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Uses of Coercion in Addiction Treatment: Clinical Aspects

Maria A. Sullivan, MD, PhD,[1] Florian Birkmayer, MD,[2] Beth K. Boyarsky, MD,[3] Richard J. Frances, MD,[4] John A. Fromson, MD,[5] Marc Galanter, MD,[4] Frances R. Levin, MD,[1] Collins Lewis, MD,[6] Edgar P. Nace, MD,[7,8] Richard T. Suchinsky, MD,[9] John S. Tamerin, MD,[10,11] Bryan Tolliver, MD, PhD,[12] Joseph Westermeyer, MD, PhD[13,14]

[1]Columbia College of Physicians & Surgeons/New York State Psychiatric Institute, New York, New York
[2]Department of Psychiatry, University of New Mexico, Albuquerque, New Mexico
[3]Committee for Physician Health, Albany, New York
[4]Department of Psychiatry, New York University School of Medicine, New York, New York
[5]Department of Psychiatry, Harvard Medical School, Boston, Massachusetts
[6]Washington University School of Medicine, St. Louis, Missouri
[7]University of Texas, Southwestern Medical School, Dallas, Texas
[8]Private practice, Dallas, Texas
[9]Private practice, Washington, District of Columbia
[10]Department of Psychiatry, Cornell/Weil School of Medicine, New York, New York
[11]Private practice, Greenwich, Connecticut
[12]Medical University of South Carolina, Charleston, South Carolina
[13]Department of Psychiatry and Medical Director, Mental Health Service, Minnesota VAMC, Minneapolis, Minnesota
[14]Department of Psychiatry, University of Minnesota, Minneapolis, Minnesota

Coerced or involuntary treatment comprises an integral, often positive component of treatment for addictive disorders. By the same token, coercion in health care raises numerous ethical, clinical, legal, political, cultural, and philosophical issues. In order to apply coerced care effectively, health care professionals should appreciate the indications, methods, advantages, and liabilities associated with this important clinical modality. An expert panel, consisting of the Addiction Committee of the Group for the Advancement of Psychiatry, listed the issues to be considered by clinicians in considering coerced treatment. In undertaking this task, they searched the literature using Pubmed from 1985 to 2005 using the following search terms: addiction, alcohol, coercion, compulsory, involuntary, substance, and treatment. In addition, they utilized relevant literature from published reports. In the treatment of addictions, coercive techniques can be effective and may be warranted in some circumstances. Various dimensions of coercive treatment are reviewed, including interventions to initiate treatment; contingency contracting and urine testing in the context of psychotherapy; and pharmacological methods of coercion such as disulfiram, naltrexone, and the use of a cocaine vaccine. The philosophical, historical, and societal aspects of coerced treatment are considered. (Am J Addict 2008;17:36–47)

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Address correspondence to Dr. Sullivan, Department of Psychiatry, NYSPI, Substance Use Research Center, Unit 120, 1051 Riverside Dr, New York, NY 10032. E-mail: sulliva@pi.cpmc.columbia.edu.

INTRODUCTION

Practitioners in the field of addiction treatment routinely encounter ambivalence in their patients' motivation to seek treatment and follow clinical recommendations. Indeed, such ambivalence is understood to be integral to the process of effecting change.[1] It is hoped that patients will work through their conflicts about alcohol or drug use in order to reach a state of decisive readiness to embrace sobriety. Yet even patients who remain ambivalent about their substance use can benefit, so long as they remain engaged in treatment. However, psychiatrists and other clinicians treating individuals with addictions must at times confront another dilemma: under what circumstances should treatment be imposed over a patient's objections? In the United States, clinicians can, and indeed are, expected to undertake coerced treatment under certain circumstances, so the operative question is not so much "can" as "when" or "under what circumstances should" treatment be coerced. What are the legitimate uses of coercion in engaging a patient who refuses treatment because the substance use disorder is impairing his or her perception of the gravity of the disorder and its consequences?

In this review, we will consider a range of indications for coercion and practices that may serve as therapeutic tools in addiction treatment. Our discussion will focus on several broad areas where coercion may play a role:

- indications for compelling an individual to seek treatment,
- the application of coercive techniques in behavioral therapy and psychotherapy,
- pharmacological methods of coercion, and
- societal, cultural and legal dimensions of coercion.

We will also address the limitations and possible abuses of such practices and suggest clinical guidelines for the application of coercion.

The crux of coercion is to motivate the patient to comply with addiction treatment by enforcing alternative consequences.[2] In practice, the individual is rarely forced to comply with addiction treatment. However, an element of coercion in treatment often exists, such as when treatment is offered as an option to alternative consequences of addiction (eg, legal sentencing, loss of employment, loss of parental custody). Within the family setting, the consequences of refusing treatment may be the loss of marriage or the withdrawal of financial or emotional support by other family members. Within the occupational or professional context, consequences of refusing treatment might include termination or the loss of licensure. Therapeutic interventions are more likely to succeed if avoiding such alternative consequences is contingent not only on entering treatment, but on continued compliance with addiction treatment.[3]

Despite research literature confirming the efficacy of coerced addiction treatment,[2,4] many clinicians are reluctant to invoke such techniques with patients. For some, concern about patient autonomy—even when such autonomy is clearly compromised by the cognitive and neurobiological effects of alcohol or substance abuse—is the primary deterrent to the use of coercive techniques. For other clinicians, a lack of experience with such interventions makes them reluctant to implement coercive strategies even when the therapeutic benefit seems clear.

In this paper we will consider the possible roles for coercion as a clinical tool. Case vignettes illustrating several mechanisms of coercion will be discussed, and their implications for clinical practice explored. We believe that the topic of coercive treatment is especially relevant to the treatment of the addictions, yet to date this technique has not received sufficient serious consideration as a therapeutic modality. We are also aware that any coercive practice carries the possibility of misuse, and we will seek to suggest a number of appropriate uses of coercion in addiction treatment, while highlighting limits on their application. In this report, we seek to present indications and methods that are currently supported by law, court decisions, ethics, and clinical guidelines in the United States.

