

Methadone maintenance critical analysis

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Southwestern Assemblies of God University School of

Distance Education Methadone Treatment Programs are Effective in Stopping

Heroin Use A Paper Presented to Professor Loyd Uglow, Ph. D In Partial

Fulfillment of The Requirements for the Course THE 5113 Research Literature

and Technology Sharon Pete November 28, 2012 THESIS STATEMENT: To

investigate Methadone maintenance is found to be more effective in treating heroin addiction than 180 day detoxification.

The objective is how methadone maintenance, a widely used but controversial method of weaning heroin addicts off the drug—with counseling has psychosocially enriched 180 day methadone assisted detoxification. OUTLINE I. INTRODUCTION A. History of Heroin B. History of withdrawals II. How Methadone is used to treat Heroin? III. Research Findings IV. CONCLUSION V. Work Cited Methadone Treatment Programs are Effective in Stopping Heroin Use

Substitution treatment or maintenance pharmacotherapy programs using methadone are today the most sought after and effective form of treatment for opiate addiction and dependence. Because methadone is a long-acting opiate whose dosage can be stabilized, it is well suited for daily administration and has proven effective in the elimination of narcotic craving, a driving force behind continued heroin use. And, because it can be administered orally, methadone dramatically reduces heroin injecting frequency and, with it, associated risks for HIV and other blood-borne pathogens. Methadone Treatment Effectiveness

The clinical effectiveness of methadone is most commonly measured by its retention of patients in care and by reductions in heroin use as well as

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improvements in social outcomes, for example, employment, family integration, and reduced arrests and incarceration for criminal offenses [10]. Both randomized trials and observational studies [5, 48-59] have determined that methadone maintenance retains patients at levels two to four times that of other treatment modalities (in other words, 75%, 12-month retention) [16], and the longer patients remain in treatment, the better the results.

For example, for those in treatment more than 24 months, methadone reduces the use of heroin to levels below 15% of those in the period immediately before treatment [16]. Conversely, even among those who have greatly reduced their heroin use while in methadone treatment, over 80% relapse to heroin use when they leave treatment [13]. The most basic public-health benefit of methadone treatment can be seen in the reduction of mortality rates among Intravenous Drug Users, who remain in treatment, observed in randomized clinical trials [11], and later follow-up [18].

History of Heroin Heroin has been around for a long time, and is currently grown around the world, with most of the largest supply coming from the Middle East, Asia, and Latin America. The drug had been a problem in the United States for decades, causing the Nixon administration to actively try to diminish supplies of heroin, when he declared a war on drugs in the 1970s. It was during this time that methadone maintenance treatments came to light, and experiments were done to measure its effectiveness.

However, incomplete data recording, complex situations of treatment, and inconclusive evidence have all aided in the difference of opinions that some studies have today. Heroin Withdrawal What we do know is that heroin is a

hard drug to beat. The addict's body quickly becomes so dependent on the substance that to go without it would mean a severe withdrawal. The withdrawals can start as soon as the next day without any heroin use. Nausea, vomiting, pain, sweating, fatigue, depression and insomnia are what an addict goes through when trying to quit.

But, if a patient is put on methadone when stopping the heroin, the symptoms are not nearly as bad. The patient will need to work to withdraw from the methadone, but that can often happen over weeks or months. Another thing we know is that addicts that are required to quit heroin without the use of medication are less likely to stay in treatment than those that are assisted by drugs such as methadone. Perhaps it gets to be too big of a task before them to be rid of drugs completely, but whatever the reason, more heroin users will stay in treatment if it involves using methadone or another medication.

How Is Methadone Used to Treat Heroin Addiction? For more than 30 years methadone has been used to treat addiction to heroin and other opioid drugs, including morphine. Like other narcotics, heroin releases dopamine into the bloodstream which activates the brain's pleasure receptors producing a state of high euphoria. To maintain the same level of pleasure, heroin addicts must take increasing amounts of the drug to maintain a continuous supply of opioid to brain receptors. This produces extreme swings in mood and behavior as the drug peaks and ebbs in the bloodstream.

