

Naltrexone Treatment in a Jail Work-Release Program

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Inmates with a history of opiate addiction have traditionally been excluded from jail work-release programs because of their high likelihood of returning to drug use. In 1972, a new jail work-release program was begun in the Nassau County (New York) Jail, to which addicted inmates, who had formerly been excluded automatically, could request admission if they took the opiate blocking agent naltrexone. Inmates received naltrexone twice a week and had routine urine checks for drugs of abuse and an alcohol breath test when indicated. Psychological and vocational testing and weekly psychotherapy sessions were provided. For those no longer incarcerated, the adjacent hospital outpatient clinic was available for naltrexone treatment. Naltrexone has proved to be a completely effective opiate blocking agent with no major side effects in 691 patients over a 10-year period. (*J Clin Psychiatry* 45 [9, Sec. 2]:49-52, 1984)

Traditionally, inmates with a history of opiate addiction have been prohibited from participating in work-release programs. This exclusion was due to the poor risk status associated with this population. Because inmates were often able to obtain opiates outside the jail, read addiction was a pronounced risk.¹ Thus, even motivated opiate-addicted inmates were denied the opportunity for work-release.

In 1972, in response to these problems, the New York State Nassau County Department of Drug and Alcohol Addiction, in cooperation with the Nassau County Jail, initiated a Narcotic Antagonist Work-Release Program, which has been reviewed previously.² The first of its kind, the program was designed to incorporate eligible addicted inmates in a work-release program that utilized the opiate antagonist naltrexone. Approximately 30 other demonstration projects nationwide have been involved in research to assess the effectiveness of naltrexone.

Narcotic antagonists are defined as "nonaddictive, non-narcotic drugs that compete for and are preferentially received by the same receptor cells to which opiates have a

chemical affinity. A sufficient amount of antagonist ingested prior to narcotic administration prevents the opiate from linking with the receptor sites and thereby blocks the natural physiological responses to the opiate. A competitive displacement of the opiate at receptor sites will occur if the antagonist is administered after the opiate, resulting in a sudden termination of opiate effects and an onset of acute withdrawal symptoms."³ Naltrexone is a derivative of thebaine, which occurs naturally in the poppy plant and produces no significant toxic side effects. Opiate-free individuals can be inducted onto or taken off naltrexone without problems. Because narcotic antagonists have no street value, they do not engender criminal activity.⁴ They are long-acting and require no special security precautions, so that administration procedures are simplified and costs are minimal.

THE WORK-RELEASE PROGRAM

Program Description

The Narcotic Antagonist Jail Work-Release Program is designed for recent opiate-addicted inmates who are motivated to achieve rehabilitation. Historically, such inmates have not succeeded in the regular drug-free work-release treatment program.⁵ However, a history of addiction no longer precludes these inmates from candidacy in work-release programs such as the one described here. In this program, efforts are made to select inmates who are motivated to become opiate-free, but whose resolve may be susceptible to breakdown. These inmates will become fully integrated into the work-release population, and may begin working the first day of naltrexone treatment. Supplementary services are provided to help prepare the addict inmate to lead a productive and drug-free life after release. Drug use and vital signs are regularly monitored. Vocational, educational, and counseling services are also provided. During the early transitional period on the antagonist, counseling is extremely important, since many of these individuals have few or no social supports and living in the community without drugs will require major lifestyle changes.

Work-release inmates turn in their uncashed paychecks each week, as proof that they have been at work the entire week and have received the correct salary. Part of the money earned is applied toward the cost of housing and feeding; 10% is placed in a trust account, which represents a forced savings that may provide the resident with a substantial sum of money upon discharge. The inmate must also maintain a minimum balance of \$50 in this account, which is regarded as the equivalent of a rent security. The inmate can obtain the remaining money if a formal request

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is submitted and approved. If his family is on relief, the financial responsibility may be shifted to the inmate to the extent that he is able to assume this responsibility. These procedures are designed to help residents develop responsible personal and work-related behaviors, which may facilitate their adjustment to the community.