HISTORY OF COERCED TREATMENT

Until the nineteenth century, addictive disorders were viewed as matters of moral weakness. Thus, people unable to control use of alcohol, opium, or other addictive disorders were seen as morally weak, sinful, or otherwise evil people. Consequences of addiction thus involved alternatives such as social extrusion, incarceration, or other forms of punishment.

Historically, beginning in the 1700s, many psychiatrists have recognized significant self-harm as a sufficient criterion for involuntary treatment. While we physicians have a long tradition of engaging in involuntary treatment for mental illness, in recent decades there has been both professional and cultural resistance against extending such mandatory treatment to substance abusers who have not entered the legal system. By contrast, for drug addicts who get arrested, the choice is more clearly presented: drug courts offer forced substance abuse treatment as an alternative to a prison sentence. The current public ambivalence over whether non-criminal substance abusers should be seen as having an illness or a weakness of will has resulted in lagging support for substance abuse commitment policies. By contrast, in the 19th century, public opinion on this subject was more clear and had consequences for mental health policy. At that time, the prevailing view of addiction shifted away from its being a moral failing, toward a view of substance use as akin to insanity. In keeping with these attitudes, by the middle of the 19th century, states began developing substance abuse commitment codes and funding institutions to which addicts could be committed.

Shortly after the Harrison Act of 1914, the narcotics unit of the U.S. Treasury Department persuaded Congress to establish a chain of federal "narcotics farms," where heroin addicts convicted of federal law violations could be incarcerated and treated for addiction.[5] The first of these farms was the U.S. Public Health Service Hospital, established in Lexington, Kentucky, in 1935. A second hospital was established three years later in Fort Worth, Texas. Such farms housed both prisoners and voluntary heroin addicts. The goal of these facilities was to use psychiatric and vocational therapies to create a serene respite that would permit the rehabilitation of the individual. These narcotic farms had limited success because of certain design flaws, including a lack of mechanisms for holding voluntary patients until they had achieved some measure of recovery and a lack of aftercare services.[6]

About thirty years later, in the context of growing numbers of heroin addicts in the early 1960s, California implemented the first formal civil commitment program for addicted individuals in the United States in 1962. New York and the federal government followed suit within the next five years. The civil commitment process allowed willing addicts to "volunteer" for treatment (without involvement of the criminal justice system) and for addicts to be involuntarily admitted for treatment (by family or officials who believed there was imminent danger of self-harm or danger to the community). These civil commitment practices fell under suspicion in the 1970s because of concerns about due process issues related to lengthy stays in commitment facilities in which the environment was more correctional than therapeutic.[6]

Public ambivalence in recent decades eroded support for these laws, and contemporary policymakers continue to struggle with the extent to which substance abusers should be subjected to involuntary treatment.[7] Within the state of New York, it is rare for chronically substance-dependent individuals to be involuntarily admitted for a psychiatric admission unless the presence of a co-morbid psychotic or severe mood disorder can be documented. Emergency room psychiatrists may invoke "soft" evidence to support such a mentally ill chemically abusing (MICA) admission (eg, substance-induced mood symptoms or psychotic symptoms that clear after stopping the drug), and psychotropic agents are frequently prescribed to justify the MICA diagnoses. This philosophical stance—that substance abuse treatment must be entered into voluntarily—reflects a belief that drug dependence is fundamentally a free choice, an act of the will that cannot be countermanded by treatment interventions over the objection of the patient. Yet numerous clinical studies attest to the effectiveness of both psychotherapeutic and pharmacological means of coercing patients to enter treatment and to remain abstinent. In a study evaluating recovery following involuntary hospitalization of violent substance abuse patients, 60% of patients (12/20) maintained total abstinence at follow-up ranging from 3 to 24 months.[8]

COERCION AS A MEANS OF INITIATING TREATMENT

Perhaps the most widely recognized example of coercing a patient to enter treatment is the Johnson Intervention, a therapeutic technique in which members of the patient's family or social group confront him or her about the consequences of drinking or drug use.[9] This approach is considered coercive because the family members and friends set forth the consequences of continued drug use, namely certain losses that the individual will suffer, and contrast these with the outcome of addiction treatment. One group of researchers, in comparing methods of referral to outpatient addiction treatment, found that the coerced referral groups were more likely to complete treatment than those in the non-coercive referral groups.[10]

Whether this procedure takes place in the familial, social, or occupational context, we may identify several components of a successful intervention. First, a trained and experienced intervention leader is essential. This interventionist will select and train the other intervenors, set goals for the intervention, rehearse the intervention so that team members understand their roles and can practice what they will say, and promptly expedite the referral for recommended treatment.[11] Second, the location and timing of the intervention is important. An early morning intervention, prior to the intake of drugs or alcohol, is recommended either in the addict's home or in some neutral site. In addition, an intervention carried out immediately after an addiction-precipitated crisis is likely to succeed. Third, the intervention team members must document factual data and agree upon shared goals. The addict should be presented in writing with the team members' experiences of behaviors related to his or her addiction. He or she should be clearly told why the intervention is necessary. The personal, social, health-related, legal, and professional implications of the illness should be set forth.[11] The successful carrying out of an intervention requires careful planning as well as a post-intervention regrouping to process the intervention team's thoughts and feelings about the event, regardless of its outcome.

The intervention team should include the most significant people in the addicted person's life: family members, close friends, supervisors, peers, or hospital administrators. The intervention must be planned to allow adequate time for discussion and relief from regular work duties. The following vignette (de-identified to protect confidentiality) illustrate such an intervention.

