

The Key Extended Entry Program (KEEP):

From the Community Side of the Bridge

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Abstract

The Key Extended Entry Program (KEEP) engages heroin addicts who were not in treatment at the time of arrest, in community-based substance abuse treatment upon release from the criminal justice system. KEEP also serves as a transitional program providing short-term treatment to street heroin addicts with brief addiction histories and little or no experience in treatment. The program goals include reductions in heroin use, HIV transmission, and recidivism. This paper describes KEEP at the Narcotics Rehabilitation Center (NRC) of The Mount Sinai Hospital, in terms of admission criteria and procedures, staffing, hours of operation, and program services. Furthermore, the paper presents a review of the literature evaluating the NRC KEEP in terms of its success in retaining patients, transferring them to long-term treatment; and reducing heroin and cocaine use, some HIV-risk behaviors, and certain kinds of criminal offenses. Recommendations are made for future program development.

Key Words: Methadone treatment, KEEP, heroin addiction, opioid dependence, substance abuse treatment, criminal justice.

HEROIN ADDICTION has long been associated with criminal activity, multiple episodes of incarceration, and social and medical problems. There clearly continues to be a public health need to intervene and engage this population in recovery. Yet only a small percentage of addicts are ever involved in treatment programs (1). To address this situation, the Key Extended Entry Program (KEEP) was developed in 1987, through the collaboration of the New York State Office of Alcoholism and Substance Abuse Services (OASAS), Montefiore Medical Center, and the New York City Department of Corrections at Rikers Island. This program was designed to assist heroin-addicted individuals who are not enrolled in treatment at the time of arrest, to become stabilized on methadone while incarcerated, and then to refer them to

community-based treatment programs upon release.

The service mandate of KEEP also involves providing treatment to non-incarcerated, heroin-addicted individuals who may have a short history of dependence or have little or no treatment history. In addition, individuals are offered the opportunity for detoxification and for ongoing assessment of needs with subsequent referral to the appropriate type of treatment (from pharmacotherapeutic through drug-free to self-help).

KEEP aims to engage and maintain people in treatment, with the goals of: (a) decreasing heroin addiction; (b) diminishing risk of exposure to transmission of HIV; and (c) reducing recidivism. The purpose of the present paper is to describe the operation of KEEP from the community-based treatment perspective of The Mount Sinai Hospital's Narcotics Rehabilitation Center (NRC), and to review representative research directed toward assessing the efficacy of the KEEP model.

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KEEP at the Narcotics Rehabilitation Center

The NRC KEEP is licensed and funded through the New York State OASAS for a census of 75 patients. The medication hours are from 3:30 PM to 5:00 PM, Monday through Friday, and 8:30 AM to 11:30 AM on Saturday. The staff includes an intake worker, a registrar, a physician, a pharmacist, three methadone counselors, one social worker, a security officer, a receptionist, and several clerks; they are overseen by the KEEP director, a psychologist. Most staff are employed on a part-time basis.

There are essentially two routes for patients to enter NRC KEEP. In one, addicts are referred directly from Rikers Island. In the other, addicts walk in after having been referred by a needle exchange program by another department within The Mount Sinai Hospital, or by friends or family members.

Admission Criteria: Rikers referrals are considered the highest priority and are admitted directly to the program. If medication was taken at Rikers prior to release and no longer than three days previous to being seen in the program, then a toxicology screen will not be required for same-day admission and medication. Any other patient referred to the program must meet the criteria given in Table 1.

Admission Procedures: The staff at Rikers contacts the KEEP director and provides referrals to the program. Key identifying information is provided, along with the methadone dose and probable release date. Upon arrival at the NRC, the patient presents a letter of introduction from KEEP at Rikers. The intake worker confirms the last date and dose of medication. If the patient is a re-admission, the intake worker reviews the patient's old chart to assess eligibility for re-admission, and addresses any concerns with

the KEEP Director. If the applicant does not qualify for re-admission, he or she may receive courtesy medication and be referred to another program.

