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# CLAREMONT McKENNA COLLEGE

# A REEXAMINATION OF UNITED STATES HEROIN POLICY

SUBMITTED TO

### PROFESSOR LYNCH

AND

DEAN GREGORY HESS

BY

DANIEL FOGEL

FOR

### SENIOR THESIS

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# TABLE OF CONTENTS

# CHAPTER I INTRODUCTION AND STATEMENT OF THE PROBLEM

CHAPTER II THE HISTORY OF HEROIN USE IN THE UNITED STATES

CHAPTER III THE CYCLE OF ADDICTION AND INCARCERATION

CHAPTER IV METHADONE

CHAPTER V IBOGAINE: THE MIRACLE CURE?

CHAPTER VI NEEDLE EXCHANGE PROGRAMS

CHAPTER VII THE BENEFITS OF EDUCATION

CHAPTER VIII DECRIMINALIZATION, LEGALIZATION, AND MANDATORY REHABILITATION

CHAPTER IX CONCLUSION AND RECOMMENDATIONS

#### CHAPTER I

#### INTRODUCTION AND STATEMENT OF THE PROBLEM

The drug policy in the United States is in shambles. No matter what one's political leanings, it is clear that the country is in dire need of drug policy reform. Initiatives such as Proposition 19, which attempted to legalize marijuana in California in 2010, have gained national attention, and much of the media's focus on drug reform revolves around efforts to medicalize, decriminalize, or legalize marijuana. However, many of the laws and policies that regulate other drugs have even more devastating consequences, both for those who use them and for the rest of society.

According to a survey by the National Institute on Drug Abuse (NIDA), almost four million Americans have used heroin in their lifetimes, and as of 2003 over 300,000 had used heroin in the past year.<sup>1</sup> Heroin, which is one of the most addictive recreational drugs, kills approximately 2,000 people every year.<sup>2</sup> Addiction psychiatrist Dr. Matthew Tessena notes that heroin has a capture rate—the percentage of first-time users that eventually become dependent on the drug—of 29 percent, higher than any other drug.<sup>3</sup> Randy Brown provides an even higher estimate in the *Wisconsin Medical Journal*, claiming that as many as 53 percent of people who try heroin eventually become dependent on it. In 2002, the Drug Abuse Warning Network (DAWN) reported 93,519 emergency room visits involving heroin.<sup>4</sup>

The graph below is a ranking of the harm of twenty commonly abused drugs, both legal and illegal. Two independent groups of experts rated each drug on a four-point scale in the categories of social harm, physical harm, and dependence. The scores were averaged with equal weight for each category, yielding the following results.



As you can observe, heroin was rated as the most harmful of all twenty drugs studied by a significant margin.

Heroin addicts experience intense negative withdrawal symptoms such as nausea and vomiting that exacerbate the difficulties associated with overcoming the addiction and make it nearly impossible to quit without professional medical help. Mash et al. explain, "The acute withdrawal syndrome in addicts dependent on heroin begins approximately 8 hours after the last heroin dose, peaks in intensity at 1 to 2 days, and subjective symptoms subside within 7 to 10 days."<sup>6</sup> The most recent volume of the *Diagnostic and Statistical Manual of Mental Disorders*—the standard endorsed and published by the American Psychiatric Association for the classification of mental disorders—now recognizes substance abuse as a mental disorder.<sup>7</sup> And yet, we continue to imprison thousands of people for suffering from this disease.

As of June 2009, there were almost 2.3 million people incarcerated in American prisons, and an astonishing 60 percent of federal prisoners were incarcerated for drug-related offenses.<sup>89</sup> Not only does this mass imprisonment cost American taxpayers millions of dollars, it has also led to severe overcrowding in prisons across the country. In 2009, a federal court ordered California to reduce the prison population because "California's prisons remain severely overcrowded, and inmates in the California prison system continue to languish without constitutionally adequate medical and mental health care."<sup>10</sup> Reducing the number of people sent to prison for personal drug use would thus also benefit the millions of inmates suffering the effects of cramped prisons.

A report by the Substance Abuse and Mental Health Services Administration (SAMHSA) estimated that illicit drug addiction cost the United States economy \$160 billion in 2000, and that this number would continue to rise.<sup>11</sup> These expenses are the aggregate of spending on medical care, lost productivity, crime, and incarceration. Imprisoning a single person for one year has an estimated cost of approximately \$30,000, and that does not include the costs of arrest and prosecution.<sup>12</sup> As the United States attempts to recover from one of the worst recessions in recent memory, we cannot afford to incur such high costs in the name of maintaining the status quo. It is important to note, though, that many of these "costs of addiction" may in fact be unintended consequences of the laws that regulate these drugs. In *Drugs and Society: U.S. Public Policy*, Jefferson Fish argues, "Opponents of drug prohibition have long recognized that the great majority

of social ills attributed to drugs are actually the result of the War on Drugs—and specifically of the colossal black market created by prohibitionist policy."<sup>13</sup>

Heroin addicts are at special risk for contracting certain diseases because the primary method of heroin use is by a needle injection. This has led many European countries, and some American cities, to enact needle exchange programs. However, opponents of these programs argue that they encourage the use of illegal drugs and function as an implicit government endorsement of illicit drug use.

Currently, the primary method of treatment for heroin addiction is a drug called methadone. But methadone itself is a dangerous and addictive drug, and surely an insufficient solution to the problem of heroin addiction. Detoxification is another common option. "Detox" consists of staying at a drug-free facility and waiting until the symptoms of withdrawal eventually subside. However, NIDA reports, "Not in itself a treatment for addiction, detoxification is a useful step only when it leads into long-term treatment that is either drug-free (residential or outpatient) or uses medications as part of the treatment."<sup>14</sup>

Another treatment option for people battling heroin addiction is ibogaine, but there's a catch: ibogaine is an illegal Schedule I drug (on par with heroin itself) in the United States. Ibogaine comes from the root of the west African plant *Tabernanthe Iboga*. In 1962, a heroin addict named Howard Lotsof bought some of the iboga plant in a quest to find a new and exciting trip. Instead, after an introspective journey that lasted more than a day, Lotsof discovered that when the effects of the plant subsided, he no longer felt the usual craving for a heroin fix. Lotsof gave the drug to seven fellow drug

addicts, and five out of seven immediately quit their addictions.<sup>15</sup> In 1985, Lotsof was finally awarded a patent for ibogaine for the use of opioid withdrawal.<sup>16</sup>

Between 1962 and 1995, numerous scientists, researchers, and activists attempted to study and patent ibogaine and its metabolites. However, ibogaine was classified as a Schedule I drug in 1967, and the National Institutes of Health (NIH) discontinued funding for research on ibogaine in 1995. Schedule I drugs are defined as having no legitimate medical purpose and a high potential for abuse.

All of the major societal problems associated with heroin use demonstrate that the United States is losing its so-called War on Drugs. The judicial system spends precious time and money to crowd the prisons with non-violent people, the streets are home to too many junkies, countless families are destroyed, hospitals are filled with users whose addictions nearly kill them, and thousands of less fortunate users die every year. And yet, there have been no attempts at sweeping drug policy reform by Congress. There have been small victories such as medical marijuana legislation, marijuana decriminalization, and laws fixing sentencing disparities between crack and cocaine, but these are all minor tweaks, not solutions to the systemic failures of American drug policy. The following chapters will explore specific ideas for reform that can effectively combat the problems that result from rampant drug abuse and the harmful policy of prohibition.

#### CHAPTER II

#### THE HISTORY OF HEROIN USE IN THE UNITED STATES

In the 1800s, before heroin was known in the United States, there was an epidemic of addiction to morphine and opium. The number of opiate addicts rose from no more than 0.72 addicts per thousand Americans prior to 1842 to a whopping 4.59 addicts per thousand in the 1890s.<sup>17</sup> Heroin was introduced as a cough suppressant in 1898, and it quickly led to mass addictions in the New York City area. Unlike morphine and opium use, heroin use was strongly concentrated in urban areas. In fact, David T. Courtwright reports in *Dark Paradise: A History of Opiate Addiction in America*, "by 1920, probably 9 out of 10 American heroin addicts were within 180 miles of Manhattan."<sup>18</sup>

Initially, heroin was thought to have no addictive potential, and it was even prescribed fairly commonly as a cure for morphine addiction. But by the 1910s, with heroin addictions on the rise, physicians finally took notice and began to decrease heroin prescriptions. In 1919, the American Medical Association called for a total ban on heroin.<sup>19</sup>

One of the contributing factors to the rise of heroin addiction was the Smoking Opium Exclusion Act of 1909. While opium was still available subsequent to these regulations, it became far more expensive and could only be acquired in minimal quantities. Heroin, on the other hand, was cheap and accessible. The early 1900s also saw severe restrictions on the legality of cocaine, in turn raising the price of cocaine, and leading many former cocaine users to switch to heroin.