> *Case example 1*. A 38-year-old married airline pilot had been drinking heavily on the days when he was not on flying duty, increasing his consumption to 8 to 12 drinks per day. Several fellow pilots became aware of his heavy drinking through observations at social events in their homes and the local community. They spoke to his wife about their concerns and their intent to confront him regarding his drinking. She endorsed their observations, shared their concerns, and agreed to attend the intervention, but did not want to speak about her concerns at the meeting. The pilots planned to report their concerns to the airline and Federal Aviation Agency if he did not voluntarily seek treatment, thereby triggering a mandatory evaluation. He could retain his position with the airline if he sought evaluation and treatment voluntarily, but could lose his position and his license if he was found to have a substance use disorder for which he was not voluntarily seeking care. The man agreed to enter treatment immediately. He responded well to treatment and returned to flight status six months later under close monitoring.

> *Case example 2*. At the end of a work day, a 40-year-old neurologist was found scavenging through left-over ampules of hydromorphone hydrochloride in a cardiac catheterization lab. When confronted by the hospital administration and his chief of service, he initially denied using this drug, saying that he was concerned that medication with high addiction potential could be abused. He also said that he was acting as "a good Samaritan" and actually collecting the partially filled ampoules so that they could be discarded. He had no answer when asked why he would ever need to be in that particular area of the hospital, except to say that he often "roamed around" the building in his spare time. The chief asked the physician to voluntarily stop practicing and scheduled an intervention with the state physician health program. During this highly emotionally charged experience, the physician admitted to using IV hydromorphone hydrochloride for the past two months and was able to identify significant psycho-social stressors. These included the birth of his first child and extreme financial pressures associated with buying new office space. The physician was told that involvement with the state licensing board was inevitable, but that for his safety and the safety of his patients he should stop practicing, enter into a treatment program, and begin a monitoring contract after treatment to document that he was indeed substance-free and in recovery. He was also asked that he personally notify the state licensing board about these events. After much ambivalence, primarily centered around his fear of losing his license, he did notify the licensing board and was admitted into a treatment program, which he completed successfully. He subsequently began a monitoring contract with the physician health program and entered into a publicly disclosed probationary agreement with

the licensing board. One year later, the physician was actually grateful that he was alive, in recovery, able to maintain his family relationships, and resumed the practice of medicine.

Often in special populations, such as physicians who practice in institutional or group settings, systemic issues act as barriers to their getting treatment for substance use disorders. For example, reluctance on the part of physicians to confront a colleague who is suspected of having a problem may be due to the fact that the concerned colleague may be the physician's friend, business associate, or coverage partner. If a physician with a problem is a significant revenue producer, the hospital may be reluctant to take action for fear that business will be taken to a rival institution. At community hospitals, the chief of service may be appointed on a voluntary, rotating basis, often with no formal training on how to be a supervisor and deal with a problem physician. On a personal level, physicians may be reluctant to confront a colleague due to their over identification with the physician, thinking that, "It could just as easily be me with the problem." Ironically, that is precisely the reason why colleagues need to reach out and let the physician with a suspected problem know that one is indeed concerned about them. They need to know that there is help, it works, and that while support may not always feel supportive, others do care deeply about them.[12] Addicted persons who voluntarily enter the recommended treatment after assessment, successfully complete their treatment, and enter into a monitoring program sponsored by their state medical society will frequently avoid punitive sanctions and may receive advocacy instead.[11]

COERCION IN THE CONTEXT OF THERAPY

The use of "leverage" or coercion in psychotherapy or behavioral therapy for substance abusers represents a departure from the psychodynamic tradition, in which patients are guided to identify and confront internal psychological conflicts through unstructured, exploratory free association. In addition, it is a principle of the psychodynamic tradition that the therapist not take any responsibility for the patient's behavior, as to do so would be infantilizing for the patient.

Psychodynamic psychotherapy is ill suited to dealing with substance-abusing patients because there are no behavioral controls to prevent the recurrence of drug use, nor are there any resources to conduct a behavioral intervention if and when a relapse occurs. Because of its inherent lack of limit-setting, psychodynamic psychotherapy fails to provide guidelines for dealing with intoxication during sessions, absences related to drug use, and dropouts because the primary problem is not brought under control. In addition, the anxiety-arousing nature of exploratory psychotherapy may give rise to intolerable affective or anxiety states that then drive a reinstatement of substance use.

Psychiatrists and other therapists working with addicted individuals recognize that drug-taking is a powerfully conditioned behavior marked by neurobiological changes in the reward pathways of the addict's brain. Individuals seeking treatment for addictions require more active limit-setting by the therapist. The presenting symptom, compulsive drug use, is initially intensely gratifying, although the long-term consequences are painful and destructive. Therapists who offer psychodynamic psychotherapy, with therapeutic neutrality and absence of structure, often find that their patients' substance abuse continues unabated and undermines the treatment.

One critical tool in the psychotherapeutic armamentarium is that of contingency contracting. This practice involves drawing up a "contract" in which the patient agrees to perform certain behaviors or else face aversive consequences (eg, sending money to one's most disliked charity, losing a license to practice a profession). Some behavioral contracts also include positive consequences (eg, receiving money) if the patient fulfills the conditions of the contract.[13] The psychotherapist may also require that a patient initiating outpatient psychotherapy sign a behavioral contract agreeing to certain conditions of treatment, such as attending therapy sessions completely sober, refraining from seeking controlled prescriptions (ie, benzodiazepines, opioids) from any other physician, admitting to any lapse or relapse, submitting a urine sample at any time upon request, and granting permission for the therapist to contact the patient's spouse or significant other if relapse occurs. In some instances, the patient may hold a job in which continued drug or alcohol use endangers the welfare of others. In this case, the patient may be required to prepare a letter informing his employer or state medical board of his addiction problem. If the patient relapses or drops out of treatment, his or her signed treatment contract grants permission for the therapist to mail this letter to the intended party. Such contracts can function as powerful external incentives to motivate continued participation in treatment and to secure sustained abstinence. Contingency contracting is often coupled with urine monitoring as a means of verifying the patient's self-report of drug use or abstinence.[14]