Except for the Rikers referrals, the KEEP director screens all applicants to the program for eligibility. If the patient meets the admission criteria, verification of identity and a urine specimen for confirmation of recent opiate use are obtained.

Prior to formal admission, each patient is seen by the physician or nurse practitioner who: (a) conducts a physical examination; (b) documents opiate dependence; (c) obtains urine and blood specimens; (d) performs Tuberculin Purified Protein Derivative (PPD) tests and orders chest X-rays as medically indicated; (e) presents and discusses the two options, either levo-alpha- acetylmethadol (LAAM) or methadone; and (f) writes a prescription for the appropriate dose of maintenance medication.

The intake worker performs a range of tasks that include: (a) communicating directly with the statistical clerk and registrar to ensure that patients sign all the necessary information releases, consent forms, treatment waivers, and contracts; (b) providing the patient with information regarding medication hours, clinic rules and expectations, patient rights, and health care proxy prior to admission; (c) registering the patient with the Central Registry to guard against enrollment in more than one methadone program; and (d) serving as a liaison between the primary counselor and the medical department during admission.

Medication: For the past 1¹/₂ years, patients have been offered the option of being treated with either methadone or LAAM. Patients are generally more familiar with methadone, since they have heard others talk about their experiences in methadone treatment or have used street methadone themselves. Based on familiarity alone, some patients prefer to receive methadone. These patients are willing and able to come to the clinic 6 days per week for their medication and receive a take-home bottle for Sunday. However, some patients are very much attracted to the convenience of LAAM's 3-day pick-up schedule. They may have jobs or childcare responsibilities that make it difficult to get to the clinic every day. The patients are informed of the advantages and disadvantages of each option, and make an informed choice. LAAM is not recommended for patients with severe liver or kidney disease, or severe alcohol problems; it is not prescribed for pregnant or

TABLE 1
KEEP Admission Criteria

Current opioid dependence, which must be validated by positive urine toxicology
No more than 18 months of prior treatment in a maintenance program for narcotics
At least 18 years old
Residence in New York State
No need for immediate psychiatric hospitalization

breast-feeding women. Currently about 20% of the KEEP patients are taking LAAM; all of them are closely monitored to ensure build-up to effective dose levels and rapid response to any side effects.

Individual Counseling: Toward the end of the intake process, the patient is assigned to a counselor, the patient’s primary contact and advocate, who obtains a psychosocial history (see Table 2). The counselor’s main goal is to engage the patient in the treatment process by: (a) performing comprehensive needs assessment; (b) orienting the patient to some of the treatment procedures; and (c) conveying an understanding of the recovery process. In addition to orienting patients to the program rules and regulations, the counselor collaborates with patients to form a treatment plan for the next thirty days and meets with them at least weekly. Some patients seek more involvement than others. Counselors will provide referrals to shelters and food programs in addition to medical, psychiatric, and vocational services, on an as needed basis.

Each patient learns to submit random weekly urine specimens to monitor opiate and other drug use as part of assessing progress in treatment. The pattern of results can be used to identify the need for referral to additional or alternative substance abuse services (e.g., inpatient alcohol or cocaine detoxification).

TABLE 2
Psychosocial History

Age, race, place of birth, and current living situation
Source of referral
Drug history and treatment experience
Family history
Educational history
Vocational history
Source of financial support
Criminal justice history and current legal status
Medical history
Mental health history
Current mental status
Spiritual orientation
Patient’s motivation for change and treatment goals, strengths and weaknesses
Formulation of initial treatment plan

Based upon the monthly treatment plan review, disposition planning begins no later than the third month of treatment. By this time, the patient has had some time to stabilize on methadone or LAAM, and to tend to other life issues. The counselor works with the patient to establish a plan for services following the sixth month in KEEP. The patient may request to be tapered off the medication, referred to an alternative type of program, or transferred to a maintenance program. The counselor ensures that a discharge plan is in place by the treatment plan review at the fifth month, and prepares the patient for the steps to be taken to optimize the likelihood of following through with the plan. All individual treatment and discharge plans are discussed with the KEEP director, and in weekly staff case conference meetings.