Weekend furloughs are granted to all inmates, but the accumulation of demerits can shorten or take away these furloughs. Upon return from work and from furloughs inmates are stripped and searched as a standard security measure.

Hospital follow-up services are provided to the inmate after release to help in his adjustment to the community. In addition, released inmates are encouraged to enroll in a hospital-based outpatient antagonist clinic where they may continue to take naltrexone or at least continue to receive counseling and regular urine monitoring.

The outpatient program provides an alternative to methadone maintenance for those who are likely to become readdicted.⁶ Many addicts in methadone maintenance programs, preferring the relative high obtained from methadone, lack the motivation or persistence required for successful use of a narcotic antagonist.⁷ Naltrexone does, however, provide a reasonable alternative for those inmates who find methadone maintenance or drug-free modalities too difficult or unpleasant.

Induction into the Naltrexone Treatment Program

As mentioned above, the Narcotic Antagonist Work-Release Program involves opiate-addicted inmates who are motivated to become drug-free but may be tempted to get high when faced with old friends and familiar situations.⁸ Naltrexone is provided in dosages sufficient to block the opiate effect when inmates are confronted with such situations. At the same time, monitoring procedures track the individual's progress, and other support and planning services are provided to assist his pursuit of a drug-free and more productive life.

To participate in the program an opiate-addicted inmate must write a letter to the program director requesting the privilege of work-release. Each case is considered individually; after review and evaluation of records, the applicant is interviewed and then presented to the Nassau County Correctional Center Board for approval. The inmate must meet all of the established criteria for nonaddicted work-release candidates. Addiction history is still considered in calculating the risk the applicant presents to the community and the Department of Corrections. In addition to standard work-release criteria, the applicant must be between the ages of 18 and 45, and must have completed opiate detoxification at least 7 days prior to submission of the application. Originally, only male applicants were considered, because narcotic antagonists have not been approved for use during pregnancy. Currently, female applicants are considered if they use birth-control pills or are fitted with an intrauterine device.

After approval by the Correctional Center Board, the candidate gives a full medical history and undergoes a complete medical examination before being accepted. Participants must be essentially healthy as judged by physical examination, neurologic examination, chest x-ray, slit lamp examination of the eye, ECG, prothrombin time, urinalysis, CBC (with differential), SMA - 12/60 and 6/50, Australian antigen, VDRL, reticulocyte count, platelet count, and sickle cell test. The physical and neurologic examinations, ECG, urinalysis, and CBC are repeated every 3 months. Additional tests are given to facilitate treatment planning and to obtain baseline data for tracking individual success in the program. The psychiatric evaluation includes an in-depth interview of the applicant and interpretation of test results.⁹

Once an applicant has successfully passed all the screening tests, the program is once again carefully explained. The potential beneficial and harmful effects of taking an investigational drug are fully discussed, and the candidate is asked to voluntarily sign an informed consent and a "rules and regulations" contract.

Cyclazocine and naltrexone have been the two most widely investigated narcotic antagonists. Since neither drug has significant toxicity, patient acceptance, measured by nontoxic side effects, determined the choice of drug. Cyclazocine was used in this program until July, 1974. However, cyclazocine may cause nausea, dizziness, hallucinations, a slight high, and other reactions. Naltrexone, on the other hand, has been found to produce few, if any, side effects,^{10,11} and replaced cyclazocine in the program in 1974.

The induction period for full antagonist stabilization has become progressively shorter. In 1974, inmates admitted to the program were started on 5 mg of naltrexone the first day, with daily increases of 5 mg up to 50 mg, at which point they were maintained. After 2 weeks, these inmates were allowed to work in the community. As we gained more experience with naltrexone and its minimal side effects, we began to increase dosages more rapidly. By 1976, new clients were started at 50 mg; by 1977, at 100 mg; and by 1978, at 150 mg. At these induction levels, no build-up period is necessary, and inmates may begin a job or a training program after only one dose of naltrexone.