Although it is a form of intrusive surveillance, urine testing is often considered an essential component of outpatient individual or group therapy with substance abusers. Addicts usually appreciate mandatory urine testing because it helps them counteract their urges to use and to conceal their use.[15] Urine testing also keeps the patient from duping the therapist and thereby devaluing his or her treatment. Urine testing also allows family members and employers to be more supportive of the recovering addict because they need not constantly scrutinize him or her for signs of possible relapse. To ensure accuracy of urine testing, all samples should be "supervised" or witnessed by a same-sex staff person to prevent attempts at falsification. If sufficient staff are not available, a "buddy" system may be employed in which patients give urine samples under the supervision of a same-sex group member, according to a rotating schedule. When on-site testing is not available, a chain-of-custody procedure should be implemented to ensure that the sample taken at a remote location is transported safely to an analysis site. The specimen is labeled and sealed such that it is tamper-proof and can be accurately identified upon arrival. Given the sensitivity limits of standard laboratory testing methods, urine

samples should be collected at least every 3–4 days.[15] Urine samples should be routinely tested for all commonly abused drugs including opiates, marijuana, cocaine, amphetamines, benzodiazepines, and barbiturates. Urine testing should be continued throughout the entire duration of the treatment program. Even when patients have achieved several months of abstinence, it is useful to continue occasional random urine testing. In addition to urine drug testing, which remains the standard for drug use monitoring, sweat testing for drugs of abuse is increasing, especially in criminal justice programs.[16] Sweat patches provide an advantage over urine drug testing by extending drug detection times to one week or longer.

Urine testing in the workplace enjoys regulatory approval under guidelines set forth by the National Institute on Drug Abuse (NIDA), the Department of Transportation (DOT), and the Nuclear Regulatory Commission (NRC). While these regulations were designed to address specific employment settings, they have been adopted by many employers as carrying regulatory approval for urine drug testing in a wide variety of work settings.[17] According to guidelines published by the U.S. Department of Health and Human Services,[18] a positive screening test obtained in most settings including the workplace should be followed by more specific testing (ie, gas chromatography/mass spectrometry) before sanctions are imposed. The standard of drug testing in the workplace includes secure collection, chain of custody, investigation by a medical review officer, and retention of positive samples for possible re-testing.[18] Similarly, when urine testing results are used for legal purposes (eg, parolee monitoring), a chain-of-custody protocol is also used to ensure that a sample has not been compromised and that legal standards for protection of evidence are maintained. The collection site (laboratory, physician's office or place of employment) must have trained personnel and adequate facilities to provide secure storage for samples awaiting analysis.

There has been growing evidence in the last decade that individuals who receive long-term aftercare and urine monitoring have better treatment outcomes than substance abusers who are less closely monitored. Frequent urine testing for illicit opioid and cocaine use in methadone programs has been found to produce more accurate use rates and help indicate the direction of needed interventions.[19]And in the treatment of therapy-resistant chronic alcoholics, an intensive outpatient approach developed in Germany has shown that monitored ingestion of disulfiram, as well as regular urine analysis for alcohol, yielded an abstinence rate of 60% at 6–26 months. The introduction of "control factors" thus appears to represent a promising advance for this population of treatment-resistant alcoholics.[20]

The advent of on-site urine drug testing has increased the use of drug testing in the workplace. Employees testing positive for illicit substances are often coerced into substance abuse treatments under threat of job loss. Lawental et al.[21] compared pre-treatment problems, treatment performance, and post-treatment outcomes in a large sample of self-referred treatment program participants vs. those coerced into treatment following detection of drug use at work. They found that the coerced group was significantly more likely to remain in treatment and had post-treatment improvements in alcohol and drug use as well as several other domains of functioning that were comparable to those shown by the self-referred patients. Further, workplace urine surveillance was successful in detecting employees with significant substance abuse problems. Among professionals with substance abuse problems, participation in a controlled aftercare program has been shown to be extremely effective. Reading found that New Jersey physicians who had completed a formal treatment and two years of program involvement had an overall success rate of 97.5%, and he attributed this to the frequent and structured outpatient counseling these physicians received.[22] In another study of impaired physicians participating in urine monitoring, 12-step participation, and family therapy, Gallegos et al. reported that 77/100 physicians in the Georgia Impaired Physicians Program maintained documented abstinence from all mood-altering substances for 5–10 years after initiating a continuing care contract.[23] Shore found that among 63 impaired physicians on probation with the Oregon Board of Medical Examiners, over an eight-year period there was a significant difference in the improvement rate for monitored individuals (96%) versus treated but unmonitored addicted physicians (64%).[24] Such findings support the fact that random urine monitoring, despite its coercive nature, is associated with improved treatment outcome. An increasing body of literature on the treatment of addicted physicians underscore the value of strict aftercare monitoring. These studies also highlight the fact that the majority of physicians who complete treatment and undergo aftercare monitoring can successfully return to the practice of medicine.

One specific coercive use of urine testing is in relation to treatment-termination contracting. This intervention employs the contingent availability of further methadone treatment as a strategy for compelling abstinence from other drugs. McCarthy and Borders showed that the threat of methadone withdrawal for failure to meet specified standards of drug-free urine samples significantly reduced illicit opioid use and improved retention in treatment.[25] Liebson and colleagues found that such negative contingency contracting increased compliance with disulfiram treatment among methadone-maintained alcoholic individuals.[26] However, this strategy is not without its risks. While several studies have showed that 40–60% of patients will reduce or stop substance use under the threat of dose reduction or treatment termination,[25,27,28] this approach is often counterproductive. Individuals with more severe polysubstance abuse tend to be unable to reduce their use under these conditions, and are thus forced to withdraw from treatment.[27,29] Negative contingency contracting may therefore have the undesired outcome that the most severely impaired patients, who need treatment most, are forced to terminate treatment.[30]

