment were also asked their reasons for non-participation. Virtually all of them said that they either were abstinent ("clean"), or that their use of drugs or alcohol did not constitute a need for treatment. Consistent with the results reported above, almost no releasees said they were not in treatment because they thought it would be hard to get in, or complained that they would be put on a waiting list. Finally, men were also asked what they would do if they felt they needed help for a substance abuse problem. About one-third of the comparison men said

[5]Community-based drug programs in the city are especially perceived as overcrowded, presenting difficulties for admission and placing referred clients on long waiting lists. This was clearly not the case with the present sample, as only 3% of the releasees referred to drug programs and 4% of those referred to alcohol programs were not accepted at admission. Moreover, similarly small proportions of referrals to drug and alcohol programs (4%) were reported to be pending placement in these programs. It should be noted that these results do not confirm that overcrowding and long waiting lists do not exist, but rather that these conditions are not prevalent in the programs to which these parolees were referred -- primarily outpatient programs and self-help groups. These results also appear to reflect the knowledgability of field officers in selecting programs that are likely to accept parolees.

they would go to their parole officer for help, and one-quarter said they'd approach their family or friends. Seventeen percent said they'd go to a particular program, and the remainder of the men offered assorted other strategies; these were typically variants on "I'd take care of the problem myself."

Treatment Participation at Six Months Post-Release. Including men who continued attending programs reported on in the two-month interview (and excluding men who were no longer living in the community because they were detained or had absconded), about two in five comparison men were referred to treatment programs (or still attending from an earlier referral) between the two- and six-month post-release points. The data on treatment participation at six months were much the same as those reported at two months. Drug treatment referrals accounted for about 80% of all referrals, and these were principally to outpatient programs. Alcoholics Anonymous was the common alcohol treatment referral. Parole officers were the principal source of referrals; in about 20% of the parolee interviews, self-referrals were reported.

Attendance rates were also very similar to those reported at two months. Of the comparison men living in the community at the six-month point, 21% were reported to be in treatment (the comparable two-month figure was 19%). Again paralleling the two-month results, one-half of the men who received referrals were attending programs at the six-month point, with the rate for alcohol programs (57%) being slightly higher than that for drug programs (48%). In both types of programs, about 15% of the referrals were no-shows and a similar proportion dropped out early. Irregular attendance was reported for 17% of the alcohol treatment referrals and 8% of the drug referrals. Compared to the two-month data, more men were pending placement in drug programs at six months. About 10% of those referred at six months were waiting to get into a program; only 4% were waiting at two months.

The more detailed parolee reports indicated that comparison men who reported some attendance in drug programs averaged 9.1 weeks in treatment over the four month duration between the two- and six-month interviews. The mean number of weeks in alcohol programs for those attending was 10.6.[6] Parolees' ratings of the alcohol programs at six months replicated the two month findings (over 70% were given positive ratings), however, drug programs were rated less favorably by men referred during the 2-to-6 month period. About half of this group gave drug programs "very helpful" or "somewhat helpful" ratings, while 29% had a neutral response and 20% rated the programs negatively.

[6]These data should be interpreted in light of the observation that the parolee sample includes a disproportionate number of "successful" cases, as recidivists were generally unavailable for interviews. Thus, for example, these treatment lengths probably exaggerate the actual average for all subjects, at least some of whom were men who went to treatment for short periods and then recidivated.

When attendance was reviewed over the entire six-month follow-up period, it was revealed that 17% of the comparison group were participating during at least one of the two follow-up periods (the two- or six-month interview), and that 11% of the men were attending at both these points. Of the parolees who reported any treatment attendance in follow-up interviews, the average number of weeks in a drug treatment program was 10.3. This was slightly lower than the mean length of stay in alcohol programs for the six-month post-release period, which was 12.5 weeks.

Summary. Forty-five percent of the comparison group men were referred to a community-based drug or alcohol treatment program at some point during the first half-year after release. It is important to note that this figure is one-fourth less than the proportion in this group who were mandated by the parole board to attend a treatment program; 60% of the comparison men had treatment conditions and 75% of them had some drug- or alcohol-related condition.

Attendance rates were consistent across the two post-release points, and across the PO and parolee interviews. At both two months and six months post-release, about 20% of the comparison sample were attending a program. Altogether, 17% of the men were attending a program at at least one of the two interview periods, and 11% were attending at both points, i.e., for most of the first half-year after release. There was a fifty-fifty chance that a man who was referred to a program would be a regular program participant at the time of the interview. Not following up the referral ("no shows"), early drop-out, and irregular attendance were the most common outcomes reported for those were not participating; depending upon the type of program (drug or alcohol) and time of measurement (two or six months), these outcomes were found for between 10% and 20% of the comparison sample. Program rejection, or placing referred releasees on waiting lists were uncommon outcomes in this sample. Echoing ratings in several other areas (of prison-based programs, of parole officers' helpfulness, of relationships with family members), men referred to these community-based treatment programs held generally favorable views of the programs. Over two-thirds typically gave positive ratings of these programs' effectiveness.

CHAPTER FIVE
THE EFFECTS OF TREATMENT AND OTHER FACTORS: ANALYZING POST-RELEASE OUTCOMES

This chapter is organized into four sections. Initially, the results of preliminary, bivariate analyses of prison treatment variables are presented. Given the wide-ranging treatment experiences of the study subjects, it was possible to explore the impacts of different elements of prison treatment, such as type of program and length of inmates' stay in these programs. These analyses were used to determine the in-prison treatment groups used in the multivariate analyses, which are presented in the next section. Here, results of regression analyses using pre-release variables as predictors are presented for each of the post-release outcomes studied: recidivism, reintegration, relapse and post-release treatment attendance. For each outcome, results are presented first for the entire follow-up period, and then for each of two shorter time intervals within this period corresponding to the follow-up interview dates. The chapter's third section describes the results of analyses of the post-release predictor variables on each of the outcomes. Further supplementary analyses of one set of post-release variables, those relating to attendance in community-based programs, are presented in the final section of this chapter.[1]

Preliminary Prison Treatment Analyses

As explained in Chapter 3, it was not possible to anticipate which elements of in-prison treatment (other than the pilot-comparison distinction) were amenable to statistical analysis until the full distribution of the subjects across different possible treatment comparisons was reviewed. In this section, the process of constructing and analyzing the prison treatment variables is described, along with the results of their preliminary analysis. Analogous to the data reduction process summarized earlier for other predictor variables, potential prison treatment variables were constructed and then initially assessed in bivariate analyses for their relationships with the major outcome variables. On the basis of these analyses, the prison treatment variables to be used in the multivariate analyses were selected. These final variables are described at the end of this section.

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[1]Throughout the chapter we've tried to explicate the multivariate results using bivariate analyses that portray findings relatively straightforwardly, using averages and percentages. Nonetheless, this chapter may be overly technical for some individuals. Readers may elect to peruse initially the next chapter, which summarizes the most important results, as an introduction to the present chapter.

Type of Prison Program. The prison treatment factors of greatest interest were type of prison program and length of participation. With regard to program type, the initial plan was to compare outcome differences among three groups of men: those who attended DOCS-run ASAT programs; those who attended less formal, inmate- and volunteer-run programs; and those who did not attend a program during their prison term. If the data permitted, a further comparison of men attending intensive, full-time "residential" ASATs, and those attending "outpatient" or "modular" ASATs (which met for three half-days a week or less) was planned. An early version of the analysis of program type was presented in Vera's March, 1989 report, using preliminary two-month outcomes. Updated for the present report, this analysis compared outcomes for four mutually-exclusive groups: the Lincoln pilot group; men who "successfully attended" a DOCS-run ASAT program for at least three months during their current stay in the State system;[2] men who successfully attended a non-ASAT drug or alcohol program for at least three months during this stay; and a "no-treatment" group of subjects who never attended or otherwise did not successfully complete at least three months of any kind of drug or alcohol treatment during the present incarceration.

The outcomes were the same as those used in the multivariate analyses, as described in Chapter 3. Two simple measures of criminal recidivism were used, including rearrest and an overall measure of parole failure, defined as any arrest, absconsion or parole violation, both assessed over the one-year post-release follow-up period. Three other measures addressed outcomes over the first half-year post-release, as recorded from parole officer follow-up interviews. These included a 5-point index of community integration, a measure of drug or alcohol relapse, and a dichotomous indicator of whether the man was attending a community-based drug or alcohol treatment program at both the two- and six-month interview points.

The results of these bivariate analyses are shown in Table 5-A. As indicated by the statistical test results in the last column of the table, the four groups showed no differences in terms of the overall parole failure measure, the community integration index and the relapse outcome. However, the groups' post-release arrest rates were significantly different

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[2]Throughout the text, "successful attendance" means that the inmate did not negatively terminate (drop out or be "kicked out") from the program. This awkward terminology results from the fact that many prison programs now avoid formally "graduating" (or otherwise positively terminating) their clients, for fear that the inmate will perceive graduation as obviating any need for further treatment. The best an inmate can do is successfully attend (and not negatively terminate from) these programs.

With regard to the attendance criterion, three months of participation is a traditional (if minimal) benchmark used in alcohol and drug treatment (e.g., Hubbard et al., 1989). In this study, when computing variables involving length of treatment participation, treatment stays in multiple programs of the same type were summed, because it was common for inmates to be transferred to different facilities several times during their prison stay. Thus, an inmate who successfully attended 4 months in the Woodbourne ASAT and 2 months in the Otisville ASAT is credited with 6 months of ASAT treatment. Stays in non-ASAT programs were also accumulated across different locations.

As noted in previous chapters and detailed in Appendix A, the prison participation information used to create variables in these analyses was obtained from DOCS inmate files and subject self-report. In Appendix A, we also report the results of further analyses which offer support for the validity of these data.

Table 5-A

OUTCOMES OF PRISON TREATMENT GROUPS

Outcome	All Subjects (N=462)	Treatment Group: None (N=104)	Non-ASAT (N=140)	ASAT (N=60)	Lincoln CPU/ Access (N=158)	Significance Test
One-Year Post Release						
Arrested (%)	(39.4)	50.0	33.6	41.7	36.7	χ^2=7.50, p=.058
Failed Parole* (%)	(54.8)	59.6	49.3	55.0	56.3	χ^2=2.48, NS
Six Months Post Release						
Community Integration Score (mean)	(2.7)	2.7	2.7	2.7	2.6	F= .9, NS
Drug Relapse (%)	(30.8)	31.7	24.6	32.0	35.3	χ^2=3.56, NS
Attending Treatment Programs (%)	(14.5)	8.2	10.4	19.6	20.1	χ^2=9.25, p<.05

* Includes arrests, violations of parole or absconding (see Chapter 3).

(although the chi-square value is "marginal" with a probability of .058). Further analysis indicated that the no-treatment group's rearrest rate (50%) was significantly higher than the aggregated rate for the other three treatment groups (which was 36%; chi-sq=6.32, p<.05). The difference between the non-ASAT group's rate (34%), and the aggregated rate for the other three groups (42%) was marginally significant (chi-sq=2.85, p=.091).

Differences among the four groups were most clearly evident (and statistically significant) in terms of post-release treatment attendance. The proportion of pilot group and ASAT group members who were attending community-based drug or alcohol programs over the six-month follow-up period (20%) was over twice that of the non-ASAT and no-treatment groups (9%).

Further exploratory analyses focused on different types of ASAT programs. These analyses included the Lincoln pilot participants, all of whom had participated in ASAT programs prior to coming to Lincoln; their Lincoln participation was disregarded in these analyses. One analysis compared post-release outcomes of men who had completed at least three months in a residential ASAT with outcomes of men not attending these programs. With the exception of rates of participation in post-release treatment, there were no significant differences in outcomes for these two groups.[3] A greater proportion of residential ASAT participants, however, did attend community-based treatment programs over the six-month follow-up period (21% vs. 13%, chi-sq=4.02, p<.05).

One plausible explanation for the absence of other post-release differences among these groups is that the residential ASAT group represented a highly diverse set of programs. For example, the residential group included men who attended the Mt. McGregor program, which has been widely regarded as a "model" residential ASAT for several years, as well as programs at the Collins and Greene facilities, which have been operating as residential ASATs for much shorter periods. Fortunately, it was possible to identify a subsample of 58 men who reported completing at least three months in the Mt. McGregor program; this sample was deemed sufficient for further exploratory analyses of this program. Results of these analyses, however, were consistent with the earlier analyses. Men who had attended Mt. McGregor were no different from the other subjects on the recidivism, reintegration and relapse outcomes, despite their higher rates of participation in treatment programs post-release.[4]

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[3]For example, the failure rate for the 103 men who attended residential ASATs was 59% and their arrest rate was 41%; this compares to a 54% failure rate and 35% arrest rate for men not in these programs. Average community integration scores for residential participants was 2.8, while non-participants averaged 2.7 on this measure. Residential participants had slightly higher rates of drug relapse (33% vs. 24%), but none of these differences approached statistical significance.

[4]On the criminal recidivism outcomes, 60% of the Mt. McGregor participants failed at some point dur'ng the one-year follow-up and 34% were rearrested (comparable figures for non-McGregor participants were 54% and 40%, respectively). Mt. McGregor participants averaged 2.8 on the community integration index, as compared to 2.6 for all other subjects. On the relapse measure, Mt. McGregor participants averaged slightly higher scores, as 43% of them were reported to have used major drugs such as heroin, cocaine or crack on a weekly or more frequent basis, as compared to 30% of the non-McGregor subjects. Mt. McGregor participants had relatively high rates of post-release treatment attendance (24% vs. 13% for all other subjects over the six-month follow-up). Additionally, in an analysis similar to the time-in-treatment analyses described below, the outcomes of men who participated in McGregor for longer periods of time (i.e., more than 25% of

Time in Treatment. Studies of treatment programs both in and out of prison have consistently indicated that longer lengths of stay in treatment are associated with favorable outcomes. While a "weeks in prison treatment" variable was initially created to reflect this factor, it was evident from preliminary analyses that this variable was flawed by confounding length of treatment participation with length of the incarcerative term. This was important, since length of incarceration was inversely correlated with some of the recidivism outcomes in our data (men with longer incarcerative terms were less likely to recidivate during the one-year follow-up period).[5]

To control for length of the incarceration period, a ratio was created by dividing the number of weeks in treatment by the number of weeks incarcerated. Three time-in-treatment variables were created using these ratios, one reflecting length of participation in all prison treatment programs, one for length of stay in non-ASAT programs, and one for length of stay in ASAT programs.[6]

Analyses of these length-of-treatment variables in relation to the recidivism, reintegration, relapse and post-release treatment participation outcomes yielded less than promising results. The few favorable findings for time in treatment achieved marginal statistical significance. One such effect was found when length of time in a non-ASAT

(footnote continued)

their incarceration term -- see below) were also assessed. No additional differences were observed for this group.

Another exploratory analysis of ASAT differences addressed program "quality," as assessed by an experienced official in DOCS' central ASAT office. We asked this administrator to reflect on the overall quality of each ASAT program (along such dimensions as the capabilities of the staff and the program's managers, the reputation of the program among inmates, structural factors such as staff-to-client ratio, staff turnover, longevity and consistency of the program, etc.), and to rank them on a simple 5-point Likert scale (1=very good, 5=very bad). Two analyses were done using these rankings, one without regard to program type, and another, in which the "quality" rankings of non-residential and residential ASATs were assessed separately. Neither of these analyses revealed any outcome differences for the differently ranked programs.

[5]It is important to note here that the difference observed above between the no-treatment group and the aggregated treatment group (all subjects who met the criterion of three months or more in treatment) was not confounded by length of incarceration. Specifically, the average incarceration term for men meeting this criterion was 29.7 months, as compared to 28.9 months for the men who participated for less than three months (the no-treatment group), a non-significant difference. Treatment stays of six months or more, however, were associated with longer incarceration terms. Men who stayed in programs for at least six months had average incarceration terms of 33.1 months; those with nine months or more of treatment averaged terms of 37.6 months, and those with a year or more of in-prison treatment averaged terms of 40.3 months (all significantly greater durations than the average terms for men who did not attend programs for this length of time). On the basis of these results, we would caution the use of simple "time in treatment" variables or analyses which do not take into account total length of incarceration in prison-based program evaluations.

[6]Because the length of stay in the Lincoln group typically varied by only a few weeks and was invariably dictated by correctional system demands rather than inmate motivation or other clinical factors, it made little sense to create a time-in-treatment variable for Lincoln attendance.

program was examined; those not arrested averaged 18.4 weeks in these program, while arrested men averaged 14.5 weeks of non-ASAT participation (p=.099). Length of stay in non-ASAT programs was also marginally associated with lower scores on the relapse measure (p=.096), while time in ASAT treatment was positively related to relapse (p=.068). Finally, longer stays in all prison programs were marginally related to regular attendance in drug or alcohol programs over the six-month follow-up period (p=.063).

Further exploration of the time-in-treatment variables was predicated on the hypothesis that inmates had to attend these programs for some minimal period of time in order to benefit from participation. Dichotomous versions of the above-described variables were created, in which subjects who participated for at least 25% of their incarceration term (coded as a "1" on these variables) were distinguished from those who attended for shorter periods (coded as "0"). Three separate variables reflecting time in ASAT treatment, non-ASAT treatment and any prison program were created and assessed. However, no effects for prison treatment length were revealed as a result of this dichotomous time-in-treatment coding. Subjects who attended any of these programs for at least 25% of their incarceration term were no different from other subjects on any of the outcome measures.

On the basis of these analyses, a relatively simple set of prison treatment variables were selected for use in the multivariate analyses, to express treatment type and length of time in treatment. In addition to Lincoln study group membership (0=comparison group, 1=Lincoln CPU/Access), two other dummy-coded variables were created to express different types of programs attended by members of the comparison group. One variable indicated successful participation for at least three months or more in a non-ASAT program, and another indicated successful participation for at least three months in an ASAT program. Reflecting mutually exclusive membership in one of these groups, these were entered as a set of dummy variables in the regression analyses. Entered in this way it was possible to assess the impacts of participation in each of these types of treatment, and compare them to the no-treatment group (i.e., men who did not meet the three months of successful participation criterion for membership in the Lincoln, non-ASAT or ASAT groups).

Three additional prison treatment variables were created for use in exploratory analyses. One of these variables was coded to reflect treatment vs. no treatment (0=no treatment, 1=Lincoln/non-ASAT/ASAT) and the other two were the time in treatment variables described above for non-ASAT and ASAT treatment. As noted earlier, these time-in-treatment variables were expressed as the proportion of the incarceration term spent attending these programs. These three exploratory prison treatment variables were analyzed in the multivariate models after the model including the three dummy-coded treatment group variables was assessed. In this separate, exploratory analysis of each outcome, the dummy-coded variables were removed and replaced by the three exploratory variables, to assess these latter variables' unique effects.

Multivariate Analyses Using Pre-Release Variables As Predictors

The results of the series of multiple and logistic regressions of the pre-release variables on the five different post-release outcomes are presented below. Analyses of criminal recidivism outcomes are presented first, followed by analyses of community reintegration, relapse into post-release drug and alcohol use, and of continued participation in community-based drug and alcohol programs. As described in Chapter 3, each outcome was investigated over three different post-release periods. The principal criminal recidivism analysis assessed outcomes over one year post-release, and the reintegration, relapse and treatment participation analyses addressed the six-month follow-up period reflected in post-release FPO interviews. Additional analyses examined possible differences in the timing of the impacts of predictor variables. In these analyses, each outcome was assessed over the first two months post-release, and then over the remainder of the follow-up period (months 3-12 for the recidivism outcomes and months 3-6 for the other outcomes).

Pre-Release Variables Used in the Analyses. The four sets (A-D, as discussed in Chapter 3) of pre-release predictors considered for entry in the multiple and logistic regression analyses are listed in Table 5-B. Organized by the content group and sequence in which the variables were typically entered in the regression models, the table includes each variable's descriptive statistics as well as an abbreviated name (in capital letters) that was assigned to each variable to facilitate presentation of the results. The scoring for each variable is described in the previous chapter (or above, for the prison treatment variables).

Predicting Post-Release Arrest. As previously detailed in the analysis plan, the principal multivariate analyses of criminal recidivism involved a series of logistic regressions of the predictors on two global outcomes. One set of analyses assessed the ability of the predictor variables to distinguish men who were arrested post-release from those who were never arrested over the follow-up period. A second set of analyses targeted a more encompassing measure of parole failure, defined as any arrest, violation or absconsion occurring over the follow-up period.[7]

With regard to the first model, the distribution on the arrest outcome included 182 (39%) persons who were rearrested at least once during the one-year post-release period and 280 non-arrested cases. The results of the logistic regression analysis on this measure are shown in the first column in Table 5-C. In addition to the set of three prison treatment group variables entered in the last step of the analysis, seven variables were selected for entry in the logistic model developed on the arrest outcome. The standardized logistic regression coefficients associated with each variable in this model are listed in this first

[7]"Listwise deletion" of cases, which excludes a case from an analysis if the case is missing on any single predictor or criterion variable was employed in the multivariate analyses. Due to missing data, then, the analyses that utilized pre-release predictors were conducted on about 450 cases (455 in the analysis of arrest and 448 in the analysis of overall failure), or 97% of the intake sample (N=462). The results of bivariate analyses reported in the text include all subjects available on the two variables.

Table 5-B

DESCRIPTIVE STATISTICS OF PRE-RELEASE PREDICTOR (INDEPENDENT) VARIABLES

Set and Variable (Abbreviated Name)	Descriptive Statistic (N = 462)*
Set A: ***Background Variables***	
Age (AGE)	mean = 29.4, sd = 7.1, N = 461
Race/ethnicity (RACEBL)	52.8% Black
(RACEHI)	38.5% Hispanic
Socioeconomic Status (SES)	mean = 62.3, sd = 9.8, N = 461
Family History of Drug or Alcohol Abuse (FAMDA)	56.9% with abuse history
Set B: ***Criminal History***	
Juvenile Arrests (JUVARR)	mean = 1.2, sd = 2.2
Number of Prior Jail Terms (PRIJAIL)	mean = 1.6, sd = 1.9, N = 460
Most Serious Prior Conviction (SERCONVIC)	mean = 3.2, sd = 1.0, N = 454
Number of Prior Drug-Related Arrests (DRUGARR)	mean = 1,0, sd = 1.3, N = 460
Length of Current Incarceration (LENGINC)	mean = 29.5, sd = 18.2, N = 460
Drug-Related Current Conviction (DRCURCON)	26.4% drug-related, N = 441
Set C: ***Year Before Incarceration***	
Severity of Drug Problem (PREDRUG)	mean = 2.9, sd = 1..2
Severity of Alcohol Problem (PREALC)	mean = 1.6, sd = 1.2
Prior Residence (PRERESID)	93.7% in private residences
Weeks Unemployed (PREUNEMP)	mean = 22.8, sd = 21.2
Set D: ***During Incarceration***	
Treatment-specific Parole Conditions (PARCONTRT)	68.4% with conditions
Plans to Attend Treatment Programs (PROGPLAN)	mean = 1.2, sd = 1.0
Plans to Use Drug and Alcohol (DAUSEPL)	mean = .9, sd = 1.2
Prison Treatment	
Lincoln CPU/Access Participant (LINCOLN)	34.2% pilot participants
ASAT Participant (ASATATT)	13.0% ASAT participants
Non-ASAT Participant (NASATATT)	30.3% non-ASAT participants
Any Treatment - No Treatment (ANYATT)	77.5% participating in any treatment
Time in ASAT Treatment (ASATTIME)	mean = 17.3, sd = 24.0, N = 459
Time in Non-ASAT Treatment (NASATTIME)	mean = 18.6, sd = 24.4, N = 459

* Except where noted.
Note: Scoring for each variable is described in Chapter 3.

Table 5-C

PREDICTING POST-RELEASE ARREST OUTCOMES

Selected Predictor Variable	One Year, Standardized Coefficient (N = 455)	First Two Months, Standardized Coefficient (N = 461)	Three-Twelve Months, Standardized Coefficient (N = 416)
AGE	-.1993**	- .3243**	- .1585*
SES	.0799	–	.0856
JUVARR	.0383	–	–
PRIJAIL	.2216***	–	.2356***
PREDRUG	.1587*	–	.1569*
PREUNEMP	.1216*	–	.1267*
PROGPLAN	-.1911+	–	-.1377*
NASATATT	-.1501*	-.3134*	–
ASATATT	-.0448	-.1565	–
LINCOLN	-.0959	-.1754	–
ANYATT[1]	-.1015+	-.3852***	–
ASATTIME[1]	–	.3634***	–
Model Chi-Square	54.22***	15.21**	40.47***

* p < .05
** p < .01
*** p < .001
\+ p < .08

Note: Dashes indicate that the variable was not selected for inclusion in the model because it was unrelated to the outcome.

[1] As explained in the chapter text preceding this section, these variables were assessed in separate, exploratory analyses, and were not part of the model for which the chi-square is presented.

"One-Year" column in the table. The chi-square statistic, displayed at the bottom of the column, is a test of the goodness of fit of the model. Similar to the F-test statistic used in standard OLS analysis, it is used to test the hypothesis that the joint effect of the independent variables is significantly different from zero. In the present case, the ten variables (seven plus the three prison treatment dummy variables) have a joint effect at $p<.0001$.

The relative impact of each variable in the final model is also evaluated with a chi-square statistic; significance of the chi-square value associated with each variable at probabilities $<.05$ are indicated in the table.[8] AGE was the only background variable found significantly related to the one-year arrest outcome; consistent with much previous research on recidivism, rearrested subjects tended to be younger (mean=28.2 years at release) than those not arrested (mean=30.1). Number of prior jail terms (PRIJAIL)[9] was the lone criminal history variable related to arrest; rearrested cases averaged 2 jail terms, as compared to 1.3 terms for non-arrested cases.

The pre-incarceration drug problem severity and unemployment measures were also significant predictors of arrest over one-year post-release. Bivariate analyses of the PREDRUG measure revealed that the rearrest rate for men classified as having a severe drug problem was 42%, which was over one and one-half times the rate of rearrest for men without a severe drug problems in the year prior to incarceration (27%). Almost half (49%) of the men who had the maximum score on the PREDRUG measure (most of whom were men who reported multiple drug use, i.e., regular use of two or more major drugs) were rearrested during the one-year follow-up.

Given this overall finding, further bivariate analyses assessed differences in rearrest rates associated with cocaine, heroin and crack use histories (by far the most commonly used major drugs). In these assessments men with histories of crack use consistently had the highest rates of rearrest. Over half (51%) of those reporting crack to be their primary problem drug in the year before incarceration were rearrested, as compared to 42% of

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[8]It will be remembered from the analysis plan (in Chapter 3) that all predictor variables were considered for entry in each hierarchical regression model. Those selected for entry met the pre-determined statistical criterion (a "chi-square-to-enter" for the logistic regressions and a "F-to-enter" on OLS regressions) of a probability of less than 5% at the particular step in which the variable was considered. However, the relative significance of a particular variable can change -- and diminish -- when additional variables are entered at later steps in the model. In presenting these regression results, the variables "selected for entry" met the initial criterion when first considered for entry in the equation, but not all of them remained significant in the final model. It is this last group of variables, those which contribute significantly to the final model, that are of primary interest.

[9]PRIJAIL is specifically the number of prior jail terms and does not include other custodial sentences. As described in Appendix A, a number of prior prison terms variable was similarly assessed in preliminary, data reduction analyses, but dropped because it was unrelated to the outcome measures (and was redundant with other criminal history measures).

those who said heroin was the primary problem, 35% of those who pointed to cocaine[10] as their primary problem, and 37% of those who did not report a primary problem drug. In bivariate analyses of these data, the crack problem-no problem difference on rearrest was marginally significant (chi-sq=4.20, p=.07), while having heroin or cocaine problems were unrelated to rearrest rates. However, in the multivariate analyses, when AGE and PRIJAIL were controlled, the effect for crack history was not upheld. Very similar figures were observed in the frequency-of-use data. The arrest rate for men who used crack on a regular (weekly or more frequent) basis was 51%, while 42% of regular cocaine users, 41% of regular heroin users and 33% of those not reporting regular use of a major drug were rearrested. Here as well, regular crack use (but not heroin or cocaine use) was related to rearrest (chi-sq=7.12, p<.01) in the bivariate analyses, but only marginally (p=.11) in the multivariate analyses.

Bivariate analyses of the pre-incarceration employment variable showed effects similar to those of drug severity. The rearrest rate for men who had been unemployed was 45%, in contrast to a rate of 26% for men who had held jobs most of the year prior to incarceration.

One of the motivational variables, PROGPLAN, was found to have a marginally significant relationship (p=.053) with the one-year arrest outcome. This indicated that men who told the Vera interviewer that they had specific plans to attend a drug or alcohol treatment program upon release were less likely to be rearrested than those who had little or no plans to attend treatment. This was somewhat surprising, given that such plans are often regarded as a function of parole officer demands or at least enhanced by a common inclination to offer socially desirable responses to research inquiries. Further assessment of the PROGPLAN scores offered additional support for the validity of the plans described to our interviewers. This analysis indicated that men who reported that their plans to attend treatment were made "on their own" had the lowest rearrest rate (33%), while men who had no plans or who said they would attend a program "if my PO refers me" had about the same rates of rearrest (42% and 44%, respectively).

With PROGPLAN and other pre-release variables controlled in the logistic model, attending a non-ASAT treatment program (NASATATT) was also significantly, and inversely, related to post-release arrest. As reported in the preliminary prison treatment analyses above, men who attended non-ASAT programs had the lowest rate of arrest (34%). With all three prison treatment variables in the equation, this analysis confirms that men attending non-ASAT programs were rearrested at a lower rate than men not attending prison treatment programs (50% of whom were rearrested). An additional analysis revealed that the difference between the aggregated rearrest rate for members of all three

[10]Throughout this report, we use the term to refer specifically to powdered cocaine hydrochloride (HCL). It does not refer to crack, which was always distinguished as a separate drug.

treatment groups (36%) and the no-treatment group's arrest rate (50%) was marginally significant (p=.077) when controlling for all the variables in the model; this is indicated by the coefficient listed for the ANYATT variable in the table. Possible explanations for these findings are discussed in Chapter 6.

The second and third columns of Table 5-C present the results of analyses limited to arrests that occurred during the first two months post-release, and after the two-month interview point, respectively. As indicated by the magnitude of its standardized coefficients, AGE was a strong predictor of arrest during the early period, and remained a significant predictor in the later post-release period. Attendance in a non-ASAT program (NASATATT), while negatively related to arrest throughout the one-year period, had its most powerful effect during the first few months after release. This was true of the other, exploratory measures of prison treatment participation as well. Overall, only 8% of the 462 men who participated in the study were arrested by the time of their two-month PO interview. The lowest rearrest rate was among the participants of non-ASAT programs (4%), and the aggregated rate for participants of any prison programs was 6% (ANYATT). This was less than twice the rearrest rate for the 104 men in the no-treatment group, which was 13% for the early two-month follow-up period.