In 1914, Congress passed the Harrison Narcotics Tax Act, which heavily regulated opiates while still allowing for their prescription by licensed medical

practitioners. Many physicians continued to prescribe heroin to addicts to maintain their addictions, but in 1919, in *Webb et al. v. United States*, the Supreme Court held that physicians could no longer prescribe heroin for the sole purpose of maintaining a patient's addiction. Many maintenance clinics sprung up in response to this decision, but the Narcotic Division of the Prohibition Unit of the Bureau of Internal Revenue strongly opposed them, and succeeded in shutting almost all of them down by 1921.<sup>20</sup>

All of these changes in policy and law were reflected in changes in the addict population. Initially, morphine addicts were primarily introgenic addicts, meaning they became addicted after a doctor prescribed them morphine. The addicts of the 19<sup>th</sup> and early 20<sup>th</sup> centuries were also heavily white, female, and upper or middle class. Caroline Jean Acker writes, "[i]f her habit became known to others besides her physician, she typically became an object of pity."<sup>21</sup> As doctors stopped readily prescribing opiates, the addicted population evolved and became dominated by lower-class criminals in the inner cities. Courtwright argues, "the transformation of the addict population was a necessary condition for public support of the 'police approach' to opiate addiction."<sup>22</sup> After this transformation, the sympathy the public had previously held for addicts morphed into disdain. Acker echoes this sentiment, and contrasting the pity felt for the mother addicted to morphine, she observes that if caught, the heroin addict "faced not only legal sanctions but also profound stigma.<sup>23</sup> Understanding the composition of the addict population is integral to understanding the public's reaction to heroin use. "A demographic subgroup reacting to a particular set of public policy and historical changes, these addicts gave rise to an image of deviance that has shaped American drug policy ever since and helped reinforce the moral underpinnings of the war on drugs."<sup>24</sup> This view that addicts were

lower-class criminals justified heroin prohibition at the same time that Americans were celebrating the repeal of alcohol prohibition. Unlike heroin, alcohol was abused fairly equally across all social classes.

Then came the United States' involvement in World War II in 1941. Not only did the war severely restrict the supply lines of foreign heroin into the United States, it also sent twelve million young American men to war. In combination, these two factors almost eliminated heroin use in the United States from 1942 to 1945. Heroin was scarce and expensive, and there were almost no new young addicts in the wartime years. For example, Bellevue Hospital in New York City did not admit a single adolescent heroin addict between 1940 and 1948.<sup>25</sup> But after the war ended, the soldiers returned from abroad, and the supply lines reopened. The epidemic was about to begin. in the first two months of 1951, Bellevue Hospital alone admitted eighty-four adolescent addicts; meanwhile, federal narcotics arrests soared from 2,827 in 1947 to 5,522 in 1950.<sup>26</sup> The addict population also evolved further, as blacks and Hispanics began to replace whites as the majority of heroin addicts, and use became concentrated in ghettos and barrios. Part of the reason for this was that in the mid-20<sup>th</sup> century, many blacks migrated to northern cities with abundant supplies of heroin such as Chicago, New York, and Detroit. Moreover, Courtwright points out, "Whites who did succumb to addiction enjoyed familial support and recovery resources that many minority addicts lacked...Minority users had a harder time escaping their drug-filled and socially isolated neighborhoods."<sup>27</sup>

In reaction to this new surge of postwar addicts, Congress passed the Boggs Act in 1951 and the Narcotic Control Act in 1956, even though heroin use had peaked before the laws were actually put into effect. The Boggs Act established sentences for

possession of two years for a first offense, five for a second, and ten for a third. The Narcotic Control Act added a minimum five-year sentence for a first dealing offense, and a ten-to-forty-year sentence for a second offense or for sale to a minor. It even allowed for capital punishment, at the jury's discretion, in the case of an adult selling to a minor.<sup>28</sup> Heroin use continued to decline minimally, but surged again in the 1960s. Courtwright calls this wave "a baby-boom phenomenon," explaining, "42 million baby-boomers, born between 1946 and 1956, were entering their most heroin-susceptible years...There were 11 million more young people in the country in 1970 than in 1960, and they were part of a huge, autonomous youth culture that romanticized drug use."<sup>29</sup> The problem was exacerbated when thousands of American troops returned from Vietnam and continued heroin habits they had picked up abroad.

One of the responses to this epidemic was the explosion of Methadone Maintenance Treatment (MMT) programs. Although methadone had been developed in 1941 and first used to treat heroin addicts in 1963, there were only a few hundred heroin addicts on methadone in 1967.<sup>30</sup> In 1971, there were 9,000 patients maintained on methadone, and this number ballooned to 73,000 by 1973.<sup>31</sup> This emphasis on treatment did not preclude a comparable increase in the efforts of police enforcement. But despite President Reagan's attempts at supply reduction, heroin prices steadily dropped in the 1980s and continued to drop in the 1990s, even as the purity of street heroin rose to unprecedented levels. The so-called War on Drugs became heavily politicized and linked with crime prevention efforts. According to Courtwright, "drug policy, no longer tied primarily to concerns about heroin, ceased to be tied exclusively to drugs at all, having evolved into a reelection, crime-prevention, revenue-transferring, culture-war

omnibus."<sup>32</sup> Clearly, the current trend is unacceptable and requires a new approach to public policy.

#### CHAPTER III

#### THE CYCLE OF ADDICTION AND INCARCERATION

Addicts encounter numerous barriers in their struggle to turn their lives around. One of these obstacles is the devastating and self-perpetuating cycle of addiction and incarceration. This is especially true for poor or homeless addicts, and heroin is widely abused by those in severe poverty. As Randy Brown reports, "Indicators of a low socioeconomic status (SES) have consistently been associated with heroin use and dependence...[including] measurements of individual income and occupation as well as neighborhood-level indicators of SES."<sup>33</sup>

The cycle begins like this: Imagine that your poverty-stricken life is so miserable that you look for a release in heroin to help escape reality. Like many users (recall heroin's high capture rate), you become addicted to heroin, and spend any spare cash to support your habit. One day, the police arrest you and you are sent to prison. In prison, you are exposed to violent criminals, possibly subjected to physical abuse, and damaged psychologically as you are made to feel as worthless as a caged animal. You crave a fix more than anything, and receive inadequate medical attention for the painful withdrawal you experience. When you are eventually released back into society, you try to turn your life around. But staying clean without professional help is an insurmountable task. Moreover, you are thrown back into society with little guidance, just as poor as you were on your way into prison. You now face the daunting task of trying to secure stable employment—hard enough in the present economy—made even more difficult by the fact that you are an ex-convict, immediately disqualifying you from many job opportunities. You may also face stigmatization in your community or among friends and

family who do not wish to associate with ex-convicts. With prospects like these, who wouldn't relapse? And so, the cycle continues. You give up on your dreams of a healthy and normal life, and succumb to the temptation of the one thing that allows you to feel good again without feeling your world collapse all around you. Naturally, you are likely to find yourself back in prison before too long, whether because of drug charges, or because you are forced to commit crimes such as theft to support your addiction.

So what are we to do about this problem? It seems unethical to punish someone for their entire life because they haven't been able to correct a mistake they made, perhaps as an adolescent. One problem of the current system is that it does not properly take into account these types of extenuating circumstances that drive individuals to break the law. An attempt to combat this problem is the recent explosion of drug courts.

The first drug court was established in Florida in 1989, and there are now hundreds of similar courts throughout the United States.<sup>34</sup> They combine community treatment, counseling, and drug-testing to try to help participants overcome their addictions and become contributing members of society. Gottfredson, Najaka, and Kearley explain, "Drug treatment courts are designed to increase the likelihood that drug-addicted offenders will seek and persist longer in drug treatment, which is expected to help these individuals reduce their drug dependence and develop healthier, more productive, and drug-free lifestyles."<sup>35</sup> Drug courts are more personal than regular courts, and treat each person as an individual, not as a statistic, or just another generic heroin addict.

In *Hooked*, Lonny Shavelson relates the story of Crystal Holmes, a heroin addict and dealer who has been in and out of prison for much of her adult life. Like many

inmates arrested on drug charges, Crystal was brought into drug court one day to observe the proceedings in the case of Brian Walker, a 20-year-old heroin addict. Crystal could not believe what happened next. The presiding judge, Judge Lam, said to Brian, "I am so sad that we've come to this point, that we are about to take you out of Drug Court and send your case back to criminal court. I had such high hopes for you, and I am hurt to my heart...I want you to want your future as much as I want it for you!"<sup>36</sup> The emotion and personal connection shocked Crystal, who had no previous experience with the drug court system. It also persuaded Crystal to take the court's offer to move her case from criminal court to drug court. According to Judge Jeffrey Tauber, the director of the National Drug Court Institute, "The Drug Court is theater."<sup>37</sup> That is exactly why inmates such as Crystal are brought in to watch the proceedings. Dr. Sally Satel, an expert on drug courts, notes, "Drug court is fertile ground for the unfolding of psychological drama...The depth of involvement with the defendant is unprecedented."<sup>38</sup> But what does the research say? Are drug courts really effective? Is Crystal better off than she would have been serving her time in prison?