Although not coercive in the strict sense, contingency management exists on a continuum with contingency contracting. Contingency management relies upon the behavioral principle

that behaviors that are rewarded or reinforced are more likely to be repeated in future. In many contingency management-based treatment programs, patients receive specific rewards for each urine specimen that tests negative for drugs. These rewards typically consist of vouchers that can be exchanged for retail goods and services, such as movie theater tickets or gift certificates for clothing, sports equipment, or electronics. In contingency management, voucher-based reinforcement of abstinence has been found to reduce cocaine abuse among methadone-maintained patients[31] and marijuana-dependent adult outpatients.[32] Higgins et al. have demonstrated that the treatment effects of voucher incentives endure after cessation of the contingencies.[33]

We find a clear example of the potential benefits of coercive treatment in the practice of establishing prison-based therapeutic communities. While these programs foster self-help in addressing life difficulties, and the individual may decline TC participation, the context in which participation takes place is perforce one of diminished autonomy. The alternative to participation is to serve a standard prison sentence. Wexler reviews outcome studies demonstrating that such therapeutic communities, while modified for a correctional setting, result in reduced recidivism by fostering personal responsibility for behavior and social integration.[34] Melnick et al. found that the effect of TC participation on subsequent recidivism was mediated through entry into aftercare programs, as aftercare participation had a direct effect on diminishing relapse and recidivism. The authors further observed that program compliance based on external pressures without internal motivation was not associated with better outcomes. Rather, the interaction of motivation and participation early in the treatment process predicted entry into aftercare several months later.[35]

PHARMACOLOGICAL METHODS OF COERCION

The treatment of alcohol dependence enjoys the longest history of an effective pharmacological agent that mandates abstinence. Disulfiram (antabuse) inhibits aldehyde dehydrogenase, thereby leading to an accumulation of acetaldehyde if alcohol is consumed. Acetaldehyde is highly toxic; it produces nausea, diaphoresis, and hypotension, which in turn may lead to shock and prove fatal. In recent years, a lower dose of disulfiram 250 mg has been used, and no deaths have been reported from its use for a number of years.[36] Because disulfiram takes up to five days to be fully excreted, a single dose will deter drinking for a 3–5-day period. Thus, although daily dosing is recommended, patients may benefit from observed ingestion of antabuse twice per week at the clinic or in the therapist's office. The vast majority of patients—76% in one study[37]—will not risk drinking on disulfiram.

As only the most highly motivated patients would willingly and regularly take disulfiram, its appropriate use involves supervision by a family member or professional. It should be taken in the morning, when the urge to drink is generally lowest. Typically, the patient's spouse observes the patient ingest the antabuse and performs a visual inspection of the mouth to confirm compliance. Such monitored ingestion may be incorporated as a technique in Network Therapy.[38] In this format, each day the observer records the time the pill is taken on a list prepared by the therapist. The observer brings the list to the therapist's office at each network session. If ingestion is not clearly observed on a given day, the observer leaves a message on the therapist's answering machine to this effect. Problems in compliance with the medication regimen are not policed by network members; rather, these issues are discussed in individual and network sessions.

Although monitored ingestion of disulfiram is a coercive practice and suggests that patients cannot be expected to continue such a program based on internal motivation alone, its therapeutic benefits are nevertheless well documented. By rendering alcohol physiologically unavailable, disulfiram reduces craving and enhances motivation for taking the medication the following day. In addition, because alcohol consumption is not an option, patients learn more adaptive strategies for coping with cues or triggers that previously resulted in abuse of alcohol.

PHILOSOPHICAL, HISTORICAL, SOCIETAL, CULTURAL, AND LEGAL DIMENSIONS OF COERCION

Philosophy of Coerced Treatment

The prospect of compulsory treatment for drug addiction has raised both philosophical and clinical objections.[39,40] Some researchers have argued that involuntary treatment represents a substantial violation of personal liberty or deprives individuals of their right to participate fully and freely in society. Others oppose coerced treatment on clinical grounds, maintaining that treatment can only be effective if the person is motivated to change (ie, the addict must "hit bottom" before he can benefit from treatment). From this viewpoint, it is a poor investment to devote resources to individuals unlikely to change because they have little motivation to do so. Still others have argued that in a society where treatment slots are limited, providing treatment to addicts who do not really want it—even if they would benefit from it—ahead of those who desire treatment violates notions of distributive justice.[41]

While some view addiction as a product of individual choice, we have suggested that control is vital to the concept of personal responsibility. Factors that affect personal responsibility in addictive diseases include awareness of the problem, knowledge of a genetic predisposition, understanding of addictive processes, comorbid psychiatric or medical conditions, adequacy of the support network, nature of the early environment, degree of tolerance of substance abuse in the sociocultural context, and the availability of competent psychiatric, medical, and chemical dependency treatment.[4] In addition, extended or excessive use of alcohol or other drugs may result in permanent cognitive deficits that interfere with treatment planning, insight, and impulse control. These cognitive deficits are often mislabeled as denial. Whereas the

initiation of substance use may be an act of free will, continued abuse—after certain neurochemical changes have taken place in the brain—may fall more toward the deterministic end of the behavioral spectrum.[42]

Advocates of coerced treatment point out that few chronic addicts will enter and remain in treatment without some external motivation, and legal coercion is as justifiable as any other motivation for entry into treatment.[43,44] Moreover, many "coerced" clients do not experience their referral as involuntary. A NIDA-funded Drug Abuse Treatment Outcome Study (DATOS) found that 40% of clients referred to treatment by the criminal justice system felt they "would have entered treatment without pressure from the criminal justice system."