Ancillary Services

(a) **Concrete Services:** Patients are admitted to the program who do not have Medicaid or any gainful employment. Those coming directly from Rikers Island may have lost all their forms of identification, and have no home or financial support. Our counseling staff will provide referrals to the shelter system, and to food and clothing provisions. A benefits coordinator assists the patients in preparing the necessary and appropriate documents for the Medicaid and public assistance application process. Where appropriate, counselors will advocate for patients with the social service organizations.

(b) **Medical Services:** Apart from the standard services provided during the admission process, patients can choose to have their primary care services provided in the clinic. This is an important feature of the service at the NRC, because the availability of medical staff at the clinic increases the chances that the patient will seek evaluation and treatment. If the problem cannot be managed in the clinic, the patient is referred out to the appropriate facility.

(c) **Obstetrical and Gynecological Services:** Female patients can avail themselves of routine obstetrical care, gynecological care for illness, birth control methods, periodic check-ups, and follow-up on prenatal care.

(d) **Psychiatric Services:** A psychiatrist is available on a part-time basis to provide consultation, evaluation, medication, and referral. The staff social worker is usually assigned any patients that have co-morbid psychiatric problems.

(e) **Health Education:** All KEEP patients are offered the opportunity for HIV testing with pre- and post-counseling, education about practices for reduction of HIV and hepatitis C virus (HCV) transmission, referral for special services (e.g., Division of Aids Services [DAS], legal advice, linkage to HIV/AIDS treatment services).

(f) **Vocational Services:** KEEP patients have a diverse range of employment experiences and skills. A few are gainfully employed on admission and throughout treatment, some have worked for years off the books, and many have very little work experience. Patients are referred to the vocational rehabilitation counselor for prevocational assessment and counseling when the patient is ready and willing to pursue education, training, or employment.

Program Expectations

One of the primary goals of KEEP is to engage people in the treatment process, which requires that they be treated respectfully. Patients must learn the clinical and programmatic policies and procedures that frame the treatment experience as well as the importance of attending the clinic regularly to receive the medication, including the return of Sunday take-home bottles. Missing medication or failing to return bottles on a consistent basis raises a flag, which is addressed by the counselor. The clinical nurse manager reviews patients' attendance and bottle return each month, and generates warning notices for those who miss or fail to return bottles frequently within that period. If the trend continues during the next month, the patient receives a probation notice. Further misses, which are evaluated by the treatment team, may represent a reluctance or inability to comply with treatment expectations, and may merit administrative detoxification and/or referral to an alternative type of treatment.

We believe that an important part of recovery is assuming responsibility for one's own health. As in most other treatment settings, all patients are expected to make an effort to pay for services either through Medicaid or fees. Each patient admitted without a Medicaid number has thirty days from date of admission to apply. The patient is admitted to the program with the knowledge of this expectation. If after 30 days, the patient has not taken any steps to initiate the Medicaid application process, a probation notice is issued which indicates that this process must be

completed within the next 30 days, at which time an administrative taper will be initiated. Alternatively, legitimate employment status must be verified by a pay stub within thirty days, so that a fee can be assessed. Failure to meet these requirements will result in discharge from treatment. Counselors work closely with patients to assist and encourage compliance.

Program Evaluation

After a brief description of the population served at the NRC, studies of KEEP are reviewed in terms of the following dimensions: treatment retention, heroin use, cocaine use, HIV transmission, criminal arrests, and treatment disposition.