The only time-in-treatment effect on arrest rates was a negative one. Men who spent longer periods in ASAT programs were more likely to be rearrested during the first two months post-release (shown by the positive coefficient for ASATTIME in the table). Although 3% of the 90 men who reported attending ASAT programs for between 10% and 30% of their incarcerative term were rearrested, 15% of the 108 men who attended ASAT for more than 30% of their terms were rearrested. These findings may have something to do with the different motivational schemas underlying participation in non-ASAT and ASAT programs; these issues are considered in Chapter 6.

The final column in the table displays the coefficients and significance levels of variables predicting arrest in the period three-to-twelve months post-release. It is during this later post-release period that the criminal history variable, PRIJAIL, had its strongest predictive impact, and that prior drug severity and employment history were found most related to arrest. The positive relationships between rearrest and number of prior jail terms, severity of a drug problem, and extent of pre-incarceration unemployment were all most evident after these men have been in the community for a few months. Somewhat surprisingly, PROGPLAN was another variable most associated (in this case, inversely) with arrest outcomes during the later post-release period.

Predicting Parole Failure. The distribution on the parole failure measure included 253 failures (55%) and 209 successes. As the arrest outcome was a major component of the more general failure variable, it is not surprising that the final logistic model for these two criterion measures were similar.

As displayed in Table 5-D, the AGE, PRIJAIL, PREDRUG and PREUNEMP variables selected for entry in the arrest analyses were also significantly related to post-release parole failure. Bivariate analyses revealed almost the same AGE and PRIJAIL differences between failed and successful cases as those described for arrests and non-arrests, above. The negative coefficient for the LENGINC variable in the failure analysis indicates that incarceration terms of failed cases were shorter (mean=26.9 months) than those of successful cases (mean=32.7 months). Being unrelated to the arrest outcome, the LENGINC variable appears uniquely associated with FPO violations and/or absconding. The fact that the most common conviction charge for men serving relatively short terms were drug sale or possession may be part of the reason for this association.[11] FPOs might impose stricter supervision with these cases, leading to a higher probability of parole failure; at the same time, a strong drugs-crime connection in the personal history of these offenders simply may make them more prone to parole failure.

Similar to the AGE and PRIJAIL results, the drug severity and unemployment differences on the failure outcome echoed the arrest results. Over three-fifths (62%) of the men who reported little or no work during the year prior to incarceration failed parole after release, a failure rate almost one and one-half times that of the men who reported that they'd worked for most of the prior year (44% of whom failed). On the PREDRUG measure, men judged as having a severe drug problem failed at a 57% rate, as compared to a rate of 41% for those scoring "none" or "slight" on the drug problem scale. As was evident in the rearrest findings, multiple drug use was highly associated with parole failure, as almost two-thirds (65%) of those reporting regular use of two or more major drugs failed.

Also as done with the arrest outcomes, additional analyses were performed to investigate differences associated with the most commonly-used drugs. Replicating the arrest findings, men reporting crack as the primary problem drug showed the highest parole failure rates. Of the 51 men who reported crack to be their primary drug problem, 71% failed, as compared to 52% of those not reporting a problem drug (chi-sq=5.52, $p<.05$). Men with heroin and cocaine problems, however, were no more likely to fail on parole than men who did not report a problem drug. Fifty-eight percent of those reporting heroin as the problem drug failed, while 48% of those reporting a cocaine problem failed during the one-year follow-up; these numbers were statistically equivalent to the 52% failure rate for men not reporting a problem drug. Multivariate analyses confirmed that crack history was uniquely and independently related to parole failure. A similar pattern of findings was revealed in the frequency-of-use data, with regular crack use (but not regular cocaine or heroin use) related to rearrest; multivariate analyses of these data revealed a marginal ($p=.07$) effect for crack use.

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[11] Drug charges were the most common type of conviction charge for men serving less than 18 months, accounting for 39% of these cases. Among men serving 18 to 30 months, drug charges were the second most numerous charge type, accounting for 31% of the convictions in this group; among these men the most common charge type was burglary, accounting for 33% of the charges.

Table 5-D

PREDICTING PAROLE FAILURE OUTCOMES

Selected Predictor Variable	One Year, Standardized Coefficient (N = 448)	First Two Months, Standardized Coefficient (N = 451)	Three-Twelve Months, Standardized Coefficient (N = 379)
AGE	-.1242*	–	-.1325*
SES	.0891	.1341	–
JUVARR	.0806	–	.0846
PRIJAIL	.1975**	.2021**	–
SERCONVIC	.1001	.1782*	–
LENGINC	-.1431*	-.2206*	-.1455*
PREDRUG	.1120+	–	.1357*
PREUNEMP	.1173*	–	.1129
DAUSEPLAN	–	.1321++	–
NASATATT	–	-.2023*	–
ASATATT	–	-.0927	–
LINCOLN	–	-.1028	–
ANYATT[1]	–	-.1329+	–
ASATTIME[1]	–	.1443*	–
Model Chi-Square	53.81***	39.45***	32.50***

* $p < .05$
** $p < .01$
*** $p < .001$
\+ $p = .051$
++ $p = .066$

[1] As explained in the chapter text preceding this section, these variables were assessed in separate, exploratory analyses, and were not part of the model for which the chi-square is presented.

No additional variables -- including the study group variable or other prison treatment variables -- were selected for entry in the overall one-year regression model for parole failure. The failure rate for Lincoln pilot subjects (56%) was about the same as that for comparison group men (54%). As noted earlier, the no-treatment group had the highest failure rate (60%) and the non-ASAT group had the lowest (49%), but none of the prison treatment variables, including the time-in-treatment variables, were found to be related to this general parole failure measure during the one-year follow-up period (when all other variables were controlled).

However, as shown by the results in the "First Two Months" column of Table 5-D, prison treatment was predictive of parole success during the first two months post-release. These results parallel those presented in the arrest analyses, as attending non-ASAT treatment (NASATATT), and attending any treatment (ANYATT) were found to be associated with success in the early release period. The positive relationship between length of stay in an ASAT program and arrest was also replicated, as the ASATTIME variable was predictive of parole failure during the first two months after release.

One of the motivational variables, DAUSEPLAN, was also found related (marginally, $p=.066$) to two-month failure outcomes. While the effect of the PROGPLAN variable was to suppress the likelihood of rearrest, men who reported in our interviews that they planned to resume drug and/or alcohol consumption after their release were more likely to fail on parole in these early months than those who planned to avoid continued use. About one-third of the early failed cases scored 2 or more on the 5-point DAUSEPLAN scale; one-fifth of the early success group had scores of 2 or more. While not having plans to attend treatment was most associated with arrest in the later, post-two-month release period, not having plans to stay off drugs and alcohol was associated with early failure. This finding seems almost self-evident; taking a cavalier attitude toward continued drug and alcohol use evinces a significant motivational lapse that has negative effects on post-release success.

The finding for the seriousness of prior convictions variable (SERCONVIC) indicates that men with less serious prior convictions were more likely to fail in the early release period than men with histories of more serious convictions. In fact, almost one in three (32%) men whose most serious prior conviction was an E felony failed within two months post-release. This failure rate was over twice that of men who had prior A, B or C felony convictions (12% of whom recidivated). Having many prior jail terms are also predictive of failure. These results are consistent with the LENGINC finding discussed earlier, further supporting the notion that frequent, low level felony offenders -- with multiple prior jail sentences, shorter incarceration terms and whose most serious prior convictions are for E or D felonies -- are more prone to recidivate after release.

As shown in the last column of Table 5-D, in addition to the LENGINC variable, age and severity of pre-incarceration drug history are predictive of parole failure over the three- to twelve-month period after release. These results are similar to those for the arrest outcome.

Predicting Community Integration. Unlike the recidivism outcomes, which were recorded from rap sheets collected over a one-year post release period, the community integration outcome measure, based on data obtained in parole officer follow-up interviews, covered the first half-year after release. In addition to the overall six-month analysis, analyses of community integration status were also done separately for the first two months, and the third through sixth month post-release. The average community integration score, 2.6 (sd=1.0), approximated the midpoint of this 0 to 5 scale for the 455 men for whom it could be calculated; 15% of the men were highly integrated in the community with scores of 4 or more on the scale, while 9% had scores of 1 or less.

The first column of Table 5-E shows the results of the multiple regression on the overall six-month community integration outcome. Four pre-release variables were selected for entry in the model; however, when combined they account for only about 5% of the variance in this outcome measure (R square=.05, $p<.001$). Two criminal history variables were related to reintegration; men with more prior jail terms and lower-level conviction histories scored lower on the integration measure. As expected, pre-incarceration unemployment and residential instability were predictive of similar problems upon release. Men who were unemployed for most of year prior to incarceration averaged 2.4 on the integration measure, and those who had been undomiciled or living in shelters, SROs or treatment residences scored 2.1. By comparison, the rest of the sample averaged 2.8 on this measure.

It was somewhat surprising that severity of drug and alcohol problems were not related to the overall reintegration outcome. However, as shown in the "First Two Months" and "Three-Six Months" columns of the table, the PREALC and PREDRUG variables were predictive of reintegration scores at specific points in the follow-up period. Men with more severe alcohol problems in the year prior to incarceration were more likely to have reintegration difficulties in the first few months after release, while those with drug problems showed lower reintegration scores later in the six-month follow-up period. When these relationships were examined further, it was evident that men with the most severe alcohol histories scored significantly lower than everyone else; the PREDRUG-six month relationship, however, was attributable to the non-user group doing much better than any of the drug users.

The PREUNEMP variable was related to reintegration for the duration of the follow-up, while PRERESID was predictive of reintegration problems in the second quarter after release. In general, there was a notable absence of relationships between the pre-release predictors and post-release community integration; none of the prison treatment or motivation variables were related to the reintegration outcomes.

Table 5-E

PREDICTING COMMUNITY INTEGRATION OUTCOMES

Selected Predictor Variable	Six Months, Standardized Coefficient (N = 440)	First Two Months, Standardized Coefficient (N = 436)	Three-Six Months, Standardized Coefficient (N = 358)
PRIJAIL	.-.0946*	-.1068*	–
SERCONVIC	-.1120*	–	-.1283*
PREDRUG	–	–	-.0954+
PREALC	–	-.1031*	–
PREUNEMP	-.1129*	-.1097*	-.1081*
PRERESID	-.1049*	–	-.1082*
Model R^2	.05	.03	.06
F Value	6.18**	4.95**	5.24***

* $p < .05$
** $p < .01$
*** $p < .001$
+ $p = .071$

Predicting Extent of Drug and Alcohol Relapse. With scores ranging from 0 (no post-release drug or alcohol use) to 5 (very heavy drug or alcohol use), the average score on the drug and alcohol relapse outcome was 1.5 (sd=2.0). Of the 371 men for whom post-release relapse data were available, 32% were judged as having relapsed at some point over the six-month follow-up period by scoring three or more on the scale (indicative of at least weekly use of cocaine, crack, heroin or another major drug, or "problem" or "uncontrolled" drinking).

Results of the multiple regression of pre-release predictors on the relapse outcomes are presented in Table 5-F. A combination of four variables accounted for 10% of the variance in the overall six-month relapse criterion ($p<.001$). Consistent with the some of the criminal recidivism findings, men with more jail terms, and those serving shorter incarceration terms were more likely to relapse over the six-month follow-up.

As expected, the best predictor of relapse was the severity of the man's pre-incarceration drug problem (PREDRUG). About 37% of those men classified as having severe drug problems in the year before incarceration relapsed after release. This is over twice the rate of relapse for men with less severe drug histories (17%). Further analyses again revealed especially strong effects associated a history of crack problems; however, unlike the recidivism results, heroin problems were related to higher relapse rates. About half (49%) of the men who indicated crack and 40% of those who reported heroin to be their primary drug problem prior to incarceration relapsed. Both these proportions are significantly greater ($p<.05$) than the 26% relapse rate of men not reporting a primary problem. The relapse rate of men reporting cocaine as their primary problem (23%) was similar to the rate for the no-problem group. When these variables were entered in the multiple regression analysis, having a crack problem (but not a heroin or cocaine problem) remained a significant predictor of relapse. Analyses of the frequency-of-use data showed the same results. In multivariate analyses, regular use of crack was associated with high relapse scores, while regular heroin or cocaine use was not.

Controlling for the PREDRUG and criminal history factors, attending a non-ASAT program for longer periods of time was found to be inversely related to relapse. For example, 12% of the men who spent 30% or more of their incarcerative term in a non-ASAT program were reported to be daily users of a major drug after release, as compared to 26% of those who spent less time in (or did not attend) a non-ASAT program. As reported earlier in this chapter, the non-ASAT group had the lowest relapse rate (26%) of the four treatment groups.

Low rates of relapse were especially evident among both non-ASAT and ASAT participants during the early, two-month release period. About 10% of the members of both these treatment groups relapsed within two months post-release, as compared to 27% of the non-treatment group, and 21% of the Lincoln men. As shown in the second column of Table 5-F, this two-month difference is only significant for the non-ASAT group when other variables are controlled. In fact, as indicated by the positive coefficient of the

Table 5-F

PREDICTING DRUG AND ALCOHOL RELAPSE

Selected Predictor Variable	Six Months, Standardized Coefficient (N = 364)	First Two Months, Standardized Coefficient (N = 291)	Three-Six Months, Standardized Coefficient (N = 247)
SES	–	.1242*	–
FAMDA	–	-.1351*	–
PRIJAIL	.1207*	.1323*	–
SERCONVIC	–	.1124	–
LENGINC	-.1656**	-.0851	-.1686**
PREDRUG	.1736***	.0922	.2164***
DAUSEPLAN	–	.1411*	–
NASATATT	–	-.1691*	–
ASATATT	–	-.0598	–
LINCOLN	–	.0220	–
NASATTIME	-.1038*	–	–
ASATTIME[1]	–	.1388*	–
Model R^2	.10	.14	.07
F Value	8.58***	4.48***	9.76***

* $p < .05$
** $p < .01$
*** $p < .001$

[1] As explained in the chapter text preceding this section, these variables were assessed in separate, exploratory analyses, and were not part of the model for which the F statistic is presented.

ASATTIME variable, men who were in ASAT programs for longer periods of time were more likely to relapse early. Bivariate analyses of these data revealed that 28% of the men who reported spending at least 30% of their incarcerative terms in ASAT programs relapsed during the first two months -- a relapse rate twice that of men who spent less than 30% of their terms in ASAT (14% of whom relapsed).

As shown in the "Two Month" column, having plans to resume drug and alcohol use is related to early relapse; apparently some proportion of these releasees are not yet convinced that abstinence (or possibly even low levels of use) is a desirable or attainable goal.

The significant finding for SES suggests that, despite the relatively low variability on the SES measure, the difference between the men characterized as "middle class" and "lower-middle class" by scores on the scale, and those characterized as "lower class" was great enough to yield a significant effect on the two-month relapse outcome. (In viewing Table 5-F, note that higher scores on the SES scale indicate lower socioeconomic status, thus the positive coefficient means that relapse is associated with lower SES.) Relapse rates for middle and lower-middle class categories averaged 12%, while the most numerous lower class category (in which 60% of the subjects were classified) showed a relapse rate of 22% over the early release period.

The inverse correlation found between a history of drug or alcohol abuse in the family (FAMDA) and early relapse could be regarded as somewhat of a pleasant surprise. This finding at least suggests that, rather than sabotaging recovery, having family members with prior a drug or alcohol history contributes in some favorable way to the releasee's attempts to stay clean and sober, at least during the first few months after release.

The relatively large number of pre-release predictors associated with two-month relapse contrasts with the results of the six-month relapse analyses. As indicated in the last column of Table 5-F, relapse between the two and six-month post-release point was related to only two pre-release variables, LENGINC and PREDRUG. As expected, the PREDRUG variable was the strongest predictor of later relapse; notably, PREDRUG was not a significant predictor of two-month relapse. The effects of the several variables related to early relapse appear relatively short-lived, while the severity of the man's pre-incarceration drug problem assumes a significant prognostic role over time.

Predicting Participation in Community-Based Treatment Programs. A logistic regression was used to assess the relationship between the predictor variables and attending drug or alcohol treatment programs during the six-month follow-up period. As shown in the first column of Table 5-G, only one variable -- that representing a parole treatment condition (PARCONTR) -- met the $p<.05$ criterion for entry in this overall six-month outcome analysis. As expected, this variable was strongly related to attendance in post-release treatment. About one in five men who had parole treatment conditions were attending programs at both the two- and six-month points, as compared to only 3% of those who did not have treatment conditions at release.

Table 5-G

PREDICTING POST-RELEASE TREATMENT PARTICIPATION

Selected Predictor Variable	Six Months, Standardized Coefficient (N = 361)	First Two Months, Standardized Coefficient (N = 442)	Three-Six Months, Standardized Coefficient (N = 370)
AGE	–	.1190	–
FAMDA	–	.1290*	–
DRUGARR	–	–	.0971
DRCURCON	–	.0701	–
PRIRESID	–	.0710	–
PARCONTRT	.3847***	.3317***	.4236***
PROGPLAN	–	.1462*	–
NASATATT	.0186	.1576	–
ASATATT	.11197	.0983	–
LINCOLN	.1902	.3202**	–
ANYATT[1]	–	.2038*	–
ASATTIME[1]	–	.1368*	–
Model Chi-Square	26.67***	71.06***	34.64***

* $p < .05$
** $p < .01$
*** $p < .001$

[1] As explained in the chapter text preceding this section, these variables were assessed in separate, exploratory analyses, and were not part of the model for which the chi-square is presented.

With the PARCONTR variable entered in the analysis, study group membership (LINCOLN) was not significantly related to the treatment participation outcome. This was true despite the bivariate findings reported earlier, which indicated that about twice as many Lincoln men (20%) as comparison group men (11%) were participating in these programs at both the two- and six-month follow-up points. The impacts of Lincoln participation, however, were evident in the multivariate analysis of the two-month attendance outcomes. Suggestive of the value of assured treatment referrals from Lincoln Access, over 40% of the Lincoln men were attending programs at two months; this compares favorably with attendance rates for ASAT and non-ASAT (both at 23%). Additionally, the finding indicated in the table for ANYATT suggests that the aggregated Lincoln/ASAT/non-ASAT attendance rate was significantly higher than the attendance rate for the no-treatment group (11%). Length of participation in ASAT programs was also positively related to two-month attendance, while controlling for variables with coefficients listed in the "Two Month" column of Table 5-G.

A family history of drug or alcohol abuse (FAMDA) was positively related to attendance: about one in three men with some familial history of drug or alcohol abuse were in treatment at two months, while one-fifth of those without familial histories were in programs. Consistent with the earlier finding on relapse outcomes, this suggests that, rather than inhibiting treatment participation (or "enabling" the parolee to stay away from treatment), family members with a history of alcohol or drug problems may be supportive of the parolee's participation in community-based treatment. Alternatively, having a family history of substance abuse may sensitize the parolee to the need to pursue treatment on his own, not wanting to suffer the consequences of continued abuse he witnessed within his own family.

The positive relationship found between PROGPLAN and two-month attendance was expected; these plans made at release are predictive of behavior at least for the first few months after release. Additionally, this PROGPLAN relationship was observed after controlling for the parole treatment condition variable. Thus, personal post-release treatment plans are uniquely predictive of early program participation, above and beyond any plans enforced by parole mandates.

While several variables were selected for entry in the two-month treatment attendance analysis, only two variables (history of drug-related arrests and the parole treatment condition variable) were selected for the six-month analysis, and only the PARCONTR variable was related to attendance at six months post-release.

Predicting Outcomes from Post-Release Information

As previously explained, post-release data (such as attendance in community-based treatment programs, post-release drug use, vocational or residential instability) were not only of interest as outcomes, but as predictors of other outcomes; the impacts of these post-release variables on the criminal recidivism, reintegration and relapse outcomes were

explored in additional multivariate analyses. Analogous to the pre-release analyses, the post-release variables were entered in a pre-determined order using two sets of variables. As detailed in Chapter 3,[12] the first of these sets included four variables indicative of the releasee's residential, vocational and drug relapse status at the two-month interview point. The second set included four variables measuring the releasee's involvement in community-based drug and alcohol programs at the two-month point. Descriptive statistics for each of these variables, along with an abbreviated name, are presented in Table 5-H.

This section presents the results of logistic and multiple regressions of these variables on the same five outcome variables used in the pre-release analyses.[13] Also, as was done above, principal analyses were conducted on the overall post-release period (one year for the criminal recidivism data and six months for the other outcomes), and additional analyses were performed separately for the two-month and post-two-month post-release periods. The regressions were conducted in the same hierarchical fashion described previously. The pre-release factors found related to the outcomes (in the above analyses) were controlled by first entering them in each model before considering the post-release variables.

Predicting Criminal Recidivism. Table 5-I displays the post-release variables selected for entry in the additional analyses of the arrest and parole failure outcomes. Relapse into drug use during the first two months post-release (POSTDRUG) was the only post-release variable predictive of both arrest and failure over the one-year follow-up, and its relationship with the arrest outcome was marginal ($p=.063$). As one of the significant contributors in the pre-release model on arrest, pre-incarceration drug use severity (PREDRUG) was entered in an earlier step in the post-release arrest equation; it remained related to rearrest even with POSTDRUG also entered. The significant contributions of both PREDRUG and POSTDRUG in this model suggests that drug use is highly related to rearrest, and the timing of that use (either pre-incarceration or post-release) appears to matter little in predicting arrest over the one-year follow-up.

In contrast, timing does appear to be a factor in predicting overall parole failure, where POSTDRUG was a much more powerful predictor than PREDRUG when both variables were considered in the equation. A simple explanation for this is that field parole officers are likely to initiate violation proceedings against men who are perceived to be current, heavy users of drugs; by contrast, frequent, active use seems to have a less immediate impact on the likelihood of arrest. The parole failure rate for men who were

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[12]Chapter 3 also explains the rationale behind the use of the two-month PO information as predictive data in these analyses, and of the general analytic plan for these predictors.

[13]Some exceptions to this pattern of regressing the eight post-release predictors on the five outcomes were necessitated by logical considerations. It would be incorrect, of course, to use post-release drug use as a predictor of post-release relapse, or post-release treatment attendance as a predictor of the treatment attendance outcome. Similarly, the post-release residential and vocational variables were not included in the analyses of the community integration outcome.

Table 5-H

DESCRIPTIVE STATISTICS OF POST-RELEASE PREDICTOR VARIABLES

Set and Variable (Abbreviated Name)	Descriptive Statistic (N = 444)*
Post-A: *Post-Release Status*	
Drug Relapse (POSTDRUG)	16.6% weekly use of major drug
Stability of Residence (POSTRESID)	23.0% one or more moves, N = 377
Weeks Unemployed (POSTUNEMP)	mean = 4.1, sd = 3.7, N = 411
Vocational Program Participation (POSTVOC)	25.2% attending or completed
Post-B: *Drug and Alcohol Program Participation*	
Attending Drug Program (POSTDRAT)	19.8% attending
Attending Alcohol Program (POSTALAT)	6.8% attending
No Show - Drug Referral (POSTDRNO)	11.5% no shows
No Show - Alcohol Referral (POSTALNO)	2.7% no shows

* Except where noted.
Note: Scoring for each variable is described in Chapter 3.

Table 5-I

PREDICTING RECIDIVISM FROM POST-RELEASE PREDICTORS

Selected Variable	Arrest			Parole Failure		
	0-12 Mos.	0-2 Mos.	3-12 Mos.	0-12 Mos.	0-2 Mos.	3-12 Mos.
POSTDRUG	.1330+	.2797**	–	.3263*	.4334***	–
POSTUNEMP	–	–	–	–	.4703***	–
POSTRESID	–	–	.1351*	.1366	–	.1195
POSTDRAT	–	–	–	–	-.3670+	–
POSTALAT	–	–	–	-.2027*	.***[1]	.1841*
POSTALNO	–	–	–	–	.1613++	–
Chi-Square	43.27***	18.41***	34.75***	48.23***	82.32***	27.55***

* $p < .05$
** $p < .01$
*** $p < .001$
\+ $p = .063$
++ $p = .051$

Note: Although not listed here, pre-release variables that were significantly related to the dependent measure were entered in each of these models. These pre-release predictors are shown in the tables presented earlier in this chapter.

[1] The POSTALAT variable was perfectly related to the two month failure outcome (i.e., none of the 30 men in alcohol treatment failed at that point in time), so it was mathematically impossible to enter this variable in the logistic model.

reported to be weekly (or more frequent) users of cocaine, crack or heroin was 86%, while about one-half of the infrequent or non-users failed. Bivariate analyses also evinced the POSTDRUG-arrest relationship, as 61% of the heavy users were rearrested as compared to 38% of the infrequent users, but this appeared less dramatic than the POSTDRUG-failure relationship.

Post-release participation in an alcohol treatment program (POSTALAT) was the lone community-based treatment variable related to either one-year arrest or parole failure. Although relatively few men (30) were regular participants of alcohol treatment programs (including AA) at two months post-release, the one-year parole failure rate for these men was less than half the rate for men not in treatment at two-months (27% vs. 57%). Attendance in drug programs was much more common (88 men were reported to be in these programs at two months); however, the one-year failure rate for these men (51%) was not significantly different from that for non-attenders (57%). While not selected for entry in the multivariate analyses of arrest, alcohol program participation was also shown to be related to the arrest outcome in bivariate assessments (chi-sq=4.67, $p<.05$). One-fifth of the two-month alcohol program participants were arrested at some point during the first year after release, as compared to two-fifths of the men not in treatment at two months. Men in drug programs at two months were rearrested at the same rate (41%) as non-participants (40%).

As indicated by the results listed in the "0-2 Month" columns of Table 5-I, POSTDRUG remained the only variable predictive of both two-month arrest and two-month failure. Two additional variables were found related to the early failure outcome, and in general, the model that includes these three post-release variables is considerably better than any other models yet presented. This comes as no surprise, as the reports upon which these status variables are based come from the same FPOs who are deciding to violate or not violate these cases. One would expect that failed cases are much more likely to be frequent users of drugs and to be unemployed than are successful cases. The two-month parole failure rate for men reported to be using major drugs on at least a weekly basis was 51% and that of daily users was 63%; this compares with a two-month failure rate of 13% for infrequent or non-users. Less than 5% of the men who were reported to be working during most of the first two months were failures during this period. The failure rate for men who worked about half of the time since release was approximately 10%, while over one-third (38%) of the men who worked less than one-fifth of this time failed by the two-month point.

Men who were participating in community-based drug or alcohol programs during this period (POSTDRAT and POSTALAT) were also much less likely to be parole failures during the same period. Of the 88 men who were attending drug programs at two months, only 3 failed parole during this period, and none of the 30 men in alcohol treatment were failures over the two months.

While these findings on the effects of community-based drug program participation appear hopeful on the basis of the early, "0-2 month" results, a more realistic test of this variable is its ability to predict future success, in the form of the "3-12 month" analysis depicted in Table 5-I. As shown in the table, the POSTDRAT variable was not related to the long-term arrest or failure outcomes (just as it was unrelated to the overall one-year recidivism outcomes). About one-half (49%) of those attending drug programs at the two-month point were later failures; this was similar to the late-failure rate of men not in programs at two months (45%). These findings indicate that, although men rarely recidivate while they're reported to be attending a program, participation in these programs is not associated with favorable outcomes in a prospective sense. This also suggests that retaining two-month drug program participants in treatment is problematical. Recidivism outcomes for releasees who are retained in these programs during both the two- and six-month follow-up points are assessed in the supplementary analyses section, below.

As previewed in the overall one-year results, participating in an alcohol program at the two-month point was found to be related to later success (i.e., to lower rates of failure through one year post-release). As noted earlier, none of the regular participants in alcohol programs at two months recidivated during this same period; by one year post-release, only one in four of these men had failed parole.

Predicting Community Integration. Because the POSTRESID, POSTUNEMP and POSTVOC variables were actually used in constructing the post-release community integration index, they were excluded as predictors in this analysis. Of the five post-release predictors that were considered for entry, two-month drug use (POSTDRUG) and one of the community-based treatment variables, POSTDRNO, were selected for the multiple regression model.

As indicated by the results shown in the "Reintegration" section of Table 5-J, POSTDRUG shared a high inverse relationship with the reintegration outcome throughout the half-year follow-up period. Of the 49 men who were reported to be using a major drug on at least a weekly basis, for example, over three-fourths of them (78%) had low integration scores (of 2 or less on the 5-point community integration scale). This was about the same proportion in the group of less frequent drug users men who had scores greater than 2 on this measure (80%). Men who did not follow-up drug treatment referrals were also more likely to have low reintegration scores. About two-thirds of the drug treatment no shows scored 2 or less on the measure, while only about one-third of all other releasees had these lower scores.

Notably, neither the drug nor alcohol treatment attendance variables were found related to the community integration outcomes. This echoed the pre-release results, in which none of the prison treatment variables were found predictive of post-release reintegration.

Table 5-J

PREDICTING REINTEGRATION AND RELAPSE FROM POST-RELEASE PREDICTORS

Selected Variable	Reintegration			Relapse		
	0-6 Mos.	0-2 Mos.	3-6 Mos.	0-6 Mos.	0-2 Mos.	3-6 Mos.
POSTDRUG	-.3907**	-.4033***	-.2074**	–	–	–
POSTUNEMP	–	–	–	–	.1954***	–
POSTVOC	–	–	–	–	-.1307*	–
POSTDRAT	–	–	–	.1032**	–	–
POSTDRNO	-.1047+	–	-.1843**	.2043***	.2327**	–
R^2	.24	.19	.14	.13	.26	–
F Value	14.63***	16.84***	7.88***	8.76***	8.70**	–

* $p < .05$
** $p < .01$
*** $p < .001$
\+ $p = .061$

Note: Although not listed here, pre-release variables that were significantly related to the dependent measure were entered in each of these models. These pre-release predictors are shown in the tables presented earlier in this chapter.

Predicting Extent of Relapse. Results of the multiple regression analyses conducted on drug and alcohol relapse outcomes are also shown in Table 5-J. Both the community-based drug treatment variables were significantly related to relapse over the entire six-month follow-up period. The positive relationship between POSTDRNO and relapse was anticipated; men who had been referred to a drug treatment program during the first two months but were "no shows" for that referral had very high relapse rates during the first half-year (59% as compared to 39% for men referred and attending drug treatment, and 25% for those who were not referred for treatment during this period). The POSTDRNO variable was also predictive of early relapse, as indicated in the "0-2 Month" column in the table. Drug treatment no shows were more than twice as likely to relapse during the first two months as men who were referred and were attending treatment at this time (45% as compared to 19%), and nearly four times as likely to relapse as men not referred to treatment (12%).