The National Institute of Justice funded a report by the Urban Institute and Caliber Associates that examined the national recidivism rates of drug court graduates. The study analyzed a sample of over 2,000 drug court graduates from 1999 to 2000 across 95 drug courts throughout the country. The results show a recidivism rate of 16.4 percent for drug court graduates within one year of completion of the program, and this rate rises to 27.5 percent after two years.<sup>39</sup> However, as the authors of this study acknowledge, they simply established a baseline recidivism rate for drug court graduates,

but analysis on the effects of drug courts was impossible because there was no control group for comparison.

Gottfredsen et al. set out to design a more rigorous study that could scientifically demonstrate the efficacy of drug courts and minimize the confounding variables. They note that a meta-analysis of forty-one studies concluded that drug courts reduce crime and drug use, but there were questions about the reliability and methodology of these studies. Many of them simply compared the outcomes of drug court graduates and nongraduates. As Gottfredsen et al. rightly point out, "Such comparisons are problematic because clients self-select themselves into conditions. Nongraduates are likely to differ from program graduates in important ways and may be at an elevated risk for recidivism."<sup>40</sup> Instead, Gottfredsen et al. took 235 arrestees eligible for entry into the drug court treatment program and randomly assigned them either into the program or not. Although some of the participants suffered from addictions to alcohol and cocaine, the vast majority (77.2 percent) were in the program due to heroin addiction.<sup>41</sup> The results were encouraging: while 81.3 percent of control subjects were re-arrested within two years, only 66.2 percent of drug court participants were re-arrested in the same time span. Moreover, only 40.6 percent of drug court participants were re-arrested for drug-related offenses in the two years after treatment began, compared with 54.2 percent of the control population. In addition, there were no significant differences in the outcomes of the minor and more severe drug users. The authors also examined how important the role of certified drug treatment was in recidivism. They found that of the subjects who participated in the drug court program but did not receive drug treatment, 75 percent were re-arrested within two years compared with only 56.7 percent of drug court participants

who underwent drug treatment as well.<sup>42</sup> This indicates that treatment plays a significant role in the positive impact of drug court programs on recidivism. Thus, although drug court participants still recidivate at high rates (it should be noted that this study was conducted in Baltimore, a location known to have an abnormally high rate of recidivism, where 85 percent of crime is supposedly addiction-driven<sup>43</sup>), they do show clear improvement compared with similarly situated individuals who do not go through the drug court program.

One more benefit of drug courts is that a participant who successfully completes the program sometimes has their criminal record wiped clean. This allows someone who has never committed a crime against another person to have more opportunity to find stable employment and get his or her life back on track.

Another suggestion to help break this vicious cycle is the idea of in-prison therapeutic communities (ITCs). Hiller, Knight, and Simpson conducted a study of 396 inmates, 293 of whom participated in an ITC. The comparison group was composed of 103 inmates who were eligible for entry into the ITC program, but were not admitted due to either lack of space or other factors that had no influence on individual outcomes.<sup>44</sup> The inmates' addictions ranged from cocaine to alcohol to heroin, with 38 percent of the group addicted to opioids. It is worth noting that only 18 percent of the participants were addicted to opiates before their incarceration, further demonstrating the harmful and risky situation people are thrown into when they are imprisoned, a far cry from a healthy rehabilitative setting. The participants spent nine months in an ITC and three months following their release from prison in Transitional Therapeutic Communities (TTCs).

consisted of 103 people in the control group, 123 who completed the ITC program, and 170 who completed both the ITC program and the full TTC program. The three groups were analyzed with complex multivariate analysis to assess the risks for recidivism for the members of each group, and the authors found that both treatment groups were predisposed to higher risks of recidivism. Despite this, in the thirteen to twenty-three months after release, 42 percent of the control group was rearrested. In contrast, 36 percent of the ITC group was rearrested, while only 30 percent of the people who completed both the ITC program and the TTC program were rearrested.<sup>45</sup> The results suggest that ITCs lower the risk of recidivism for drug-addicted inmates, and that followup TTC programs further reduce an individual's risk of recidivism. The authors conclude, "[e]ffective in-prison treatment appears to require a continuum of care that takes the drug-involved offender from the institutional environment to the reintegrative process of community-based initiatives."46 Treatment in prison, and genuine attempts to help reintegrate inmates back into society after their release, are vital to ending the cycle of addiction and incarceration. I will return to the idea of mandatory treatment for addiction later in the paper.

#### METHADONE

Methadone has long been the preferred treatment method for heroin addicts. Like most drugs, methadone has certain risks, and between 1999 and 2005, "Methadonerelated deaths...increased more than other narcotic related deaths."<sup>47</sup> Despite the fact that methadone was involved in 4,462 deaths in 2005—up 468 percent since 1999<sup>48</sup>—the majority of researchers and physicians endorse methadone's safety. In the Mount Sinai Journal of Medicine, Joseph, Stancliff, and Langrod report, "Medical studies have shown that methadone maintenance is medically safe and nontoxic, can be used effectively in pregnancy, and does not impair intellectual, cognitive or motor functioning."<sup>49</sup> It should be noted that a recent study published in the New England Journal of Medicine in 2010 undermines the claims about methadone's safety during pregnancy. "131 neonates whose mothers were followed to the end of pregnancy according to treatment group (with 58 exposed to buprenorphine and 73 exposed to methadone) showed that the former group required significantly less morphine (mean dose, 1.1 mg vs. 10.4 mg; P<0.0091), had a significantly shorter hospital stay (10.0 days vs. 17.5 days, P<0.0091), and had a significantly shorter duration of treatment for the neonatal abstinence syndrome.<sup>50,</sup> Nonetheless, SAMHSA also lauds methadone's safety, stating, "[m]ethadone has been shown to be safe; it produces no serious or long-term side effects."<sup>51</sup> Even if methadone is safe when properly used by an addict with a doctor's prescription, we cannot ignore "the reality that methadone meant for treating patients is often diverted to the streets by those who are given the privilege of taking home a one-to-six-day supply of the drug."<sup>52</sup>

Nonetheless, methadone has certainly been demonstrated to have definite positive effects on heroin addicts who undergo methadone maintenance treatment (MMT).

Following are some of the highlights of the success of MMT programs:

- "during the first 4 months of treatment, crime decreased from 237 crime days per year per 100 addicted persons during an average year of their addiction to 69 crime days per year per 100 patients, a reduction of more than 70 percent"<sup>53</sup>
- "over a 3-year period, 5 percent of patients in methadone treatment became HIV positive...while among a cohort of out-of-treatment addicts in the same neighborhood, 26 percent became HIV positive"<sup>54</sup>
- "patients can work in any capacity for which they are trained, live normal lives with their families and, if not infected with HIV or hepatitis C, or afflicted with other potentially fatal illnesses, show improvements in their health status"<sup>55</sup>

Indeed, methadone has helped many addicts successfully overcome their addictions and return to a semi-normal life. It is also relatively cost-effective. Recall the exorbitant social and economic costs of heroin use. Farrell et al. found that MMT programs are "substantially cheaper than the cost to the community of the active or incarcerated drug misuser. International reports find that oral methadone maintenance is justifiable on a cost-benefit analysis."<sup>56</sup> But to claim, as SAMHSA does, that methadone has an "absence of *any* serious, long-term side effects"<sup>57</sup> is simply disingenuous.