Population Description: The population treated at the NRC KEEP is mostly male (81%), has an average age of 38 years, is Latino (40%) and African-American (40%), has never married (62%), has dropped out of school prior to completing high school (44%), is unemployed (92%), has a legal history on admission (95%), and is living in a home (72%) (2, and personal communication - Diab ME et al.). In contrast to earlier high rates of injection drug use (3, 4), more recently about one-half of the population use heroin intravenously or subcutaneously and one-half prefer the intranasal route. There have been no significant demographic differences found between Rikers referrals and walk-ins.

Retention: Several studies have examined retention levels in KEEP. In an initial evaluation of pre-KEEP at Rikers Island in 1987 (3), of the 1,146 admissions discharged to community-based methadone programs, 69% reported for and were accepted into treatment. In 1993, Magura, Rosenblum, Lewis, and Joseph (4) assessed the effectiveness of KEEP at Rikers on several dimensions including retention. The researchers compared 195 inmates admitted to KEEP who were not enrolled in methadone at the time of arrest with 54 inmates who were undergoing heroin detoxification. The latter group served as a control group. Upon release, 85% of KEEP participants vs. 37% of controls had applied for drug abuse treatment, both predominantly for methadone treatment. At the time of 6-month follow-up interviews, 27% of KEEP subjects and 9% of controls were enrolled in a drug treatment program, including methadone.

Focusing more specifically on the NRC population, Diab et al. (personal communication)

investigated treatment retention, drug use, and discharge disposition for KEEP admissions, comparing Rikers referrals ($n = 42$) with walk-ins ($n = 37$). This study identified a high rate of retention for this population in the 6-month program. About 50% of the sample remained in treatment after 5 months. The mean total time in treatment for the Rikers Island group was 20.4 weeks, and 19.9 weeks for the walk-in group.

In contrast, an unpublished investigation by Rosenblum and Magura (personal communication) tracked 488 successive NRC KEEP admissions, from 1-1-91 through 3-31-95, through 24 weeks of treatment. They found that at the start of the fourth month of treatment about one-third (34%) of KEEP admissions were still in the program. This number had dropped to 21% retained in the program by the start of the fifth month. Thus, it appears that at least 80% of patients exit treatment before making the transition to long-term maintenance treatment. This finding highlights the need to improve treatment engagement and retention.

Bradbury (2) investigated a sample of 86 patients enrolled in KEEP to identify the concrete aspects of treatment that improved retention. Patients were compared on a variety of demographic factors at admission and discharge to assess whether changes in status were related to treatment retention. The best predictor of treatment retention was Medicaid status. More specifically, patients who were admitted to the program without Medicaid and still did not have Medicaid at discharge remained in the program for an average of 42 days, and tended to be incarcerated or lost to contact. Patients who had their Medicaid at admission and at discharge lasted an average of 95 days in the program. One-third of this group eventually transferred into long-term treatment, but one-third was lost to contact. However, the greatest retention was for those patients who came into the program without Medicaid but had received it by the end of treatment (an average of 166 days). Additionally, a significant correlation was found between homelessness and treatment retention; those patients who were homeless were more likely to drop out of treatment. Bradbury makes the point that treatment success is mediated through treatment retention, which is enhanced by advocacy in meeting the concrete needs of the patient.

Heroin Use: Magura et al. (4) found that about 90% of KEEP participants reported daily heroin use prior to arrest. The study showed

that relapse to drug use is quite high among inmates released from Rikers. Eighty-eight percent of KEEP participants and 85% of controls (heroin detoxification) reported returning to heroin and/or cocaine use after release from Rikers. At 6-month follow-up, this was reduced to about 50% of KEEP participants reporting daily heroin use. This estimate was supported by Rosenblum and Magura (personal communication), who followed KEEP admissions through treatment at the NRC from 1991 to 1995 and found that the percentage of urines positive for opiates ranged from 55–61% across the 24 weeks of treatment. These estimates were given further support by Diab et al. (personal communication), who also found that opiate use rate was high (62%) throughout treatment. It seems that heroin use remains stable for many patients during the six months of treatment in KEEP. Therefore, for many of these patients, six months is not a sufficient amount of time to change substance using habits.