One possible explanation of the positive relationship between drug treatment attendance (POSTDRAT) and relapse is that men identified as relapsing (by parole officers) are more likely to be referred to drug treatment and urged to continue attendance in these programs. At the same time, the finding may indicate that referral to and attendance in drug programs simply does not prevent these clients' eventual relapse into drug use. These explanations were further explored by comparing the two- and six-month relationships. Overall, 39% of the men attending drug programs at the two-month point relapsed between release and six months post-release (31% of releasees not in any treatment at two months relapsed). Relapse rates at the two-month point were about equal for program participants (17%) and non-participants (19%). However, 42% of the two-month participants relapsed between three and six months, while 30% of the non-participants relapsed during this period. Thus, while the participants and non-participants did not differ in their relapse rates at the time of entry to treatment, proportionately more men in treatment relapsed during the later period. While one would expect somewhat higher relapse rates among men referred for treatment, it also appears that, just as drug program participation does not appear to forestall criminal recidivism (as observed earlier), this participation does not reduce the chances of these men relapsing at some later point in time.[14]

As indicated in Table 5-J, two post-release vocational variables (POSTVOC and POSTUNEMP) were related to the two-month relapse outcome. Relapse rates for men who were attending a vocational program or were employed for most of this period were around 10%. Releasees who were not in vocational programs relapsed at a 20% rate, and

[14]While the multivariate analyses did not reveal a relationship between post-release alcohol program participation and relapse, the bivariate results were consistent with the recidivism results, and at least suggestive of the positive impacts of these programs. Twenty-two percent of the men in alcohol programs at the two-month point relapsed over the six-month follow-up, as compared to 31% of the men not in treatment, and 39% of the men in drug programs at two months.

men who were referred to these programs but didn't pursue the referral or dropped out relapsed at a 26% rate. Similar relapse rates (20%) were observed for men who were unemployed about half of the time during the first two months after release. The highest relapse rate, 34%, was reported for men who were not working for more than 80% of this period.

The blank column in Table 5-J under the "3-6 Month" heading for the relapse analysis indicates that none of the post-release variables were found predictive of later relapse.[15] Thus, the model with the three significant pre-release variables selected in the earlier analysis (PREDRUG, LENGINC and NASATTIME) could not be improved by adding post-release information.

Predicting Treatment Attendance Using Post-Release Predictors. With treatment attendance serving as the outcome variable, the four post-release status variables (POSTVOC, POSTUNEMP, POSTRESID and POSTDRUG) were the only post-release variables tested in this analysis. None of these variables were predictive of overall six-month attendance, and none predicted later attendance, between three and six months post-release. Relapse into post-release drug use (POSTDRUG) was marginally predictive ($p=.064$) of two-month attendance, as was stability of residence (POSTRESID) at the two-month point ($p=.102$). It will be recalled from the pre-release analyses that, aside from the strong positive relationship between treatment participation and having a parole condition to attend treatment, few variables were predictive of post-release involvement in community-based programs.

Supplementary Analyses of Post-Release Treatment

Although the research design focused on the effects of Lincoln participation and on prison treatment in general, the considerable data collected in follow-up interviews on post-release community-based treatment participation presented a valuable source for additional investigation. Some of these supplementary analyses were preliminary to the outcome analyses described above, examining attendance rates associated with different modalities, and differences between the pilot and comparison groups in attendance and treatment retention. Other analyses extended the multivariate analyses, addressing the impacts of different treatment modalities and treatment retention on recidivism outcomes.

Attendance Rates: Study Group and Modality Effects. In results presented earlier, it was evident that, relative to the comparison group (which comprised the no-treatment, non-ASAT and ASAT groups in the multivariate analyses), a greater proportion of the Lincoln CPU/Access group was attending treatment during the follow up, and especially at

[15] We elected not to use two-month measures of the six-month outcome as predictors in these analyses -- in this case two-month drug use (POSTDRUG) as a predictor of six-month relapse -- simply because the positive relationship between these factors seemed self-evident. We were most interested in testing the predictive power of conceptually distinct variables.

two-months post-release. Thus, the pilot program was successful in achieving this primary goal of ensuring and enhancing linkages to treatment. However, preliminary findings presented in previous Vera reports suggested this attendance rate difference was simply due to a greater proportion of pilot men receiving referrals in the first place. To test whether pilot men were more likely to follow up referrals with regular attendance than were comparison men given referrals, the present analyses were limited to men from each group receiving referrals. The data included in these analyses were all treatment referrals reported in the two- and six-month PO follow-up interviews.

Consistent with the results presented in interim reports, the two groups had virtually the same attendance rates when viewed in this way. Of the 126 pilot men for whom two- and six-month attendance data were available, 58% were attending a program at the two- or six-month point, and 23% were attending at both these follow-up points. A total of 125 comparison group men had treatment referrals during the same half-year follow-up; 59% of these men were attending a program during at least one of the two periods and 24% were reported participating at both interview points.

At the two-month point, when the effects of the Lincoln experience (and particularly Access' efforts) should be most evident in terms of post-release attendance outcomes, no differences were found between the study groups. Just over half of both groups with treatment referrals (52% of the pilot men and 54% of comparison subjects) were attending at the two-month point. Other differences that might be expected were also not found. For example, while one of the intents of the Lincoln Access was to prepare the community-based linkage in advance and thus reduce the likelihood of releasees being rejected by programs claiming the referral was unsuitable, this type of program rejection was rarely reported for either group -- 3.0% among the comparisons and 2.5% among pilot men. "No show" rates were also similar, about 16% for each of the groups.

With no study group differences, the comparison and pilot men were collapsed in a single sample to compare attendance rates in the most commonly attended modalities. The highest attendance rates were reported for the self-help modalities.[16] Of the 34 referrals to Alcoholics Anonymous reported in the two- and six-month interviews, 65% followed up the referral and were regular participants.[17] Approximately the same attendance rate (59%)

[16]As pointed out in prior Vera reports and addressed in Access policy (which generally opposes self-help referrals in preference for OP referrals), it is very difficult for field POs to monitor attendance in self-help groups. There is no way of telling if or how much this fact may have influenced these PO reports on attendance rates (other than again noting the consistency between these data and the parolee reports on treatment attendance, noted in Chapter 4).

[17]Attendance here refers to the subject's status as reported in the latest interview conducted on the subject. If a man was referred to AA and kept attending the program during the first two months, but then was reported to have dropped out in the six-month interiew, he was counted as a non-attender. If no six-month interview was conducted on a subject, his two-month data were counted (in most cases these were non-attending recidivists).

was reported for the 32 Narcotics Anonymous or Cocaine Anonymous referrals. Outpatient alcohol programs had lower attendance rates (46% of 39 referrals), and drug-free outpatient programs (35% of 188 referrals) and assorted other drug programs (33% of 42 referrals) had the lowest attendance rates relative to referrals to these modalities.

Further Outcome Analyses. Results of the multivariate analyses suggested that participation in drug programs during the first two months after release did not deter recidivism or relapse during the one-year follow-up. However, this was not the case with men participating in alcohol programs at two months post-release. Although few men were in these programs -- and thus findings relating to this group must be interpreted with caution -- their participants were less likely to be rearrested or failed by Parole during the first year after release. Further exploration of community-based treatment and outcome addressed more detailed questions: Apart from the overall difference in alcohol and drug programs, are there additional outcome differences associated with participating in certain modalities? What are the impacts of attendance at six months post-release? And what about treatment retention -- are men who are in attendance at both two and six months less likely to recidivate?

One set of supplementary treatment analyses extended those described in the multivariate section, assessing long-term impacts of attendance in different modalities at the two-month point. Unfortunately, small sample sizes and the limited number of modalities utilized by releasees permitted only an exploratory analysis of four (and in all but one case, very small) sub-samples: men who were attending drug-free outpatient (OP) programs at two months (N=68), those attending Narcotics Anonymous or Cocaine Anonymous (N=13), those attending AA (N=19), and those attending outpatient alcohol programs (N=14).[18] The results of these analyses are summarized in Table 5-K.

There were no real differences between the two alcohol program modalities, as participants of both AA and outpatient programs showed arrest and parole failure rates that were about half that of men who were not in treatment during the data collection periods. Compared to a 40% one-year rearrest rate for men not in treatment at the time of the two-month interview, for example, 16% of the two-month AA participants and 21% of the alcohol OP participants were arrested at some point during this first year. The parole failure rate for the non-attenders was 57%; for AA and alcohol OP clients, it was 26% and 29%, respectively. (As indicated in the table, with the exception of the arrest outcome for the alcohol OP group, these outcome differences were statistically significant.)

[18]The subjects included in these analyses account for over 90% of all men attending programs at two months post-release. There were three men attending alcohol programs other than OP and AA, and seven men attending drug programs other than OP and NA/CA; these numbers were too small to include in an analysis. As with most of the previous analyses, these were based on the two-month PO interview database and the rap sheet follow-up. The four groups designated in the text are not necessarily mutually exclusive. Although this was rare, POs could report a subject's simultaneous attendance in more than one program. It bears repeating that the small numbers of men in all but the outpatient drug group necessitate cautious interpretation.

Table 5-K

CRIMINAL RECIDIVISM OUTCOMES BY MODALITY AND RETENTION

Treatment Group	Arrest (%)	Parole Failure (%)
No Treatment		
2 Month (N = 327)	40.1	57.2
6 Month (N = 266)	38.0	51.4
AA		
2 Month (N = 19)	15.8*	26.3**
6 Month (N = 14)	14.3+	21.4+
Alcohol - OP		
2 Month (N = 14)	21.4	28.6*
6 Month (N = 12)	16.7	16.7*
NA/CA		
2 Month (N = 13)	30.8	30.8+
6 Month (N = 10)	20.0	20.0+
Drug - OP		
2 Month (N = 68)	44.9	56.5
6 Month (N = 53)	30.2	32.1*
Alcohol Programs, Retained Two and Six Months (N = 15)	6.7*	13.3**
Drug Programs, Retained Two and Six Months (N = 36)	33.3	36.1
Not in Treatment Two and Six Months (N = 313)	35.5	48.6

* $p < .05$
** $p < .01$
+ $p < .10$

Analyses of the two drug program groups revealed that the 13 men attending NA/CA also had somewhat better recidivism outcomes than men not in treatment. Both the arrest and failure rate for NA/CA participants was 31% (as compared to the 40% and 57% rates for non-attenders noted above, the failure rate difference was significant at p=.06). However, participants of outpatient drug programs, by far the most numerous post-release treatment group, were just as likely to recidivate as men not in these programs. The arrest rate for drug-free OP clients was 45%, and their failure rate was 57%.

These analyses were replicated using six-month attendance data and recidivism outcomes limited to the period covered by these interviews through the one-year rap sheet cut-off, i.e., from approximately 3 to 12 months post-release. As shown in Table 5-K, similarly positive outcomes were associated with AA, alcohol-OP and NA/CA attendance in these analyses. As compared to a 3-to-12 month rearrest rate of 38% for men not in treatment at six months, 14% of those in AA, 17% of those in alcohol-OP, and 20% of those in NA/CA were rearrested (because of the small samples, only the AA group difference was marginally significant at p=.07). Not surprisingly, failure rate differences were more marked, as men attending programs at the half-year point were infrequently failed by POs. Just over half (52%) of those not in treatment were failed in the 3-to-12 month period, while 21% of those in AA, 17% of those in alcohol-OP and 20% of NA/CA participants were failed (all were significant, with the NA/CA difference marginal at p=.052).

The six- and two-month findings departed with regard to drug-free OP participation, as men in these programs at the half-year point also showed positive recidivism outcomes. A little less than one-third of the men in drug-free OP programs were arrested (30%) or failed (32%), as compared to the no-treatment group rates of 38% and 52%, respectively (the failure rate difference was significant).

Retention. Finally, available data were analyzed to assess the impacts of treatment retention on recidivism. Although conclusions from results involving such small samples must be tentative, these analyses suggested that retention in alcohol programs was associated with favorable outcomes, while retention in drug programs had a positive, but less substantial impact. These findings are depicted in the lower part of Table 5-K. Of the 15 men reported to be regular participants of alcohol programs at both the two- and six-month points, one was rearrested and two failed during the 3-to-12 month follow-up. These are significantly lower figures than for men not in treatment during these two periods (35% of whom were rearrested and 49% failed; both the differences were significant). Although lower, recidivism rates for men who were retained in drug programs were not significantly different from the figures for the no-treatment group. One-third of the men who stayed in drug programs were rearrested, and 36% of them were failed by parole during the follow-up period.

A summary of the findings presented in this section, including additional analyses of the drug-alcohol program differences, appears in the "Post Release Linkage and Participation in Community-Based Treatment" discussion in Chapter 6.

CHAPTER SIX

ASSESSING THE EFFECTS OF TREATMENT AND OTHER FACTORS: SUMMARY & INTERPRETATION OF THE OUTCOME RESULTS

Results of the multivariate analyses, detailed in the previous chapter, are summarized here in five sections. In addition to describing the overall pattern of results within each content area, we highlight findings of particular import. The first section comprises a brief discussion of those background and criminal history variables found to be related to the outcome measures. Drug- and alcohol-related variables are considered next. In this section, the importance of drug history on post-release success, and the effects associated with the use of particular substances are described.

Findings concerning the prison treatment variables are then summarized. The limited impacts of Lincoln participation, as well as impacts of participation in other prison programs are discussed; further assessments of the Lincoln findings are presented in the following chapter. Results regarding releasees' participation in community-based treatment programs are discussed in the fourth section. Considered here are Access' linkage efforts, and the impacts of post-release participation in drug and alcohol treatment programs on recidivism. The chapter closes with a look at the results from a different perspective. In this last section, the outcomes themselves are summarized and interpreted in terms of what they tell us about the current State inmate and parolee population.

Background and Criminal History Variables

Table 6-A displays the relationships revealed in the regression analyses of the five outcomes and the pre-release background and criminal history variables. Asterisks in the table indicate a significant relationship (with probability levels signified by multiple asterisks, and marginal relationships by a plus sign), and the letter N indicates a negative or inverse relationship. One can see from the matrix that number of prior jail terms (PRIJAIL) was the best criminal history predictor of post-release outcomes, and that its impacts ranged from criminal recidivism to reintegration and relapse outcomes.

Two other, closely-related criminal history variables, length of current incarceration (LENGINC) and most severe prior conviction (SERCONVIC), were also related to the parole failure outcome. Additionally, LENGINC was associated with relapse and SERCONVIC with reintegration. The pattern of relationships reflected here is consistent;

Table 6-A

BACKGROUND AND CRIMINAL HISTORY VARIABLES RELATIONSHIP MATRIX

Outcome	Predictor Variable: AGE	SES	PRE-UNEMP	PRE-RESID	PRI-JAIL	LENG-INC	SER-CONVIC
Arrest,							
0-12 Months	*N	–	*	–	***	–	–
0-2 Months	**N	–	–	–	–	–	–
3-12 Months	*N	–	*	–	***	–	–
Parole Failure,							
0-12 Months	*N	–	*	–	**	*N	–
0-2 Months	–	–	–	–	**	*N	*
3-12 Months	*N	–	–	–	–	*N	–
Community Reintegration,							
0-6 Months	–	–	*N	*N	*N	–	*N
0-2 Months	–	–	*N	–	*N	–	–
3-6 Months	–	–	*N	*N	–	–	*N
Relapse,							
0-6 Months	–	–	–	–	*	**N	–
0-2 Months	–	*	–	–	*	–	–
3-6 Months	–	–	–	–	–	**N	–
Treatment Attendance,							
0-6 Months	–	–	–	–	–	–	–
0-2 Months	–	–	–	–	–	–	–
3-6 Months	–	–	–	–	–	–	–

* $p < .05$
** $p < .01$
*** $p < .001$

N = Negative (inverse) relationship.

Note: All predictor variables and their abbreviated names are shown in Table 5-B of Chapter 5. These variables and the outcomes are described in Chapter 3.

the inverse relationship shown for these variables[1] indicates that releasees whose most recent incarceration was over a shorter duration, and whose most serious prior conviction was for a lower level felony charge were more likely to experience negative outcomes. Further analyses of the incarceration length variable indicated that, as expected, the most common charge type for men serving shorter sentences were drug charges, accounting for about one-third of all charges of men serving terms of less than two and one-half years.[2] Coupled with the PRIJAIL relationships, these findings suggest that offenders with a recent history of low level felony convictions and relatively numerous misdemeanor convictions resulting in jail terms are more likely to fail parole, relapse and have problems reintegrating into the community during the post-release follow-up period.

The fact that the LENGINC and SERCONVIC variables are associated with parole failure, but not with rearrest may indicate that these outcomes have as much to do with parole supervision practices as with the offenders themselves. It is possible that experienced parole officers, anticipating more problems among releasees who have been serving shorter terms for lower level crimes (and especially drug crimes) impose more strict supervision standards with these releasees. The relationship between LENGINC and the relapse outcome is consistent with the view that these men do have problems after release (although no conclusions about causality can be drawn from these findings). In practice, these factors, together with other perceived "risk factors"[3] may present a picture that raises the antennae of field parole officers. At the same time, some FPOs may be willing to give parolees who have recently served long terms more chances before initiating violation proceedings.

Besides PRIJAIL, age and pre-incarceration unemployment were predictive of both post-release arrest and parole failure. These findings were anticipated by prior studies that have found younger offenders (e.g., Greenberg, 1977), and those with little employment history (e.g., Chiricos, 1987) to be prone to recidivism. PREUNEMP and PRERESID were also related to reintegration outcome. This was expected, as the reintegration outcome was a measure of the post-release status of these same pre-incarceration unemployment and residential factors.

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[1]As shown in Table 6-A, LENGINC was inversely related to parole failure and relapse outcomes, and SERCONVIC was inversely related to reintegration outcomes but positively related to parole failure at two months. Although the differing directions of the SERCONVIC relationships might suggest otherwise, they represent the consistent pattern described in the text. SERCONVIC was coded with the most serious prior convictions assigned the lowest scores (A felonies were coded '1,' B felonies coded as '2,' etc., through E felonies coded as '5'). Thus, the inverse relationship between SERCONVIC and reintegration meant that less serious histories (which were actually higher scores on this measure) were associated with low reintegration scores (which indicated integration problems). SERCONVIC's positive relationship with two-month parole failure meant that men with less serious histories had higher rates of parole failure.

[2]Drug charges were the most common conviction charges for men serving less than 18 months, accounting for 39% of these cases. Among men serving 18 to 30 months, robbery charges (occurring in 33% of these cases) occurred with slightly more frequency than drug charges (which accounted for 31% of the charges in this group).

[3]According to the results presented here and below, youthfulness, a history of repeated jail terms, [illegible] history and suspected current use are the most robust predictors of parole failure.

Drug- and Alcohol-Related Variables

The Importance of Drug History. Using the same format shown in the previous matrix, Table 6-B shows the relationships between the substance abuse-related variables and the five outcomes. Severity of pre-incarceration drug history was a consistent predictor of the criminal recidivism outcomes and the relapse outcome. Bivariate analyses indicated that men classified as having severe drug problems in the year prior to incarceration were about one and one-half times more likely to be arrested or to fail parole, and twice as likely to relapse as men with non-severe histories. Additionally, PREDRUG had a marginal relationship in the expected direction with community reintegration during the 3-to-6 month post-release period.

An interesting pattern of relationships emerged when PREDRUG was assessed for the different follow-up periods. On all four outcomes (arrest, parole failure, relapse, reintegration), the impact of a severe drug history is greatest after the first couple of months post-release. This finding could be viewed as an indirect refutation of one of the hypotheses underlying the CPU/Access treatment linkage and transition demonstration -- that offenders with addiction histories are most vulnerable in the period immediately after release. One alternative explanation, however, is that these outcomes are measures of delayed impact. That is, some releasees resume drug use and criminal activity soon after release but simply don't get "caught" for these behaviors until several months thereafter. A third interpretation is that FPOs may be most vigilant and parolees most diligent during this anticipated high vulnerability period immediately after release, and then relax. In any event, these findings suggest that treatment interventions and FPOs' employment of these interventions are crucial several months after release as well as during the early release/transition period.

Chapter 5 also reports the results of additional analyses conducted to assess the impacts of specific abuse histories. Using data on subjects' self-reported use in the year prior to incarceration, Figure 6-A compares the recidivism and relapse rates associated with regular (weekly or more frequent) use of the most common "major" drugs (crack, heroin and cocaine), regular use of multiple major drugs, no regular use of a major drug, and very heavy alcohol consumption.[4] Regular use of crack, even more than regular use of multiple substances, was consistently related to recidivism and relapse when compared to less frequent drug users. As shown in the figure, regular users of heroin and cocaine had higher

[4]The groups represented in this graph are not mutually exclusive. Creating mutually exclusive groups (such as men who reported regular use of heroin exclusively, or crack or cocaine exclusively, or regular heroin plus regular crack use, etc.) was not appropriate given the high frequency of use of multiple substances and the range of substance combinations reported by these subjects. Thus, for example, the regular crack use group in the graph includes some subjects who also reported regular heroin use; these same subjects are also represented in the regular heroin group and the multiple substance use group in this graph. The groups being compared in the graph, then, represent subjects who reported at least regular use of the particular drug, with or without the use of other drugs.

Table 6-B

DRUG AND ALCOHOL VARIABLES RELATIONSHIP MATRIX

	Predictor Variable					
Outcome	PREDRUG	PREALC	FAMDA	DAUSEPL	PROGPLAN	PARCONTR
Arrest,						
0-12 Months	*	–	–	–	+	–
0-2 Months	–	–	–	–	–	–
3-12 Months	*	–	–	–	*	–
Parole Failure,						
0-12 Months	+	–	–	–	–	–
0-2 Months	–	–	–	+	–	–
3-12 Months	*	–	–	–	–	–
Community Reintegration,						
0-6 Months	–	–	–	–	–	–
0-2 Months	–	*	–	–	–	–
3-6 Months	+N	–	–	–	–	–
Relapse,						
0-6 Months	***	–	–	–	–	–
0-2 Months	–	–	*N	*	–	–
3-6 Months	***	–	–	–	–	–
Treatment Attendance,						
0-6 Months	–	–	–	–	–	***
0-2 Months	–	–	*	–	*	***
3-6 Months	–	–	–	–	–	***

* $p < .05$
** $p < .01$
*** $p < .001$
\+ $p < .10$

N = Negative (inverse) relationship.

Note: All predictor variables and their abbreviated names are shown in Table 5-B of Chapter 5. These variables and the outcomes are described in Chapter 3.

FIGURE 6-A

OUTCOMES FOR DIFFERENT DRUG AND ALCOHOL USE PATTERNS

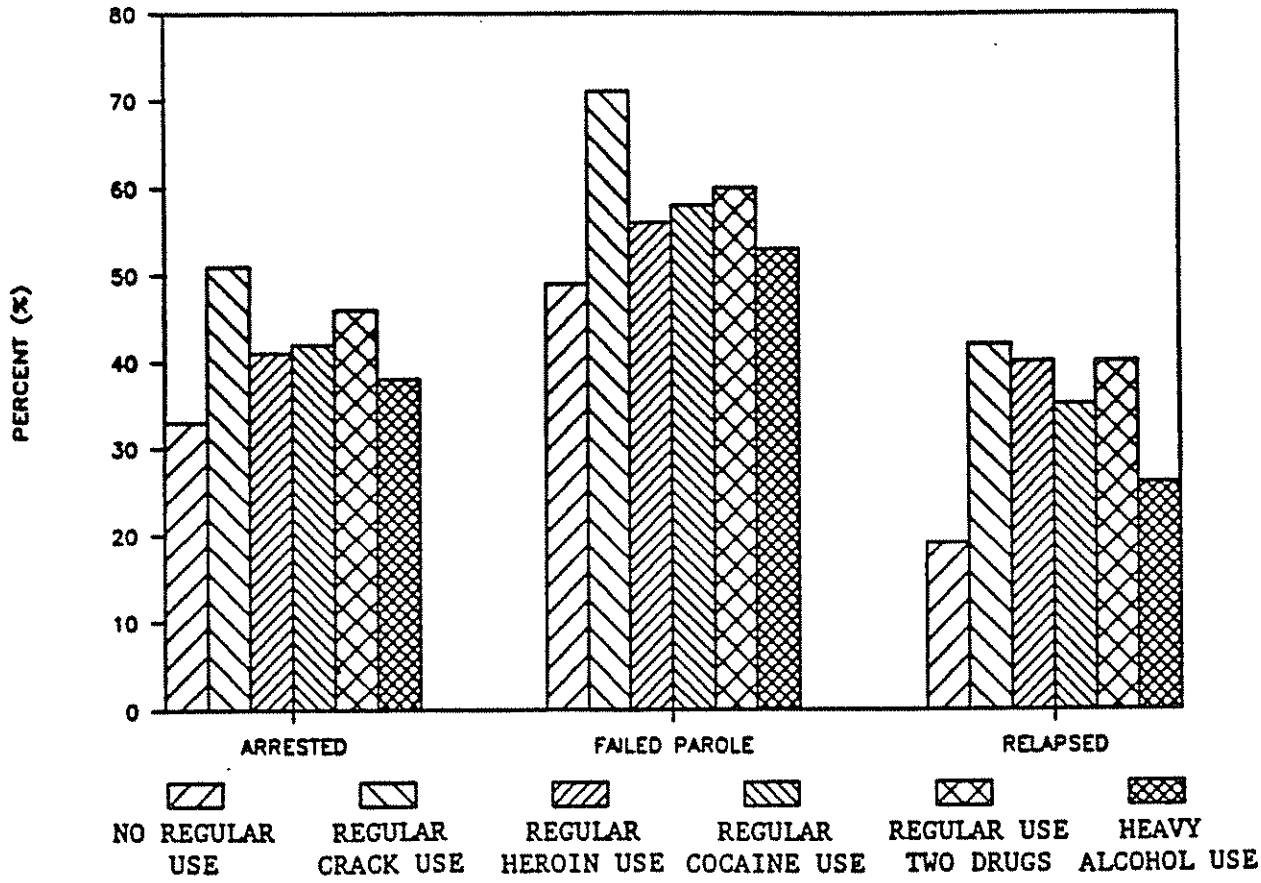
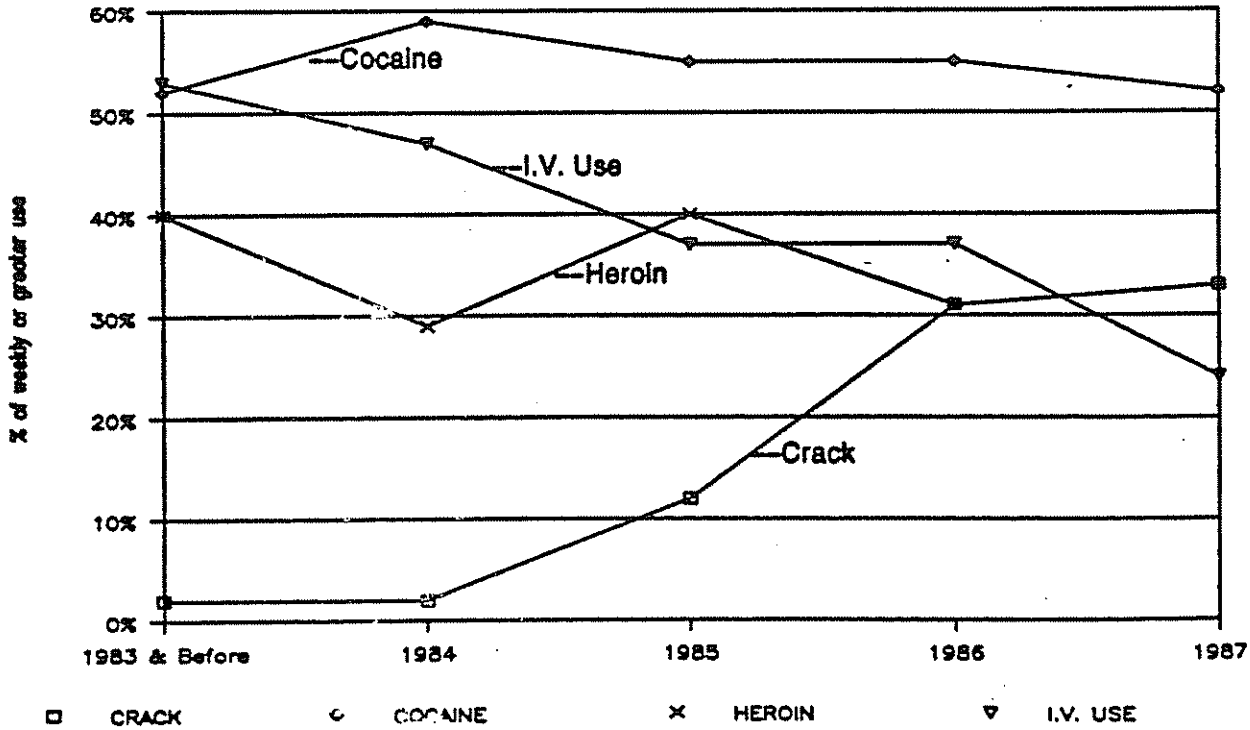


FIGURE 6-B

SELF-REPORTED USE OF DRUGS BY YEAR OF INCARCERATION



NOTE: These proportions represent regular (at least weekly) drug use; however, it based on those reporting any use.

recidivism and relapse rates than these non-regular drug users, but these differences were not statistically significant. The consistency of the crack effects are especially notable. In addition to the relationship depicted in the figure (between frequency of crack use and these outcomes), men who reported crack to be their primary problem drug also had significantly higher recidivism and relapse rates; reporting heroin or cocaine as the primary problem drug was not associated with a greater likelihood of rearrest, parole failure or relapse.[5] These findings are of particular import when viewed in light of the growing prevalence of men with crack histories in the prison system.[6] Information presented in Vera's 1989 interim report, replicated here as Figure 6-B, offers illustrative documentation of the increase of crack use in this population.

Alcohol History, Motivation, and Other Variables. In contrast to the PREDRUG effects, severity of pre-incarceration alcohol problems was found unrelated to any of the outcomes (with the lone exception of reintegration during the first two months post-release). Men classified as having severe alcohol problems on PREALC, in fact, had arrest and parole failure rates that were about 5% below those of men without severe alcohol histories (many of whom, however, had severe drug histories). As indicated in Figure 6-A, rearrest and failure rates for excessive drinkers[7] were lower than those of regular drug users; these rates (38% arrested and 53% failed on parole) were virtually the same as those for men consuming modest amounts of alcohol (of those consuming an ounce or less of ethanol daily, 38% were arrested and 51% failed).

Returning to Table 6-B, the two motivational variables included in the analyses were also related to specific outcomes. The DAUSEPLAN variable had immediate effects post-release, as men who reported that they planned to resume drug and alcohol use were more likely to score high on the relapse measure and to fail parole early in the follow-up period. The same immediate effects were noted for the PROGPLAN variable; men who reported more specific plans to attend programs, and to attend them "on their own" rather than only at the urging of the FPO, were more likely to be in programs soon after release.