Methadone was first shown to be an effective treatment for heroin addiction in 1949 at U.S. Public Health Hospital in Lexington, Kentucky.<sup>58</sup> In 1968, Sapira, Ball, and Cottrell investigated the addictive properties of methadone at that same hospital after "Preliminary studies of its addiction liability...demonstrated experimentally that methadone produced drug dependence of the morphine type."<sup>59</sup> They concluded, "Although methadone is not the drug of choice among American narcotic addicts, 214 methadone addicts have been admitted to the Lexington and Fort Worth hospitals in

recent years. Methadone addiction appears to be discomforting enough to prompt persons to seek treatment, as evidenced by the significantly higher voluntary admission rate of these addicts compared with the entire narcotic addict population."<sup>60</sup> Shockingly, there seems to be very little modern research on methadone addiction and dependence. However, this is not because methadone magically lost its addictive power—one anecdotal report describes the devastating effects of methadone withdrawal:

"I've been on both ends of withdrawals, heroin and methadone, every patient of methadone will always tell you the same, as I do; I can kick heroin anytime, but methadone that is something else. In 15 yrs of heroin addiction, I've kicked 3 times, 'cold-turkey'. In 10 years on methadone I've never kicked methadone. Once I landed in jail, I had to do 72 hours of jail time before I got to see the judge. I was literally on the floor screaming my guts out. About 12 hours before I was to see the judge, I demanded to be taken to the hospital, I just couldn't take it. I was cuffed, and looking like a 'chair' was glued to my back, I limped to the ambulance, since I couldn't lift my leg to climb into the back, the police grabbed me on both sides and shoved me in like a sack of potatoes, I fell flat on my face. The doctor, realizing my condition and that it was severe, gave me a shot of methadone. The relief was immediate. I was returned to the precinct and 2 days later I was in the same condition! Never did I go through such hell in all my days."<sup>61</sup>

Another internet user pleads for help in an online support forum:

"I just can't stand it any more. Cold turkey of course did not work as I experienced muscle cramps and restless limbs. I have tried gradually reducing the amount I've taken daily until I got down to down to little tiny grains a day but the muscle cramps that keep me up at night have never gone away. Finally about 3 weeks ago, I completely stopped taking even those tiny grains and keep expecting the cramps and restlessnes to go away. My nightly routine is made up of falling asleep, then waking up 30 minutes later with muscle cramps, take a hot bath, try to go back to sleep, take another bath, fall asleep, wake up 30 minutes later, and on and on and on until 4:00 am when I finally fall asleep. I am only getting about 4 hours sleep a night and am absolutely going insane. It's been 20 days of little to no sleep, tossing and turning in bed. How long am I going to have to suffer this way until the restlessnes and muscle cramps go away? Does anyone know of anything that will lessen the cramps?"<sup>62</sup>

A simple Google search will turn up myriad equally gut-wrenching stories from methadone addicts suffering in anguish from withdrawal.

Moreover, while studies rave about the effectiveness of MMT, the reports are often misleading. According to SAMHSA, "Consumption of all illicit drugs declines to less than 40 percent of pretreatment levels during the first year and eventually reaches 15 percent of pre-treatment levels for patients who remain in treatment 2 years or more."63 However, this is an obviously self-selected sample, and it is evident that longer stays in treatment correlate with higher success rates. In the Psychology of Addictive Behaviors, Simpson, Joe, and Brown report, "Length of time spent in treatment has been one of the most reliable predictors of posttreatment outcomes in national evaluations in the United States."<sup>64</sup> To properly understand the statistic SAMHSA quotes, we must know the retention rate of the MMT program. As NIDA reports, an Italian study of over 1,500 heroin addicts found that only 40 percent of addicts remained in the program after one year. A UK study of 351 patients had a retention rate of 62 percent after one year, but dropped to only 30 percent after two years.<sup>65</sup> Neither of these studies is anomalous. Furthermore, follow-up studies that examined the outcomes of MMT patients found that once they left treatment, relapse rates were as high as 70 percent.<sup>66</sup> These data contextualize SAMHSA's claim and show just how misleading the supposed success rates are. If 1,000 addicts entered the MMT program with these success rates, then only 300 or so would be left after two years. Of those, as many as 200 are likely to relapse, leaving only 10 percent of those who initially entered the program currently substancefree.

MMT simply substitutes another drug—albeit less dangerous—for heroin. According to Joseph et al., "Methadone maintenance is a corrective, not a curative treatment for heroin addiction. It may be necessary for patients to remain in treatment for indefinite periods of time, possibly for the duration of their lives."<sup>67</sup> This is certainly far from ideal. Consider the psychological impact on one's self-image when every day, a little pill reminds you of your powerlessness over heroin addiction. Much like Prozac can function as a daily reminder of a patient's depression, methadone constantly reinforces the idea that heroin exercises control over an addict. Friedman and Alicea note, "Many self-help groups also view the use of methadone as contradictory to the goals of full rehabilitation and sobriety. These groups see methadone as simply the replacement of one addiction for another."<sup>68</sup>

All of this is not to say that MMT has not helped countless addicts since its invention as a treatment for addiction. Certainly, helping even 10 percent of addicts beat addiction is a great start. But it's not enough. And there very well may be a better alternative—if it weren't illegal in the United States.

#### **IBOGAINE: THE MIRACLE CURE?**

Ibogaine treatment is one potential alternative to MMT. Despite being illegal in the United States, ibogaine has many advantages over MMT. However, because of ibogaine's Schedule I status, no addicts in the United States are currently receiving legal treatments of ibogaine. Recall that Schedule I status means that according to the United States Congress, ibogaine has no legitimate medical purpose and has a high potential for abuse. This classification alone should set off warning bells that something surreptitious is going on here. Even if the results of the research conducted before the NIH pulled funding in 1995 did not persuade Congress of ibogaine's miraculous healing power, a Schedule I classification is impossible to justify. Ibogaine users experience intense 24 to 36 hour hallucinogenic trips that often include vomiting and nausea. Much like peyote, which is used legally by some Native Americans for spiritual rituals, and also makes users violently ill, there is essentially no potential for abuse. Ibogaine has never been reported in any emergency room visits, police incidents, or fatalities, from recreational use. If ibogaine fits the profile for a drug with a high potential for abuse, so should every other drug. Cocaine, one of the most addictive and deadly recreational drugs, is somehow only Schedule II.

Kenneth Alper, a leading researcher on ibogaine in the treatment of opioid withdrawal, observes, "The available evidence does not appear to suggest that ibogaine has significant potential for abuse... Ibogaine is reportedly neither rewarding [n]or aversive in the conditioned place preference paradigm. Rats given either 10 or 40 mg/kg ibogaine daily for 6 consecutive days did not show withdrawal signs. Animals do not

self-administer 18-MC, an ibogaine analog, in paradigms in which they self-administer drugs of abuse. None of the consultants to NIDA in the 1995 Ibogaine Review Meeting identified the possible abuse of ibogaine as a potential safety concern."<sup>69</sup> Moreover, even if ibogaine had a high potential for abuse, which is a claim beyond reason and unsupported by any evidence, it is suspect to say that it has no legitimate medical purpose. Ibogaine is the only drug ever discovered that may be a cure, not a treatment, for addiction. Even if it were dangerous and highly addictive, there is simply no justification or logic behind the claim that ibogaine has no legitimate medical purpose when it can achieve what no manmade drug has ever come close to accomplishing. Nevertheless, inertia is a powerful force, and ibogaine has remained a Schedule I substance since its initial classification as such in 1967.

This curious classification elicits some interest in the motives behind ibogaine's Schedule I status. A treatment drug is always more profitable for drug companies than a cure—addicts undergoing MMT have to take methadone every day, whereas part of the magic of ibogaine is that, at least potentially, it is a one-time cure. Drug companies also tend to be far more concerned with drugs that have a high profit potential, not drugs that primarily treat poor people. "The Pharmaceutical Research and Manufacturers of America (PhRMA) reports that in 1999, for example, its roster of drug giants had 10 antiaddiction agents in clinical trials. The same companies had more than 400 cancer drugs in clinical development."<sup>70</sup> Alper points out that 90 percent of anti-addiction drug development in the public sector is funded by NIDA, whose annual budget is a mere \$60 million. In contrast, the average cost of developing a drug and successfully bringing it into the market is \$300 million. Thus, Alper says, "The strategy of relying on the

pharmaceutical industry to underwrite the cost of drug development works extremely well in many instances, but appears to present some limitations with regard to the development of pharmacotherapy for addiction in general, and specifically ibogaine."<sup>71</sup> There is even less incentive for drug companies to investigate ibogaine because since it is a naturally occurring alkaloid, the actual structure cannot be patented.

Moreover, just as the criminalization of recreational drugs creates black markets for those drugs, there is a now a black market of underground ibogaine clinics in the United States. According to an article in the *Journal of the American Medical Association*, "A sophisticated 'underground railroad' of sorts has sprung up in New York, spearheaded by Dana Beal, a long-time marijuana legalization advocate."<sup>72</sup> One of the primary researchers on the effects of ibogaine, Deborah Mash, also notes this phenomenon, cautioning that "We've got this explosion of underground clinics, and I'm scared that everything I work for is going to go right down the toilet."<sup>73</sup> Even the most passionate ibogaine advocates do not claim that it is risk-free, and so these underground clinics may actually be quite dangerous, exacerbating, rather than ameliorating, the problem.

So is ibogaine the miracle cure it's cracked up to be? The research speaks for itself. The chart below lists some of the benefits of ibogaine in a comparison with methadone and some other similar but newer drugs starting to be used to treat heroin addicts.