The involuntary treatment of substance use disorders remains highly controversial in some sectors, despite legal mandates and thousands of court cases. The civil libertarian position, as expressed by John Stuart Mill (1859) argues that

> the sole end for which mankind are warranted, individually or collectively, in interfering with the liberty of action of any of their number, is self-protection. That the only purpose for which power can be rightfully exercised over any member of a civilized community, against his will, is to prevent harm to others. His own good, either physical or moral, is not a sufficient warrant.[45]

According to this standard of ethics, coercive treatment of substance abuse can only be justified if it is not actually against the individual's will, or the addict is causing harm to another person. Adhering to this standard, Ker et al. assert that because the majority of substance abuse clients surveyed while in treatment say they want to quit smoking,[46,47] it is not a violation of their will to require it in chemical dependency programs.[48] This argument does not fully address the issue of imposing smoking cessation on the minority of clients who may not wish to quit. Yet it has also been argued that because society as a whole benefits from controlling drug addiction, the criminal justice system should bring drug-abusing offenders into treatment in order to safeguard and promote the well-being and interests of the community.[49,50] Criminal justice referrals constitute a substantial proportion (ie, 40–50%) of the publicly funded drug treatment population in the United States.[41] Indeed, for many addicts, the only way they will receive treatment "in spite of themselves" is to end up in the criminal justice system, which is gradually evolving into an involuntary treatment system.[4]

Objections to coercive treatment options are often inspired by ethical concerns regarding the principle of autonomy in patient care. However, another central principle in medical ethics that is very pertinent to coercive treatments is beneficience. Definitions of beneficience center on the concept that it is the duty of health care providers to be of benefit to the patient, as well as to take positive steps to prevent and to remove harm from the patient.[51] Autonomy and beneficience sometimes conflict in medicine; some coercive measures should be interpreted as a way to provide good care.[52] Under the principle of beneficience, failure to increase the good of others when one is knowingly in a position to do so (ie, to offer effective treatments) is morally wrong.[53–55] As the evidence reviewed in this article suggests, coercive treatments are effective. Therefore, it would be unethical to withhold effective treatments, such as the coercive treatments described here, to the patients who could benefit from them.

While the philosophical discussion of free will and determinism has an ancient tradition, recent advances in neuroscience have added a biological dimension to this debate. For instance, advances in functional brain imaging have linked perceptual processing in the extrastriate visual cortices in the fusiform and superior temporal gyri to the formation of social judgments.[56] However, even if the mental is reducible to the physical, it does not follow that free will is merely an illusion. In translating neuroscientific discoveries to the practice of addiction psychiatry, we must confront the question of impaired consent. Do the neurobiological sequelae of drug addiction constitute a state of compromised autonomy? And from a social and ethical standpoint, who would give permission for treatment on behalf of those who cannot give it by themselves?[57] Such questions lie within the domain of the emerging field of neuroethics.

Science, Society, and Coerced Treatment

Assisted outpatient treatment is a legal intervention intended to improve treatment adherence among persons with serious mental illness. While opponents of coerced treatment argue that such mandates represent coordinated efforts to tighten social controls on people with mental illness, advocates of these policies believe that mandated care can be patient-centered in that it promotes patients' engagement in their care to the maximun extent consistent with their abilities. Similarly, using incentives and disincentives to promote adherence is patient-centered care to the extent that these interventions are experienced by patients as being clinically grounded in a caring therapeutic relationship.[58]

Guidelines to help clinicians identify which patients are appropriate for involuntary outpatient treatment have been set forth by Geller.[59] These guidelines begin with the premise that the patient has a chronic mental illness and a related history of dangerousness to self or others. The treatment guidelines follow a sequential order; the patient must meet the criteria for each guideline before being evaluated on the next guideline. The guidelines are as follows:

1. the patient must express an interest in living in the community;
2. he must have previously failed in the community;
3. he must comprehend the outpatient treatment requirements;
4. he must have capacity to comply with the involuntary treatment plan;
5. the ordered treatment must have demonstrated efficacy;
6. the ordered treatment must be able to be delivered by the outpatient system, be sufficient for the patient's needs, and be necessary to sustain community tenure;
7. the treatment can be monitored by outpatient treatment agencies;

8. the outpatient treatment system must be willing to deliver the ordered treatments and be willing to participate in enforcing compliance;
9. the public sector inpatient system must support the outpatient system of involuntary community treatment; and
10. the outpatient must not be dangerous when complying with the ordered treatment.

Geller notes that community care that provides "an atmosphere that respects individual autonomy, enhances individual dignity, and encourages independence[60]" may be achievable only through coercion, for some persons.

> *Case example 3*. A 26-year-old unmarried woman, unemployed with a history of heroin dependence, bipolar disorder, and borderline personality disorder, was hospitalized in a manic state, in the context of non-compliance with mood stabilizers and a relapse to heroin use. She had had two near-fatal heroin overdoses in the six months prior to admission. Her history was also notable for 24 prior psychiatric hospitalizations, episodes of self-mutilation, and non-compliance with both psychiatric medications and buprenorphine. During her hospitalization, the inpatient team applied for AOT and attended a court-ordered hearing for this patient. Based on the patient's desire to live in the community but dangerousness to self and repeated failures in outpatient treatment, an AOT order was granted. She was mandated to daily attendance at a methadone program, attendance at recovery group therapy four times per week, and compliance with pharmacotherapy visits. She was also assigned a case manager who monitors her attendance at the methadone program to which she was referred. Urine toxicologies are collected weekly, and the results made available to her case manager, who is in regular contact with her treatment team. Failure of compliance with any element of her mandated outpatient treatment program may result in immediate involuntary hospitalization. Her primary psychiatrist reports that the patient has thus far remained abstinent from opiates and compliant with medications for the past three months, her longest period of mood stability and sobriety in the past seven years.

Forty-two states permit the use of assisted outpatient treatment (AOT), also called outpatient commitment. AOT is court-ordered treatment (including medication) for individuals who have a history of medication noncompliance, as a condition of remaining in the community. AOT has been proven to be effective in reducing the incidence and duration of hospitalization, homelessness, incarcerations, and violent episodes. AOT also increases treatment compliance and promotes long-term voluntary compliance. Data from the New York Office of Mental Health on the first five years of implementation of Kendra's Law indicate that of those participating, 77 percent fewer were hospitalized (97 percent vs. 22 percent).[61] Several studies have clearly established its effectiveness in decreasing hospital admissions.