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[5]Specifically, multivariate analyses confirmed that having a crack history (either in terms of use or reported primary problem) was significantly related to parole failure and relapse, while having a heroin history or a cocaine history was unrelated to rearrest, failure or relapse. Bivariate analyses showed a crack-rearrest relationship, but this was not upheld in multivariate analyses.

[6]Although it is not unusual to encounter discussions about the waning of the crack epidemic of the late '80s, crack remains a widely used drug among addicts in New York City. It should also be remembered that there is a time lag in prison systems as compared to "street" trends, as inmates must be treated for drug problems they experienced at least a year (and more typically two or more years) earlier.

[7]Defined as men whose average alcohol consumption was four or more ounces of pure alcohol (ethanol) daily; this is equivalent to about one quart of wine, eight 12 ounce bottles of beer or nine ounces of liquor.

Of greater interest were the long term impacts of PROGPLAN on post-release arrest. PROGPLAN was marginally related (p=.053) to rearrest throughout the one-year follow-up, and had its greatest impacts during the last three quarters of that year. As reported in Chapter 5, men who had specific plans to attend a program "on their own" were rearrested at a 33% rate. This contrasts with the overall rearrest rate (39%), and that of men who had no plans (42%) and men who planned to attend treatment "only if my PO refers me" (44%). This finding is especially notable given that participation in post-release treatment, or the enforced participation in treatment through parole mandates, are generally not associated with lowered rearrest rates (or other positive outcomes, as discussed below). Thus, motivation to attend treatment, and to deal with one's substance abuse problem at least as expressed at the release point appears to be a better predictor of reduced rearrest than treatment participation per se.

A few additional relationships are also depicted in Table 6-B. Somewhat surprisingly, having a family member with a history of drug or alcohol abuse had some positive, if limited, impacts. FAMDA was associated with lower scores on the relapse measure and a greater likelihood of attending treatment in the early post-release period. These family members may serve as motivational models or in other ways support the releasee's abstinence and treatment participation. That influence might work in two rather disparate ways, while yielding a similar effect. If recovered, these family members could be positive models, but if not, they could also serve as close reminders of the eventual impacts of substance abuse and treatment avoidance.

The last column of Table 6-B shows the strong effects found for the presence of a parole mandate to attend treatment. Only 3% of releasees without parole treatment conditions were in programs, while about one-fifth of those with mandates were attending at both the two- and six-month interview points. Other than limited effects of prison treatment participation during the first two-month period (and the PROGPLAN variable, above), no other variable appeared to influence participation in community-based treatment programs. Given the significance of parole treatment conditions on post-release participation, the results of the "matching" analysis summarized in Chapter 4 are of particular import. If, as appears to be the case, having a condition is central to participation, improved matching of those conditions to releasees most in need of treatment is essential.

The Lincoln Program and Other Prison Treatment Effects

The central hypothesis of this research, that Lincoln pilot participation would be associated with positive post-release outcomes, was not supported by the findings. On all outcomes but treatment participation during the first two months after release (including criminal recidivism, relapse and reintegration at any of the follow-up points), Lincoln

participants were the same as the comparison group.[8] As indicated by the prison treatment matrix in Table 6-C, those members of the comparison group who participated in ASAT treatment also showed no better outcomes than men not in treatment, or those attending non-ASAT or the Lincoln programs. As discussed in the first section of Chapter 5, exploratory analyses of different ASAT program dimensions, including residential vs. outpatient (or "modular") status and program quality, found these ASAT program variables similarly unrelated to the outcome measures. However, length of stay in ASAT programs was found related to a few outcomes in unexpected directions. Longer ASAT stays were associated with arrest and parole failure in the early, two-month post-release period, and to relapse during the 3-to-6 month period.

The fact that Lincoln participants were more likely to be attending post-release programs, especially in the first two months, after release should not be viewed as an insignificant finding. The results show that having attended the Lincoln program and being assured an Access program referral made pilot participants about two and one-half times more likely than comparison men to be in treatment at two months, and about twice as likely to be in treatment throughout the six-month follow-up. In this limited sense, the program's goals were achieved. Some practitioners might argue that this is the most that should be expected of any prison program -- to acquaint their participants with treatment, and to prepare them to continue dealing with their addiction after release. In this respect, in addition to Lincoln, ASAT programs (at least for inmates who stay for some time, as indicated by the relationship found for ASATTIME), and generally all treatment efforts in the DOCS system (as indicated by the ANYATT effect) are successful -- participants of these programs are more likely than non-participants with similar drug problems to continue community-based treatment in the immediate post-release period.

However, we think that more could and should be expected of prison-based programs. In addition to continuation in treatment, reduced recidivism, as well as reductions in relapse rates should be included in the criteria used to assess these programs' success. As discussed more fully in the next chapter, it is our view that these outcomes did not accrue for Lincoln participants at least partially because of the implementation problems noted in the program description in Chapter 2 (and well documented in earlier Vera reports). These implementation problems were too severe to permit an adequate test of the CPU model's potential impacts, or the theory underlying the program's development. However, given the absence of positive impacts of post-release treatment in general (discussed further below), it is unclear whether any pre-release intervention that stresses linkage to extant post-release treatment (no matter how successful in its implementation) would yield successful long-term outcomes.

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[8]While referred to as the comparison group throughout this report, as discussed in the first section of Chapter 5, it was possible to distinguish sub-groups among the comparison sample for analytic purposes. In the multivariate analyses, the comparison group comprised non-ASAT participants (NASATATT), ASAT participants (ASATATT) and the no-treatment group.

Table 6-C

PRISON TREATMENT VARIABLES RELATIONSHIP MATRIX

	Predictor Variable					
Outcome	NASATATT	NASATTIME	ASATATT	ASATTIME	LINCOLN	ANYATT
Arrest,						
0-12 Months	*N	–	–	–	–	+
0-2 Months	*N	–	–	***	–	***N
3-12 Months	–	–	–	–	–	–
Parole Failure,						
0-12 Months	–	–	–	–	–	–
0-2 Months	*N	–	–	*	–	+N
3-12 Months	–	–	–	–	–	–
Community Reintegration,						
0-6 Months	–	–	–	–	–	–
0-2 Months	–	–	–	–	–	–
3-6 Months	–	–	–	–	–	–
Relapse,						
0-6 Months	–	*N	–	–	–	–
0-2 Months	*N	–	–	–	–	–
3-6 Months	–	–	–	*	–	–
Treatment Attendance,						
0-6 Months	–	–	–	–	–	–
0-2 Months	–	–	–	*	**	*
3-6 Months	–	–	–	–	–	–

* $p < .05$
** $p < .01$
*** $p < .001$
\+ $p < .10$

N = Negative (inverse) relationship.

Note: All predictor variables and their abbreviated names are shown in Table 5-B of Chapter 5. These variables and the outcomes are described in Chapter 3.

The Effects of Any Prison Treatment and Non-ASAT Participation. The rearrest and parole failure effects shown in the table for ANYATT suggest that, when viewed collectively, the prison programs that were studied did achieve the goal of recidivism reduction for a brief period. The multivariate analyses affirmed that during the first two months post-release, the aggregated arrest and parole failure rates of non-ASAT, ASAT and Lincoln participants were significantly lower that those of the no-treatment group. Men completing at least three months of successful attendance in any program had early arrest and failure rates of 6% and 14%, respectively, while 13% of the no-treatment group were arrested and 25% them failed parole during this period. Being in any prison program was also marginally associated ($p=.08$) with lower arrest rates throughout the one-year follow-up; the aggregated one-year arrest rate for the treatment groups was 14% lower than that of the no-treatment group.

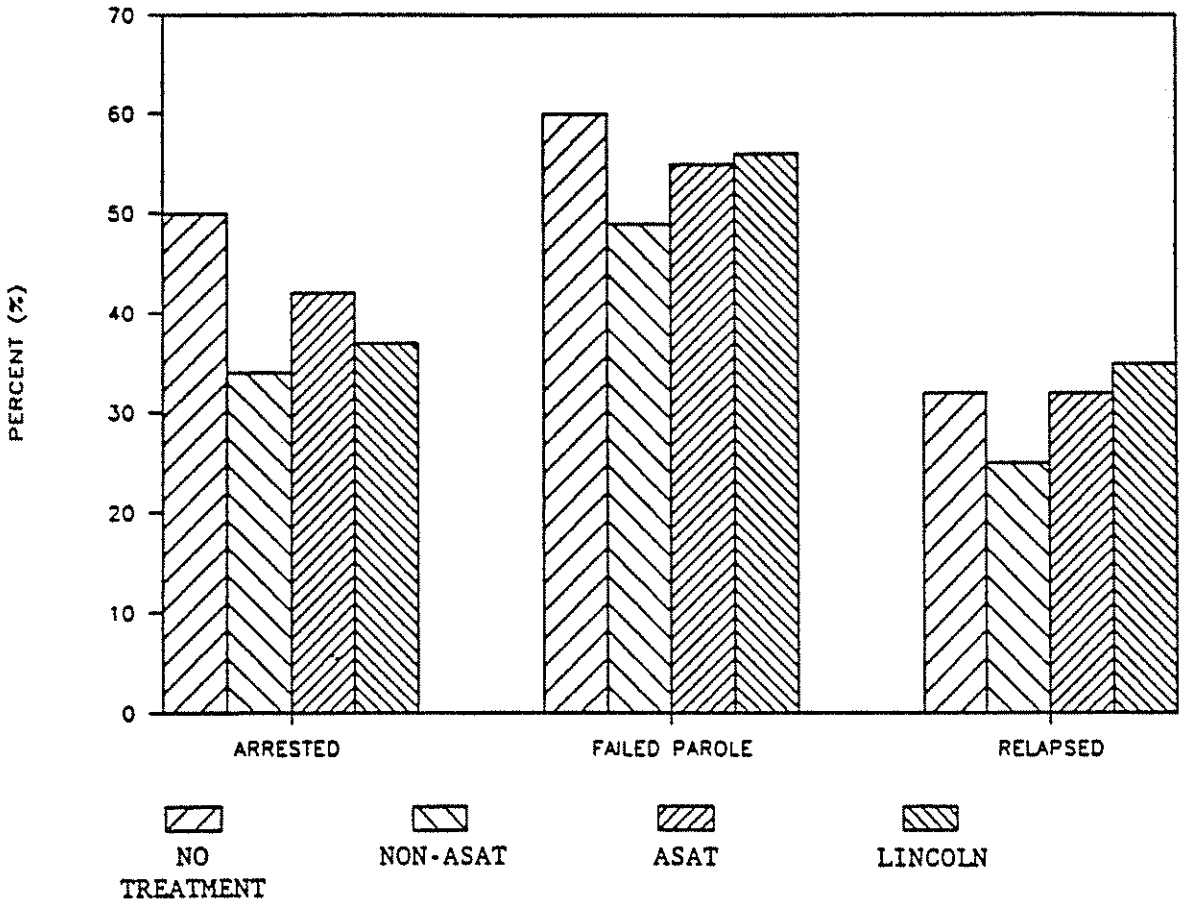
It is possible that this finding speaks more about the attitudes and motivations of the no-treatment group than about the effectiveness of treatment received by the rest of the subjects. Given that drug and alcohol programs of various kinds are now quite common in the DOCS system -- three-fourths of all men in the widely representative screening sample had attended a program -- it probably requires effort not to participate in some kind of substance abuse treatment during a term of State incarceration. Avoiding a mainstream activity like drug and alcohol treatment may be a self-prescription for failure after release.

Comparative analyses of the different prison treatment groups indicated that the effects found for "any treatment" are primarily attributable to the positive impacts of participation in non-ASAT programs. As shown in Figure 6-C, compared to the other prison treatment groups, men in these programs had the lowest rearrest, parole failure and relapse rates. The non-ASAT participants' rate of rearrest was 16% lower than that of the no-treatment group, and 8% lower than the aggregated rate of the three other treatment groups. The non-ASAT group's failure rate ranged from 6 to 10% below that of the other groups, and its relapse rates were from 7 to 10% lower. The multivariate analyses affirmed that, controlling for other predictive variables (including age, criminal history and drug problem severity), this group's rate of rearrest over the one-year follow-up was significantly lower than that of men receiving no treatment. This was also true of the group's parole failure and relapse outcomes for the first two months post-release. Additionally, longer lengths of stay in non-ASAT programs were associated with lower relapse scores throughout the half-year follow-up used with this measure.

The more successful outcomes of the non-ASAT group may in part be explained by the inverse of the self-selection explanation theorized for the no-treatment group effect, above. Results of the "matching" analyses summarized in Chapter 4 (and detailed in Vera's 1989 interim report) indicated that there was an association between treatment need and non-ASAT attendance, but not between treatment need and ASAT attendance. This may be because, regardless of an inmate's level of need for treatment, they have gotten the message that attendance in the more formal, DOCS-run ASAT programs are held in high regard by correctional staff and, more importantly, by parole commissioners. Thus it is not

FIGURE 6-C

OUTCOMES OF PRISON TREATMENT GROUPS



implausible that ASAT programs, most of which have long waiting lists of inmates who desire admission, may attract many inmates who are more concerned with having ASAT attendance on their record than with recognizing the severity of their drug and alcohol problems, and dealing with those problems.

In contrast, one might surmise that fewer of these inmates would elect to enter and participate in non-ASAT programs. Often sponsored by outside volunteers and inmate groups, these programs may offer fewer external rewards to participants, and thus attract fewer clients who are merely "going through the motions." When this self-selection hypothesis was assessed using the available data on motivation, however, it was not supported; non-ASAT and ASAT participants had similar scores on the two measures of motivation (plans to continue in treatment and to resume drinking and drug abuse) obtained at release. Of course, practitioners and researchers both know that motivation in substance abusers is ephemeral; these measures may not provide an adequate test of this hypothesis. Confirmation of the self-selection hypothesis requires further testing.

The positive impacts of non-ASAT participation may also be explained by the treatment itself. Recent literature on prison-based treatment (Chaiken, 1989; Wexler et al., 1988) argues that successful programs are ones in which the inmate-participants have a sense of "ownership" of the program, while limiting to some extent the role of institutional staff. It is possible that inmates might be more likely to risk such therapeutic prerequisites as openness and honesty with individuals "from the outside" who are not directly employed by the correctional authorities, or, in the right environment, with fellow inmates.

One could also speculate that non-ASAT programs, because they are more informal and flexible, are more responsive to the particular needs and interests raised by their participants. Based on our own experience with the Lincoln program and our discussions with inmates, ASAT managers and staff around the State, we came to view ASATs as strongly 12-Step oriented, with a considerable focus on alcohol abuse. Inmates remarked to us that ASAT staff were much more likely to be recovering alcoholics than drug addicts, and that the videos frequently used in these programs were oriented toward alcohol problems. The Lincoln experience also taught us that these program drawbacks, to the extent they exist, are difficult to resolve (there are few recovering addicts desiring employment in rural upstate locales, and there are few videos dealing with drug abuse as distinct from alcohol abuse, or the more general disease, 12-Step model). Nevertheless, non-ASAT programs, while not offering drug-oriented videos, may have the flexibility to address more directly the issues and problems brought by their clients.[9]

[9] A related advantage of some non-ASAT programs may be their cultural specificity. Although we have no data on the frequency with which men in the study attended such programs, some inmates described programs which were specifically organized around common racial/ethnic or cultural/religious affiliations. In the correctional environment, inmates may find such programs more meaningful and involving.

Unfortunately, any explanation we can offer for these non-ASAT findings are speculative. Based on Vera's assignment as it was outlined in the originating legislation, as well as our early conversations with persons most familiar with the existing prison-based system, the research was focused on ASAT program elements, and thus we obtained much less information on the myriad of non-ASAT programs. Nonetheless, the positive impacts associated with participation in these programs indicate that a potentially valuable avenue of future research would target the individual programs and program variables which account for these favorable results. A further summarization and discussion of the prison treatment findings follows in the final chapter of this report.

DOCS Research on ASAT Programs. It is instructive to assess the present findings in light of those reported in DOCS' own evaluations of selected ASAT programs. Described in previous Vera reports, these studies compare the rates at which inmates designated as satisfactory and unsatisfactory ASAT participants return to DOCS custody over a variable follow-up period extending at least one year post-release. Despite their methodological differences,[10] DOCS' studies and the present research have yielded notably consistent findings.

The two most recent comparable DOCS studies, completed in 1987, were of the Woodbourne and Mt. McGregor programs; graduates of these two ASAT programs were well-represented in the Lincoln study group included in this Vera research. The Woodbourne evaluation showed that satisfactory participants of this program returned to DOCS at a rate 4.7% below that of unsatisfactory participants. This figure was similar to that reported in DOCS' 1984 study of Woodbourne, where the return rate of successful participants was 6.9% below that of unsatisfactory participants. Because the number of unsatisfactory participants of the Mt. McGregor program was insufficient for making these same comparisons, DOCS' evaluation of this program focused on the difference between the actual return rate of satisfactory participants, and this group's projected rate of return, based on the overall rate for all DOCS releasees. Follow-up results showed that the actual return rate of the Mt. McGregor participants was 7.4% below that of their projected rate.

Although time constraints made return to prison an impractical outcome for the present study, similar comparisons can be made in differences between rearrest and parole failure rates of the ASAT study group and the no treatment group in the Vera study. ASAT participants had a rearrest rate 8.6% below the no treatment group's rate, and a parole

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[10] In the DOCS evaluations, the "unsatisfactory" study group includes inmates who entered a program but dropped out or were terminated by the program, as determined from program files. These subjects are most comparable to the "no treatment" group in the present study, however, this Vera study group also includes inmates who never entered a prison program, inmates who attended a program for less than three months, and inmates whose most recent program attendance was more than two years prior to release. Additionally, in the present study, program drop out and termination status are based on reviews of DOCS inmate files and inmate self-report, not program files.

failure rate 4.6% below that of the no treatment group. Thus, both the directionality and magnitude of these findings are consistent with the DOCS results: ASAT participants show lower rates of negative outcomes than unsuccessful or non-participants of programs, with a difference ranging only a few percentage points between about 5% and 9%.

Any inconsistencies between the DOCS and Vera results appear to rest on interpretation. Without the benefit of statistical tests, DOCS interprets the 5-7% differences found in their return rates to suggest that "satisfactory participation in [these programs] is positively related to post-release adjustment." Recognizing the limitations of these departmental evaluations, however, the authors of the DOCS reports also "caution against any definitive conclusions" being drawn from these results. This caution emerges as particularly important in light of the statistical test results performed in the present study. These tests showed similar differences of 5-9% to be non-significant, thus, as discussed above, we concluded that ASAT participation was not related to positive outcomes. The consistency of these ASAT findings between the DOCS and Vera studies is supportive of their validity. The fact that these similar findings yielded divergent conclusions, however, underscores the influential role of differing methods of analysis, and the value of enhancing DOCS' commendable research efforts with more rigorous statistical analysis and methodology.

Post-Release Linkage and Outcomes Associated with Participation in Community-Based Treatment

As described previously, multivariate results indicated that Lincoln attendance was related to higher rates of participation in community-based treatment after release. However, further analyses of these data, presented in the supplementary analyses section of Chapter 5, suggested that this could be entirely attributed to more Lincoln men receiving referrals. When only referred cases from the comparison and Lincoln groups were considered, Lincoln participation was unrelated to attendance outcomes. Apparently, the single (but by no means unimportant) measurable advantage of participation in Lincoln Access was the assurance of a treatment referral. Additional potential advantages, such as a greater likelihood of acceptance by the community-based program, or reduced "no show" or drop-out rates were not in evidence (in part because these negative outcomes did not occur with great frequency in either study group).

The value of an assured referral was indicated in analyses of referral rates in the comparison group. Just over a third (35%) of this sample had been given a referral according to FPO reports at the two-month point, despite the fact that this group's need for treatment equaled that of the Lincoln pilot group (and that 60% of this group had parole mandates to attend treatment).

Once referred by either Access or other agents (typically parole officers), about half of the men were attending programs at the two-month point, and a little less than one-fourth of those referred remained in attendance the entire time between the two- and six-month interviews. Based on parole officer reports, self-help groups (AA, NA, CA, etc.) had the

highest attendance rates (about 60% of men referred to these groups during the half-year follow-up were reported to be regularly participating in them at the time of the latest interview conducted on each subject).[11] Alcohol outpatient programs had an attendance rate of 46% and the modality with the most referrals, drug-free outpatient treatment, had a relatively low attendance rate of 35%.

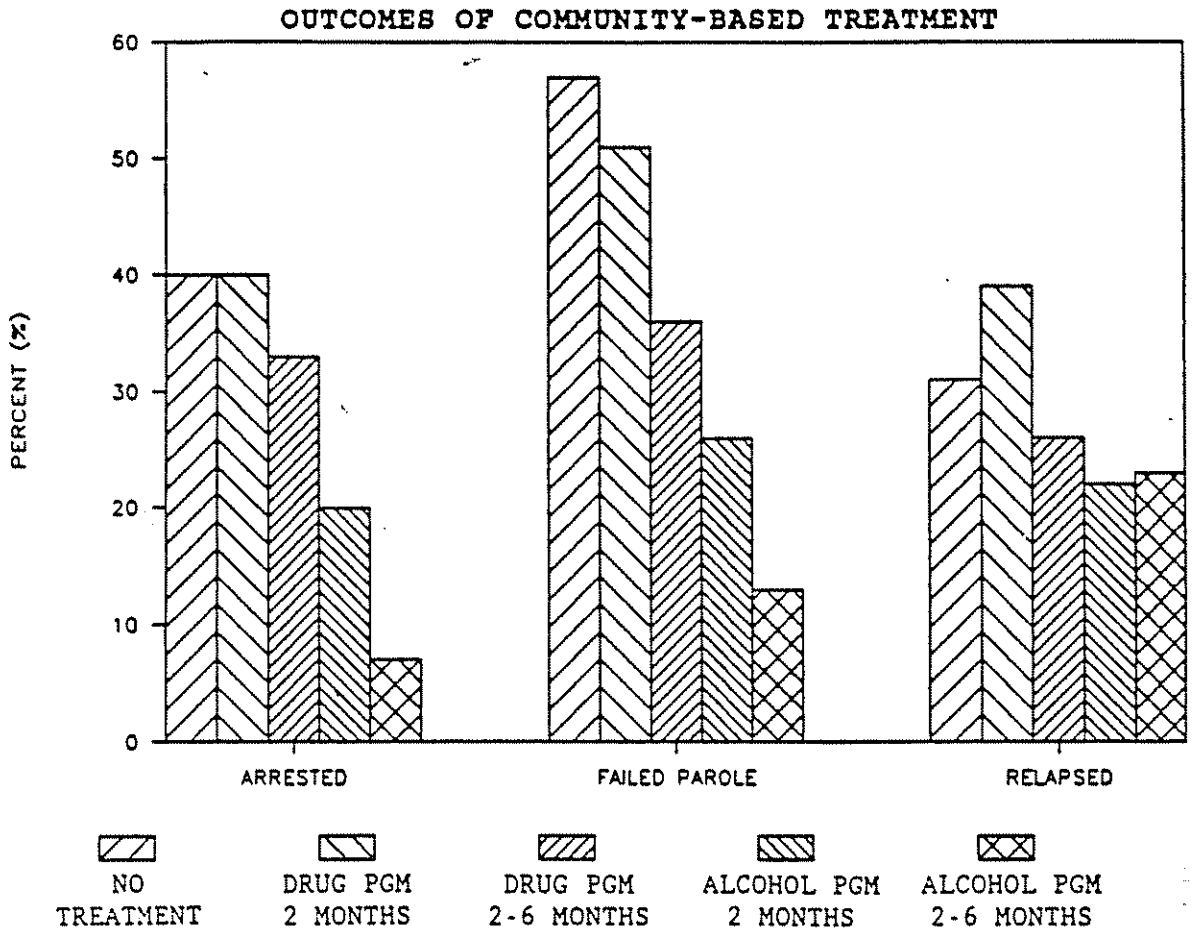
Recidivism Outcomes Associated With Participation in Community-Based Drug and Alcohol Programs. Multivariate analyses of post-release predictors indicated that participation in drug treatment programs (to which about 80% of all post-release referrals were made) soon after release was not related to more favorable outcomes over the one-year follow-up period. The graph in Figure 6-D shows that men attending drug programs at the two-month interview point had about the same rearrest and parole failure rates during this year as men not in treatment at that time. This was not the case with alcohol programs (including AA), however. Although there were relatively few men attending these programs (30, as compared to 88 men reported to be attending drug programs at two months), and therefore findings concerning this group must be interpreted with caution, their rearrest and failure rates were about half those of men in drug programs, or men not in treatment. As shown in Figure 6-D, this amounts to recidivism figures that are 20 to 25% below the drug treatment and no-treatment groups.

Modality-specific analyses (on, unfortunately, even smaller sub-samples) and analyses of the effects of attendance at six months provided more detail on program impacts. Men in AA or outpatient alcohol programs at either the two- or six-month point had about the same low rates of recidivism (ranging from 15 to 25%, which was about half those of releasees not in treatment). Participation in NA/CA was associated with similarly low rates of failure and arrest (with the exception of arrest outcomes for men attending these groups at the two month point, when the magnitude of difference was about one-quarter). In contrast, men attending drug-free outpatient programs during the first two months post-release had the same recidivism rates as non-participants. Men who were attending drug-free OP programs at six months, however, did have a significantly lower failure rate (32%) than men not in programs at this time (52%, although the drug-free OP failure rate was still higher than those of the other three treatment groups, which were around 20%). The arrest rate of men in drug treatment at six months was also slightly lower (by 8%, a non-significant difference) than men not in treatment.

Retention analyses similarly indicated that men who were retained in drug programs over the first half year had somewhat lower parole failure rates (36%) than subjects not in treatment at two and six months (49%), but this difference was not statistically significant. The one-year arrest rate for men retained in drug programs over the first half-year (33%) was about the same as the rate for men not retained in any treatment (35%). Although as

[11] As noted in Chapter 5, these self-help group attendance rates should be interpreted in light of the fact that they are the most difficult to substantiate due to these groups' commitment to anonymity.

FIGURE 6-D


OUTCOMES OF COMMUNITY-BASED TREATMENT
PERCENT (%)
60
50
40
30
20
10
0
ARRESTED
FAILED PAROLE
RELAPSED
NO TREATMENT
DRUG PGM 2 MONTHS
DRUG PGM 2-6 MONTHS
ALCOHOL PGM 2 MONTHS
ALCOHOL PGM 2-6 MONTHS

few as 15 men were reported to be retained in alcohol programs during the two- and six-month periods, only one of these men (7%) were arrested and two failed (13%) through one year post-release (see Figure 6-D).[12]

While notably consistent, the association between alcohol program participation and positive outcomes is open to various interpretations; in simplest terms these include subject effects, sample size limitations or "true" treatment effects. The impacts on parole failure appear to be due to the treatment itself, as the alcohol program effect in this analysis was observed while controlling for various subject characteristics (including age, drug history, and vocational and criminal history variables). The effect for participation on the arrest outcome, however, was observed only in the bivariate analyses. Additional analyses indicated that, although the bivariate effect was considerable (20% of the men in alcohol programs were rearrested as compared to 40% of those not in treatment and 40% of those in drug programs) it could be at least partly attributed to subject factors; men in alcohol programs were older (by 3.5 years), had less pre-incarceration unemployment, and, of course, had lower drug severity and higher alcohol severity scores. On the other hand, the absence of a statistically significant effect for the alcohol treatment variable in the multivariate arrest analysis is also probably in part due to the skewed distribution on this variable, and the small sample of alcohol program participants which were represented in the analysis.

The absence of an association between drug program participation and rearrest, parole failure (as well as relapse),[13] however, cannot be attributed to small sample size. It should be remembered that the variable representing two-month drug program participation was considered in the multivariate analyses while controlling for both pre- and post-release drug severity, as well as various additional pre-incarceration factors. That it was not related to the recidivism outcomes under these circumstances vitiates one possible explanation for these findings -- that participants of these programs have no better outcomes than the no-treatment group because they have more severe drug problems, and thus they start out relatively disadvantaged. The multivariate analyses has the effect of leveling these

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[12]To be included in the six-month and retention analyses, subjects must have been residing in the community and thus available for POs to report on during at least some of the 3-to-6 month period covered by the six month interview. Therefore, the sample used in these analyses is slightly different (and smaller), which accounts for the slightly different recidivism figures reported for non-treatment participants.

[13]As discussed in Chapter 5, analyses of the relapse outcome also indicated that attendance in drug programs did not deter eventual relapse into substance abuse. An additional analysis of the relapse data (similar to those described later in this paragraph) controlled for pre-incarceration drug severity by assessing relapse outcomes of only those subjects who had the highest scores on this (PREDRUG) measure. The untreated/high severity subjects (N=98) and the drug program/high severity subjects (N=48) still had the same relapse rates (both were 40%), indicating that the absence of favorable relapse outcomes for the drug program clients cannot be attributed to these clients having more severe drug problems prior to entering treatment.

differences or possible disadvantages. This point was reinforced in an additional analysis done on only those subjects who had the highest scores on the drug severity (PREDRUG) measure. In this analysis the 127 subjects with high severity scores who were not in treatment at two months still had the same one year rearrest rate (44.9%) as the 51 drug program participants with high severity scores (45.1%). Parole failure rates for these two groups were also statistically similar (61% for the high severity/non-treated subjects and 55% for the high severity/drug program clients). When compared to those who were not in treatment, then, the absence of a drug program effect cannot be attributed to the drug histories (or other unique pre-treatment characteristics) of their clients.

Descriptive Summary of Post-Release Outcomes

Representativeness of the Research Sample. Descriptive comparisons between the 462 men who participated in this research and those of 1986 and 1987 DOCS releasees indicated that the study sample was largely representative of the New York State's general inmate population. There were some important differences, however. First, because of the way that subjects were selected, the 15-25% of the state inmate population which does not have a recent history of drug or alcohol problems was not included in the research. Additionally, also because the sample was selected from a pool of NYC-bound releasees, compared to a state-wide releasee sample, the study sample was disproportionately black and Hispanic; only 7% of the research subjects were white. As anticipated, therefore, the study sample is representative of NYC-bound inmates with recent drug and alcohol histories.

Recidivism Outcomes. Two-fifths (39%) of the 462 men who participated in the research were rearrested, and 55% were reported to be parole failures (rearrested, absconded, or to have had parole violation proceedings initiated against them) over the one year follow-up period. The most recent comparable federal data indicate that the sample's rearrest rate was typical of this population; in fact, the USDOJ Bureau of Justice Statistics' most recent study of a large, nationwide sample of state prison releasees showed the exact same one year rearrest rate (39%) as that of the present sample (Beck, 1989). Comparable parole failure data were not available.