Traditional addiction treatments rely on maintenance based programs that can continue indefinitely. Some of the drugs are addictive themselves, and most cannot combat the depression, anhedonia, and anxiety that lead to relapse.

		ne	osate	- C	nelRevierphine			Center step	
	Meth	ado. Acan	ipro Antal	Nattre	Xot Bupr	ano cloni	dim 30 D2	N AN12	5 1bog
Targets multiple addictions	0	0	0	•	0	•	•	•	•
Full results in one dose/session	0	0	0	0	0	0	0	0	•
Alleviates anhedonia <sup>(1)</sup>	0	0	0	0	0	0	0	0	•
Decreases craving	0	0	0	0	0	0	0	0	•
Alleviates withdrawal	0	0	0	0	0	•	0	0	•
All natural	0	0	0	0	0	0	•	•	•
Alleviates anxiety	0	•	0	0	0	0	0	0	•
Elevates mood	0	0	0	0	0	0	0	0	•
No ongoing cost	0	0	0	0	0	0	•	0	•
No long term commitment	0	0	0	0	0	0	•	0	•
No potential for abuse <sup>(2)</sup>	0	•	•	•	0	0	•	•	•
Minimal life disruption	0	0	0	0	0	0	0	0	•
Covered by health insurance <sup>(3)</sup>	0	0	0	0	0	0	0	0	0

74

Before being tested on humans, ibogaine was demonstrated to reduce the selfadministration of morphine and cocaine in rats, monkeys, and mice.<sup>75</sup> The few studies involving human subjects have small sample sizes, but all nonetheless indicate the amazing potential of ibogaine. Howard Lotsof, the father of ibogaine treatment in the United States, and his colleagues published a review in the *American Journal on Addictions* of thirty-three heroin-addicted patients who they had observed after undergoing ibogaine treatment. Specifically, they examined ibogaine's effects on the well-known symptoms of heroin withdrawal. The researchers measured both subjective complaints of withdrawal symptoms (e.g. nausea, chills) and objective physical symptoms of withdrawal (e.g. vomiting, sweating). An astounding 88 percent of patients were free of withdrawal symptoms twenty-four hours after treatment.<sup>76</sup> Seventy-six percent of patients did not seek drugs during the seventy-two-hour period following treatment. Twelve percent of patients were free of withdrawal symptoms but chose to resume their drug use nonetheless. This result is significant because the unpleasant withdrawal symptoms are believed to be a major reason that heroin addicts find quitting so challenging. Only a single patient exhibited subjective and objective withdrawal symptoms, and this was believed to be due to an inadequate dose of ibogaine given her history of heroin use.

There is one significant caveat to this report: one patient suffered a respiratory arrest 19 hours after treatment and eventually died. According to the authors, "This incident was a significant factor in the decision not to pursue a clinical trial of ibogaine following the NIDA Review Meeting held in March of 1995."<sup>77</sup> However, there is no proof that the subject actually died as a result of ibogaine use. In fact, the researchers found evidence in her personal effects that suggested that she might have snuck off and smoked heroin after treatment. Inexplicably, an autopsy, which could have confirmed this, was not performed. Naturally, it is understandable to be skeptical of a cure that may itself be lethal, but other research has further demonstrated the safety and efficacy of ibogaine.

Mash et al. conducted a more extensive and controlled study of thirty-two patients addicted to heroin or methadone. The results were equally encouraging. Patients showed almost no objective signs of withdrawal over the two-week period after treatment, and when symptoms did occur, they were relatively minor. The results were obtained through three different blind and independent assessment measures, and the ratings of withdrawal symptoms were consistent across all three analyses. The authors conclude, "The results

suggest that ibogaine provided a safe and effective treatment for withdrawal from heroin and methadone."<sup>78</sup>

Mash et al. studied another group of twenty-seven patients addicted to cocaine or heroin with similarly positive results. They hypothesized that many addicts may selfadminister numbing drugs to help cope with depression, and so they measured depressive symptoms on the Beck Depressive Inventory scale, a standard objective measure of depression. Indeed, Brienza et al. report, "Multiple studies of opiate abuse treatment samples have revealed high prevalence rates of both lifetime and current major depressive disorder...far exceeding general population estimates."<sup>79</sup> Mash et al. observed the subjects for two weeks, and they also conducted follow-up evaluations one month after treatment. They found that "[a]fter treatment with ibogaine, opiate-dependent subjects were less likely to anticipate positive outcomes from heroin (or other opiate) use, less likely to believe that heroin (or opiate) use would relieve withdrawal/dysphoria, and more likely to believe in their control for abstaining or stopping their drug use. Ibogaine treatment also decreased participants' desire and intention to use heroin."80 Moreover. patients reported significantly lower levels of depressive symptoms at the one-month follow-up. Thus, depression is another illness that may potentially be combated with the help of ibogaine.

The main concern with ibogaine treatment is the previously mentioned fatality and a few other deaths possibly related to ibogaine reported in the literature. Alper, Lostof, and Kaplan mention that as of 2006, they were aware of eleven deaths that occurred within seventy-two hours of the administration of ibogaine. "Deaths were most commonly attributed to a cardiac cause in association with significant risk factors such as

a prior myocardial infarction, cardiomyopathy or valvular disease, or to pulmonary embolus. Other deaths were regarded as mixed drug overdoses.<sup>\*\*81</sup> In one of the cases, the individual who died consumed more than twice the maximum dose of ibogaine. This reminds us again of the dangers of underground clinics with no legal or professional medical supervision, yet another harmful consequence of prohibition. People with preexisting heart conditions should never be given ibogaine, and if it were legal, many of these deaths could have been easily avoided. Alper et al., argue that these fatalities underscore "the need for the security procedures and medical supervision available in a conventional medical setting and for completion of the FDA dose escalation studies to allow systematic collection of pharmacokinetic and safety data."<sup>82</sup> Moreover, any risks of ibogaine must be weighed against the dangers of MMT, yet NIDA's concerns somehow disappear when over 4,000 people die from methadone in one year.

One additional concern is the potential neurotoxicity of ibogaine at high doses. Rats treated with 100 milligrams of ibogaine per kilogram of body weight suffered cerebellar damage.<sup>83</sup> However, the dose necessary to reduce self-administration of morphine or cocaine in rats was a mere 40 mg/kg, and there was no evidence of toxicity at these lower doses. Even water is lethal at high doses, so the fact that ibogaine is dangerous in excessive amounts in no way indicative of its effects at proper doses. Moreover, this neurotoxicity has only been observed in rats, but not in mice, primates, or humans.<sup>84</sup>

The powerful hallucinogenic properties of ibogaine make many people uneasy about its potential to treat addictions to other drugs, but it is important to recognize that the "trip" of the drug may not be wholly unrelated to ibogaine's anti-addictive properties.

Alper explains that unlike traditionally abused hallucinogens such as LSD, the experience of ibogaine is more like a dream than a hallucination. Thus he prefers the term "oneiric" to "hallucinogenic" in describing the subjective experience of ibogaine. According to The Iboga Foundation, a Dutch non-profit organization, "Many users of ibogaine report experiencing visual phenomena during the waking dream state, such as instructive replays of life events that led to their addiction, while others report therapeutic shamanic visions that help them conquer the fears and negative emotions that might drive their addiction."<sup>85</sup> Many researchers believe that these introspective, self-reflective aspects of the ibogaine experience are integral to making the user reevaluate his drug use. Alper et al. posit, "the material recalled in the psychoactive state might have potential psychotherapeutic significance."<sup>86</sup> In contrast, some ibogaine experts believe the "trip" is irrelevant to ibogaine's healing power.

Stanley Glick, a leading ibogaine researcher at Albany Medical College, argues, "The hallucinations are just an unfortunate side effect. Part of the problem is that when you go through this thing, it's so profound you've got to believe it's doing something. In part, it's an attempt by the person who's undergoing it to make sense of the whole thing."<sup>87</sup> Dmitri Mugianis disagrees. Mugianis, a former heroin addict who got clean after Howard Lotsof gave him ibogaine and has been helping other addicts overcome addiction with ibogaine ever since, is the subject of the documentary *I'm Dangerous with Love.* He contends, "With methadone, they just removed euphoria from opiates. This is the same process they're doing now—removing psychedelic and visionary experience. Ibogaine works. What are they trying to improve or fix? It's not broken, and they're spending a great amount of time and money to fix it."<sup>88</sup> The spiritual aspect also

increases patient autonomy by making them feel like they *want* to quit rather than feeling forced.

It is significant that ibogaine treatment is a onetime event rather than a maintained treatment. As discussed, a severe problem with MMT is low rates of retention. With a onetime treatment, the problem of retention completely disappears. Moreover, the potential for an immediate cure is extremely cost effective. Farrell et al. explain, "Treatments such as methadone maintenance are costly, particularly because of the duration of treatment."<sup>89</sup> In contrast, "[i]bogaine can presently be purchased at a wholesale price of approximately 200 US dollars per treatment, and that price could drop considerably if significant demand were to stimulate increased production."<sup>90</sup> A downside of onetime treatment is that it means that following up with patients may be challenging at times.