A randomized controlled study in North Carolina demonstrated that intensive routine outpatient services alone, without a court order, did not reduce hospital admission. When the same level of services (at least three outpatient visits per month with a median of 7.5 visits per month) were combined with long-term AOT (six months or more), hospital admissions were reduced 57 percent and length of hospital stay by 20 days compared with individuals without court-ordered treatment. The results were even more dramatic for individuals with schizophrenia and other psychotic disorders; long-term AOT reduced hospital admissions by 72 percent and length of hospital stay by 28 days compared to individuals without court-ordered treatment. The participants in the North Carolina study were from both urban and rural communities and "generally did not view themselves as mentally ill or in need of treatment."[62]

AOT also improves substance abuse treatment. Individuals who received a court order under New York's Kendra's Law were 58 percent more likely to have a co-occurring substance abuse problem compared with a similar population of mental health service recipients. The incidence of substance abuse at six months in AOT as compared to a similar period of time prior to the court order decreased substantially: 49 percent fewer abused alcohol (from 45 percent to 23 percent) and 48 percent fewer abused drugs (from 44 percent to 23 percent).

In a review of the empirical literature on the effectiveness of this procedure, Swartz and Swanson conclude that AOT is most effective if it is sustained for six months or more. While AOT remains a controversial treatment strategy, clear practice guidelines for the treatment of specific conditions (eg, substance abuse comorbid with serious mental illness) could improve the understanding and utilization of AOT.[63] Another arena in which important services have been withheld from substance abusers in that of money management assistance. Rosen et al. have documented a significant unmet need for money management assistance among psychiatric inpatients, particularly those with substance use disorders.[64] Yet, in spite of this clear need, patients with comorbid substance use are typically not assigned a payee. Involuntary assignment of a payee based on substance abuse has been deemed controversial because, as substance abuse is often episodic, it is assumed that patients may be able to handle their funds independently when abstinent.[65]

Anglin and Hser recommended four important considerations for designing and implementing programs to serve legally coerced clients:

1. The period of intervention should be lengthy, at least three to nine months.
2. Programs should provide a high level of structure involving either residential stay or close urine monitoring in an outpatient program. Other ancillary services should be offered on an individual basis, including psychological/psychiatric care, vocational training, and GED courses.
3. Programs must be flexible: occasional drug use that does not threaten to disrupt the overall recovery process should be distinguished from relapse requiring detoxification or more intensive treatment.
4. Programs must undergo regular evaluation, preferably by an external evaluator, to determine their level of effectiveness and to detect changes in the client population they serve.[50]

Drug courts comprise an example of a society-wide effort to employ coercion in the service of recovery from substance abuse.[66] The initiative originates with courts of law, rather than from families or individuals. Indeed, many clients in drug courts have been alienated from their families. Thus, drug courts probably comprise a later intervention than might be feasible through commitment. Begun in the 1980s, drug courts use a coercive approach to encourage participation in treatment. Compliance is assessed monthly by a judge; positive behavior and abstinence are rewarded by reduced restrictions, while negative behavior or relapse is addressed by graduated sanctions including incarceration. Neither insight nor internal motivation need be present in order for participants to benefit from court-mandated drug treatment.[67,68] The high program retention rates (more than 70%) and low re-arrest record of drug court graduates represent compelling evidence that such coercive practices can facilitate improved treatment outcomes.[67,69] Further, Farabee et al.[70] found that the use of coercive measures not only increased treatment retention, but also raised the likelihood of the legal offender entering treatment early in his substance-abusing career. Early entry into treatment has been consistently found to be associated with positive treatment outcomes.[71]

Culture, Ethnicity, and Coerced Treatment

"Culture" refers to the social organization, norms, values, and lifestyles of a people who share an over-arching identity and society; United States culture is an example. "Ethnicity" refers to subgroups within a culture that may share specific religion, national origin, language, or dress. Examples include African Americans, Irish Americans, Japanese Americans, Jewish Americans, and Navaho Americans.

Autonomous cultures hold the ideal of the individual as a "rugged individualist" who is a law unto him or herself.[72] In such groups, family members and community peers respect and accept the self-destructive behaviors chosen freely by the group member, so long as the individual does not pose a risk to others. Cultures influenced by earlier Celtic societies and Plains Indians groups exemplify these values.

Such cultures have the advantage of holding individuals responsible for their alcohol and drug consumptions and associated behaviors. However, advanced cases of addiction can stymie families and even the societal institutions of such groups. The following case of a woodlands American Indian highlights the predicament that this value poses for family members.

> *Case example 4*. In therapy, a recovering 28-year-old Chippewa man recalled his father's suicide, which occurred when he was 15 years old. His mother had recently deserted his father and their five children. On a wintry Saturday morning, as the children were playing around the small three-room household, the father—hung over from the previous night's drinking—uncharacteristically took out his shot gun and one shell. He watched spellbound as his father cocked the empty gun and held to his chin, manipulated the barrel around so he could discharge the weapon with his toe, clicked the firing pin against the empty chamber. Then he took the gun down and carefully loaded it with a shell, released the safety, repeated the maneuver with his toe against the trigger. The round blew the top of his father's head off, strewing blood around the room, filled a moment before with children playing and catching up on homework.
>
> The patient even as an adolescent knew exactly what his father was doing, and why. Further, he knew that he could overpower his still drunken father, grab the shotgun, and throw the weapon off into the snowy woods where his father could not find it. Yet the respect for his father's decision restrained any action, even if it meant his father's life.
>
> Parenthetically, this patient—later trained as a counselor—changed his mind about his decision as a 15-year-old. He now wishes that he had grabbed the gun and flung it out into the forest.

Leaving the addicted people to their own destiny is not a "no-fault" exercise for peers and for society at large. The self-destruction, incarceration, or disability of a family member does affect others. In the short term, there is a rip in the social fabric, financial losses, and crisis. Over the long term, the family is exposed to psychopathological role models, negative identities, and social shame. Ultimately, loss and grief ensue.