The Stay'n Out research on New York State inmates (Wexler et al., 1988) provides some basis for comparing the present outcomes at the local level. Keeping in mind that direct comparisons cannot be made with confidence (without assessing other sample differences), the recidivism of the sample studied in the present research was consistently higher. Disregarding the Stay'n Out study group (which had the lowest rearrest rate of 27%), 37% of the male comparison group subjects (N=367) in the Stay'n Out research were rearrested -- however, this figure was based on a follow-up period that averaged over three years (mean months "at risk" between release and the close of the data collection period was about 41 months for these subjects). Using the federal data cited above as a benchmark (in which 39% were rearrested within one year and 63% rearrested within 3 years), the present

sample's rearrest rate appears roughly 20% higher than that of Wexler et al.'s comparison groups. Even greater differences between the two samples were evident in the parole failure outcomes; however, the failure criteria used in the two studies were sufficiently diverse to account for at least some of this difference.[14] It is unclear why the arrest differences were found in these samples. Perhaps it is due to differences in the samples themselves, although both included NYS inmates involved in substance abuse treatment. Historical differences may also have come into play, as the follow-up period used in the present research ran from mid-1987 through early 1990, while the Stay'n Out research used recidivism data from the late-70s through early 1985.

The arrest and parole failure outcomes in the present sample were found to be related to traditional predictors of recidivism: age (inversely), criminal history (specifically, number of prior jail terms), pre-incarceration unemployment, and severity of pre-incarceration drug problem. Reductions in recidivism over the one-year follow-up were also predicted by attendance in non-ASAT programs; attendance in any prison treatment programs was associated with lower recidivism rates in the first two months post-release. Serving a shorter term during the present incarceration was uniquely related to parole failure (not to rearrest) over one year; possible explanations for this finding were discussed above.

Post-release drug use was the lone post-release variable related to both rearrest and parole failure. Additionally, residential difficulties predicted arrest, and post-release unemployment predicted failure. As detailed above, attendance in community-based alcohol program was also inversely related to rearrest in bivariate analyses, and to parole failure in multivariate analyses.

Post-Release Reintegration. The study sample was well distributed on the simple, 5-point community integration index; the average score was near the midpoint of this measure, and the distribution formed an almost ideal bell-shape, with 15% of the men scoring 4 or more and 9% scoring 1 or less. Nonetheless, this six-month outcome measure was associated with only a few predictors, most of which were pre-release versions of the same variables that composed the measure of post-release community integration. Thus, pre-incarceration employment and residential stability predicted community integration during the first half-year post-release; however, drug history and demographic factors such as age and SES did not. Two criminal history variables were associated with community integration: men with many prior jail terms and those with a history of low-level convictions were more likely to experience reintegration problems. The post-release analyses indicated that throughout the first half-year after release, reintegration problems were highly related to post-release drug use.

[14] Wexler et al. used formal records of violations obtained from Parole, while we used FPO verbal reports of initiated violation proceedings (which could have been terminated or not upheld).

Relapse. About one-third of the study sample were estimated to have had a serious relapse at some point during the six-month follow-up; that is, they averaged weekly (or more frequent use) of a major drug or evinced "problem" or "uncontrolled" drinking. An additional 12% of the men were estimated to have used minor drugs (typically marijuana) or used major drugs infrequently. We know of no source of similar data on state inmates' relapse rates during this half-year post-release period which could serve as a comparison. Studies of drug treatment programs report post-treatment relapse (or regular drug use) rates ranging from about 10% to 50% or even 75% (Catalano et al., 1988; Hubbard et al., 1989).

As expected, the best predictor of relapse was the severity of the releasee's pre-incarceration drug problem. While the transition just after release is often viewed as the most vulnerable period for releasees, the PREDRUG predictor showed its strongest impact a few months after release, in the 3-to-6 month period. Effective efforts to address these problems must be continuous, if not increased, for at least several months after release. LENGINC was another strong predictor of relapse; men with shorter incarceration terms and with many prior jail terms were more likely to relapse throughout the follow-up period. Further analyses indicated that drug sales and possession were the most common charge for men serving the shortest sentences.

The post-release data indicated that relapse in the early period after release was strongly related to employment problems and being a "no show" to a treatment referral. However, no two-month variables share a prospective relationship with relapse; that is, neither the man's employment or residential status, nor his involvement in treatment programs at two months, predict whether he will relapse after the two-month period.

Treatment Attendance. Just over 15% of the study sample were attending a treatment program at both the two- and six-month interview points, and about one-fourth of the men were attending a program at one of the two follow-up points. Very few pre- or post-release variables were related to attendance in a community-based treatment program. Apart from having a parole condition to attend treatment, which was the sole powerful predictor of attendance, participation in prison programs was related to attendance in the first few months post-release. Lincoln participation showed a substantial impact on the two-month treatment outcome. Two-month attendance was also predicted by ASAT attendance and by the subject's announced plans to attend treatment (independent of any parole mandates).

CHAPTER SEVEN
LESSONS FROM THE RESEARCH FINDINGS AND PROGRAM EXPERIENCES: CONCLUSIONS AND RECOMMENDATIONS

Having summarized the multivariate results in Chapter 6, this chapter integrates them with other findings of the research, and discusses their implications for State policy on the treatment of substance-abusing inmates and parolees. Following the "treatment continuum" concept laid out in the legislation that initiated this research, this chapter looks first at prison-based treatment. The rest of the chapter addresses post-release, community-based treatment and the process of establishing the necessary continuity of care between these stages of treatment.

The recommendations offered throughout this chapter (and distinguished by bold typeface), arise both from the formal research and from information gathered by Vera research and technical assistance staff through four years of formal and informal interactions with subjects, parole officers, state agency personnel and other practitioners.

In the prison-based treatment section, we offer general observations based upon the Lincoln CPU findings, and discuss some specific lessons that surfaced from that program's experience. The recommendations are crafted with an eye toward assisting the State's ongoing development of prison-based treatment initiatives.

Similarly, in the community-based treatment section, we offer broad recommendations arising from our investigation of the impact that participation in post-release treatment had on recidivism, as well as several specific, though tentative suggestions about ways to enhance extant services for parolees and to develop new treatment resources that are better suited to their needs.

An Overview of Prison-Based Treatment

A Two-Tiered System. Although the central focus of this research is an evaluation of the Lincoln CPU and Access pilot, considerable additional information was gathered on the treatment of substance abusing inmates and parolees generally. The data collected on a representative sample of over 300 comparison group subjects presented an opportunity to assess a wide range of prison-based treatment experiences, as well as to evaluate the Lincoln demonstration program. **On the basis of that assessment, we recommend that the State develop a two-tiered system of prison-based drug and alcohol treatment.** This recommendation arises primarily from two sets of findings: First, participation in non-ASAT drug or alcohol treatment was associated with reduced recidivism through one year post-release,

and with reduced chances of drug and alcohol relapse during the first six months post-release. Second, participation in the more formal, DOCS-run ASAT programs, and in the Lincoln CPU/Access pilot, was unrelated to positive post-release outcomes over the same periods.

Three months or more of participation in non-ASAT programs was associated with one-year rearrest rates 16% below those of men in the no-treatment group.[1] The parole failure rate for the non-ASAT group was 6 to 10% below those of the other treatment groups, and their rate of relapse was 7 to 10% lower. The difference in rearrest rates between the non-ASAT treatment and the no-treatment groups was further substantiated after controlling for the effects of other variables (such as age, and drug and criminal history). These multivariate analyses also showed that longer stays in non-ASAT programs were associated with reduced chances of relapse over the first half-year after release from DOCS custody.

Like much previous research, these findings can be understood to affirm that drug treatment works.[2] Nevertheless, it is important to recognize the limits on the effectiveness of these programs. These findings are consistent with previous studies (e.g., Simpson and Sells, 1982; Hubbard et al., 1989; Wexler et al., 1988) in showing that treatment programs have a measurable effect for individuals who stay in them for some period of time (in this case, at least three months) and who take advantage of what the programs have to offer. The present research suggests that considerable numbers of inmates utilize non-ASAT programs and that this treatment approach does offer relatively long-term benefits to many of their clients.

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[1] As specified in Chapter 3, the no-treatment group included all subjects who did not successfully complete at least three months of participation in any (ASAT or non-ASAT) treatment program during the current incarceration. Beyond the three month attendance criterion used to define successful program participation, length of stay in these programs was related (inversely) only to the relapse outcomes; it was not associated with recidivism or other outcomes. Further analyses also indicated that length of time spent in ASAT treatment was also not related to positive post-release outcomes (indeed, longer ASAT stays were predictive of higher recidivism in the first two months post-release, and of increased likelihood of relapse in the 3-to-6 month post-release period). While length of stay in these programs was linearly, positively related with favorable outcomes when the raw number of weeks or months in treatment was used as the length of stay measure, this measure was confounded by length of incarceration, which itself was associated with recidivism (longer incarceration terms were associated with reduced likelihood of recidivism). Therefore, a ratio of time in treatment to time served was utilized in these analyses.

[2] In fact, multivariate analyses indicated that participants in any of the prison-based treatment programs studied (non-ASAT, ASAT or Lincoln) had lower recidivism rates in the first few months after release than did men not completing treatment. However, analyses comparing the different prison treatment groups indicated that the short-term effects found for "any treatment" are primarily attributable to the positive impacts of participation in non-ASAT programs. Non-ASAT participants were also the only prison treatment group with reduced rates of recidivism and relapse over the entire follow-up period.

However, while positive impacts of non-ASAT participation were notable and impressive, prison-based programs of this type are not a panacea. Although the rate of post-release recidivism among participants in non-ASAT treatment programs appears slightly below the nationwide average among all prison releasees,[3] the likelihood that many of these men will return to the criminal justice system still commands concern: one-third of those who attended non-ASAT programs were rearrested; nearly half (still the lowest among the prison treatment groups) were either arrested or violated by Parole, or absconded during the first year after release; and one-fourth relapsed to heavy drug or alcohol use within six months. Looking at the entire study sample, regardless of in-prison treatment experiences, 39% were rearrested and 55% failed parole during their first year out. Given the representativeness of this sample, these figures can comfortably be used to estimate recidivism among the more than 10,000 inmates with drug and alcohol problems released annually to New York City. Moreover, current sentencing trends feature high levels of incarceration for young drug offenders and other low-level felons with severe substance abuse (and especially crack) problems who have had little or no prior exposure to drug treatment -- people whom our data suggest are likely recidivists. Delivering effective treatment in prison is likely only to become more difficult.

In sum, the present research indicates that, compared to no treatment and to the ASAT programs studied, the relatively informal and inexpensive inmate- and volunteer-run programs effectively serve significant numbers of state inmates with serious drug and alcohol problems. However, many inmates do not respond to these "lower-tier" programs. In our view, the inability of the Lincoln pilot (and of the extant ASAT programs generally) to produce measurable post-release effects suggests a need to design and test more intensive, well-implemented "upper-tier" treatment alternatives, with linkages to effective community-based services. What can be said about the shape and structure of this two-tiered system?

Lower Tier Programming and Non-ASAT Programs. More research on non-ASAT programs would help. This study, focused as it was on the Lincoln CPU/Access pilot, collected relatively little information about non-ASAT programs upstate, and our sense is that they have not been afforded much policy attention. Therefore, while the findings favor these programs, our interpretation of these results remains largely speculative. For example, self-selection may play more of a role in these findings than can be ascertained currently.[4]

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[3] As noted in Chapter 5, the most recent data available on a large nationwide sample of state prison releasees (Beck, 1989) showed a one-year rearrest rate of 39%.

[4] Data in Chapter 4 on the match between treatment need and prison program attendance suggest that, compared to ASAT programs, non-ASATs may attract more inmates with genuine motivation to deal with their substance abuse problems (while ASATs may attract more inmates looking for a ticket to early parole release). This hypothesis was not supported, however, by inmates' scores on measures of motivation obtained at release. Thus, no firm conclusions could be drawn about possible self-selection effects.

Nonetheless, it is not implausible to suggest that some positive impacts of participation in non-ASAT treatment are attributable to the treatment itself. In speculating about what program characteristics might explain this success, the following appear likely: inmate-sponsorship; inmate and/or volunteer leadership in the counseling groups; the absence of a direct, salient institutional role; flexibility and responsiveness to client interests and needs; counseling content (and leadership roles) that recognizes drug addiction, rather than alcoholism, as more prevalent among participants; and cultural and racial/ethnic specificity. **Further research aimed at identifying the characteristics of non-ASAT treatment programs that are responsible for their success is necessary. Even without a greater understanding of the reasons for their success, non-ASAT treatment programs should be supported by DOCS' central office, as well as at the administrative level of each facility. Inmates and volunteers should be encouraged to expand existing programs and to begin new ones, especially where inmate demand for such services is identified.**

When compared to the situation in other states (Marlette, 1990), the level of participation in drug and alcohol treatment in the DOCS system is commendable. Three in four subjects interviewed as part of the large, representative screening sample for this study reported attending some kind of treatment during their present incarceration; three-quarters of these (roughly half of all releasees) attended non-ASATs, participating on average for four months. While admirable, these numbers could be increased without an investment of significant system resources; similarly, more tailored treatment options (e.g., programs oriented to inmates with particular abuse histories) could be made available to inmates presently attending these programs without much additional cost.

Drawing on the Lincoln CPU Experience -- Prison Treatment

Our recommendation for an additional, upper tier of treatment for inmates who do not or cannot benefit from non-ASAT programs emerges from research findings about the ASAT and Lincoln CPU/Access programs, as well as from our analysis of day-to-day program experiences at Lincoln. (This process analysis of the Lincoln program's implementation has been extensively documented in previous Vera Interim Reports.) The central hypothesis of this study was that, compared to participating in other prison programs or no treatment, participation in the CPU/Access pilot would be associated with more favorable outcomes for an extended period after release. Only one sub-hypothesis was partially confirmed: pilot participants were more likely to have continued in community-based treatment during the first few months after leaving prison. This important finding is discussed further below. The point to be noted here is that neither the CPU/Access regimen, nor ASAT treatment generally, was associated with decreased recidivism or relapses, or improved reintegration outcomes. More refined analyses of ASAT-related variables (such as length of stay, or program type or "quality") also did not reveal any positive effects.

DOCS closed the Lincoln CPU in June of 1990, to make way for a facility-wide conversion to work-release status and to focus on the CASAT initiative.[5] Partly because these new program efforts have overrun the Lincoln experiment, the CPU's record is limited. Nonetheless, close examination of the unit's development and operational history yields several lessons worth noting. Some of these lessons have to do with fundamental issues such as mission, comprehensiveness of services, and the integration of in-prison services with those outside the DOCS system; these program issues are especially relevant to the development of what we've termed upper-tier treatment, which we distinguish from most ASAT program models. Other lessons to be drawn from the Lincoln CPU/Access experience concern the implementation and operation of prison-based programs generally, regardless of their design or purpose.

With regard to these more general observations, Chapter 2 (as well as previous Vera reports) recounts many of the difficulties encountered in the implementation of the CPU from its inception. For most of the first year of its operation, Lincoln administrators struggled to resolve problems with candidate identification and with transition procedures -- problems that kept the CPU below its stated census of 37 men. The unit also suffered from discontinuities of leadership and staff. These implementation problems significantly impeded the unit's development into a program with the character and intensity of affect that distinguish thriving prison-based programs.

In offering an overview of Lincoln's implementation difficulties here (in contrast to the more detailed perspective presented in our earlier reports), we draw from the work of Wexler (1989) and Chaiken (1989), who have developed useful frameworks for analyzing successful in-prison drug treatment programs.[6] The recommendations which follow are organized around structural and operational issues.

Structural Lessons from Lincoln. Public agencies are often extremely complex organizations; DOCS is no exception. A myriad of DOCS personnel had at least some role in shaping and implementing the Lincoln pilot program. These included staff of the ASAT unit within DOCS' central office, administrators of the Lincoln facility, individuals directly supervising the program's daily operation and the CPU's staff itself. Administrative complexities were not limited to the routine interplay between program and security,

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[5] Described in more detail below, Comprehensive ASAT (CASAT) is the name DOCS has given to plans developed pursuant to the 1989 Omnibus Prison Act. These plans include a multi-phase treatment program for selected inmates, featuring "residential" in-prison treatment in facilities designated for this purpose, a temporary release/community reintegration phase, and post-release "aftercare" treatment. Other notable treatment initiatives begun within this arena subsequent to the CPU/Access demonstration include the development and support of parolee-specific community-based treatment and its expansion of field services.

[6] The authors base much of their analysis on experiences with the Stay'n Out program at New York [illegible] Kill Correctional Facility.

between central office and institutional direction, and between ASAT personnel at the prison and ASAT supervisors in central office. In addition, legislative staff were focused on the program's development, and Vera research and technical assistance staff were offering commentary as well.

In retrospect, everyone had a piece of it and no one had all of it; in short, no one took ownership of the program. This process contrasts with the development of other in-prison programs, where the program's operations are nearly synonymous with the person who designed the service and continues to run it. Getting a workable line of authority in place requires clarity -- about priorities (e.g., how clinical and security considerations can be meshed), about responsibility for administrative tasks, and about the unit's sense of purpose (e.g., what will be included in the counseling curriculum and what kind of staff will be hired).

Lines of authority for prison-based treatment programs need to be drawn as clearly and as unambiguously as possible. Ideally, an individual committed to championing the program, and whose sole responsibility is running the program (i.e., someone without central office or facility-wide responsibilities), should be identified in the earliest stages of planning the effort. A premium should be placed on identifying a "program owner" who has a history of success in program implementation. Program leadership needs support from, and should be accountable to, the highest levels of administration.

There are innumerable obstacles inherent in a correctional setting that can derail innovative program efforts (especially small, easy-to-ignore, experimental programs). Although the Lincoln experience demonstrated that many day-to-day difficulties can be overcome by creative and committed managers and staff, a handful of persistent barriers to implementation could never be surmounted.[7] If a small demonstration is to succeed, a clear, consistent message must come repeatedly from the highest administrative levels that the program's success is its priority.

Some of the structural problems that arose in the Lincoln CPU could have been overcome with more planning and preparation. It is notoriously difficult to modify the way inmates are classified and transferred in correctional systems. Early manifestations of inadequate planning were the low census and unprepared (and sometimes inappropriate) CPU participants. **Procedures for identification and transfer of upper-tier program participants should be well detailed and vigorously adhered to, from institution to institution, after being pre-tested and adjusted prior to full program implementation.**

At Lincoln, inmates arrived with varying expectations and knowledge about the program; the motivational and clinical ramifications of inadequate participant preparation can be problematic, especially with a substance abusing population who incline to considerable resistance and denial. **If personnel other than program staff recruit and inform pros-**

[7] Civil service rules, inadequate space, or security considerations were the common sources of several problems: low census, staff vacancies, no Spanish-speaking staff, no furloughs for treatment visits, and inadequate integration of families, outside treatment providers and separation services.

pective candidates for a treatment program (as was the case with the CPU), these staff should be trained for those tasks and should be involved in establishing the recruitment and referral procedures. As part of the process of preparing inmates for transfer and admission to a new voluntary program, prospective participants should always provide informed consent that is documented and consistently obtained.

Lincoln's staffing problems have been noted previously. Unfortunately, it is easier to enumerate staff-related requirements than to prescribe methods for meeting them. Nonetheless, to the extent possible in New York State's upper-tier programs: staff attrition should be kept at a minimum and vacancies filled quickly. Program staff should include persons who are Spanish-speaking, persons who are ex-offenders, and persons who are recovering drug addicts. Staff should be qualified and motivated to work in the correctional setting. While it appears that salary levels are not a key personnel issue (private treatment providers have complained that they cannot compete with DOCS' wage scales), the development of in-service training and of quality assurance procedures may raise the competence of program personnel.

It is also easier to recommend resolution of competing structural issues, especially clinical and security demands, than it is to recommend specific means. Not enough experience has been surfaced, compiled and shared about how correctional administrators can cede decision-making authority to clinicians, and under what circumstances this is necessary. The CASAT initiative, which will bring non-DOCS agency operators into prison settings, may provide the experience needed to assess how collaborations between program and security can be better structured. It is possible, however, that anything less than a fusion of the two will leave too much room for conflict and tension (and, inevitably, the ascendance of security considerations). If so, a solution might be to create a model program run by staff whose responsibilities bridge both areas, and who are entrusted with the secure treatment of incarcerated clients. In the meantime, corrections officers should be specifically trained to work on a substance abuse unit, and expected to be supportive of clients and staff in the unit.

As a final structural point, the placement of the CPU on a floor separate from general population inmates was an advantage to CPU managers trying to build a sense of program identity and intensity in the unit's earliest stages. Intensive, full-day ("upper tier") prison-based programs should be separated from the general inmate population.

Operational Lessons from Lincoln. Previous Vera reports have chronicled difficulties encountered by CPU managers and staff in moving program structures and rules from planning documents to day-to-day operations. There are a small set of operational practices that typify sound in-prison programs.

Day-to-day program operations and program rules need to be tightly structured, implemented and enforced:

- Procedures for mandatory participation and verification of attendance should be established.

- Activities that are voluntary should be checked nevertheless to ensure they are utilized by participants.
- Compliance should be reinforced; responses to non-compliance should be pre-specified and implemented consistently, with graduated sanctions up to and including expulsion from the program as a last resort.
- Program staff should be held accountable for documenting clinical activity.

As noted in previous Vera commentaries, one of the central challenges of effective treatment is to provide structure in a positive, supportive environment. Measuring and modifying participant behavior inside the program should emphasize the positive, not merely the negative. Studies repeatedly demonstrate that punishment and negative reinforcement are the least effective ways of achieving lasting behavioral change. Yet these failed techniques tend to become the focus of behavior management in correctional settings, bringing short-term gains at the expense of internalized, therapeutic advancement. To some extent, the use of positive reinforcement can be formalized through participant "promotions" and other rewards. Probably more important, however, is that all staff (and eventually the participants) learn to employ the "focus on the positive" philosophy in their everyday interactions in the program.

Upper-Tier Programs, the CASAT Initiative, and the Need for Research

The CPU's Mission. In our view, the original legislative planning document portrayed a pilot program tightly integrated with the release community: the CPU as a staging area where DOCS' treatment and separation services would be fused with Parole's resources to link men to treatment programs, to their families, and to jobs. In this view, the CPU's counseling curriculum would have centered on equipping participants with the understanding and the skills to prevent relapse and cope with it when it occurs. The program would have focused on helping participants reshape their relationships with families, and planning for their self-support upon release.

By contrast, those who designed and implemented the CPU appeared to set a more limited mission, emphasizing the program's role as a prison-based ASAT, with a core curriculum that repeated and restated the content of treatment services already received by participants upstate. Like most upstate ASATs, the CPU mixed traditional counseling groups with a considerable amount of didactic, educational interactions. Although some inmates' families, and some community-based treatment and social services were brought into the program during the last year Vera was observing its operation, the CPU relied heavily on AA, Al-Anon (and to a lesser extent, NA) volunteers for its connection to the community. In sum, we think the CPU's mission did not take sufficient advantage of the program's proximity to what the first planning document described as "the release milieu."

CASAT and Research on Upper-Tier Treatment. On the basis of the research findings, it is difficult to justify expansion of ASAT programs which are characterized by a similarly limited focus. Rather, scarce correctional treatment resources would be better targeted to support a proliferation of the non-ASAT treatment programs and to the development of intensive, comprehensive upper-tier treatment programs specifically designed for inmates with addiction histories who do not respond to less formal treatment alternatives. We also believe that launching upper-tier programs, regardless of their mission, without anticipating and devising strategies for resolving the implementation dilemmas described previously, can be a futile exercise.

CASAT, as it is described on paper, is an encouraging sign that the State has already moved to try to develop upper-tier treatment of the kind we recommend. The CASAT initiative appears to embody several promising treatment elements that distinguish it from the traditional ASAT model: six months of intensive treatment delivered by a private service provider in a facility designated specifically for this purpose; a six-month temporary release/community reintegration component; and one year of post-release, community-based treatment, provided by the same private agency that delivered the in-prison services.[8]

Stay'n Out and similar comprehensive, "upper-tier" programs (Wexler et al., 1988; Chaiken, 1989) have served as a model for CASAT in many respects (especially in its emphasis on therapeutic community-oriented treatment, its use of outside treatment providers, and its segregation of participants from general population inmates). Evaluative research such as that conducted on Stay'n Out and a similar program in Oregon (Lipton et al., 1990; Field, 1989) is rare in the in-prison treatment arena. Echoing promising findings of previous studies of therapeutic community programs (e.g., DeLeon, 1984), this research indicates positive post-release effects of treatment. The Stay'n Out research, for example, indicates that inmates who stay in these programs for nine to twelve months have more favorable recidivism outcomes for up to three years post-release than inmates who stay for shorter (or longer) periods.

The CASAT initiative should provide a unique opportunity for research that can build both on previous research and on the present study. The goal of such a research effort would be to test alternative upper-tier program models for the substantial number of inmates (the majority of inmates in need of treatment) for whom in-prison treatment has not yet been proven effective: inmates who do not elect to enter programs voluntarily;

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[8]Not counting the community reintegration or aftercare phases, the CASAT plan actually calls for 12 to 18 months of in-prison treatment, with the use of a 6-month "residential" ASAT component prior to the half-year "contract component" in the treatment annexes. (In addition, the residential ASAT is to receive inmates who have spent an additional 6 months previously attending another, presumably non-residential ASAT.) With the community reintegration and aftercare phases (which alone account for 18 months of treatment), the rationale for an in-prison phase of 12 to 18 months is open to question. A shorter in-prison phase (e.g., 6 to 9 months) might be just as effective and might allow many more inmates to be treated in the initiative.

inmates who drop out or are otherwise negatively terminated from rigorous TC-oriented programs; inmates with histories of regular crack use; inmates with little or no treatment history; and young, recidivist-prone felons (often involved in the drug trade) with less severe criminal histories.

Numerous alternative treatment models could be designed (each based upon existing treatment strategies), implemented, and tested within the general CASAT framework. Almost nothing is known, for example, about the relative impact of treatment when delivered at each of the three phases of the CASAT model (in-prison, community reintegration and post-release). Assuming sufficient inmate samples, it might be possible, for example, to compare the efficacy of a model featuring a lengthy, intensive in-prison component coupled with minimal reintegration and post-release treatment, against a model with a shorter-term in-prison component (e.g., six months or less) linked to more intensive community integration and post-release components. While it appears that all upper-tier programs should follow a general model (i.e., be tightly structured, full-time, intensive operations located in segregated facilities staffed with well-chosen, motivated personnel), further research could assess the relative value of different approaches within this overall model. For example, comparisons could be made among programs tailored to individuals with different abuse histories (especially inmates with histories of drug use exclusively as compared to poly-abusers and alcoholics); programs integrating substance abuse treatment with family counseling and educational and vocational assistance; 12-Step approaches; TC treatment elements, such as the use of confrontation and inmate hierarchies; behaviorally-oriented approaches emphasizing relapse prevention; combinations of 12-Step, TC and behavioral approaches; and cultural/racial/ ethnically-oriented treatment.

Identifying Treatment Need. In addition to allocating scarce institutional resources to programs that have the greatest likelihood of impact, resources should be targeted to inmates with the greatest need for treatment. In more than one area, the current study documented ways in which both DOCS and Parole could improve their procedures for assessing inmates' drug use histories and implement screening mechanisms for participation in prison programs. As detailed in Vera's 1989 interim report (and summarized here in Chapter 4), an estimated one in four of DOCS' most popular (ASAT) treatment slots was being used by an inmate with substance abuse histories of limited severity, while 17% of those with severe problems never attended any (ASAT or non-ASAT) in-prison treatment program.

Fortunately, the research also found that DOCS' current tool for assessing alcohol problems (the MAST) yielded valid results, consistent with more sophisticated research measures (although about one-third of the 678 screened sample subjects appeared to have never been administered the MAST). The current state of drug problem assessment in the State prisons, however, appears less developed. Present results indicated that drug use history was a powerful, independent predictor of recidivism and relapse (in contrast to alcohol history, which was unrelated to post-release outcomes), and DOCS obtains little systematic information on drug history. While we would not recommend devoting

inordinate resources to drug screening, substance abuse history data should be a standard component of routine evaluations done by correctional counselors. At a minimum, information on frequency and years of use of different substances should be gathered. To increase the validity of this information, it should be obtained on a few occasions (perhaps twice annually) by different staff, and inconsistencies in self-report should be resolved. Upper-tier programs should utilize this information to select candidates that demonstrate the greatest need for treatment.[9] Ideally, this information would be collected in collaboration with institutional Parole representatives, who would use it to advise the Parole Board about establishing drug- and alcohol-related conditions.

Drawing on the Access Experience – Linkage to Post-Release Treatment

Despite the mixed results of the Lincoln Access experiment, several lessons for future program efforts emerged from the research findings. On the basis of outcome analyses, the main benefit associated with Lincoln CPU/Access participation was the assurance of receiving a referral to a community-based treatment program. This assurance can be valuable. Without a mechanism such as Lincoln Access (which formally referred nearly all the men in the Lincoln program to community-based treatment), only about forty percent of prison releasees with drug or alcohol problems are referred to a program during the first few months after release. (This was the referral rate for releasees in the comparison group, despite the fact that the Parole Board required that sixty percent of them attend treatment as a condition of release.)

Once referred, however, Lincoln Access clients had no better attendance or retention rates than men referred by parole officers (or other sources). Regardless of the referral source, about half of all referred men were attending programs at two months post-release, and a little less than one-fourth of those referred remained in attendance for the entire time between two and six months after release. Thus, while Lincoln Access fulfilled its basic (though minimal) goal of referring almost all CPU inmates prior to release, neither the expertise of the Access counselors, nor the three-month pre-release lead time available to assess special needs and tailor referral plans for Lincoln clients resulted in any tangible benefits.

Observations made at Lincoln do not provide any clear explanation for why Access attained such modest outcomes. Certainly the program could have been more fully and consistently staffed during its first year of operation; it would have been advantaged by having an office on the CPU floor at Lincoln in these early stages; and, in general, it might have been more effectively integrated with the overall CPU program. Nonetheless, the program's administration and operation appeared consistent and competent. Access

[9] While much more research must be done before definitive conclusions can be drawn in this regard, the data indicate that, in order of descending need/risk, inmates with crack, mulitiple drug use, heroin, and finally, cocaine use histories should be targets of treatment.

managers were creative and aggressive in dealing with obstacles (such as FPOs who resisted involvement with Lincoln participants before their release) and in developing new components for the community preparation program (such as bringing outside treatment providers and Medicaid processors into Lincoln). Furthermore, after weathering some problems in the early implementation stages (documented in Vera's 1987 and 1988 reports), substantial levels of cooperation were realized between the Parole, DSAS and DAAA staff devoted to Access.