It should also be noted that, as mentioned, ibogaine has been shown to be an effective anti-addictive agent for more than just heroin. It also has the potential to cure addictions to alcohol, cocaine, morphine, methadone, and nicotine. This only adds to the benefits that would come from legalizing ibogaine treatment. At the very least, ibogaine research deserves significantly more funding. Perhaps ibogaine still needs to prove more effective and completely safe, but the results thus far certainly justify further research.

#### NEEDLE EXCHANGE PROGRAMS

One of the problems of addiction that is specific to heroin use is the risk of contracting HIV or hepatitis C as the result of sharing needles. This is due to the fact that the majority of drugs are smoked or insufflated, while heroin's primary method of administration is through intravenous injection.<sup>91</sup> This has led to the concept of needle exchange programs, where addicts can obtain free needles with no threat of legal retaliation. Intravenous drug users are often required to exchange a contaminated needle for a clean one in an effort to ensure that contaminated needles stay off the streets, hence the name needle exchange program.

Elisabeth Pisani, a public health expert who has studied HIV for 15 years, expounds on the benefits of needle exchange programs in a 2010 TED talk titled *Sex*, *Drugs, and HIV: Let's Get Rational.* She introduces the idea that despite the risks of sharing needles, addicts are forced to make that dangerous decision by circumstances beyond their control. "People do get HIV because they do stupid things," she says, "but most of them are doing stupid things for perfectly rational reasons."<sup>92</sup>

Pisani interviewed nearly 600 addicts in Indonesia and asked them how people get HIV. Almost 100 percent of them fully understood the risks of sharing needles. They also knew where to get cheap clean needles, yet a maximum of one in four were actually carrying clean needles on them, and sadly, only one in ten used clean needles when they had injected in the past week.<sup>93</sup> So what explains this apparent discrepancy between knowledge and behavior?

In Indonesia, it is illegal to carry a syringe without a doctor's prescription. Heroin addicts know this, and don't want to risk getting arrested for something that isn't absolutely necessary in order to get high. Pisani spoke with addicts on the street who told her, "You don't want to share a needle any more than you want to share a toothbrush, even with someone you're sleeping with. There's just a kind of ick factor there...we share needles because we don't want to go to jail."<sup>94</sup> Laws regulating the possession of syringes in the United States vary from state to state, but if an injecting drug user is found with a needle that has been contaminated by drugs, that is sufficient for arrest in twentynine states.<sup>95</sup> Burris et al. found that this is also sufficient to deter users from carrying clean needles, and thus encourages risky needle sharing.<sup>96</sup>

Pisani relates the story of Frankie, a heroin addict she interviewed who had been in prison. One day, someone smuggled in some heroin for another inmate's birthday, and kindly decided to share it with his friends. A group of more than twenty inmates lined up, and one person went down the line injecting each person one by one. With no access to anything to use to sterilize the needle, the injector simply wiped the bloody needle on his shirt after each injection. Frankie stood there thinking about how he was twenty-second in line. He recalled, "'A small part of my brain is thinking, *That is so gross and really dangerous*. But most of my brain is thinking, *please let there be some smack left by the time it gets to me*."<sup>97</sup> Although Frankie recognized the stupidity of his decision to use such a disgusting needle, Pisani explains that it was nonetheless a rational choice for someone in Frankie's situation. "Frankie at that time was a heroin addict and he was in jail, so his choice was either to accept that dirty needle or not to get high. And if there's one place you really want to get high, it's when you're in jail."<sup>98</sup> In Frankie's mind, he

was choosing the lesser of two evils—risking disease was preferable to not getting high. Many addicts face a similar conundrum on a daily basis. "While junkies think that it's a really bad idea to expose themselves to HIV, they think it's a much worse idea to spend the next year in jail, where they'll probably end up in Frankie's situation and expose themselves to HIV anyway."<sup>99</sup>

The first needle exchange program was introduced in England by Margaret Thatcher, and Australia and the Netherlands soon followed suit. Amazingly, none of those countries surpassed a rate of 3.5 percent of HIV prevalence among injecting drug users in their highest year since. In contrast, Moscow, New York City, and Jakarta peaked at 45, 50, and 55 percent, respectively, as the graph below shows.<sup>100</sup>



Yet while needle exchange programs are growing in the United States, they are still relatively rare. This is largely because Congress banned the use of federal funds for needle exchange programs in 1989. President George W. Bush's drug czar, John Walters, argued that needle exchange programs do not "pass any serious test of rationality. It's like the surgeon general deciding that handing out lighters is a good way to help people to stop smoking. It's at least that absurd, and the consequences are even greater given the risks involved in IV drug use."<sup>102</sup> But Walters clearly misses the point—no one endorses needle exchange programs as a way to decrease drug use; people support them because they prevent thousands of people from contracting deadly and communicable diseases, harming themselves and putting the rest of society at risk. Clark and Fadus condemn the ban, noting, "This ban was introduced by Congress in accordance with the drug war ideology, a narrow and elusive plan to completely eradicate drug use in the United States. Although there are a significant number of government reports supporting needle exchange programs, including support from the CDC, American Medical Association, the National Institutes of Health, it appears as if public health and the lives of others have become a secondary concern to strong federal policy on eradicating drug use."<sup>103</sup>

Indeed, the evidence is undeniable that needle exchange programs prevent the spread of HIV and hepatitis C. The chart below compares numerous studies on the effectiveness of needle programs at reducing the transmission of HIV. The studies on the left have demonstrated the effectiveness of needle exchange programs. An exhaustive list of the studies that have shown that needle programs are not effective is presented on the right—they simply do not exist, because needle exchange programs are universally effective at preventing the spread of diseases acquired through needle sharing.

# Do sterile needle programmes reduce HIV transmission? Reviews of the evidence

# Studies showing needle progrmmes ARE effective

The National Commission on AIDS The General Accounting Office The Centers for Disease Control and Prevention The Office of Technology Assessment of the US Congress The National Institutes of Health The American Medical Association The United States Surgeon General The Institute of Medicine The National Academy of Sciences

# Studies showing needle programmes ARE NOT effective

104

Critics maintain that these programs promote drug use, but there is not a shred of evidence to support these claims. In fact, studies have demonstrated that many needle exchange programs encourage addicts to seek treatment, thereby *decreasing* drug use.<sup>105</sup> According to the American Psychiatric Association's Commission on AIDS, "After extensive review of the current available research, the panel members further concluded that needle exchange programs do not increase the amount of drug use by those using such programs, and do not increase overall community levels of new or continued injection or noninjection drug use."<sup>106</sup> Fortunately, President Obama has heeded these results. He recently repealed the ban on using federal funds for needle exchange programs and began funding them.

No matter how much we learn about addiction, people persist in blaming addicts for their behavior. In *The Fallacies of No-Fault Addiction*, Sally L. Satel argues, addicts "are the instigators of their own addiction, just as they can be the agents of their own recovery.<sup>107</sup> While we should not absolve addicts of all personal responsibility for their decisions, it is dangerous to downplay heroin's powerful addictive properties and perpetuate dispassionate attitudes towards addicts. Pisani describes what she coins "the compassion conundrum," explaining that people are hesitant "to be giving out needles to junkies, but once they've gone from being transgressive people whose behaviors we don't want to condone to being AIDS victims, we come over all compassionate and buy them incredibly expensive drugs for the rest of their lives. It doesn't make any sense from a public health point of view."<sup>108</sup> Not only does this make little sense from a public health standpoint, it also makes no sense from an economic standpoint. As Pisani mentions, anti-retroviral medication to treat AIDS patients is extremely expensive, and all of society incurs large costs when one person gets HIV. It is hundreds of times more cost-effective to provide addicts who will inject anyway with cheap clean needles and prevent these cases of HIV in the first place.

#### THE BENEFITS OF EDUCATION

Despite all of the efforts of the government and law enforcement, there are still millions of illicit drugs users in the United States. Clearly, the lure of drugs is enticing enough to attract people to illicit substances in spite of their health risks and illegality. When citizens make the decision to use substances in violation of the law, they knowingly relinquish certain rights. For example, they relinquish the right to travel, if they are convicted of a crime and incarcerated. However, there are other rights that no American can ever relinquish—it would be draconian and unconstitutional to deny inmates access to proper water, food, or health care. Education is an equally fundamental right, especially regarding one's personal safety. Nevertheless, the same anti-drug crusaders who decry needle exchange programs often oppose any education about how to use drugs safely on the grounds that it encourages use. This is akin to abstinence-only sexual education, and it simply does not work.