A practical antagonist regimen balances less frequent administration against the increased side effects that may accompany higher dosages. A dose of 50 mg provides 24 hours of protection; a 200 mg dose is effective for approximately 72 hours. Fortunately, a tolerance level does not develop to inhibit the opiate-blocking action of the antagonist. The two maintenance regimens that have proven most efficacious are those in which patients are medicated either 2 or 3 times weekly.⁶ In the latter regimen, patients are given 100 mg on Monday and Wednesday, and 150 mg on Friday. Ordinarily, a program nurse administers the medication in the evening after the participant returns from the community.

In our program, inmates use naltrexone for approxi-

mately 4 months. Monitoring the inmate's drug use, general health, and behavior are extremely important, particularly during the first weeks of treatment.¹² Urine samples are collected randomly twice a week, when the inmates return from the community. The primary purpose of this testing is to monitor the inmate's illicit drug use, so that proper supportive services may be provided. Any positive tests (presence of quinine and/or morphine) are reported to the director of the work-release facility. The first three or four such infractions are dealt with through a demerit system, which is a relatively benign form of punishment. If urine testing reveals the presence of quinine only, it is considered a "suspicious" urine, and program staff attempt to ascertain if the individual has used opiates. If the patient admits to using an opiate, this is also reported to the director. When warranted, alcohol breath tests are also given. The decision to remove an inmate from the program for repeated drug and alcohol violations is made on a case-by-case basis by the work-release director in consultation with the narcotic antagonist program staff.

In addition to urine testing, the general health of the program participants is checked regularly. Vital signs, such as blood pressure, pulse, respiration, and temperature are monitored at least weekly by a program nurse. Behavioral and physical changes are also noted by the program nurses on a twice weekly basis.

Support Services

While receiving naltrexone, the inmate is given other support services to help him adjust to the drug and to prepare him for later reentry to the community. Each inmate sees an individual counselor at least one night a week. An important aspect of counseling is guarding against the possible substitution of one addiction for another. Occasionally, the inability to get high on opiates leads to the substitution of nonopiates such as alcohol, barbiturates, amphetamines, and benzodiazepines.⁶ Supportive counseling focuses directly on this and other adjustment issues.

Another support service provided to program participants is vocational training. A vocational rehabilitation counselor from the Department of Drug and Alcohol Addiction assesses the potential usefulness of various training programs for each participant. Vocational interest inventories, preference schedules, and aptitude tests are administered to each participant. Every resident of the work-release facility may apply for vocational training in addition to or in lieu of a regular community job. The qualified inmate may receive financial support for training through the New York State Office of Vocational Rehabilitation. The vocational trainee, like the inmate who holds down a regular job in the community, is considered "gainfully employed."

A social worker from Social Services makes appropriate referrals and community contacts for inmates prior to their reentry to the community. This planning encompasses employment, family relationships, legal matters, and appropriate treatment programs. The narcotic antagonist

program also attempts to aid community adjustment by explaining the option of postrelease treatment through the antagonist clinic. Often inmates are given a tour of the adjacent hospital outpatient clinic before their release, to increase the chances of treatment continuity. Approximately 20% of the released inmates continue with the narcotic antagonist after release. Even when they discontinue the antagonist, many remain in the outpatient program for urine monitoring and counseling.⁶

SUMMARY

To date we have treated 691 patients with naltrexone (636 males and 55 females) in both the jail work-release program and the hospital antagonist outpatient clinic. Of these patients, 279 have been treated at the work-release facility and 412 at the hospital outpatient clinic.

The Narcotic Antagonist Jail Work-Release Program offers potential benefits not only to the opiate-addicted inmate but to the drug treatment system, the correctional institution, the criminal justice system, and the general community as well. Most of these benefits are difficult to measure without a rigorous research design incorporating a non-treatment control group. Such a design is not possible within the prison system. The following will outline the direct and indirect benefits of the naltrexone treatment program offered in conjunction with our work-release program.