Given that Lincoln Access was relatively successful from an operational standpoint, its inability to achieve improvements in post-release treatment attendance and retention may indicate that there are inherent limits to the impacts of this type of linkage program. The fact that both Access and FPO referrals had similar levels of success (and failure) suggests that factors outside the Access referral process may constrain those impacts. Inevitably, for example, once the appropriate treatment modality was determined (e.g., this person needs an outpatient drug program), treatment slot availability, affordability and the proximity of programs to the releasee's home or worksite took precedence over more sophisticated treatment matching decisions. Other variables which influenced these outcomes, but were likely unmodified by Lincoln Access, were the motivation of the releasee and the efficacy of the selected program itself in retaining and treating its clients. While it was hoped that Access counselors' expertise in the local treatment network would result in inmates being linked to more retentive, effective programs, it appears that such programs were equally unavailable or unknown to both these counselors and to field officers.

The Field Parole Officer, Urinalysis and Field Access. The findings of the study indicate that post-release referrals from FPOs -- when they are made -- are just as likely as pre-release Access referrals to result in the parolee actually participating in treatment. What is crucial from a policy perspective is the higher rate of referral by Access. This, coupled with the discrepancy found between the proportion of non-Access releasees who had treatment mandates and the proportion in this group who were actually referred suggests a need to hold FPOs more accountable for carrying out mandates. **Administrative action that encourages more consistent, thorough application of routine FPO functions such as enforcement (making referrals and taking drug tests) and monitoring (calling and visiting programs about parolee progress and attendance) should be a priority.**

The fact that referrals by FPOs were as successful as those made by Lincoln Access counselors reinforces the view that FPOs occupy a pivotal position as monitors and enforcers of post-release treatment interventions. **Given the predictive impacts on recidivism of drug history and post-release drug relapse, FPOs should be trained to perform routine assessments of drug and alcohol problems, to recognize signs of impending relapse, and be provided with general guidelines about how to respond to relapse among parolees.**

While experienced FPOs are undoubtedly aware of these matters already, the research findings underscore the need to be particularly alert to the needs of parolees who have histories of crack and multiple drug use, and parolees who have no plans for post-release treatment and are resistant to all kinds of treatment.[10]

Findings which pointed to the relatively long-term impacts of drug history severity (and in fact its relative lack of impact early in the release period) suggest that FPOs should not limit their monitoring of relapse to the first few months after release, but should maintain vigilance throughout (at least) the first year post-release. Related findings on the positive impacts of treatment throughout the first six months suggest that FPOs should supervise with the knowledge that retention in (and not just referral to) community-based treatment is central to post-release success.

While not assessed in the present study, urinalysis is widely regarded as a useful monitoring tool for FPOs to employ in supervising parolees' involvement in post-release treatment (see McGlothlin et al., 1977). Research interviews with FPOs suggest, however, that just as they exercise discretion in making treatment referrals, they are not always consistent in their use of drug testing or in their responses to positive test results. **Ideally, a urinalysis policy would provide for a range of immediate and certain responses to evidence of drug use in the early stages of relapse. The State's desire to ensure high rates of parole success and to reduce returns to custody suggests policy and practice that invokes intermediate measures before resorting to reincarceration when a parolee produces a "dirty" urine. Wider use of clinical responses, graduated to the timing and frequency of lapses should be explored.** Graduated clinical or therapeutic sanctions could include requiring more frequent urinalyses or more frequent FPO visits, regular sessions with field Access counselors in addition to FPO visits, or transfer to a more intensive level of treatment (e.g., from outpatient to day treatment). Providing FPOs with specific guidelines for making assessment decisions, and a flowchart that delineates choice points and options for setting both positive and negative sanctions over the course of the parolee's progress along the treatment continuum could be helpful.

Implementation of procedures or policies that increase the number of parolees referred to community-based treatment must be undertaken in light of current strains on the existing treatment system. It is likely, for example, that if the discrepancy between imposition of treatment conditions and referral to treatment programs was closed by an immediate 20% increase in referrals, the existing system would not be able to accommodate

[10]Other prognostic signs of recidivism risk underscored in this research include unemployment in the year prior to incarceration, unstable post-release residence, youthfulness and an extensive jail (as distinct from prison) history.

them.[11] Expanded Access resources in field offices could be helpful in this regard. Field office Access makes it harder for the community-based system to assign a low priority to parolees and to blame unresponsiveness to the difficulty of dealing "with the criminal justice system" and FPOs in particular. It is apparent that demand is a prime force in moving the treatment system; Access can play a visible, central role in creating that demand on behalf of parolees.

In addition to pushing for new treatment slots, an expanded field office Access would afford the field staff with needed training, backup and expertise. Access counselors in each district office could play an important consultative role as "in-house" treatment experts. Even with expanded FPO training, it would not be appropriate to expect FPOs to be able to make all the difficult clinical decisions that are increasingly part of Parole's everyday responsibilities. Access counselors placed in Parole District Offices should be the resident experts on new and developing treatment alternatives, educating FPOs on the relative merits of particular programs and modalities for certain types of clients.

Setting Treatment Conditions. Although not everyone who was required by the Parole Board to attend treatment as a condition of release was referred to a program, most everyone who was in a drug or alcohol program had such a parole condition. The single, strong predictor of treatment attendance during the first half-year was having been required to attend by the Board. The analysis of the match between treatment need and Parole conditions presented in Chapter 4 indicated that the process of designating treatment conditions for particular parolees should be more systematic, and should be tied to objective, clinically informed assessments. As mentioned above, Parole should work with DOCS to develop a joint assessment procedure, which would inform both in-prison treatment decisions and Board hearings.

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[11]This has been a difficult issue to investigate quantitatively in this study. Contrary to early expectations, fewer than 10% of parolees referred to community-based treatment (even in the comparison group, without Access assistance) were rejected by these programs for reasons of client inappropriateness or overcrowding, or were placed on a waiting list. To some extent, this suggests that the well-publicized imbalance of treatment supply and demand is not an issue with regard to outpatient (OP) programs (which, together with self-help groups, account for 90% of the modality choices among parolee referrals); perhaps severe overcrowding is limited to residential programs.

Upon further inspection of these data, however, it is evident that the OP programs used by parolees are not necessarily representative of all community-based OP programs. There is, for example, a noticeable absence of referrals to older, established drug treatment programs among the more than 200 referrals described in the research follow-up interviews. Informal discussions with Access staff reinforced the view that some programs are not considered viable options for parolees because they exact client fees, they are overcrowded, or their staff have expressed the belief that parolees are less than ideal clients. Furthermore, some of the programs most willing to accept parolees may be sacrificing treatment quality for a larger client census, or they may be less crowded because they're less desirable or effective (this latter point is at least consistent with the present results, as discussed further below). In sum, parolees' access to OP treatment appears variable, often differing for specific programs. Regardless, the efficacy findings reported below suggest that drug treatment programs that are currently accessible should be improved, and that new, more effective programs should be developed, evaluated and made available to this population.

We also recommend that the range of options available to parole boards when setting drug- or alcohol-related conditions be reduced; we suggest abandoning the Board's delegation of authority in this area by use of the phrase "at the PO's discretion." Because FPOs use discretion regardless of such formal delegation (albeit, less than when it is present), and because a board typically has insufficient information to make a specific clinical judgment about the best treatment type (drug, alcohol or poly-abuse), or modality, or the utility of urinalysis for each inmate, a generic "attend substance abuse treatment with requisite monitoring" condition seems to be the most sensible board mandate for individuals with severe substance abuse histories.

Designing Suitable Post-Release Treatment

Drug and Alcohol Program Differences. The research findings about the effects of post-release treatment were not promising; initial, early attendance in most post-release treatment programs did not reduce subsequent recidivism or relapse. Further analyses of specific treatment modalities indicated that these findings were primarily associated with participants of outpatient (OP) drug programs -- programs to which perhaps three-fourths of all referrals were made. Regular attendance in these drug-free OP programs at two months post-release did not lead to reductions in recidivism over the one-year follow-up, or in relapse over six months; with various subject characteristics controlled (including age, drug history, vocational and criminal history), those participating in community-based drug programs at the two-month point had the same outcomes as men not in treatment.[12]

Nevertheless, there were some limited positive findings associated with participation in community-based drug programs. Men attending drug programs at six months after release had a lower parole failure rate (by 20%) than men not in treatment at this time. These men, and men who were retained in drug treatment over the first half year also had arrest rates slightly below that of the no-treatment group, but not significantly so. These findings serve to reinforce the recommendation, made earlier, that FPOs continue monitoring of parolees' treatment participation for at least several months after release.

Although the number of men attending community-based alcohol programs after release was too small to permit certainty in interpreting the data, these alcohol program participants showed consistently positive outcomes; recidivism rates for men in these programs at the two-month point were 20 to 25% below those of men not in treatment or

[12]As explained in Chapter 3, participation status in post-release treatment programs was assessed in interviews conducted with field parole officers at two months and six months after the subject's release. A subject who was a "two-month" participant was one whom the FPO indicated to be "regularly attending" a drug or alcohol treatment program at the time of the two-month interview; a man reported as participating "at the six-month point" was indicated as such in the FPO interview done at six months post-release (note that a six-month participant is not necessarily a two-month participant, or the converse). In the analyses of program retention, men reported to be attending at both the two- and six-month interviews were regarded as retained in treatment throughout this half-year period.

men in community-based drug programs at this time. Attendance at six months and retention in alcohol programs through the six month period were also associated with lower arrest and parole failure rates. Modality-specific analyses suggested that self-help drug programs had outcomes similar to those of the alcohol programs; among two-month post-release participants, then, higher recidivism rates were associated with men attending the most popular modality, drug-free outpatient programs (and releasees not in treatment).

The positive impact of attending community-based alcohol treatment programs is another finding for which only speculative explanations can be offered. Analyses discussed in Chapter 6 indicated that the more favorable recidivism outcomes for alcohol program participants are partly attributable to unique "pre-treatment" characteristics of these subjects (e.g., their less severe drug history, older age and more stable employment history). However, these subject characteristics did not entirely account for the recidivism findings; men attending alcohol programs have lower recidivism rates in part because these programs appear to provide more effective treatment.[13]

In interpreting the alcohol program findings, it must be noted that about half of the alcohol program participants were in AA groups and not more formal programs. Self-help groups generally were associated with favorable outcomes. Men referred to these programs had the greatest likelihood of continued attendance, and AA participants had a low rate of recidivism, with NA close behind.[14] Contrary to Lincoln Access' general disinclination to refer to self-help groups and preference for outpatient referrals (a position shared by many, including Vera staff, prior to the completion of this research), **self-help programs should be explored further as potentially valuable post-release treatment resources. Ways of monitoring attendance in these programs, while protecting their pledges of anonymity, should be investigated and tested.**

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[13]Specifically, when subject characteristics were controlled in the analysis of parole failure, alcohol program participants still showed significantly lower rates of failure than men not in these programs (i.e., men not in treatment or in drug programs). However, in multivariate analyses of rearrest, the difference between these groups (20% of the men in alcohol programs at two months were rearrested, compared to 41% of those not in treatment and 41% of those in drug programs at this time) was not upheld as significant. In part, this is because of subject characteristics which favored the alcohol program participants. However, the absence of a significant finding here is also likely attributable to the skewed distribution reflected in the alcohol program variable; this distribution significantly reduces the statistical power of this variable. The discussion of multivariate analyses presented in Chapter 6 also addressed the hypothesis that participants of drug programs had unfavorable pre-treatment characteristics, which might explain why these participants did no better than men not in treatment. This hypothesis was not substantiated, indicating that subject characteristics were not responsible for the drug program results.

[14]AA and NA showed the highest attendance rates (averaged over the two post-release interviews, about 60% of all releasees referred to AA or NA followed up the referral and were reported to be regular participants in a self-help group at the time of the interview). Men in AA had the lowest recidivism rates (16% arrested, 26% failed parole), while men in NA had moderately low rates (31% arrested as compared to 40% of men not in treatment, and 31% failed parole as compared to 57% of men not in treatment).

The positive outcomes associated with referral to and attendance in more formal alcohol outpatient programs, coupled with the fact that half of the men participating in these programs had severe drug problems suggests that alcohol outpatient programs should be considered as a preferred treatment option for poly-abusers.[15] The research offers no quantitative data that explain why these programs seem more effective than the outpatient drug-free programs used by parolees. However considered, differences among these programs have been noted in interviews with subjects, with Access personnel, and with other practitioners, as well by Vera staff in visiting various providers. These hypothesized differences are noted below; whether these differences between OP drug programs and OP alcohol programs are plausible explanations for outcome differences, however, remains to be tested.[16]

First, it is reported that OP alcohol programs are not presently experiencing the overcrowded conditions that characterize OP drug-free programs in New York City. Therefore, alcohol program staff are believed to be spending more time in one-to-one sessions with clients, doing assessment and counseling. Compared to the OP alcohol programs, the OP drug programs used by parolees have been described as disorganized, and less able to monitor and report routinely on a client's attendance status. These OP drug programs may also impart a less consistent, coherent treatment philosophy to their clients. While the alcohol programs routinely cite 12-Step principles, the treatment philosophy of some drug programs can vary, depending upon the recovery experiences or training particular to the individual administrator or counselor. Similarly, alcohol program staff are sometimes held in higher regard as professionals; the widespread acceptance of the need for credentialing in alcohol treatment (CACs), and the much greater "medicalization" of the field are undoubtedly significant contributors to this perceived difference.

Clearly, the findings reported here suggest that additional research is needed on the relative efficacy of community-based drug and alcohol outpatient programs (and on self-help groups in particular) for the parolee population. Research should address our tentative recommendations, cited earlier, that self-help groups and OP alcohol programs are particularly useful for poly-abusers. It should also attempt to assess quantitatively the validity of the program differences noted above. The capacity to study a larger number of participants in OP alcohol programs and self-help groups should, by itself, illuminate some of the tentative findings offered in this section.

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[15]The attendance rate in these programs was 46%, as compared to a rate of 35% for drug-free outpatient programs. More importantly, men in alcohol OP had about the same low recidivism rates as AA participants (21% arrested, 29% failed parole), in contrast to an arrest rate of 46% and parole failure rate of 57% for drug-free OP participants.

[16]As noted earlier, the drug-free OP programs used by the parolees in this sample are not necessarily representative of all drug-free OP programs in the City. In fact, referrals to some of the more long-standing, well-known programs were rare in this sample; thus, the research findings and the discussion of these findings cannot be said to apply to these programs.

Improving Community-Based Treatment. The success of any complex continuum-of-care initiative rests on each link and stage of that continuum. Potentially, the post-release effects of the most successful prison-based program could be undone if its participants are linked to ineffective community-based programs upon release (or not linked at all). It is only commonsensical that the real test of an addict's recovery occurs in the community, and that resources must be focused there to establish and maintain that recovery. In this regard, the expenditure plan for the 1989 Omnibus Prison Act seems to take a contrary approach: While well over $200 million in capital expenditures alone were designated for innovative prison-based programs linked to post-release treatment, less than 2% of that amount ($3.4 million) was specified for post-release services in the community. The findings presented above would support a shift of investment strategy to expand effective community-based services that specifically target recently released parolees, and to enhance and improve the extant services utilized by this population.

The remainder of this section offers several suggestions, again tentative, about how parolee-specific services might be designed and existing services improved. In general, we think it likely that creating new outpatient programs, specifically fashioned to respond to the unique needs of just-released parolees may be more effective than trying to shift the practice of existing, over-stressed treatment programs in the hope that they will come to meet these needs. There is no compelling evidence to suggest any particular treatment model or approach for such programs. It is our view that, regardless of approach, the crucial elements for success with this population include certain pragmatic structural and operational attributes; these are discussed below.[17]

Forming counseling groups specifically for just-released parolees, and employing ex-offender recovering addicts are two structural features likely to improve outpatient treatment for this population. Likewise, programs that utilize urinalysis as a component of treatment are often regarded as more effective with parolees, particularly if they have the clinical capability to weigh individual circumstances in assessing the implications of a positive test result and in developing a therapeutic response to that result. Another valuable program element is a systematic procedure to ensure regular contact between the program and Division of Parole personnel. Simply put, part of the counselor's duty in parolee-

[17]Theoretical and philosophical debates as to the etiology and appropriate conceptualization of addiction -- interesting though they may be -- can obfuscate the more fundamental requisites for program effectiveness. Expensive proprietary treatment programs, for example, offer the same basic treatment model as programs for the homeless on the Bowery; the former programs, however, are more effective at least in part because their staff are more skilled and (sometimes) more motivated -- and, not coincidentally, higher paid. Such programs also have a lower client-to-counselor ratio, and can afford to be sensitive to the individual, tailoring the treatment protocol to the client's needs. Tailoring program operations to the unique circumstances of just-released parolees could offer similar benefits. Although publicly-funded programs probably can't afford to "buy" more motivation in their staff, counselors who are selected to work specifically with this population, because they accept the challenge while also recognizing the promise of working with just-released clients, will clearly be more successful than counselors who hold little hope for these individuals.

tailored treatment programs should involve routine contacts with FPOs. The purpose of contact between the FPO and counselor is to share both positive and negative information on treatment attendance and urinalyses results and to do so quickly, so as to impress upon the parolee/client that treatment compliance, noncompliance, and relapse, are signals that will be noticed and that will produce a therapeutic response.

Programs that have clearly specified, tightly-administered and well-documented procedures for keeping clients' attendance records and tracking their progress in different program activities would also likely suit the treatment needs of parolees. To address the strong clinical resistance that characterizes this (and any substance abusing) population, programs should routinely pursue clients who drop out of treatment (e.g., phone calls to home, family, the FPO, queries of associates in the program). For all these reasons, services that incorporate a case management system in which an individual counselor is responsible for overseeing and tracking each client's involvement in the program might be especially effective with parolees.

It is axiomatic that treating the substance abuse problems of parolees without also attending to their housing, vocational, educational, health and general economic problems is futile. Effectively managed programs develop formal or informal relationships with agencies that provide these concrete services; when asked, their counselors can direct their client to the appropriate place for specific types of help, and follow-up with them on their client's behalf. Ideally, these various program services would be delivered under the same roof, or by formally related agencies, to circumvent gaps in the delivery of needed services; long periods of waiting to obtain needed services present high risks for relapse into drug or alcohol abuse.

Programs for parolees should also routinely implement procedures that engage families and significant others in treatment. The release point is an especially opportune moment for this involvement, because the parolee is re-establishing his or her role and identity in the context of the family. Programs can help shape that identity as one that is drug-free, and make family members aware of behavior that either promotes or prevents relapse.

Increased frequency of OP visits is another structural feature that may enhance treatment effectiveness. One common programmatic response to the recent drug epidemic is to employ once-weekly group sessions, in combination with some other program activity. It is unlikely that programs dealing with this population can engage them sufficiently to ensure their recovery through once-a-week sessions; at least initially, three visits per week should be a minimum. One of these sessions should include individual counseling, and participation in additional self-help groups should be encouraged (but not necessarily required). Because stable employment is central to the adjustment of just-released parolees, sessions for employed parolees must be offered during the evening hours. Service fees should be waived; almost all parolees experience precarious financial circumstances at release and interviews with parolees and FPOs suggest that even small fees can deter partic-

Apart from incorporating these fundamentals, parolee-responsive programs might also benefit from adopting one approach largely absent from the current treatment landscape in New York City – the relapse prevention (RP) treatment model (particularly as articulated by Marlatt & Gordon, 1985). Relapse prevention techniques seem to offer a uniquely promising strategy for the just-released parolee. In the RP view, the clinical problem at release becomes maintaining the period of putative abstinence imposed by incarceration. Most parolees returning to the community are confronted by an alluring array of "cues" which they associate with getting high and which, therefore, can trigger relapse. RP treatment aims to teach ways to anticipate and effectively cope with these cues. It is possible that this approach would have an intrinsically utilitarian, pragmatic appeal to parolees who consider themselves "cured" simply by virtue of their prolonged, if enforced, abstinence. Even parolees who deny or underestimate the intransigence of their addiction might be helped to recognize a need to avoid and constructively deal with relapse. The relative abundance of relapse-related cues in many parolees' neighborhoods may serve to provide constant, identifiable reminders of the benefits of attending RP treatment. The effectiveness of RP with parolees should be tested; RP should also be explored as an adjunct to more traditional approaches.

Although the recommendations made here arise from research on the parolee population, there is no reason to think that -- with some variations -- these recommendations would not apply to other offender populations, or to substance abusing populations, generally. Vera's program and research projects bring its staff into regular contact with detainees, probationers and other individuals for whom treatment and alternatives to incarceration (and reincarceration) are needed. In every quarter, this work reveals the need to develop treatment programs suitably designed for, and thus responsive to, the needs and particular circumstances of these individuals. Treatment tailored in this way would seem an essential element of any widespread effort to reintegrate today's offenders more successfully into society.

APPENDICES

participants

APPENDIX A
RESEARCH DESIGN, METHODS AND ANALYSIS PLAN

The Research Design

The study design included a pilot (or "experimental") group composed of 158 participants of the Lincoln CPU and pre-release Access programs, and a comparison (or "control") group of 304 inmates chosen from Lincoln's large Community Preparation - Open Date population (CPOD inmates are general population inmates who have been granted parole and been given an open date -- a tentative release date from the Parole Board). This latter group was selected using a pre-established screening procedure designed to generate a comparison sample that was similar (and therefore statistically "matched") to the pilot sample.

With the exception of additional qualitative data collected on CPU participants, the same information was collected on both pilot and comparison subjects. These data included drug and alcohol histories amassed at a screening interview; extensive intake data obtained from DOCS files and during a face-to-face interview; follow-up information from interviews with subjects and their supervising parole officers at two and six months post-release; and arrest record data through twelve months post-release.

The selected design was intended to assess the central hypothesis of the Interagency State initiative: inmates participating in the Lincoln pilot program will be less likely to commit crimes, abuse drugs and/or alcohol, and remain estranged from the community after release. Lincoln men were also expected to show higher rates of attendance in community-based treatment programs after their release. Since the comparison group men had a range of prison-based treatment experiences prior to coming to Lincoln just before their release, the research plan initially called for a comparison of Lincoln CPU/Access participants, comparison men who attended other in-prison treatment, and comparison men who received no in-prison treatment on each of these post-release outcomes.[1] Additionally, data collected at intake and at follow-up were analyzed to yield information on such factors as prevalence of drug and alcohol problems in the DOCS population, and participation in prison and community-based treatment programs. Numerous other research questions to be addressed by the research are listed in Chapter 3 and at various points throughout this report.

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[1] As explained in Cha... numbers of comparison men to designate four treatment groups in the ... who attended non-ASAT programs, men who attended ASAT program...

Research Methods and Instrumentation

The Screening Interview. After several months of pilot testing instruments and procedures, Vera researchers began screening for comparison subjects in April, 1987. Screening data were obtained on virtually all Lincoln CPOD inmates who met pre-determined criteria. Individuals in the CPOD pool were considered eligible for research screening if their post-release plans (as specified by Parole staff) included residence in the Bronx, Brooklyn, or Manhattan, and if they had a release date at least seven days after the first Monday following their arrival at Lincoln.

Once having determined an inmate's eligibility (in terms of residence and release date), his DOCS file was investigated for references to previous drug or alcohol involvement, and drug- or alcohol-related treatment. When available from the file, the score from the DOCS-administered Michigan Alcoholism Screening Test, or MAST (Selzer, 1971), was recorded. Following the review of the DOCS file, Vera staff asked the inmate to partake in a 15-30 minute interview during which a series of research instruments were administered that measure different dimensions of any drug and/or alcohol history. The inmate was also asked about participation in treatment programs during his current incarceration and given a brief introduction to Vera's role at Lincoln. In the extremely rare event that an inmate did not wish to participate in all or part of the screening interview, he was thanked for his time and excused.

Those who completed the screening interview were assessed by researchers according to a pre-set criteria to determine if they qualified for inclusion in the comparison group. If their scores indicated a history of significant alcohol/drug abuse, as determined by the scoring of responses, they were further informed about the research objectives and procedures, and asked to participate as a research subject. If the inmate agreed, he and the Vera researcher read and signed a consent form which outlined the research, assured anonymity and confidentiality, and presented the rights of the individual as a Vera research subject.

Vera researchers engaged in almost the same screening procedure when they first met with Lincoln pilot participants to collect drug, alcohol and treatment history data; however, **no Lincoln pilot participants were screened out of the study** as a result of scores on instruments. With pilot subjects, this first interview was also used to familiarize the CPU inmate with Vera staff, our research plans, and our role in the Lincoln initiative. The drug and alcohol measures, queries about prior treatment, and the consent form were identical for both pilot and comparison participants.

Screening interview summary data were recorded by Vera staff on a screening log. As specified in the discussion below, respondents' scores on the various instruments were recorded, as well as the name and type of any drug or alcohol program they attended during the present incarceration.

Measures of Drug and Alcohol Abuse. In selecting and developing measures for the screening interview, we were aware that self-reported drug and alcohol use can be of questionable validity; the validity and reliability of those data obtained from criminal justice populations are especially suspect. Faced with this reality, procedures and questioning strategies were developed and tested to enhance the quality of the screening data. Interviews were always conducted in quiet, private areas of the prison (in an office assigned only to Vera staff) under strict assurances of confidentiality and anonymity. A special effort was made to present Vera staff as unaffiliated with DOCS, Parole, or other institutional personnel; inmates were told that the information collected by Vera is for research purposes only, and their answers could in no way affect their relationship or status with these official agencies. It was stressed to the inmates that dishonest answers made the research less valuable, and that we would rather have them refuse to participate or to answer a question than to answer it inaccurately. Perhaps most importantly, a few months after our interviews had begun, researchers in the field received signals that the "inmate grapevine" had accepted these assurances, reinforcing the inmates' willingness to participate.

It is evident that, given the inherent difficulties in assessing self-reported substance abuse in this population, use of a single measure to identify drug or alcohol abuse is suspect with regard to validity and reliability. We therefore used a series of instruments to measure different dimensions of drinking and drug problems, and augmented self-report data with information available from the inmate's DOCS file. In introducing the instruments to the inmate, he was asked to recall his drinking and drug use (and related behavior) in the one-year period prior to the current incarceration.[2] Inmates rarely had problems specifying and remembering this period quite clearly; it seemed apparent from our pilot testing that, while a few inmates might intentionally misrepresent their behavior during this period, these self-reports were not inaccurate due to problems with recall.

In addition to recording available drug, alcohol and treatment data from DOCS files for future analysis, interviewers used this information while administering the screening instruments. A participant who denied or misrepresented an apparent history of abuse was reminded that his file has already been checked; any discrepant information was reviewed with him prior to continuation of the questioning. In such cases, the inmate was encouraged to discuss the reasons for prior drug-related arrests, a high MAST score, notes by corrections counselors about a drug or alcohol problem, or reasons for his attendance in a treatment program. Important inconsistencies were resolved to the satisfaction of the interviewer before the screening process continued.

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[2]Note that this restricted time period is in contrast to the MAST and other, more global measures of abuse which set no time limits (in the case of the MAST, for example, many items start with the phrase, "Have you ever..," such as "Have you ever attended a meeting of Alcoholics Anonymous?"). Obviously instruments using the restricted time period will identify fewer cases with drinking or drug problems, but they will more accurately reflect the prevalence of problems just prior to incarceration. This type of measurement is preferable in the present research, which was intended to assess treatment effects on a current problem.

The first measure carried out in the interview was the Substance Abuse Frequency Questionnaire (SAFQ), in which the inmate indicated on a 0 to 3 scale the frequency with which he used specific drugs. Developed by Vera researchers for this study, the SAFQ format was suggested following Hubbard et al.'s (1984) analysis of numerous widely used measures of drug use severity. SAFQ responses for individual drug items were depicted on a 5x7-inch card held by the inmate, who was asked to indicate his level of use for each of several drugs named by the interviewer (0 = used once a month or less; 1 = used 1-3 times a month; 2 = used weekly or 1-2 times a week; and 3 = used daily or almost daily). If he responded with a 2 or 3 on any drug type, the man was also asked which drug he regarded as his "primary problem" and if he had ever used drugs intravenously during the year previous to this incarceration.

The Alcohol Quantity/Frequency Questionnaire (Alc-QF) was administered next. Adapted from a more extensive index developed for the Rand studies (Polich et al., 1981), the Alc-QF provided a measure of the respondent's quantity (in ounces) and frequency (number of drinking days over a typical 30 day period) of wine, beer, and liquor consumption. By computer analysis, such responses were used to estimate individuals' daily average alcohol intake, adjusted for differences in the "proof" or levels of alcohol concentration of different beverages. (The Alc-QF included separate probes for three types of beverage alcohol, with respect to the number of bottles, cans, shots, etc., drunk in a typical day.)

The inmate was then administered the Adverse Consequences Questionnaire, which measured the extent to which (again, during the year prior to incarceration) he experienced difficulties -- such as getting into arguments or fights, missing work, having medical problems -- as a result of taking either drugs (ACQ-D) or alcohol (ACQ-A). Recognized as important symptoms of substance abuse problems, the items used in the ACQ scale are common to those used in other scales (e.g., Polich et al., 1984; Mulford, 1977), but tailored for an inmate population. The scores on both the ACQ-A and ACQ-D could range from 0 (no consequences) to 9, depending upon the number and frequency of occurrence of particular problems.

Related to the ACQ were two questions about the inmate's use of drugs and alcohol during his commission of crimes. Here the man was asked if he was drinking and/or high on drugs on the day that he committed the instant offense, and how often this occurred in general when he committed crimes (scored as 0=never, 1=sometimes, or 2=frequently). These two items were summed for separate crime-alcohol and crime-drug scores, which range from 0 to 3.

The last instrument administered in the screening interview was the Alcohol Dependence Scale (ADS), a standardized measure of the alcohol dependence syndrome with proven reliability and validity (Skinner and Horn, 1984). Developed and normed over several years with large populations, the ADS measures the extent to which the respondent has experienced classical symptoms of the syndrome (e.g., loss of control over drinking, increased tolerance, withdrawal symptoms), and specifically "the extent to which the use of

alcohol has progressed from psychological involvement to impaired control." As with other instruments, the inmate was asked to respond to each of the 25 items in the questionnaire in terms of the one-year period prior to the current incarceration. Scores on the individual items were totalled to obtain an overall ADS score ranging from 0 to 47.[3]

Scoring of Measures at Screening. Responses on the screening instruments were recorded and analyzed in two different ways, initially to determine if a CPOD inmate qualified as a potential comparison subject, and in more detail when a man was formally designated as a research subject. Preliminary scores on the Alc-QF and SAFQ were calculated in the screening interview. The Alc-QF was scored dichotomously (excessive or not excessive alcohol consumption) in the screening interview (average daily alcohol intake was calculated only for inmates in the research sample and not for all screened inmates). Respondents were assigned a score of 1 (indicative of high consumption) if for 25 or more days out of 30 they drank daily 24 or more ounces of wine, 64+ oz. of beer or 6+ oz. of liquor; for 15-24 days of 30 they drank daily 32+ oz. of wine, 96+ oz. of beer or 8+ oz. of liquor; or for 7-14 days of 30 they drank daily 48+ oz., of wine, 144+ oz. of beer or 10+ oz. of liquor. If a man did not meet any of these criteria he was assigned a 0 at screening. The quantities represent a range of ethanol contents (from 2 to 3 ounces), and thus this scoring provides only an approximate, global indicator of excessive consumption.