There are a few basic pieces of information that could save hundreds of lives if all heroin users were privy to them. Some of these are obvious, and likely widely known in drug communities. For instance, as Elizabeth Pisani demonstrated, most injecting drug users understand the risks of acquiring diseases such as HIV or hepatitis C that come from sharing needles, even if that knowledge fails to stop the majority of heroin users from avoiding this dangerous practice. But some other information is much less well known.

For example, Shephard Siegel reports in *Addiction Research and Theory* that injecting heroin in a new place is significantly more likely to be fatal.<sup>109</sup> This is

extremely counterintuitive, and unless addicts are actively taught this information, they have little hope of knowing this fact that could very well save their lives. Siegel explains that injecting heroin in a new place is more dangerous as a result of a complex process of Pavlovian conditioning. While most fatalities from heroin are classified as overdoses, in fact most people who die from heroin die of respiratory depression, not an overdose in the usually understood pharmacological sense of the term. Siegel introduces the concept of the "situational specificity of tolerance" to convey the idea that tolerance to a drug is variable, not static, dependent on time, place, route of administration, and any other cues that subconsciously prepare a user's body for the drug. If an addict typically injects at home, then when he is home his body will preemptively try to fight the foreign poison before he injects. However, the body is not primed for this response in new locations, and thus, a dose that may be safe in the usual injecting location is significantly more likely to be lethal in a new place. Despite the fact that it would be obviously unethical, and is therefore impossible, to test the concept of situational specificity of tolerance on humans, there is a plethora of evidence to support this claim.

Siegel references a study conducted on rats in which two groups were injected with 15 mg/kg of heroin. Both groups had previously been given heroin to establish a tolerance, but in this experiment, one group was given the drug in a novel location, while the other was given heroin in the same location as previous injections. Thirty-two percent of the rats drugged in the same location as before died, while an astounding twice that percentage (64 percent) of the rats that were injected with heroin in a novel location died.<sup>110</sup>

Gutierrez-Cebollada et al. observed this phenomenon in human patients. They interviewed 76 heroin users admitted consecutively to a hospital in Spain. Fifty-four of the patients had suffered an overdose, while the other twenty-two were admitted for other health problems but had nonetheless injected heroin within an hour prior to their trip to the hospital. Every single one of the twenty-two users who did not overdose had injected in a typical location. In contrast, 52 percent of those who suffered an overdose had injected in "an unusual setting."<sup>111</sup>

Darke and Zador also discuss the phenomenon of situationally specific tolerance. They explain that if tolerance were static, one would expect heroin users who die to have higher levels of morphine (heroin's metabolite) in their blood than users who survive. However, they found that this was not the case, further cementing the idea that most "overdoses" are not technically overdoses in the pharmacological sense of the term; rather they are the result of the user injecting more heroin than his specific situational tolerance could endure at one particular time or place.<sup>112</sup> Siegel concludes his report by critiquing the fact that this increased danger of injecting in unfamiliar settings is not publicized, noting, "Based on the available evidence, such behavior should be considered dangerous."<sup>113</sup>

Darke and Zador also report on the high prevalence of polydrug use among supposed heroin overdoses. They contend that in many deaths attributed to heroin overdose, other drugs are likely causal factors. The average morphine level in the blood in overdoses without alcohol is nearly twice the average level for fatalities resulting from a combination of heroin and alcohol, suggesting that alcohol significantly increases the likelihood of overdose given a fixed amount of heroin. Recognizing the importance of

education, the authors argue, "An important finding from the literature is the major contributory role of other CNS [Central Nervous System] depressants in 'heroin' overdoses. The reduction of concomitant use of alcohol and/or benzodiazepines with heroin could be expected to reduce the frequency of heroin-related deaths. Interventions targeted towards reduction of concurrent depressant drug use seem warranted."<sup>114</sup> Education is a virtue in and of itself—but when it can save lives with little effort, it is a necessity.

#### CHAPTER VIII

#### DECRIMINALIZATION, LEGALIZATION, AND MANDATORY REHABILITATION

Imprisonment denies citizens many of the rights to which Americans are otherwise entitled, and thus it requires significant justification. There are four classic justifications for a government to incarcerate its citizens: deterrence, incapacitation, retribution, and rehabilitation. Let us now examine how each of these justifications applies in the case of the incarceration of heroin addicts. Retribution is reserved for crimes with victims, and so it is an invalid justification for incarcerating drug addicts. However, the other three justifications are all applicable.

The only way to properly measure the deterrent effect of criminalizing a particular behavior is through a comparison of the prevalence of said crime before and after the behavior is either newly criminalized or newly legalized. Unfortunately, a good opportunity for this analysis has yet to present itself, so any conclusions about the deterrent effect of criminalizing heroin use are purely speculative.

The ideas of incapacitation and rehabilitation are interrelated. Presumably, the primary goal of incarceration, on an individual level, is rehabilitation (as compared with goals such as deterrence on the societal level). Thus, incapacitation is a valid justification for incarceration only until the individual is properly rehabilitated. It seems, then, that rehabilitation is the only legitimate governmental goal of imprisoning an individual for heroin use. If this is the case, then must we imprison them at all? Is that really the best way to rehabilitate a heroin addict?

It seems clear that the answer to these questions is a resounding no. As previously mentioned, the psychiatric community now recognizes addiction as a disease, but the law has not caught up to this new understanding. Once we acknowledge that incarceration is not a form of medical rehabilitation, we are left with three primary policy options to attempt to control drug use and the crime often associated with the world of illicit drugs.

The first method is decriminalization. Decriminalization of heroin could manifest in many forms, but the basic idea would be that possession of small amounts of heroin would no longer constitute a criminal offense, and thus would not be subject to criminal penalties, i.e., incarceration. However, decriminalization would still allow for civil penalties, i.e., fines, for the possession of heroin, and it need not change the laws and penalties for smuggling, selling, distributing to a minor, or driving under the influence.

There is precedent for drug decriminalization in the United States with marijuana. Alaska was the first state to decriminalize marijuana in 1973. Twelve other states have followed since: California, Colorado, Maine, Massachusetts, Minnesota, Mississippi, Nebraska, Nevada, New York, North Carolina, Ohio and Oregon. Fortunately, this allows for a comparison between prevalence of marijuana use pre-decriminalization and postdecriminalization. A simple comparison is not quite adequate, though, because there are constantly changing trends of drug use. However, we can analyze whether or not the decriminalization of marijuana has had an effect on use in these thirteen states by comparing the trends of marijuana use in these states to the trends in the same years in the other thirty-seven states.

According to the National Organization for the Reform of Marijuana Laws (NORML), "Findings from dozens of government-commissioned and academic studies

published over the past 25 years overwhelmingly affirm that liberalizing marijuana penalties *does not* lead to an increase in marijuana consumption or affect adolescent attitudes toward drug use."<sup>115</sup> In *The Impact of Marijuana Decriminalization: An* Update, Eric W. Single reports on a few such studies. In one, "Data collected at four points in time in Ann Arbor and the control communities (which underwent no changes in marijuana penalties) indicated that marijuana use was not affected by the changes in law."<sup>116</sup> The second study found an increase in use after decriminalization, "However, the increase in marijuana use was even greater in other states and the largest proportionate increase occurred in those states with the most severe penalties."<sup>117</sup> Single coauthored another article eleven years later with similar conclusions, asserting, "The reduction of maximum penalties for cannabis possession to exclude the possibility of receiving a jail sentence has had no discernible impact on rates of cannabis use or problems associated with cannabis use. This was true in all of the jurisdictions in Australia and the United States that enacted decriminalisation measures."<sup>118</sup> Given classic economic models, it may seem counterintuitive that reducing the penalty for use-thereby increasing incentives to smoke marijuana-did not lead to a subsequent increase in use. However, Single et al. explain, "simple lack of interest or fear of adverse health consequences are the most commonly given reasons for abstention from cannabis use."<sup>119</sup> Fear of legal consequences is rarely the reason that people abstain from smoking marijuana.

It seems clear that decriminalization of marijuana does not in fact promote use, but how analogous would the decriminalization of heroin be? What are the relevant differences and similarities between heroin and marijuana? The most striking difference

is that heroin is intensely addictive, while marijuana is not addictive at all. This has a few important implications: since no one in the United States is currently physically addicted to marijuana, it stands to reason that few people feel compelled to use marijuana in spite of the law. On the contrary, heroin addicts feel they have no choice but to find their next heroin fix regardless of what the law says. Thus, one might expect that even if decriminalization increased marijuana consumption, those interested in using heroin would be even less likely to be deterred by heroin's criminal status.