Cocaine Use: One of the consistently significant findings is the high rate of cocaine use in the KEEP population. Rosenblum and Magura (personal communication), who followed KEEP admissions through treatment at the NRC from 1991 to 1995, found that the percentage of urines positive for cocaine ranged from 62–71% across the 24 weeks of treatment. These estimates were given further support by Diab et al. (personal communication), who also found that cocaine use rates were high throughout treatment. With further analysis, these researchers found that the patients who had been referred from Rikers Island did have a higher proportion of positive cocaine urine toxicologies than the walk-in patients (81% vs. 45%).

Opiate agonist therapy is clearly not designed to directly address cocaine abuse. Nor are methadone maintenance programs particularly staffed to adequately treat secondary drug use. The usual treatment is referral for inpatient cocaine detoxification, which has been found to be ineffective in establishing abstinence (5). We investigated the efficacy of providing outpatient cognitive-behavioral therapy to treat cocaine use among patients on methadone maintenance at the NRC. The model has been described elsewhere (6). Recently published results by Rosenblum et al. (7) showed that patients in both high and low intensity cocaine treatment groups had significant and equivalent declines in

proportion of urines positive for cocaine at the 6-month and 15-month follow-up points (from 0.72 at baseline to 0.58 and 0.56, respectively). The mean number of days using cocaine in the past 30 days (by self-report) showed a similar decline from 18.6 days of use at baseline to 9.9 and 11.2 days at 6- and 15-month follow-ups, respectively. Frequency of drug-injection and percent of injectors also declined at follow-up, e.g., from 40% using needles at baseline to 23% at 15-month follow-up. One key finding was that the high intensity treatment group did not show a greater overall decline in cocaine use than the low intensity treatment group. Completing either treatment was associated with lower proportion of cocaine positive urines at follow-up. However, baseline cocaine severity interacted with treatment intensity such that subjects using large amounts of cocaine (daily or near-daily users) were more likely to reduce their cocaine use if they were exposed to high intensity treatment. Those who had a less severe cocaine problem were more responsive to low intensity treatment. This observation suggests that patients should be matched to the appropriate level of treatment for maximal effectiveness in cocaine treatment, for patients on methadone.

Magura (personal communication) has applied this research model to NRC KEEP in an ongoing National Institute of Drug Abuse (NIDA)-funded study. These investigators have identified cocaine-using methadone patients at admission and offered them either regular methadone treatment or enhanced (individual and group) treatment with a cognitive-behavioral model targeting cocaine use. The treatment emphasized the importance of engaging patients and rewarding them for participation and progress in treatment. Patients were given financial incentives for completing concrete tasks that advanced them toward their treatment goals (e.g., attending therapy sessions, following up with medical/psychiatric appointments and/or public assistance/ Medicaid appointments). The results, which have not yet been published, should have strong implications for treating the problem of cocaine use among patients receiving opiate agonist therapy.

HIV Transmission: In terms of HIV transmission, Joseph et al. (3) noted that 78% of Rikers KEEP participants reported needle sharing prior to arrest, and 91% reported sharing cookers. Magura et al. (4) noted that baseline rate of injection drug use for this

population prior to arrest was about 70%, and this rate dropped to 44% at 6-month follow-up for KEEP participants. Lower frequency of drug injection at follow-up was associated with remaining in treatment.