A synthetic opioid, methadone does three things that allow the cycle of heroin addiction to be broken: 1. Methadone's effects are fast-acting and long-lasting. By maintaining a constant level of opioid in the bloodstream,

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methadone acts as a stabilizing influence, eliminating the frighteningly high and low swings in mood and behavior that characterize heroin addiction. 2. Taken orally, methadone blocks the high, or “rush,” associated with heroin injection, allowing addicts to “get off the needle.” 3.

Methadone reduces drug cravings and suppresses narcotic withdrawal for 24 to 36 hours. This allows heroin addicts to detoxify without undergoing acute withdrawal symptoms. Administered orally and daily under a doctor's supervision, methadone maintenance treatment (MMT) reduces opiate cravings, relieves withdrawal symptoms, and produces a biochemical balance in the body. While being treated with methadone, typical street doses of heroin no longer produce a feeling of euphoria, making heroin less desirable to users.

MMT is a maintenance program which means that methadone is gradually substituted for heroin in the body. While the patient will need to continue taking methadone, he is freed of the uncontrolled, compulsive and disruptive behavior caused by heroin. Administered under a physician's care, methadone does not impair cognitive function and does not adversely affect intelligence, mental capability or employability. Methadone does not create feelings of sedation or intoxication and does not impair a person's ability to work, drive a car or operate machinery.

Patients are able to feel pain and emotion. When prescribed and administered under a physician's care, studies show that long-term MMT is medically safe, allowing former heroin addicts to become normal, productive members of society. Methadone maintenance is more Effective in Reducing Heroin Use Methadone maintenance is more effective in reducing heroin use

among addicts than a 180 -day detoxification program that included an array of counseling services, a UC San Francisco study has found.

The objective of the study was to compare methadone maintenance, a widely used but controversial method of weaning heroin addicts off the drug —with an alternative treatment of psychosocially enriched 180 day methadone assisted detoxification. Methadone maintenance resulted in lower heroin use rates and fewer drug- related HIV risk behaviors, such as sharing needles. “ Methadone maintenance is controversial,” said Sharon Hall, PhD, lead author of the study and UCSF professor in residence and vice-chair of psychiatry. [08] “ People don’t like it because it is continued provision of an addicting drug.

When people come on methadone maintenance, they may stay on it for several years. The idea of the study was to do a comparison to find a method that was as effective but didn’t involve indefinite treatment with an addicting drug. “[00] Methadone maintenance has been used to treat heroin addiction since 1964, Hall said. Heroin is a short- acting opiate, Hall explained, meaning it produces a high and a withdrawal effect rapidly. Methadone is a slower acting and legal, synthetic-opiate. It works by stabilizing heroin users so that they do not have a heroin -induced euphoria or suffer from severe withdrawal symptoms.

Those in the 180 -day detoxification program received 120 days of methadone treatment, followed by 60 days of methadone dose reduction until they were no longer taking methadone. They also received a host of drug counseling services. During the first six months, participants were required to attend two hours per week of substance abuse group therapy, <https://assignbuster.com/methadone-maintenance-critical-analysis/>

one hour per week of cocaine group therapy if they were found to also be addicted to that drug, and a series of one- hour substance abuse education classes held weekly. They also attended weekly individual therapy sessions.

During the last seven months of the study, participants were offered aftercare treatment that included weekly individual and group psychotherapy and liaison services with the criminal justice system, medical clinics and social service agencies. Methadone maintenance was found to retain more patients and be more effective in decreasing heroin use, though use was still high in both groups. Also, the study found that those addicted to cocaine were more likely to drop out of the 180-day program than the methadone maintenance program. I think the results came out the way they did because heroin is a very addicting drug and we need pharmacological tools at this point to fight that addiction,” Hall said. [08] “ It’s not enough to just provide psychosocial services when we lose methadone. There are two ways the field could change. One is to develop more sophisticated pharmacological treatments for heroin addiction that have less addiction potential. Another thing we need to think about is developing psychosocial interventions targeting what methadone patients need like legal and vocational services. Hall added that one of the reasons the counseling services offered as part of the 180- day detoxification program did not lower heroin use might be because they were too general. Dr. Hall points out that the study points out is that a long time ago methadone maintenance clinics had many more services than they do now. She also said. “ And perhaps that’s one of the reasons the 180 day detoxification didn’t work. The services

were limited in scope and they didn't have legal or vocational services or family therapy.