On the other hand, heroin is widely viewed—rightly so—as a much more serious drug than marijuana. If it were decriminalized, it could send the message to society that it is not in fact severely addictive or dangerous. Moreover, if this were the case, and decriminalization increased the number of heroin initiates, this would create lots of new heroin addicts because of heroin's abnormally high capture rate.

Legalization is essentially a more extreme version of decriminalization. Full-scale legalization would eliminate any penalties for personal heroin use. However, just as alcohol is legal but regulated, the government would most certainly regulate heroin. Perhaps there would be a license to sell heroin, similar to the current system with alcohol, or the government itself might take over the heroin distribution business. There would undoubtedly still be a minimum age, likely eighteen or twenty-one, before an individual could legally use heroin. As with decriminalization, there would not necessarily be any change in the laws regulating selling, smuggling, distributing to a minor, or driving under the influence.

One of the biggest benefits of legalization that distinguishes it from decriminalization would be the tax revenue gained from the sale of heroin. As with

cigarettes and alcohol, the government could impose high "sin taxes" on heroin to both discourage its use and raise revenue. While decriminalization would raise some revenue from the fines, it would pale in comparison to the potential tax revenue from legalization, which could be used to fund an aggressive education campaign discouraging drug abuse. Moreover, the government could carefully regulate and maintain the purity level of heroin, decreasing the chances of overdoses. If the government were to take control of the heroin industry, it could also ensure that anyone buying heroin were fully informed of the health risks before allowing them to purchase it. Legalization entails the same risks of increased use as decriminalization, though perhaps they are augmented with full-scale legalization.

One danger of legalization, particularly if the heroin industry were privately run, would be the advertising campaigns of those who stood to benefit from addicting people to heroin. We have already seen the devastating consequences of the tobacco industry's advertisement campaigns, specifically those targeted at adolescents. Any system that creates incentives for companies to promote heroin use sets a dangerous precedent.

One other possible heroin policy is the idea of mandatory rehabilitation. As discussed earlier in this chapter, the primary goal of incarcerating heroin addicts is to rehabilitate them. So why not do that explicitly? Instead of sending addicts to prison, a system of mandatory rehabilitation would send them to a government-run rehabilitation facility. (The facilities would not necessarily need to be run by the government, but giving private companies—whose ultimate goal is to make a profit—control over people who are involuntarily confined to a facility presents myriad opportunities for abuse. This is a similar argument to the arguments against prison privatization, but that is a topic for

another time.) Mandatory rehabilitation is similar to drug court treatment programs, except that the system I propose would be in-patient, so the addicts could be carefully monitored, and would not have any access to drugs. This would ensure a retention rate of 100 percent.

Perhaps the facility would use MMT, ibogaine, or simple detoxification. In order to ensure that no addicts are worse off as a result of this policy, they should be given the option to serve the prison sentence they would have served under the previous system if they so choose. They should also be given the opportunity to choose whichever treatment method they prefer, as citizens are normally entitled to make autonomous decisions about their own medical treatment.

In *Human Rights Quarterly*, Saul Takahashi cautions, "the right to the highest attainable standard of health includes the right to be free from involuntary medical treatment of any kind."<sup>120</sup> However, at the same time he acknowledges that some level of involuntariness might be necessary in order to aid the addict in overcoming his or her addiction. Moreover, "[t]he reality of drug addiction is that it destroys—or at least suspends—the free will of the addict."<sup>121</sup> Committing someone who is resistant to treatment may be in accord with their second order desires even if it does not comport with their first order desires. In other words, an addict may not want to go to treatment, but at the same time they may wish that they were not addicted to heroin, and that they wanted to seek treatment.

Anglin, Prendergast, and Farabee note that some researchers claim, "little benefit can be derived when a drug user is forced into treatment by the criminal justice system...treatment can be effective only if the person is truly motivated to change."<sup>122</sup>

They reviewed eleven studies that analyzed the different outcomes of voluntary and involuntary treatment programs. The studies used inconsistent terminology and defined voluntary on different criteria, thus meta-analysis was challenging. Some studies found a positive correlation between level of coercion and treatment outcomes, some were neutral, and others were negative. Nonetheless, the evidence was strong enough for the authors to conclude, "In general, our review of 11 empirical studies of compulsory substance abuse treatment supports the use of the criminal justice system as an effective source of treatment referral, as well as a means for enhancing retention and compliance."<sup>123</sup> Although voluntary treatment should always be preferable to coerced treatment, coerced treatment seems universally preferable to coerced incarceration.

#### CHAPTER IX

#### CONCLUSIONS AND RECOMMENDATIONS

We have seen the plethora of problems that result from the current heroin policy. Thousands of non-violent citizens are in prison, and still, heroin kills thousands of people every year. While hundreds of thousands of Americans are addicted to heroin, few are receiving adequate medical treatment for their condition. Many injecting drug users are also infected with hepatitis or HIV.

These problems affect all Americans, not just addicts. Incarceration and prosecution cost millions of taxpayer dollars every year. Emergency room costs and lost workdays are a drag on the economy. And when injecting drug users acquire HIV, they put others, especially their loved ones, at risk for contracting the disease, too. The crime that frequently results from addiction also clearly harms society as a whole.

The black market created by the criminalization of heroin is the cause of many of these social ills. But legalization of such a dangerous and addictive drug is an unsatisfactory alternative until we can be more certain of what the impact of full-scale legalization would be. Furthermore, even in California, one of the more liberal states in the country, the attempt to legalize marijuana through Proposition 19 narrowly failed. If California is not ready for marijuana legalization, the country is far from considering the idea of legalizing heroin.

Decriminalization would cease to make all addicts inherently criminal, and would save millions on costs of prosecution and incarceration. It has the added benefit of not appearing to some as a tacit government endorsement of illicit drug use. Moreover,

evidence from the experiments with marijuana decriminalization suggests that it does not increase use, although the analogy to heroin may be imperfect.

A system of mandatory treatment has the most potential to reduce harm, treat addicts, and help them comfortably reintegrate into society. Decreasing the rates of recidivism and relapse benefit all of society. A downside of mandatory treatment is that it would not raise the revenue that a system of legalization, regulation, and taxation would raise, and rehabilitation programs would of course cost a significant amount of money. However, it is doubtful that the expense would exceed the current costs of incarceration, especially since the average stay in rehab would likely be far shorter than the average prison sentence for heroin use. The system of drug courts that already exists is a model for what mandatory rehabilitation would look like.

Rehabilitation centers could offer multiple forms of treatment for addiction. While methadone has been shown to be effective at reducing crime, drug use, and the transmission of HIV and hepatitis C, it also has many negative aspects. It simply substitutes one addiction for another, and the withdrawal from methadone is as excruciating as heroin withdrawal. Methadone use can also be deadly, especially when mixed with other drugs. Rates of retention in methadone maintenance programs are discouragingly low, although this would obviously not be in the case in a mandatory treatment setting.

Ibogaine is a promising alternative to methadone. Although the research on ibogaine is nowhere near as extensive as that on methadone, experiments by Alper et al. and Mash et al. demonstrated that ibogaine eliminates withdrawal symptoms and reduces craving, which is a significant step in helping people overcome their addictions. Ibogaine

has also been shown to decrease depression, which improves the prospects for addicts who self-medicate with drugs to combat this illness. Ibogaine should be rescheduled so that it can be used to treat addiction. This would also eliminate the black market for ibogaine clinics and move treatment into the proper medical setting.

Needle exchange programs have proved effective time after time in reducing the transmission of HIV and hepatitis C. Although critics decry the supposed endorsement of illicit drug use, no studies indicate that these programs encourage drug use. Now that federal funding can finally be used to fund needle exchange programs, Congress should fund programs in every major city in an effort to combat the HIV epidemic.

The government should also run aggressive advertising campaigns to educate addicts about some of the lesser-known dangers of heroin. Specifically, addicts should be taught the dangers of combining heroin with alcohol or benzodiazepines. They should also be educated about the concept of situationally specific tolerance, which could save hundreds of lives. The networks already exist to disseminate this information at MMT clinics or needle exchange programs. Perhaps in ten years or so, the country will be ready for more radical systemic change in our drug policy. Until then, instituting needle programs, expanding the drug court system, and educating addicts could greatly alleviate the serious social and economic problems the United States faces as a result of widespread heroin abuse.

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<sup>17</sup>David T. Courtwright, *Dark Paradise a History of Opiate Addiction in America* (Cambridge: Harvard University Press, 2001), 9.

<sup>18</sup> ibid., 87

<sup>19</sup> ibid., 92

<sup>20</sup> ibid., 11

<sup>&</sup>lt;sup>2</sup> Clifford A. Schaffer, "Basic Facts about the War on Drugs,",

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<sup>&</sup>lt;sup>3</sup> Matthew Tessena, "Opioid FAQ,", http://www.addictivedrugs.net/opiates.html

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