On the SAFQ, respondents were assigned an overall score of 0, 1 or 2 at screening. (Again, more precise coding for each substance is recorded on research subjects.) High frequency drug users (scoring 2 on the overall scale) included subjects who (a) reported use of one or more drugs daily or almost daily (most commonly cocaine or marijuana, followed by heroin or crack) or (b) use of two or more substances at least 1-2 times weekly. To score a 1 ("moderate users"), the subject had to report weekly use of any drug other than marijuana; less frequent use was scored a 0.

Alc-QF and SAFQ scores are then used in combination with scores on the other scales to determine if the inmate qualified as having a drug, alcohol or poly-abuse history sufficient to warrant his inclusion in the study. His alcohol history was evaluated first. An inmate qualified on the basis of an alcohol problem if he (a) met the Alc-QF criteria of excessive use, or (b) had a score of 10 or more on the MAST (as recorded in his DOCS file), or (c) 10 or more on the ADS, or (d) 2 or more on the ACQ-A. If one of these criteria was not met, he was evaluated for a poly-abuse problem. Men qualified as poly-abusers if they

[3]The ADS is similar to the MAST, but was developed with the more specific intention of measuring degree of dependence on alcohol. The MAST addresses a much broader range of signs and symptoms of alcohol problems, and is described and accepted as a screening instrument, where respondents can be roughly grouped as being "non-alcoholic," "suggestive of alcoholism," or "alcoholic." In this sense the ADS is a more useful research instrument, since individual scores reflect actual, relative degrees of dependence (in statistical terms the ADS represents an interval or ratio level of measurement).

scored 6 or more on the ADS or MAST, or 1 on the ACQ-A, and a 1 on the SAFQ, or 1 on the ACQ-D. If the inmate did not meet either the alcohol or poly-abuse cut-off for inclusion in the research, he was then assessed for drug abuse. Here, a man qualified for the research if he scores a 2 on the SAFQ or a 2 or more on the ACQ-D.

Some of the men meeting the drug criteria, however, were screened further using a random assignment procedure. The purpose for rejecting some of the drug-only cases was to ensure that there was a sufficient number of alcohol- and poly-abuse cases in the sample for analysis purposes. If all men with drug-only histories were taken "first come, first served" into the research, there would have been too few (e.g., less than 75) men in the comparison sample with alcohol problem histories.

Screening Sample Composite Measures. The screening sample results reported in the text for individual alcohol and drug measures correspond with the scoring procedures described above. In addition, simple composite indices of alcohol and drug problem severity were created for purposes of analyzing screening data. The drug severity composite used for the screening data combined scores from the ACQ-D and the SAFQ; preliminary analyses indicated these two drug use measures were sufficiently correlated (r=.54) to compute this index. To make the frequency and consequences dimensions of equivalent weight, the ACQ-D was first recoded to reflect the same scale range; a man scoring 0 or 1 on the original ACQ got a 0, a 2 was recoded to a 1, and 3 or more were recoded to a 2. The recoded ACQ-D and the SAFQ were then summed to yield a total drug severity score ranging from 0 to 4.

Inspection of the correlations of the three alcohol measures (ACQ-A, Alc-QF and ADS) suggested that a composite alcohol severity index would also be useful. (For the quantity/frequency and adverse consequences, r=.57; for the Alc-QF and the ADS, r=.58; for the ACQ-A and the ADS, r=.74.) The alcohol composite score was determined by summing (1) the dichotomous quantity/frequency score; (2) a recoded ACQ-A score (recoded to range from 0-2, exactly as was done with the drug composite); and (3) a recoded ADS, where scores of 0-4 were recoded to 0, 5-9 recoded to 1, 10-13 recoded to 2, and 14 or more recoded to 3. In the recoded ADS, the assignment of different scale scores within the low dependence group (original scores from 1-13) appeared appropriate given the high variability of the original scores (sd=5.3) and the low frequency of scores of 14 or more. This alcohol composite yielded scores ranging from 0 to 6.

Scoring of Drug and Alcohol Measures for the Research Sample. The alcohol and drug data recorded on research subjects were subjected to much more detailed scoring and analyses than that done for screening purposes. For example, assigning overall scores of 0, 1 or 2 on the SAFQ was adequate for selecting subjects during the screening interview and for estimating prevalence levels. However, more detailed, computer-based scoring of SAFQ responses was done on the research sample using a scale that ranged from 0 to 7. Additionally, in contrast to the simple "excessive consumption" designation made at screening from Alc-QF responses, a computer was used to calculate estimates of average daily ethanol

consumption in ounces for each research subject. More sophisticated composite indices of the severity of drug and alcohol problems were also developed for the research sample. The scoring of the SAFQ and the composite measures are described in Appendix B, where the sample's distribution on these measures is presented.

The Research Sample: Intake Data Collection. Comparison group candidates who met the screening criteria and agreed to participate further in the study were considered members of the research sample, along with all Lincoln pilot participants. As noted previously, with the exception of some additional process information gathered on pilot subjects, the same data were collected on comparison and pilot group members. At Lincoln, these data were recorded by Vera researchers on an Intake Data Collection Form (IDCF) which, when completed, was transferred to Vera's main site for checking and computer processing.

The IDCF was divided into three sections: a pre-prison section focusing on demographic and background information and data pertaining to the inmate's life in the year prior to the present incarceration; prison information; and post-release plans. In addition to demographic information, the pre-prison section included: residential history; familial information with some history; educational data; vocational history; income in prior year; some self-reported social/emotional information; physical and mental status and history; and community-based alcohol and drug treatment history. It was in this section of the IDCF that the alcohol and drug-related data collected at the screening were compiled for further analysis, and items about the relationship between an inmate's drug/alcohol use and criminal activity were recorded. The institutional section of the IDCF included data pertaining to dates of incarceration and parole; parole conditions; prison disciplinary proceedings; and attendance in and self-reported satisfaction with prison programs (detailed further below). The following post-release plans were recorded in the last section: residential; vocational; financial support; social/familial; anticipated drinking and drug use; and the anticipated means of dealing with drinking and drug problems.

The Vera researcher first examined the inmate's DOCS file for IDCF information. For some items, this file served as the principal source of data (e.g., institutional information), but for the most part, file data were used as a basis for probing during the inmate interview (e.g., if there was a reference to familial drug or alcohol abuse), or as a double check on inmates' responses. The IDCF interview, which could take anywhere from 45 to 90 minutes, was conducted in the last week prior to the inmate's release from Lincoln.

Prison Treatment Participation. Pilot testing and early discussions with DOCS officials indicated that, while information on inmates' participation in prison drug and alcohol treatment was sometimes recorded in inmate files, these files were not always a dependable source of these data. Similarly, participation data were not always available from files kept by the programs themselves. Records were not kept on many of the less formal, non-institutional services (such as AA and NA), and some of the newly developing

DOCS-run Alcohol and Substance Abuse Treatment (ASAT) programs, which expanded quickly over the course of the research, did not keep sufficiently reliable records. Therefore, program participation data were obtained principally from inmate self-report, along with any supporting information available from DOCS inmate files.

Because these data were central to the research, inmates were queried twice (at screening and intake) about drug and alcohol treatment participation during the current incarceration. Due to widespread interest in ASAT treatment, additional data (e.g., number of meetings attended weekly of each type) were obtained on these programs. A "probe sheet," with information about each of the ASAT programs in the prison system, their staff and dates of operation, was developed with DOCS' assistance and used in the interviews to help clarify the self-report data.

As described in Chapter 5, based on the distribution of the comparison sample's participation data, it was possible to divide these subjects further into three discrete groups for purposes of analyses. Thus, assessing outcomes of prison treatment involved assigning each subject to one of four treatment groups: the Lincoln CPU group (the original experimental group), participants of ASAT only, a non-ASAT group and a no treatment group. Members of the CPU group were readily identified; assignment to the latter three groups was determined from information obtained in the interviews and files. Due to the potential policy value of findings relating to the ASAT group, additional analyses were done to assess the accuracy of these subjects' ASAT information. Tests were performed to compare ASAT data recorded for this group to ASAT data recorded for members of the CPU group (all of whom had to have successfully participated in ASAT as a condition of CPU eligibility). Both groups were found to have very similar ASAT participation information, thus supporting the representativeness and validity of data reported for the ASAT study group.[4]

Follow-up Data Collection. All research subjects were told that we intended to interview them twice following their release from Lincoln, the first interview being two months after their release date, and the second occurring approximately six months after release. In addition to parolee interviews, interviews were done with the subject's field

[4]Specifically, the CPU group was found to have participated in 7.4 months of ASAT treatment, with an average of 7.1 weekly meetings, while the ASAT group spent 8.3 months in ASAT, and attended 5.6 weekly meetings (the lower meeting frequency figure for the ASAT group was expected, because the CPU included a greater proportion of "residential" ASAT participants from such facilities as Mt. McGregor). Additionally, on a cumulative scale of program satisfaction, CPU men averaged 5.9 points, while the mean score for ASAT subjects was 5.7. Perhaps the most convincing evidence of the validity of the ASAT group's data (and thus this group assignment) was the similarity of this group and the CPU group on outcomes. Unlike the two other study groups (non-ASAT and no treatment), the CPU and ASAT groups had nearly the same proportions of post-release arrests, parole failures, relapses, and participation in community-based treatment. On this last outcome, these two groups were within .5% of one another (20% of each group attended a program), and both had twice the proportion of participants than the other two study groups (which was about 10% for each).

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parole officer (FPO) on approximately the same dates. The FPO interview, which typically took from 10 to 20 minutes, was most often conducted over the telephone, but in some instances the interview took place at the parole office. If a subject did not participate in one or both of the follow-up interviews his FPO was still interviewed.

Prior to a participant's release from Lincoln several techniques were employed to encourage a subject's participation in the two-month follow-up interview, held at Vera's offices. Subjects were given a "contact card" with Vera's address, phone number, and a suggested interview date. They were also asked, with an assurance of confidentiality, to give researchers an address and telephone number where they could be reached should they lose the card or neglect to contact us. And finally, they were promised a sixteen dollar stipend ($15 for the interview and, at that time, $1 for a subway token) immediately upon completion of the follow-up interview.

In addition to these efforts at Lincoln, shortly before the two month interview was scheduled to take place a contact card was sent to the man's field PO, who was asked to pass the information on to the subject. A letter was also mailed about three or four days in advance of the two-month point to the parolee's previously obtained address; if no response occurred within three weeks a second letter was sent. Follow-up phone calls to the FPO and to the man's home were made when necessary. Six men (two before the two-month interview and four before the six-month interview) contacted Vera after release and stated that they wished to withdraw from the study; these men's parole officers were not contacted. Subjects who simply never contacted Vera for the follow-up, however, remained part of the research.[5]

The Follow-Up Data Collection Form (FU-DCF) focused on events in the parolee's life since his release from Lincoln. Included in the interview were: residential information; familial, and some self-reported social/emotional information; vocational and income data; and measures of present drinking and drug use (similar to the intake screening). Much of the interview also concerned self-reported use of services in educational, vocational, medical, mental health, and alcohol and drug areas. In all cases, the man was asked to assess his needs in these areas, to describe the reasons he had (or had not) pursued relevant services, and to report on the outcomes of service use. Furthermore, he was asked about the role of his parole officer in each of these areas.

Field parole officers were asked similar questions about the circumstances of the subject's post-release life (residential, vocational, familial, social/emotional status, and estimates of drinking and drug use), service use (especially of drug and alcohol programs), and his or her role in assisting the parolee to obtain services. Additionally, they were

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[5]For about two-thirds of the data collection period, Vera researchers attempted to interview subjects who were detained due to arrest or a violation (at Rikers Island) with marginal success. (Much time was spent riding buses between facilities and waiting, frequently in vain, for inmates to be delivered for the interview.) Eventually, we concluded that going to Rikers was an inefficient use of staff resources, and stopped any attempts to interview detainees. The bias resulting from an undersampling of detained or "failed" cases is addressed in the text.

queried regarding their enforcement of parole conditions, and any official actions taken concerning the subject. The FPO interview ended with several open-ended questions that solicited the respondent's view of the accessibility and effectiveness of alcohol and drug treatment for the parolee population.

Arrest record information (New York State "rap sheets") were collected for criminal history comparisons, and also for one year post-release follow-up data. Arrests and dispositions occurring during the year after release from Lincoln were recorded and analyzed.

Limitations of the Study. As noted previously, the design and methodology employed in the research was intended to yield statistically sound conclusions regarding the effectiveness of the pilot efforts and other treatment modalities for State prison inmates returning to New York City. The initial plan called for a comparison of the effects of the pilot effort to those of alternative treatments (in the aggregate) and to "no treatment," controlling for numerous variables that also influence post-release outcomes. As discussed in Chapter 3, the extent to which specific other in-prison and community-based services (e.g., a particular upstate ASAT or a specific drug program in New York City) could be assessed by this research depended upon the number of men participating in the research who attended each of those services.

In this regard it should also be noted that the nature of the Lincoln pilot intervention made it impossible to statistically compare the separate impact of the Lincoln CPU and the Parole Access efforts. This is because all Lincoln pilot participants received both "treatments."

Research Implementation

Subject Attrition and Scheduling of the Follow-Up Interviews. From the beginning of pilot sample intake in May 1987 through its completion in February 1989, six CPU participants completed the program but were not included in the study sample because they refused to participate in the research. Although all prospective Lincoln candidates were to be prepared by DOCS staff for CPU and Vera research participation prior to their transfer to Lincoln, periodic problems arose in implementing this plan at feeder sites. Each of these six men came to Lincoln complaining that they had been misinformed about the program in general, and, with research participation being the sole program element that was elective, they refused to participate. Four additional inmates also participated in the intake interview as pilot subjects but were dropped from the research at release. Two of these men were held by authorities on immigration detainers, and two were paroled out of state and were unavailable for follow-up.[6]

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[6]It should also be noted that there were approximately 50 inmates who were initially transferred to the Lincoln CPU during this period but were removed from the program and in most cases returned upstate; these men were not included in the research. Most inmates removed from the program were either denied parole after coming to Lincoln or [illegible] disciplinary reasons (breaking program rules, getting in fights, etc.). Early on, there were [illegible] who were returned because they were incorrectly screened for Lincoln eligibility in upstate facilities.

Of the 708 CPOD inmates approached for screening interviews, 30 (4%) declined to participate. Seventy percent of the 678 inmates who were screened met the comparison group criteria described above, however, 111 of these 474 eligible inmates were excluded from the research using a random number procedure. These men all had exclusive histories of drug problems, and, as explained above, were dropped to ensure a greater representation of alcohol- and poly-abusers in the final sample. Additionally, 31 (7%) of the eligible inmates declined to participate in the intake interview and were dropped from the study. Another twelve men selected for the comparison group were transferred back to an upstate facility and never took part in an intake interview. Four men who participated in the intake interview were dropped after release; two of these men were paroled out of state, and two later requested that they be dropped from any follow-up data collection.

The response rates for the two- and six-month follow-up interviews are presented in Chapter 3. The actual scheduling of these interviews depended upon the availability and cooperation of the respondents. On average, two-month PO interviews were conducted 10.6 weeks post-release and ranged from six to fifteen weeks post-release; two-month parolee interviews were held 9.9 weeks after release and ranged from seven to fifteen weeks. The six-month PO interviews averaged 28.3 weeks post-release and ranged from 21 to 35 weeks; the six-month parolee interviews averaged 27.8 weeks post-release and ranged from 23 to 33 weeks.

We tried to conduct interviews no more than two weeks prior to the scheduled date or six weeks after the scheduled date. In 5% of the parolee interviews and 4% of the parole officer interviews the six weeks post-date criterion was not met. Rather than simply not conducting these interviews, we elected to conduct the interview and ask the respondent beforehand to "backdate" responses to the six-week limit. Thus, a man who arrived for an interview 8 weeks after his scheduled two-month interview was asked to describe his status on time-specific questions as he would have 2 weeks earlier (the interviewer also automatically coded items in this way). Additionally, 8% of the two-month parolee interviews and 2% of the two-month PO interviews were partially reconstructed from six-month interviews; these were cases that were unavailable for two-month interviews but were interviewed at the six-month point. If, in the course of conducting the six-month interview, valid two-month data were obtained, that information was coded in a two-month interview (e.g., if the man reported working the entire six months at a particular job, he was credited with working that job in a partially reconstructed two-month interview). If there was any question as to how an item should be backdated or reconstructed, it was left missing.

Equivalence of the Study Groups. A major premise of the design was that the pilot and comparison groups were equivalent on various pre-incarceration (or pre-treatment) characteristics; a series of statistical tests were performed to compare the two groups on these characteristics. The results of these analyses, shown in Table A-1, indicated that the selection procedure used to identify comparison group subjects was successful, as the groups were found to be very similar with regard to all but two of the sixteen variables tested. Differences were evident on the overall alcohol severity score, on which pilot men had lower

Table A-1

COMPARING THE STUDY GROUPS

Variable	Pilot	Comparison	Significance Test
Age at Release	mean = 29.1	mean = 29.5	t = 0.53
Race	BK = 48.7% HS = 41.8%	BK = 54.9% HS = 36.8%	$\chi^2 = 1.23$
Marital Status	M = 26.7% NM= 49.17%	M = 27.8% NM= 51.8%	$\chi^2 = 4.48$
Sex	mean = 63.3	mean = 61.8	t = 1.5
Highest Grade Completed	mean = 9.5	mean = 9.7	t = 1.07
Weeks Unemployed Year Before Incarceration	mean = 24.2	mean = 22.1	t = 1.01
Percent With One or More Drug Treatment Admissions	24.1%	27.0%	$\chi^2 = 1.55$
Drug Severity Score	mean = 2.8	mean = 2.9	t = 0.45
Alcohol Severity Score	mean = 1.4	mean = 1.7	t = 2.8*
Prior Arrests	mean = 6.6	mean = 7.3	t = 1.37
Prior Drug-Related Arrests	mean = 1.1	mean = 0.9	t = 1.64
Prior Jail Terms	mean = 1.8	mean = 1.8	t = 0.082
Prior Prison Terms	mean = 1.7	mean = 1.6	t = 0.98
Length Current Incarceration (Months)	mean = 27.2	mean = 30.7	t = 1.98*
Percent With Prior A,B, or C Felony Convicts	58.2%	62.4%	$\chi^2 = 1.19$

BK = Black
HS = Hispanic
M = Married
NM = Never Married
* $p < .05$

scores than comparison men. This is not surprising, given that inmates with alcohol problems were oversampled in the selection of comparison group subjects. As explained elsewhere, this was done to ensure a sufficient number of these cases for statistical analyses involving alcohol history.

The only other difference revealed in these analyses concerned the length of the present incarcerative term, where the term of the comparison men averaged three and a half months longer than that of the pilot group. As shown in the table, the groups were equivalent on the other measures of criminal history, including total number of prior arrests, number of prior drug-related arrests, number of prior convictions, number of prior jail terms, and most serious prior conviction (that is, proportions with prior A, B, C, D and E felonies). The length of present incarceration variable was statistically controlled in all multivariate analyses of post-treatment outcomes, to ensure that its effects did not confound those of other experimental variables. The alcohol history measure (and, in fact, a number of variables included in the above analyses) was similarly controlled, as described in the next section.

Analysis Plan

Multivariate Statistical Techniques. In addition to controlling the confounding effects of pre-treatment factors through selection of a "matched" comparison sample, control was obtained through use of multivariate statistical techniques. As described in Chapter 3, a series of regression analyses were planned to assess the relationship between a pre-selected set of independent (or predictor) variables on five different outcomes. On the continuous outcome measures of post-release community integration and relapse severity, multiple regression analyses (MR) were performed. MR is a widely used and powerful technique for estimating the joint effect of a set of independent variables on a dependent variable. This procedure assumes the independent variables to have a linear relationship with the dependent variable. Ordinary least squares estimators are derived that specify the nature of this linear relationship.

One of the major assumptions of MR (that of homoscedasticity, or homogenity of variance) is violated, however, when the dependent variable is dichotomous (yes/no). Logistic regression, however, is an alternative probability procedure that is nonlinear, and thus deals with this violation, by assuming a different functional form between the predictor and dependent variables. Rather than specifying a linear effect of the independent variables on the criterion variable, a nonlinear, Sigmoid (S-shaped) relationship between the predictors and the dependent variable is assumed in logistic regression. Logistic regressions were performed on the dichotomous outcomes of post-release arrest, parole failure, and participation in community-based treatment programs.

Criminal Recidivism Outcomes. Two measures of recidivism, post-release arrest and a more encompassing index of failure, defined as any arrest, a technical violation of parole, or absconsion from parole supervision were used in the analyses. With rare exceptions,[7] arrest information was taken from New York State criminal history records or "rap sheets." A violation was recorded if it appeared on a rap sheet or if the field parole officer reported in one of the follow-up interviews that a violation proceeding had been instituted on the subject. In the analyses of parole failure, a subject was also considered a recidivist if the parole officer reported that the man had absconded, or the rap sheet listed an arrest warrant (usually for absconding).[8]

Community Reintegration and the Use of Parole Officer Data. Data obtained in follow-up interviews with parole officers were used in constructing the community integration outcomes, as well as the relapse and treatment participation outcomes described below. The PO follow-up interview data were preferable to the parolee data primarily because the PO interviews represented a large, unbiased sample. The consistency between the parolee and PO data also suggested that it was appropriate to use the larger PO sample for these analyses.[9]

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[7]In eleven cases the parole officer reported to us an arrest that was not found on the rap sheet. In six of these cases the parole officer had supplied to the interviewer sufficient detail about the arrest (typically a Rikers Island identification number that had been assigned to the individual who was being detained there) to suggest that the rap sheet was incorrect; these six arrests were counted in the results.

[8]Virtually all of the subjects were included in the recidivism analyses. Supplied to Vera by the New York City Police Dept., arrest records could not be located for two of the 462 subjects for whom we requested these records. However, because recidivism information was gathered in both two- and six-month follow-up interviews with these two subjects' POs, these cases were included in the analyses. Similarly, the five cases who were not represented by any follow-up interviews were included in the recidivism analyses because rap sheets were available on them.

[9]For comparison purposes, variables analogous to the parole officer outcome measures were constructed using parolee data. The simple order correlation between the overall six month parole officer community integration index and the comparable parolee-based variable was .41 ($p<.0001$). On the six month relapse variables, $r=.38$ ($p<.0001$), and on the treatment attendance outcome, $r=.53$ ($p<.0001$). As would be expected, the variables from which these composite measures were constructed shared higher correlations. For example, the correlation between the PO and parolee reports on the subject's employment at two months was .69 and on the residential status variable, $r=.47$ (these variables were incorporated in the community integration index). On the two-month drug use measure, which served as the basis of the relapse outcome, $r=.50$, and on the six-month drug use measure, $r=.57$. On the two-month treatment attendance outcomes, $r=.67$, and on the comparable six-month outcomes, $r=.61$. It should be remembered that at least some of the discrepancy between the PO and parolee follow-up reports are due to time differences. As described previously, data collection procedures permitted a range of six weeks for each of the two- and six-month follow-ups; in the two-month interview, for example, the PO could have been reporting on the parolee's status at 9 weeks after release, while the parolee, interviewed 5 weeks later, was reporting on his status at 14 weeks post-release.

Scored separately at the two- and six-month interview points, the community integration measure was a cumulative five-point scale where subjects were assigned one point for each of the following accomplishments: living in a private residence (as opposed to a shelter, SRO, or being undomiciled); staying in the same residence over the entire follow-up period; being judged as having a "very good" or "good" relationship with family members during the follow-up period; being unemployed for less than 20% of the follow-up duration; and regularly attending or completing a vocational or educational program. The community integration scores obtained at each of the two follow-up points were averaged into a single measure for the principal analysis of this outcome, reflecting reintegration over the first six-months post-release.[10]

Post-release Relapse and Treatment Attendance as Outcomes. At both the two- and six-month follow-up points the relapse measure combined PO reports of post-release drug use and problem drinking on a five-point scale. On this measure, the subject was assigned a score of 0 if no drug use or problem drinking was reported; a 1 was assigned if, on average, the subject used drugs less than once weekly; a 2 if daily use of a "minor" drug (typically marijuana) was reported; a 3 if one "major" drug was being used on a weekly basis or the subject was reported to be "a problem drinker...occasionally went on binges"; a 4 if two or more major drugs were being used at least weekly or the man was judged as having "relapsed into uncontrolled drinking"; and a 5 was assigned if there was daily use of a major drug over the follow-up period. The highest (or "worst") of the two- or six-month scores was used for the overall relapse outcome. In many of the bivariate analyses of relapse, scores of 2 or below were collapsed into 0 and scores of 3-5 into 1.[11]

The treatment attendance outcome measure was a simple dichotomous variable, with scores of 1 representing steady attendance in a community-based drug or alcohol program (including self-help groups such as AA and NA), and 0 representing no or irregular attendance. On this measure, subjects were coded as attending if they were participating at

[10]It was possible to construct community integration scores for 455 (98%) of the cases using the two- and six-month PO interviews. As noted earlier, about 20% of the cases were not represented in the six-month interviews because they lacked relevant data, having not lived "in the community" between the two and six-month points due to being in jail or having absconded. If the case was missing six-month data, the parolee's two-month community integration score was used in the overall six-month analysis, with the assumption that that score was indicative of the person's level of reintegration in the community for the time he spent living there after release. There were also 11 cases (2%) for which we had six-month data but no two-month data (because we were unable to conduct an interview with the PO at that point in time); the six-month score was used for these cases in the overall six-month analysis.

[11]Ninety-one (20%) of the subjects were counted as missing and were not included in the relapse analyses because their field parole officers could not estimate these subjects' drug or alcohol use at neither the two- nor six-month interview point. If data were available at either point in time, they were used in the overall analysis, since any relapse during this time period was a relevant outcome.

both the two- and six-month interview periods, and the rest (including men attending at only one of the two periods) were coded as not attending.[12]

Data Reduction and the Pre-Release Predictor Variables. A strategy for reducing the multitude of potential predictor variables obtained in interviews and from official records was necessitated in part by standard limits on the number of variables that can be used in multivariate analyses (as determined by sample size), but also as a means of organizing and simplifying the analysis and presentation of results. The first stage of data reduction was the creation of composite variables comprised of individual data items. Several relational analyses were then performed on the remaining data. In this stage of the data reduction process, all variables in the pre- and post-release data sets were analyzed for their associations with the major outcome measures as expressed by simple zero-order correlations. The variables that showed no or very few significant correlations with outcomes ($p<.05$) were dropped from consideration for the multivariate analyses.

A correlation matrix of the remaining variables was then reviewed to assess the degree to which variables were redundant. If two variables were found to share an r value of greater than .35, one of the two was dropped from the multivariate analyses. In addition to eliminating redundant variables, this process also served to avoid problems of multi-collinearity among the independent or predictor variables, which can lead to misleading regression results.[13] Final determinations for inclusion in multivariate analyses also took into consideration the amount of missing data on a particular variable. Since "listwise deletion" of records was performed for both ordinary least squares (OLS) and logistic regression analyses (a case was dropped from the analysis if the case was missing information on any one of the variables in the model), variables with many missing respondents were not used in the multivariate analyses.

For both data reduction and analyses purposes, the pre-release predictor variables were divided into four content areas or groups, representing sets of variables: (A) background information; (B) criminal history; (C) status on various characteristics in the year prior to incarceration; and (D) events occurring during that incarceration. Chapter 3 describes the variables included in each variable set.

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[12]Almost all the POs interviewed were able to provide this information, however, subjects who were not in the community between the two and six-month point (i.e., they had been detained or had absconded throughout this period) were missing on the six-month attendance measure, and were counted as missing on the overall measure. Excluding missing PO interviews, and these cases not in the community, it was possible to construct the overall, half-year post-release treatment outcome on 361 subjects, or 76% of the entire intake sample.

[13]In addition to eliminating collinear variables in this way, checks for multicollinearity among the remaining variables were accomplished by examining their condition index for each regression model that was developed (Freund, R. & Littell, R., 1986, SAS System for Regression. SAS Institute: Cary, N.C.). These tests confirmed that none of the variables entered in the analyses were highly collinear to be of concern.

Set A, background variables, included age, race/ethnicity, socioeconomic status (SES) and history of familial drug and alcohol abuse.[14] Some of the notable background variables that were included in earlier correlational analyses, but were dropped from further consideration because they shared no variance with the outcomes, included: marital status; medical history; psychiatric history (admissions for psychiatric treatment and/or references to psychiatric problems or prescribed use of psychiatric medication in DOCS files); drug treatment history (number of prior admissions to community- or hospital-based programs); alcohol treatment history; and parental work history (a measure of the extent to which the adults in the subject's childhood home worked and/or depended on public assistance).[15]

The criminal history content group (B) included number of arrests as a juvenile, number of prior jail terms, a 5-point scale representing most severe prior conviction (1=A felony, 2=B felony, etc.), number of prior drug-related arrests, whether the current conviction was for a drug charge, and length of the present incarceration. Several criminal history variables were also considered but dropped because of their lack of association with the outcome variables or because they were redundant with variables that were included. Among these were number of prior arrests, number of prior convictions, number of prior prison terms, number of parole violations, length of the arrest record, and seriousness of the current conviction.

The four variables in set C included severity of alcohol problem, severity of drug problem, prior residence (1=private residence, 2=shelter, SRO, treatment program or homeless), and number of weeks unemployed in the prior year. Scoring for the drug and alcohol variables is detailed in Appendix B, where their distributions are reported. Some of the year-prior-to-incarceration variables dropped from the multivariate analyses included:

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[14]Race/ethnicity was actually represented by two dummy-coded variables, one for black (0=other, 1=black) and Hispanic (0=other, 1=Hispanic). SES was a slightly amended version of the Hollingshead Two Factor Index of Social Position (Myers and Bean, 1968), which assigns points for highest level of education achieved and ranking of longest held full-time job. Multiplied by pre-specified weights, the grade completed and job classifications yield a single SES score ranging from 11 to 77. Lower scores reflect higher socioeconomic status on this measure. The family drug/alcohol history was scored 0 if no one in the family had a drug/alcohol abuse history, 1 for history of either drug or alcohol abuse, and 2 for history of both.

[15]Despite documentation of the power of these predictors in prior research (and thus their consideration here), in the present sample they were of little use, typically because of their restricted range. For example, although one might expect that men with extensive prior exposure to drug or alcohol treatment would respond better to in-prison programs, and thus show better recidivism or relapse outcomes, only about one-fourth of the sample had had even a single admission to a drug program, and only 7% of them had attended one or more alcohol programs. Similarly, evidence of psychiatric problems was present in less than 10% of the cases. This general observation about restriction of range and the limits of these predictors in the present sample applies to all variables not included in these analyses, and most notably to criminal history variables.

number of times changed residence; estimated job income; the subject's judgment of his relationship with family members (a Likert scale ranging from 0 to 5, with 0=very good, 5=very bad); and the extent to which recreational activities centered around drug or alcohol use.