Opiate-Addicted Inmate

The addicted inmate is provided access to correctional program options that were previously out of reach, including the possibility of firmer anchoring to family and other aspects of life in the community. Many work-release participants, for example, had never worked before and believed they could never hold a job. Although many inmates in the program may attempt to get high to test naltrexone's efficacy when they are back in their community, their efforts are frustrated. Generally we do not subject them to heavy sanctions, because this "unrewarded" use of heroin could be considered *extinction* of the behavior and potentially beneficial (see O'Brien et al. this issue). This testing behavior usually declines in frequency and, in most cases, ends before release.

Available data indicate that naltrexone-treated participants in the work-release program receive no more demerits than other residents in the work-release facility. Attrition rates for the two groups are comparable, about 25%. Differences in job performance of participants and nonparticipants have not been measured.

Finally, the opiate-addicted inmate in this program has achieved a highly important change of status. Prior to the narcotic antagonist program, the addict was considered to be at high risk and was relegated to the bottom of the "trust ladder." The correctional administration now views naltrexone program participants as among the most trustworthy in the facility. This was demonstrated in 1976, when a week-

end furlough program was started and most of the original participants were selected from the narcotic antagonist population.

Drug Treatment System

The program provides an alternative to methadone that is not addictive, and naltrexone's essential freedom from side effects encourages compliance in this poorly motivated population. The mere presence of the opiate-addicted inmate in the work-release program represents a substantial victory for the narcotic antagonist program, and it is a major indication of the program's success. The program's ability to develop funding sources also attests to its viability. Outcomes for the drug treatment system have been measured only in terms of the numbers of released inmates who continue in postrelease antagonist treatment, and by the difference between participants and nonparticipants in frequency of drug arrests after release.⁵

Correctional Institution

This is a program that is easy and relatively inexpensive to administer, since the inmate's salary contributions offset the costs. Programs which use naltrexone reduce security requirements and enable a new category of inmates to take advantage of the work-release option. Other correctional benefits, such as reduced tension and increased morale among staff, have not been measured and would be difficult to separate from the advantages of the low-key work-release environment itself.

Criminal Justice System

The criminal justice system profits by a reduction in drug arrests of releasees and by the conversion of potential law-breakers into productive citizens. One could expect the use of naltrexone to have three postrelease effects: 1) reduced illicit drug use, 2) decreased dependence on methadone maintenance, and 3) reduced crime to support a habit. From the point of view of the criminal justice system, it will be important to investigate whether these outcomes occur; and the work-release experience should provide the opportunity for such research. Collection of follow-up data on this program was partially accomplished in a 1974 study, which suggested that opiate-addicted participants and nonparticipants were arrested for nondrug offenses with equal frequency after release.⁵ When preincarceration drug arrests were equated, however, the narcotic antagonist group had significantly fewer drug arrests after release than did the nonparticipant group.¹³ However, inadequate data and data analysis preclude definite findings: Future demonstration projects should develop the capability for more rigorous analysis of data.

General Community

The benefits anticipated for the general community from the program have been measured in terms of estimated tax savings, because the inmates turn over a portion of their

wages to their own families and to the State of New York. One of the basic expectations of the program is that the inmate's reentry problems can be eased by allowing him or her to assume appropriate roles and responsibilities at home and at work while still incarcerated, an achievement of benefit both to the inmate and to the community. The success of such a program could be assessed in terms of job performance and stability, family stability, use of social services, and home relief. In the future, similar demonstration projects may be able to provide such assessments on participants and comparable nonparticipants.

The Narcotic Antagonist Work-Release program demonstrates an important and innovative use of naltrexone that should prove highly beneficial once this narcotic antagonist has been approved for general distribution.² Naltrexone, although not indicated for every opiate addict nor proposed as a wholesale replacement for methadone, seems particularly well suited for treatment of a segment of the opiate-addicted offender population.¹² This program has demonstrated how drug treatment and criminal justice agencies can use this investigational drug to treat the opiate-addicted inmate who is motivated toward rehabilitation but could not survive in the traditional work-release setting. Naltrexone treatment thus can serve as a bridge to a productive drug-free life.

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