Many methadone programs have lost funding for these types of services and we have yet to see what a methadone program looks like that has them. "

Methadone Treatment Facilities Many drug treatment facilities have built their programs around these pieces of information. By using medications such as methadone, physicians are able to ease the withdrawal symptoms and to keep the addict in treatment. Facilities may not be able to come up with statistics that say their patients have completed their program and are clean and drug-free, but that they are heroin-free. According to many, this is a better alternative.

Many facilities work to help their patients become responsible members of society, by keeping a job or taking care of their family, something heroin addicts find almost impossible. For those patients that require the use of methadone to achieve those goals, the benefit of living a normal life is worth it. Question 1: Is methadone maintenance treatment effective for opioid addiction? Answer: Yes. Research has demonstrated that methadone maintenance treatment is an effective treatment for heroin and prescription narcotic addiction when measured by Reduction in the use of illicit drugs Reduction in criminal activity

Reduction in needle sharing Reduction in HIV infection rates and transmission Cost-effectiveness Reduction in commercial sex work Reduction in the number of reports of multiple sex partners Improvements in social health and productivity Improvements in health conditions Retention in addiction treatment Reduction in suicide Reduction in lethal overdose Recent

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meta-analyzes have supported the efficacy of methadone for the treatment of opioid dependence. These studies have demonstrated across countries and populations that methadone can be effective in improving treatment retention, criminal activity, and heroin use (09).

An overview of 5 meta-analyzes and systematic reviews, summarizing results from 52 studies and 12, 075 opioid-dependent participants, found that when methadone maintenance treatment was compared with methadone detoxification treatment, no treatment, different dosages of methadone, buprenorphine maintenance treatment, heroin maintenance treatment, and L-a-acetylmethadol (LAAM) maintenance treatment, methadone maintenance treatment was more effective than detoxification, no treatment, buprenorphine, LAAM, and heroin plus methadone.

High doses of methadone are more effective than medium and low doses (10). Patients receiving methadone maintenance treatment exhibit reductions in illicit opioid use that are directly related to methadone dose, the amount of psychosocial counseling, and the period of time that patients stay in treatment. Patients receiving methadone doses of 80 to 100 mg have improved treatment retention and decreased illicit drug use compared with patients receiving 50mg of methadone (11).

A systematic review conducted on 28 studies involving 7, 900 patients has demonstrated significant reductions in HIV risk behaviors in patients receiving methadone maintenance (12). A randomized clinical trial in Bangkok, Thailand, included 240 heroin-dependent patients, all of whom had previously undergone at least 6 detoxification episodes. The patients were

randomly assigned to methadone maintenance versus 45-day methadone detoxification.

The study found that the methadone maintenance patients were more likely to complete 45 days of treatment, less likely to have used heroin during treatment, and less likely to have used heroin on the 45th day of treatment (13). In the Treatment Outcome Prospective Study(TOPS), methadone maintenance patients who remained in treatment for at least 3 months experienced dramatic improvements during treatment with regard to daily illicit opioid and cocaine use. These improvements persisted for 3 to 5 years following treatment, but at reduced levels (14).

In a study of 933 heroin-dependent patients in methadone maintenance treatment programs, during episodes of methadone maintenance, there were (1) decreases in narcotic use, arrests, criminality, and drug dealing; (2) increases employment and marriage; and (3) diminished improvements in areas such as narcotic use, arrest, criminality, drug dealing, and employment for patients who relapsed (15). In a 2. 5-year followup study of 150 opioid-dependent patients, participation in methadone maintenance treatment resulted in a substantial improvement long several relatively independent dimensions, including medical, social, psychological, legal, and employment problems (16). A study that compared ongoing methadone maintenance with 6 months of methadone maintenance followed by detoxification demonstrated that methadone maintenance resulted in greater treatment retention (median, 438. 5 vs. 174. 0 days) and lower heroin use rates than did detoxification. Methadone maintenance therapy resulted in a lower rate of drug-related (mean [SD] at 12 months, 2. 17 [3. 88] vs. 3. 73 [6. 86]) but

not sex-related HIV risk behaviors and a lower score in legal status (mean [SD] at 12 months, 0.5 [0.13] vs. 0.13 [0.19]) (17). In Conclusion: Between 750,000 and 1 million people in the United States are addicted to heroin, a semisynthetic opioid made from the seeds of opium poppies. This highly addictive, illegal drug is converted in the brain into morphine, which binds to opioid receptors to produce a euphoric rush or heroin “high.” Repeated heroin use causes drug dependence and its removal rapidly produces unpleasant withdrawal symptoms that can last for several days to months. Users become addicts when their desire to take heroin outweighs the negative health, social, financial, and legal consequences of their drug habit.