The fourth group of variables, set D, was divided into two subsets. One group included three variables: the presence or absence of parole conditions specifying attendance in drug or alcohol treatment; the subject's stated plans to attend treatment programs upon release; and the extent to which the subject planned to resume use of drugs and alcohol upon release.[16] The last subset of variables in this content group were the in-prison treatment variables. The construction and analysis of prison treatment variables depended upon how the study sample was distributed on in-prison treatment factors. This approach was necessary because it was not feasible to select subjects a priori on any treatment dimension other than Lincoln CPU/Access participation.[17] The process of selecting and constructing these variables is described in Chapter 5.

Post-Release Variables as Predictors. In considering the use of post-release variables as predictors of outcome, an array of analytic possibilities were presented by the follow-up interview data. Just one set of alternatives, for example, included an assessment of the effects of two-month predictors (e.g., drug use or employment during the first two months after release) on two-month outcomes (e.g., rearrest during this period), on six-month outcomes, and on outcomes over the twelve months represented by the rap sheet data. Another set of analyses could focus on six-month predictors, and their relationship with six-month and post-six-month outcomes. To further complicate matters, because the PO and parolee two- and six-month interviews were completed on somewhat different samples (due to parolee attrition), analyses would have had to be run separately on these data sets.

Because conducting all of these analyses would be, at best, extremely time consuming, and, at worst, confusing, it was decided to limit most of the analyses of post-release predictors to the two-month parole officer data. As noted earlier, when compared to the parolee data, the PO follow-up sample is larger and more representative. The two-

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[16]The first of these measures ranges from 0 to 3, with higher scores indicating more specific plans, and plans to attend "on my own" -- not just because of a field PO referral. Men with no plans were assigned a 0 on this measure. A 1 was assigned if the man indicated plans to attend a program "if my PO refers me," a 2 if the man said he was going to a self-help group (AA, NA, etc.) "on my own," and a 3 was assigned if he specified plans to go to a particular community-based outpatient or residential program "on my own." The measure of the subject's plans for using drugs and alcohol after release ranged from 0 to 4, with a point assigned for affirmative responses to each of four questions about expected use of drugs and alcohol after release.

[17]Several months of attempting to control inmate flow to Lincoln for purposes of building subsamples for planned analyses of program type proved impractical, apparently in large part because of the correctional system's understandable need to maximize bed use and security. Therefore, analyses of program factors depended entirely upon the flow of subjects who happened to arrive at Lincoln, without regard to research considerations. Fortunately, the study sample appears to be representative of NYC-bound DOCS inmates, even though there were insufficient numbers to address very specific hypotheses.

month PO sample (N=444) is also larger than the six-month PO sample (N=417); additionally, 45 of the 417 POs interviewed at six months could not provide any new information on the subject under their supervision because the man had been incarcerated (or absconded and had not been returned) throughout the period between the two- and six-month interview. In the major analyses reported in Chapter 5, two-month parole officer data were used to predict criminal recidivism over the twelve-month post-release period, and reintegration, relapse and treatment attendance over six months. Supplementary analyses compared the ability of the two-month variables to predict recidivism, relapse and attendance at the two-month point, and their ability to predict these same outcomes measured after the two-month point.

Similar to the pre-release data, the two-month PO variables were divided into two distinct sets, and entered in the regression models in a hierarchical sequence. The first set (POST-A) included four variables: the PO's estimate of the extent of the subject's drug use; number of times the parolee changed residence since release; amount of time parolee was unemployed since release; and the parolee's involvement in a vocational program.[18] The second set of post-release variables (POST-B) included four measures of the parolee's status in community-based drug and alcohol treatment programs. For both drug and alcohol programs, dichotomous variables were created to express "no show" to a program referral (0=not referred or in treatment, 1=refused to follow-up referral), and regular attendance in a program (0=not attending, 1=attending).

Hierarchical Regression Models. Each of the six variable content groups (A, B, C, D, post-A, post-B) were entered in an ordered, hierarchical fashion in the regression models (Cohen & Cohen, 1975). With some variations (described below), the sets were entered sequentially. In the first step of the typical hierarchical analysis of pre-release predictors, all the variables in set A (background information) were entered. Within this set, the variable most strongly related to the dependent measure (with the highest F-value in the OLS regressions or the highest chi-square value in the logistic regressions) would be selected, and then

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[18] As was done on similar indices at intake, the drug use measure incorporated a distinction between use of major drugs (cocaine, crack, heroin, unprescribed methadone, and PCP/other hallucinogens) and minor drugs (all other substances). On the two-month drug use variable, a 0 was assigned if no use was reported, 1 if a minor drug was used weekly or a major drug less than weekly, 2 if the subject was using a minor drug daily, 3 if a minor drug was used weekly, 4 if two or more major drugs were used weekly, and 5 if daily use of a major drug was reported. (No alcohol use variable was included in these analyses because almost half of the POs interviewed could not estimate the extent to which the subject was abusing alcohol, and less than ten cases were estimated to be "problem" or "uncontrolled" drinkers.) The unemployment variable was actually a proportion created by dividing the number of weeks employed by the number of weeks between release and the interview date. On the vocational program variable, a 0 was assigned if the subject was not referred and [illegible], 1 if a referral was made but the subject was not attending, and 2 if the subject was [illegible] the time of the interview.

"forced" to remain in the equation. The remaining variables in the set would then be considered and selected in the same way, until no variables with F or chi-square values with probabilities of less than .05 remained. Variables not meeting this criterion would not be included.[19]

The variables that were selected in this manner from set A would be forced to stay in the regression model when the next set (set B, criminal history) was considered; variables from this set would be selected using the same forward selection procedure. This process was repeated for the third and fourth sets (C and D), respectively. Similarly, in the separate analyses of the impacts of post-release predictors, these were assessed only after significant variables contributing from the pre-release sets (A-D) were first forced in the model. If, within a particular set, no variables met the .05 probability criterion, that set would not contribute any variables to the final model.

This combination of hierarchical and forward selection procedures for variable selection takes into account both temporal and theoretical, or hypothesis-specific, rationales in specifying the final regression model. Entering variables in a temporal order permits one to draw more definitive conclusions about the effects of the later-entered variables on the dependent variable, because the model statistically controls for the effects of the temporally prior variables entered earlier in the model.

The theoretical rationale for this hierarchical model primarily concerns the last variables entered in the pre-release analyses, taken from set D. In all analyses of pre-release variables, the last variables entered represented prison treatment, including Lincoln study group membership. Thus, any impacts found for this variable (or other prison treatment variables) are independent of all other variables. The next-to-last variables entered were the two variables that might be regarded as motivational indices (plans for attending post-release treatment, and for using or not using drugs and alcohol post-release). Prior to these variables, the parole condition variable was entered. Thus, the relationship between motivation and the outcome variable can be discerned apart from any influence that parole mandates might have on the outcome, and the association between prison treatment and the outcome can be discerned, independent of the effects of both motivation and parole conditions (and all the variables in sets A, B and C).

The A to D variable set entry sequence was occasionally varied, depending on the particular dependent or criterion variable. Specifically, if in a particular analysis a set of predictor variables could be regarded as a pre-treatment (or "time 1") measure or analogue of the post-treatment criterion variable ("time 2" of that measure), this predictor set was

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[19]Sometimes referred to as "forward selection," this process of variable selection differs somewhat from the more common "stepwise" selection procedure, where variables entered in earlier steps are re-considered at each step, and may be dropped because individual F (or chi-square) values fall below a specified criterion. The more conservative forward selection procedure was used to assure that variables found related to the dependent measure in earlier steps were controlled when evaluating the contribution of later-entered variables.

entered first. So, for example, in predicting post-release criminal recidivism, the set of criminal history variables (set B) was actually the first set entered in the regression model, before set A (after entering set B the A, C, D sequence was maintained for the rest of the model). In this way, predictor variables that were related to criterion variables for obvious reasons, such as being conceptually and psychometrically very similar, were controlled in the first step of the regression model.

As noted above, the separate analyses of post-release predictors used the same hierarchical logic, with relationships between these variables and the criterion variable analyzed after controlling for the effects of pre-release variables. In practice, this meant entering those variables found to be significant contributors in the pre-release analysis of a particular criterion variable in the first step of the post-release analysis of that criterion. Therefore, the variables from sets A through D (above) which were found to be significantly related to rearrest, for example, remained as the first set of predictor variables in the regression analysis of the post-release predictors and rearrest. Since the central theoretical interest with regard to the post-release variables was the independent impacts of participation in community-based treatment, this set of variables (post-B) were entered after variables contributing from the post-A set were forced in the model.

APPENDIX B

DETAILED DESCRIPTION OF THE RESEARCH SAMPLE

This appended chapter provides a detailed account of the summary description of the study sample presented in Chapter 4. These results were taken from the intake interview completed on all 462 men who entered the research at Lincoln. While most of the data reported here were based on subjects' self-reports in the interview, some information was taken from the DOCS file on each case. On many items, such as vocational and residential data, the information was taken preliminarily from files, and then validated by interview inquiries.

The chapter begins with a description of the background of these men, ranging from demographic data to socioeconomic factors to medical and psychiatric history. Alcohol- and drug-related information gathered in the intake interview is then presented, followed with a section on these men's post-release plans. In all but a few cases, these descriptive results are presented for the entire intake sample of 462 subjects. When preliminary group comparisons indicated that the comparison and pilot samples differed on a particular data item, the descriptive analysis was done separately on the two groups; these occasions are reported as such in the text.

Background Information

Demographics. A majority of the sample was either black (53%) or Hispanic (39%). Of the 184 Hispanic subjects in the sample, 165 said they were of Puerto Rican origin. The rest of the sample were either white (8%) or classified as other (1%). Two-thirds of the sample spoke English only and 29% of them spoke both Spanish and English. A small minority could speak only Spanish (3%; these men were interviewed with the assistance of Spanish-speaking Vera or DOCS personnel). Twenty-eight subjects in the sample were born in a country other than the U.S. (Puerto Rico being counted as a U.S. commonwealth territory).

The median age of the combined sample was 29 (mean=29.4, sd=7.1) with the ages ranging from 18 to 67. Only about one in ten men had received a high school diploma and 6% had some college education. A total of 172 subjects (38%) had received a G.E.D., and almost one-fifth of the sample had earned a G.E.D. during the present incarceration. About half of the subjects had not obtained either a G.E.D. or a high school diploma. On average, the subjects completed 9.7 years (sd=1.7) of schooling. According to DOCS information available on 393 subjects, the sample had a mean grade-level reading score of 7.4 (sd=3.0).

Just over half of the men (51%) had never married. About one-fourth (27%) were married, including 17% of the sample who reported having common-law marriages. The remainder of the sample were either divorced, separated or widowed. The median length of marriages was 6 years. About three in five men reported having children and 19% reported having three or more children.

Residential and Familial Information. A considerable amount of additional familial and residential information was collected as part of the intake interview. All the information here refers to the subject's life in the year before incarceration. The 288 men who said they had children were queried as to whether they spent any part of the year before their incarceration with their children. About half of these men (47%) said they had spent no time at all with their offspring while one-third said they had spent the entire year with them.

One in three subjects had resided in the borough of Brooklyn, while about one-fourth lived in Manhattan (24%) or the Bronx (27%) just prior to incarceration for the present offense. Just 6% of the men were from Queens, and 2% were from Staten Island. An overwhelming majority of the sample (94%) lived in private apartments or houses; the remainder reported living in shelters, SROs, residential drug or alcohol programs, or were undomiciled. Fourteen percent had moved once, and 6% had moved two or more times in the prior year. The subjects had spent a median of 3 years at the last place of residence (mean=5.7 sd=6.4). Most commonly, subjects reported living with their spouse or girlfriend (36%). One-quarter had lived with their mother, 11% were alone, 8% lived with both parents, 1% with their father, and 15% lived with some other family member or friend.

When asked what they did for recreation, 38% of the sample said their activities centered around drug or alcohol use, or both. About a third (36%) cited spending their time with others in specific social activities (other than drug/alcohol use), while others "hung out" with friends (6%), stayed home with others (8%) or stayed home alone (11%).

The subjects were asked to rate several aspects of their social and familial life on a five point scale with `1' being very good and `5' being very bad. The responses were mostly positive. About half of the men rated their relationships with family members and friends as good or very good, and only 20% responded with negative ratings in this area. Relationships with children (86%) and parents (68%) were most commonly judged as good or very good, although relations with spouses or girlfriends were also perceived favorably (58%).

These positive ratings of familial and social life were contradicted to some degree by more objective records from DOCS files and more detailed inquiries into amens' background. Data from DOCS files on prison visits showed that three-quarters of the men averaged 2 or fewer annual visits from family or friends during the present incarceration. Forty-three percent of the men reported alcoholism in other family members and one-third reported the existence of drug problems in their family. About 37% of the men reported

that some other member of their family had at one time been involved in criminal activity. Based on file review or self-report, 7% of the cases had some kind of marital difficulty, and 18% had some other specific family difficulty such as the inmate being "rejected by a parent" at an early age, or having an emotionally disturbed parent or sibling.[1]

About half of the inmates (49%) had spent their childhood in a two-parent household (some combination of father/stepfather or mother/stepmother). Just over one-third (37%) were raised primarily by their mother. About 15% of the men had spent some time in foster care with the median time spent in foster care being 24 months (mean=37.5 sd=33.0). About half of the sample (53%) reported that their families had "rarely or never" received public assistance while they were growing up, while 30% of the men said that they had received public assistance most of the time.

Employment and Income Information. On all job history items, men were queried about both "legitimate" employment and non-taxed, "off the books" or "under the table" jobs. While most men (92%) reported having held a full-time job at some point in their lives, one-third reported that their longest held full-time job was a year or less. For those reporting a history of one or more full-time jobs, the median number of months spent on the longest-held job was 24. According to their self-report, these jobs were most frequently as service laborers (31%) or as semi-skilled workers (29%).

Over half of the men (51%) were not working prior to the present incarceration. Including "spot jobs," part- and full-time work, the average number of weeks worked in the year prior to this incarceration was 29. Of the 73% who reported any employment in the prior year, their median employment income for that year was $8,000 (mean=$10,812, sd=$11,503). The entire sample's median employment income for that year was $4,510. With public assistance, cash support, and any additional (non-criminal) income added to employment income, the median annual income for these men was $5,644 (mean=$8,773, sd=$10,795). On separate interview items that addressed non-cash support, nearly half of the men (48%) reported being supported at least in part by family members or friends. Fifteen percent of the men said they were supported entirely by other people, while 19% paid for some 15% for most of their own expenses.

At the end of the employment and income section of the interview, Vera interviewers asked these men to estimate the total amount of money they had made in the prior year from illegal activities. About three-fifths of the men could provide an estimate of annual illegal income; their median annual income reported from illegal activities was $29,000, while the average was $43,295 (sd=$38,089).

[1]Pilot and comparison group differences were observed on a couple of these variables. Having other family members with drug problems was more common among pilot men (39%) than comparison group subjects (29%); similarly other family difficulties were reported for more pilot (19%) than comparison (9%) men.

Medical and Psychiatric Information. DOCS files and interviews with inmates yielded information about medical and psychiatric history. The most common medical problems reported were gunshot or stab wounds (43%) or accidents (36%) of one kind or the other. A majority (85%) of the sample either had a history or were currently being bothered by at least one ailment. About one-fifth of them took some kind of non-psychiatric medication on a regular basis, and 17% had spent one or more days in a prison hospital during the current incarceration. References to psychological problems were found in 19% of the inmate files. Less than half of these cases (6%) had taken medication for psychological ailments, and about the same number of men (6%) men had had at least one psychiatric hospitalization in the past.

Alcohol- and Drug-Related Information

Screening Sample Results. The screening interview consisted of multiple measures of recent drug and alcohol abuse history and information on in-prison treatment participation. Obtained on a sample of 678 men passing through the Lincoln facility prior to their release, results of these interviews represent a descriptive profile of state inmates who are returning to New York City. Of the 708 CPOD inmates who met with Vera staff to conduct screenings, 31 (4%) refused to participate; thus, with the exception of rare missing data, the results described below are based on a sample of 678 men.

On the basis of self-reports (see Appendix A for descriptions and scoring of the drug and alcohol measures at screening), 58% of the screened inmates were categorized as "high frequency" drug users, 5% moderate, and 37% low frequency drug users in the year prior to incarceration. On a composite drug use measure, which combined frequency-of-use reports with responses to an adverse consequences due to drug use scale,[2] 65% of the screening sample were judged as having a drug problem just prior to incarceration, and 38% had very severe problems.

Based on responses to the alcohol quantity-frequency measure, one quarter of the sample were drinking excessive average daily quantities of alcohol. On a combined index of alcohol problem severity, one-third of the men showed some evidence of an alcohol problem, and 15% scored in the most severe range.[3] The composite drug and alcohol

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[2]As described in Appendix A, this composite measure (and the alcohol composite index mentioned in the next paragraph) was created only to yield prevalence estimates for the screening sample. Separate, more complete composite severity measures were created and used in numerous analyses involving the research sample; as distinguished from the "screening" composites, the "research" composite measures are detailed below.

[3]MAST data, collected by DOCS, were available on 437 members of the screening sample. The results of analyses on these data were consonant with those produced by the other measures reported above. Specifically, 25% of the men qualified as having an alcohol problem on the MAST (received scores of nine or more), and another 16% had scores suggestive of an alcohol problem (5-8).

measures were also used to determine the incidence of poly-abuse problems. Nearly one quarter (24%) of the men in the screening sample were found to be abusers of both drugs and alcohol. An additional 38% of the sample had exclusively drug problems, while 7% had an alcohol problem only.

Drug Use in the Research Sample. Much more detailed drug and alcohol-related information was collected in intake interviews with the 462 members of the study sample. As was the case with the background data, the drug and alcohol results are presented for the total sample unless statistical tests revealed group differences. When differences were observed they are noted in the text, and the results are presented separately for the two groups.

Self-report responses to Vera's questions about drug use in the year prior to incarceration revealed a substantial proportion of the sample as heavy users of drugs. Using a scale which took into consideration the frequency of use for different types of drugs,[4] almost three-fourths (72%) were classified as "regular drug users," meaning that they reported use of a "major drug" (primarily heroin, powdered cocaine or crack) on at least a weekly basis. Included in this group are "heavy users" who reported at least daily use of a major drug or weekly use of two or more of these drugs (58% of the entire sample), and those reporting daily use of two major drugs (25%). Another 10% of the sample used minor drugs (typically marijuana) daily, and the remaining 18% were classified as infrequent or non-users.

Cocaine HCL was the most commonly used drug, with 56% of the men reporting regular (at least weekly) use. Over one in three men (35%) reported daily or almost daily use of cocaine HCL. Heroin was also used by a substantial proportion of the sample, with over a quarter (26%) of the men reporting daily or almost daily use, and 9% reporting weekly use. With about half the sample reporting on their drug use prior to 1986 (when they had began the present incarceration), crack use would be expected to be less common among these men than with more recent entrants. Nevertheless, about one-fourth of the sample reported some use of crack, and 20% reported regular use. With the exception of marijuana, which was used daily by 37% of the men, there was little use of other substances in this sample.

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[4]In scoring the Substance Abuse Frequency Questionnaire (SAFQ) for the research sample, we followed a distinction used by the D.O.J.'s Bureau of Justice Statistics' between "major" and "minor" drugs; the former group includes cocaine, crack, heroin, other opiates (non-prescribed methadone), and hallucinogens such as PCP and LSD. The remaining substances included in the scale (e.g., marijuana, tranquilizers, barbiturates) are minor drugs. Non-users were scored a 0 on this scale and men who reported less than weekly use of any drug were assigned scores of 1. Scores of 2 were assigned if the man reported daily use of a minor drug or weekly use of two or more minor drugs. Men with scores of 3 or more on this scale were regarded as "regular users," and those with scores of 4 or more were termed "heavy users." On this scale, 3=weekly use of a major drug; 4=daily use of a major drug or weekly use of at least two major drugs; 5=daily use of a major drug and weekly use of a minor drug; 6=daily use of a major drug and weekly use of a second major drug; and 7=daily use of at least two major drugs.

Subjects were also asked to identify their primary drug problem. Cocaine was cited by 21% of the men, and heroin by 18%. Another 8% said "speedballing" (mixing heroin and cocaine) was their primary drug problem. Crack was regarded as the primary problem of 13%, and about one-fourth of the men (28%) did not feel they had "a drug problem." On the adverse consequences of drug abuse measure (ACQ-D) the research subjects averaged 3.7 (sd=2.6).[5] A composite index of drug problem severity was formed from the ACQ-D and the frequency-of-use measure.[6] Three-fourths of the sample was classified as having a severe drug problem on this measure.

Patterns of Drug Use Over Time. Changes in drug use patterns over time were assessed by dividing the subjects into two groups: men who began their term of incarceration in 1985 or earlier (N=231) and men who were committed on or after January 1, 1986 (N=229). In responding to drug use queries, subjects are asked to describe their drug use in the year prior to commitment. As expected, differences were most striking on items regarding crack; proportional differences indicated that crack use had more than quadrupled in this sample by the end of the second period. Eight percent of the pre-1986 group reported any crack use, as compared to 36% of those who entered in 1986 or 1987. Daily use increased similarly, from 5% in the early entrants, to 24% in the more recent group.

The reported use of cocaine did not significantly differ between pre- and post-1986 admissions. However, in the year-by-year comparisons of the primary problem responses, an interesting pattern emerged. About one in four men who began their term in 1983 or earlier reported cocaine as their primary problem. This increased to about 38% in the years 1984 and 1985, but then dropped in 1986 to 29%, and to 24% among 1987 entrants. Heroin use also dropped slightly, with 31% of those entering in 1985 reporting daily use, as compared to 22% of the later entrants. The rise in crack, then, appeared to be accompanied by slight decreases in cocaine and heroin use; these results at least suggest the substitution of crack for other drugs among this sample.

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[5]Unlike the scoring of this measure at screening, the total adverse consequences (ACQ-D) score for research subjects included a question about how often the subjects used drugs when involved in crime. Scores for research subjects on the ACQ-D can range between 0 and 12, for screening purposes the range was 0 to 9.

[6]Described above, the frequency measure (SAFQ) ranged from 0 to 7; the ACQ-D ranged from 0 to 12. On the composite, a score of 4 ("very severe" problem) was assigned if (a) the SAFQ was greater than or equal to 6, or (b) the SAFQ=5 and the ACQ-D was greater than or equal to 4. A score of 3 ("severe") was assigned if (a) the SAFQ=3, 4 or 5 or ACQ-D was greater than or equal to 4, or (b) the SAFQ=3, 4 or 5 and the ACQ-D=3. A 2 ("moderate") was assigned if SAFQ=2 or ACQ-D=3, and a 1 was assigned if SAFQ=1 or ACQ-D=1 or ?. The remaining cases were assigned a score of 0. This composite severity measure is used in many subsequent analyses reported in the research chapters (where it is referred to as PREDRUG). For purposes of these analyses, the severity scores were often dichotomized into severe (scores of 3 or 4 on this composite) and non-severe (scores of 2 or less on the composite).

A dichotomous (yes/no) item on intravenous drug use was also significantly associated with the time of admission, showing a solid decline from 1983 to 1987. Over half (53%) of those entering in 1983 and earlier reported intravenous use in the period prior to incarceration; this figure decreased by more than half (24%) in the 1987 group. The fear of contracting AIDS through intravenous use, in concert, perhaps, with the rise in popularity of crack, has had a clear impact on this sample.

Alcohol and Poly-Abuse in the Research Sample. Measures of alcohol abuse are described in Appendix A. Unlike the drug results, descriptive results on alcohol measures differed somewhat between the comparison and pilot groups. Greater prevalence of alcohol problems in the comparison group is not surprising, given that, as discussed in Appendix A, men with alcohol problems were intentionally "oversampled" when this group was selected with the screening procedure. Responses to the alcohol quantity-frequency (Alc-QF) measure, for example, revealed that 30% of the comparison men consumed the equivalent of at least 4 ounces of pure alcohol daily, while 25% of the pilot men consumed this much ethanol daily. (One can consume four ounces of ethanol by drinking about a quart of wine, eight 12-ounce bottles of beer, or nine ounces -- roughly five or six drinks -- of liquor.) About two-thirds of the pilot men consumed less than two ounces per day, as compared to half of the comparison group.

Scores on the MAST were obtained from DOCS files; over a third (35%) of the subjects scored nine or more, the standard used to qualify a MAST respondent as an alcoholic. Using the suggested ADS scoring categories, 34% of the men showed no dependence, 55% were in the low dependence group (scores between 1 and 13), and 11% were classified as having moderate to severe dependence. Similar to the drug composite described above, a composite index of alcohol problem severity was also created for the research sample.[7] Overall, 37% of the subjects were categorized as having a severe alcohol problem on the composite scale. The alcohol composite was one of the few measures on which the comparison and pilot men differed. On the alcohol composite, 40% of the comparison group was judged as having severe problems, as compared to 31% of the pilot men.

A measure of poly-abuse was computed from the composite measures of drug and alcohol problem severity. The results of this measure indicated that 13% of the sample had neither a severe drug nor a severe alcohol problem. Almost two-fifths of the sample (39%) were categorized as having a severe drug problem only, and 7% were considered to have a severe alcohol problem only. Poly-abuse was divided into severe and very severe categories: 17% of the sample fell into the former group, and 24% of the sample were in the most severe category.

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[7] A subject was given a 3 ("severe") on the composite if he (a) scored 14 or more on the ADS, or 4 or more (average daily ounces) on the Alc-QF, or 4 or more on the ACQ-A, or (b) scored 7 or more on the ADS and scored 3 or more on the Alc-QF and scored 3 or more on the ACQ-A. A 2 ("moderate") was given if he scored 7-13 on the ADS, or 3-3.99 on the Alc-QF, or 3 on the ACQ-A. A score of 1 ("slight") was given if he scored 1-6 on the ADS, or 1-2.99 on the Alc-QF, or 1-2 on the ACQ-A. Scores lower than these on all three measures were assigned a 0 on the composite. Subsequent analyses of alcohol problem severity often included a dichotomized variation of this scale -- severe (3 on this composite) or non-severe (0-2 on the composite).

Alcohol, Drugs and Crime. According to self-reports in Vera interviews, 39% of the subjects said they had been drinking heavily, and 69% had either used drugs or were in drug withdrawal at the time of the instant offense. When reflecting more generally on their use of alcohol and drugs during the commission of crimes, comparison group men more often reported a connection. Fifty-eight percent of the comparison men reported that "sometimes" or "most of the time" they drank heavily immediately before or after committing crimes, while 41% of the pilot men reported this alcohol-crime connection. Although the great majority of subjects in both groups reported at least some history of drug use or being in drug withdrawal while engaged in criminal activity, comparison men were also more likely to report that use. While 90% of the comparison men reported a drug-crime connection, 80% of the Lincoln men reported this drug-crime history.

Responses to two additional interview questions shed light on the relationship between drugs and crime (no group differences were observed on these responses). Over half the sample (54%) said they had committed crimes to support a drug habit. When asked to describe the most common connection between drugs and crime in their own history of use, one-fourth of the men said they committed crimes to obtain drug-purchasing money. Nearly one-fifth of the men (19%) indicated that drugs or alcohol made them feel more courageous or made them less inhibited, and 9% said the use of these substances made them feel more aggressive or violent, which led to a crime. Just under a quarter of the sample (23%) claimed no relationship between their use of alcohol or drugs and their criminal activity.

Drug and Alcohol Treatment History. Given their extensive involvement with drugs and alcohol, this sample had a surprising lack of exposure to treatment for these problems. Seventy percent of the men had never been to a drug or alcohol treatment program (including self-help groups like AA and NA) outside of prison. Only one-fourth of the men had some experience with a drug program, and half of these (12% of the sample) reported a single admission to a drug program. Methadone maintenance, drug-free residential and detoxification programs were equally represented in the drug treatment admissions; about 10% of the sample reported at least one admission to each of these modalities (men could report attendance in more than one modality). Seven percent of the men had one or more admissions to an outpatient drug-free program, and less than 1% of them reported attending a NA (or CA, etc.,) meeting. Involvement alcohol programs was even less common. Only 22 men (6%) reported one or more admissions to these programs and about half of these had only a single admission. Almost all of these alcohol treatment admissions were either for detoxification and to attend AA meetings.

Inmates' Post-Release Plans

One of the reasons for the intake interview was to have an adequate assessment beforehand of the subjects' post-release plans. About three-fourths of the men reported plans to return to the same boroughs of New York they were living in before they were incarcerated. Most commonly, they reported plans to move in with their mother (32%).

Sixteen percent reported plans to live with their spouse, 10% with both a mother and father (including step-parents) and about one-fourth mentioned other family members with whom they intended to live. A few men (2%) said they didn't know what their future place of residence would be. The great majority (85%) reported that they were confident they could stay at their planned place of residence for as long as they wanted, while only 9 (2%) men said they could spend only a week or less.

Questions similar to the ones about their pre-incarceration recreational activities were posed to the inmates to ascertain what they planned to do with their free time and whom they planned to spend it with. Similar proportions said they would spend their free time alone (22%), with their spouse (19%), with their children (17%), and with other family members (18%). Six percent of the men expected to spend most of their free time with friends. When asked about free time activities, most commonly, men reported a preference for social activities outside the home (39%), while 24% said they wanted to stay home with their family members and 21% said they would rather be alone at home. In contrast to reports of pre-incarceration activities, only 7 men said they would "hang out with their friends" without citing a specific activity such as going to movies, playing sports, etc.

On a scale ranging from 1 ("very easy") to 5 ("very difficult"), the inmates were asked to rate several aspects of their future life. Most respondents were quite optimistic. More than half (59%) thought they would find it very easy to find a stable place to live and only 5% said they would find that task very hard. Similarly, 60% anticipated that it would be easy to settle in with their co-habitants, while only 3% said they would find it very hard.

The men were also asked about their plans for employment and other means of future income. Thirty-eight percent thought they would find it very easy to find a job and keep it, while only 5% said they would find it very hard. About one-quarter of the men said they had a reasonable chance at finding employment with a specific employer. About equal numbers of men indicated plans for full-time employment (24%) and for enrolling in job programs (27%). Another 23% of the inmates could not specify any employment plans.

The subjects were also asked to estimate how much of their income would come from employment. About two-fifths of them said they expected to depend solely on employment as a source of income, while 22% said they expected a job or jobs to provide half of their income, and 19% said they did not expect to earn any income from employment at all. About 29% of the men expected full or partial support from family members while the majority (55%) expected to be independent of their family and friends for money.

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