The "autonomy value" may cause one fail to appreciate that the addicted individual may have a compromised ability to make free, unencumbered choices. The autonomy perspective ignores the coercive forces of acute intoxication and withdrawal, subacute anxiety and depression, and chronic neurophysiological consequences of psychoactive substance use. Family members and society, choosing to support the addicted person's "autonomy," ally themselves with the coercive forces of the psychoactive substance. Family and societal education can help to inform and perhaps modify these cultural values, such as occurred in the life to the Chippewa counselor in the case above.

Collectivistic families and societies can also impede recovery if the group perceives the drinking or drugging behavior as being "normal," even if it is "immoral" or an indication of "weak character.[73]" Examples of collectivistic societies include para-Mediterranean cultures, oriental societies, and many African and Hispanic societies.

> *Case example 5*. A 56-year-old Hispanic married employed patriarch was brought to the hospital with bleeding esophageal varices. Laboratory evaluation revealed elevated liver enzymes and bilirubin with decreased albumin; antibody studies for hepatitis were negative. He had drunk about six beers per evening over the last forty years, with greater intake over the weekends and on vacation (12 beers or more).
>
> Informed on his alcohol abuse diagnosis, he refused treatment, despite the potential seriousness of his resuming alcohol use. His family (wife, two daughters, and one son) would not consider initiating commitment and indeed actively supported the patient in resisting motivational interviewing. They stated that he could not be an alcoholic in view of his stable employment, his care and concern for his family, and the absence of fighting or trouble-making in the local community. This scenario repeated itself on two subsequent admissions for esophageal bleeding over the ensuing six months. He exsanguinated during his third esophageal hemorrhage before he could reach the hospital.

One might argue the family support for the patient's perspective fostered his continued drinking and his early

demise. In this instance, collectivism impaired his chances of recovery rather than enhancing it.

Of course, cultures often involve some elements of both autonomy and collectivism. Even if a society cathects to one of these world views and eschews the other, typically elements of both co-exist. Nonetheless, as exemplified by the two cases described above, these values can have powerful effects in driving addiction-related behaviors.

The uses of psychoactive substances are especially apt to change over time, sometimes over relatively brief periods of years or decades. Adoption of new psychoactive substances can derail cultural stability, especially when the use is integrated into other fundamental aspects of the culture.[74] In Asia, the elimination of widespread opiate addiction in some areas led to increased alcohol abuse.[75] Changes in the social or economic environment of a community can drastically alter substance use.[76]

Most case examples of culture change indicate a deterioration toward pathological substance use or other behaviors. However, numerous examples also document the abandonment of problematic cultural beliefs or customs. Gradual elimination of the Gin Epidemic in England occurred through voluntary and coercive means, including changes in the law (ie, a tax on beverage alcohol), establishment of new abstinence-oriented religions, and distribution of pamphlets that described the depredations of chronic alcohol use.[77] In the United States, anti-smoking laws enacted over the past decade reflect and reinforce stronger negative cultural sanctions against nicotine dependence.

CONCLUSION

To date, coercive treatment has not received sufficient serious consideration as a therapeutic modality within addiction psychiatry. Current public ambivalence over whether non-criminal substance abuse should be seen as an illness or a weakness of will has resulted in a lack of support for involuntary treatment, despite the proven efficacy of such techniques and their special relevance to the treatment of addictions.[66] In light of the compromised autonomy that individuals in the throes of addiction exhibit, coercion may be necessary to initiate treatment, through an organized intervention or other direct confrontation. Cognitive impairment related to addiction may impact on the addicted person's ability to provide informed consent. Recent research in the neurobiological correlates of drug addiction has demonstrated, through functional imaging studies, that addicts have impaired response inhibition and abnormal salience attribution. Their motivation to obtain drugs overpowers the drive to attain most other non-drug-related goals.[78] Motivational impairments and deficits in relative reward processing are consistent with uncontrolled drug-taking behavior and suggest that such individuals may not be capable of giving fully informed consent.

Recent pharmacological advances in the treatment of opiates and cocaine have highlighted how effective some coercive strategies can be. A depot formulation of naltrexone (vivitrol, manufactured by Alkermes) was recently approved for the treatment of alcohol abuse but also holds promise for the treatment of opioid dependence. Given as a monthly injection, depot naltrexone virtually guarantees that heroin-taking will be extinguished. Further, a naltrexone implant currently being tested may block any opioid effects for six months or more. It is possible that depot naltrexone or naltrexone implants may become a legally mandated treatment in the future for patients who enter the criminal justice system. Under such conditions, these formulations would constitute coercive pharmacologic treatment. Similarly, the cocaine vaccine holds the promise of a similar "immunity" to cocaine dependence. This vaccine, which reduces drug craving, is still in efficacy trials but may eventually find application in legally mandated coercive treatment strategies. But the existence of such a vaccine raises important ethical and legal issues. Two fundamental questions that arise are the following:

- Is drug use ever a rational strategy for an addict?
- Does he or she have a right to engage in such behavior as an adaptive mechanism?

Another important question for future informed community debate is what role the cocaine vaccine should play in preventing cocaine addiction in children and adolescents. The efficacy of available treatments for substance abuse highlights the need for informed ethical and clinical discussion of the appropriate uses and limits of coercion in the practice of addiction psychiatry.

While such techniques are coercive to a greater or lesser degree, even mandated therapeutic techniques may be patient-centered in that they promote the individual's engagement in treatment to the fullest extent consistent with his or her abilities. The clinical literature confirms that coercion can be a highly effective therapeutic strategy, and one that patients often retrospectively endorse. Yet clinicians should recall that coercion may have unintended as well as therapeutic consequences. As in all clinical interventions, it is necessary to exercise compassion and wisdom in the use of coercive techniques for the treatment of addictions.

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