For more than 30 years, the synthetic narcotic, methadone has been used to treat heroin addiction. Methadone, a powerful pain-relieving drug, binds to the same receptors as heroin but without producing the euphoric rush. Because it lasts much longer in the body than heroin, patients trying to abstain from heroin need to take only a single daily dose of methadone to avoid withdrawal symptoms. Although patients become physically dependent on methadone, the reduction in withdrawal symptoms, together with a reduction in drug cravings, helps heroin addicts in methadone maintenance treatment programs stop using illicit drugs and lead normal lives.

The minimum maintenance dose of methadone recommended in these programs, 60mg/day—is derived from randomized trials that have tested the ability of different doses of methadone to wean populations of addicts off heroin. However, many clinicians report that lower doses of methadone are effective in some patients. The clinicians reports that setting a standard dose

will not optimize therapy for all patients, and recommend that methadone doses be titrated on an individual basis to achieve heroin abstinence.

Overall, 168 volunteers achieved heroin abstinence for at least a month, as measured by the absence of illicit opioids in their urine. The median effective daily dose of methadone taken by these successful volunteers was 69mg, but doses ranged from 1.5 to 191.2 mg. Of those who abstained, 16% took daily doses of more 100mg methadone, 38% remained abstinent on less than the recommended minimum daily dose, and almost half of the patients who did not achieve abstinence received more than 60mg/day of methadone.

How long a patient had taken heroin and the amount taken per day did not correlate with the methadone dose associated with abstinence. However, patients who had previously been through drug detoxification treatments appeared to need higher methadone doses, as did those recently diagnosed with depression or posttraumatic stress disorder and those living in areas with lower average heroin purity. In addition, patients who were abstinent on higher doses were more likely to have stayed in treatment longer or attended a clinic where dose reductions were discouraged.

Taken together, these factors predicted 40% of the variance in methadone dosage associated with heroin abstinence. The results suggest that only patients with lower methadone needs achieve abstinence in the early titration phase of treatment or at clinics that encourage use of lower doses. These results provide scientific confirmation that the dose of methadone required to achieve heroin abstinence varies greatly between patients, and indicate that effective and ineffective dose ranges overlap substantially.

The researchers suggest that clinicians should be allowed some flexibility in determining methadone dosing and call for research into the most effective way to determine the optimal dose for a particular patient. For now, they suggest, given that patients attending clinics that routinely give at least the recommended minimum dose of methadone do better on average than those attending clinics where lower doses are often given 60mg/day should be the benchmark for dose titration, which should occur early during treatment.

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Westley Clark, MD, MPH, on leave from position as UCSF associate clinical professor of psychiatry; Helen [06] Robillard, RN, MSN, MA, research nurse practitioner at the Veteran Affairs Medical Center in San Francisco; [07] Peter Banys, MD, associate clinical professor and vice chair, psychiatry at the Veteran Affairs Medical Center in San Francisco. [08] Sharon Hall, PhD, lead author of the study and UCSF professor in residence and vice-chair of psychiatry. [09] Marsch, 1998. [10] Amato, Davoli, Perucci, et al. 2005. [11] Simpson, 1993. [12] Metzger, Woody, McLellan, et al. , 1993. 13] Vanichseni, Wongsuwan, Choopanya, et al. , 1991. [14] Hubbard, Marsden, Rachal, et al. , 1989. [15] Powers and Anglin, 1993. [16] Kosten, Rounsaville, and Kleber, 1987. [17] Sees, Delucchi, Masson, et al. , 2000. [18] Dole, Nyswander, and Kreek (1966) Works Cited Amato L, Davoli M, Perucci C, Ferri M, Faggiano F, Mattick RP. An overview of systematic reviews of the effectiveness of opiate maintenance therapies: available evidence to inform clinical practice and research.

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