Arrests: Magura et al. (4), who assessed the effectiveness of KEEP at Rikers, found a consistently significant reduction in theft and illegal income, in association with drug treatment at 6-month follow-up. In terms of patients enrolled at NRC KEEP, Diab et al. (personal communication) found that for 6 months prior to discharge, the mean number of days incarcerated for the Rikers Island group was 3.0 and for the non-Rikers Island group was 0.59 days. The mean number of arrests for the 6 months prior to discharge was 0.73 for the Rikers Island group and significantly less, at 0.11 per person, for the non-Rikers Island group. Bradbury (2), in his assessment of NRC KEEP, found that 100% of the patients who were referred from Rikers Island without Medicaid and who then obtained Medicaid while in treatment, were not re-arrested during the six months in KEEP, whereas 38% of the remainder of Rikers referrals were discharged due to incarceration. This finding lends support to Magura et al. (4), who found that retention in KEEP leads to decreases in criminality. Participation in KEEP clearly does not eradicate involvement in criminal activities, but it is associated with a decrease in recidivism.

Treatment Disposition: Bradbury (2) noted that about 29% of NRC KEEP patients transferred into long-term treatment. More specifically, he found that treatment discharge disposition was a function of how well patients responded to the assistance in acquiring Medicaid. Most of the patients (81%) who had come to the program without Medicaid but had successfully obtained it, remained in the program longer and then transferred into the long-term maintenance program. Patients who were admitted to NRC KEEP without Medicaid and did not obtain it during treatment were more likely to drop out (62%) or be re-incarcerated (23%). Interestingly, patients who began treatment with Medicaid were equally likely to either transfer to Methadone Maintenance Treatment Program (MMTP) (33%) or drop out (37%). Diab et al. (personal communication) found that 53% of the overall sample continued treatment after completing KEEP. For both of these studies, there were no significant differences between Rikers referrals and walk-ins in terms of treatment disposition.

While this number is high compared to more conservative estimates of 20% (3, 4), KEEP has been modestly successful in introducing patients to long-term methadone maintenance treatment.

Summary

The KEEP population is a challenging group of people who often present with multiple impairments. They may recently have been released from jail, may be homeless, lack any identification or entitlements, have little or no sources of social support, may have medical or psychiatric complaints, and have severe opiate and cocaine dependence. Living on the edge or outside of regular work and social roles can make it very difficult for these patients to engage in the treatment process with all of its expectations, demands, and rules.

KEEP has demonstrated some success in reducing heroin use. However, some patients continue to use heroin throughout treatment. We need to assess the adequacy of methadone dose levels and the impact of LAAM on urine toxicology results. Cocaine use is quite widespread among KEEP patients. We must re-evaluate the efficacy of our interventions for treating this problem. For patients who remain in treatment, there is a reduction in injection drug use, which probably reduces the rate of HIV and HCV transmission. We need to identify HIV and HCV prevalence rates in the KEEP population, clarify our intervention and assess its impact. Treatment participation is also associated with reduced criminal activity in this population. Nonetheless, many patients continue to be involved in criminal activities and return to Rikers Island.

At best one-half and at worst one-quarter of our admissions complete treatment and transfer to long-term methadone maintenance or alternative programs. Thus, many individuals introduced to treatment remain in the throes of an addictive lifestyle while others do make the transition to treatment. Many who drop out are lost to follow-up, or they are re-incarcerated and do not return to treatment. The factors that underlie treatment dropout should be assessed and the program developed to enhance retention. We plan to evaluate whether the use of LAAM, with its less inconvenient schedule, contributes to greater treatment retention. Stabilizing on methadone dose and receiving help with concrete services improves the

chances that some of these patients will decide to continue on methadone maintenance treatment and avoid re-arrest.

Even though KEEP was designed as a long-term detoxification program, few of our patients actually go through a planned detoxification process. If they decide to discontinue methadone, they usually walk away. There are not many success stories.

Finally, with the recent governmental emphasis on welfare-to-work, which insists that persons receiving public assistance abstain from any drug use and be ready to work, vocational rehabilitation services have assumed renewed significance. The impact of KEEP in terms of preparing people for employment has yet to be adequately assessed.

Nonetheless, despite its very limited success in rehabilitating heroin users, KEEP has proven to be extremely beneficial to some in allowing them a significant change in lifestyle.

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