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TREATING OPIOID ADDICTION WITH OPIOIDS: GROUNDBREAKING SCIENCE OR ABSOLUTE CHAOS?

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As the opioid crisis continues to impact communities, developing an effective treatment for opioid addiction is a critical public health challenge. This study aims to explore the use of opioid agonists for the treatment of opioid addiction and examine potential controversies surrounding it.

Treatment of OUD with medication such as Methadone and Buprenorphine has been proven to be effective in the treatment of overdose of opioids. The mechanism of action for these opioid agonists are primarily focused on maintenance of the opioid addiction and detoxification. In the United States Buprenorphine is used for office based treatment, whereas Methadone is provided only in the Opioid usage overdose treatment facility centers.

However, many statistical analyses found that opioid agonist treatment for OUD, can pose a major risk for the public health and safety, potentially causing more harm to the patient than the OUD itself. It is crucial to address the issues of misuse and stigma of medication associated with medication assisted treatment in order to optimize patient care of individuals with OUD.

Key words: Buprenorphine, Methadone, Public health, opioid use disorder, opioid agonist, Treatment for OUD.

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ЛЕЧЕНИЕ ОПИОИДНОЙ ЗАВИСИМОСТИ С ПОМОЩЬЮ ОПИОИДОВ: НОВАТОРСКАЯ НАУКА ИЛИ АБСОЛЮТНЫЙ ХАОС?

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Поскольку опиоидный кризис продолжает оказывать влияние на общество, разработка эффективного лечения опиоидной зависимости является важнейшей задачей общественного здравоохранения. Цель данного исследования – изучить применение опиоидных агонистов для лечения опиоидной зависимости и рассмотреть потенциальные противоречия, связанные с этим методом.

Доказана эффективность лечения опиоидной зависимости с помощью таких препаратов, как метадон и бупренорфин, при передозировке опиоидами. Механизм действия этих опиоидных агонистов в основном направлен на поддержание опиоидной зависимости и детоксикацию. В Соединенных Штатах бупренорфин используется для амбулаторного лечения, тогда как метадон предоставляется только в специализированных центрах лечения передозировки опиоидами.

Однако многочисленные статистические анализы показали, что лечение опиоидной зависимости с помощью агонистов опиоидов может представлять серьезную угрозу для здоровья и безопасности населения, потенциально причиняя пациенту больше вреда, чем сама опиоидная зависимость. Крайне важно решить проблемы злоупотребления и стигматизации лекарственных препаратов, связанных с медикаментозным лечением, чтобы оптимизировать уход за людьми с опиоидной зависимостью.

Ключевые слова: Бупренорфин, метадон, общественное здравоохранение, расстройство, связанное с употреблением опиоидов, опиоидный агонист, лечение расстройства, связанное с употреблением опиоидов.

The opioid epidemic continues to challenge modern medicine, forcing clinicians and policymakers alike to confront a crisis that is both clinical and societal in scope. Amid the surge in opioid-related morbidity and mortality, opioid substitution therapy (OST)—the controlled admi-

nistration of opioids such as methadone and buprenorphine to treat opioid dependence—has emerged as a cornerstone of harm reduction. Yet the very strategy of treating opioid addiction with opioids has long ignited fierce debate: is this approach a groundbreaking scientific advancement

that mitigates harm and stabilizes lives, or if it represents a precarious therapeutic paradox fraught with risks and potential for long-term dependency.

Decades of research have laid a strong evidentiary foundation for OST. Clinical trials and meta-analyses have shown that, when administered under medical supervision, these treatments substantially reduce illicit opioid use, lower the risk of overdose, and improve overall psychosocial functioning. For instance, studies accessible through PubMed Central have documented significant reductions in opioid-related mortality among patients enrolled in methadone maintenance programs, underscoring the therapy's role in saving lives. Similarly, research published via Springer indicates that structured opioid substitution can alleviate withdrawal symptoms by maintaining steady receptor activation a pharmacological tactic that not only curtails the cycle of intoxication and withdrawal but also facilitates engagement with complementary psychosocial interventions.

Despite these compelling benefits, OST sits at the nexus of controversy. Critics have raised concerns about the potential for long-term dependency, the risk of medication diversion, and the societal stigma that can accompany prolonged opioid therapy. These issues have been highlighted in comprehensive reviews and policy analyses from sources such as the European Monitoring Centre for Drugs and Drug Addiction (EUDA) and the Canadian Medical Association Journal. Further, detailed evaluations in health policy literature reveal that while OST can be a key element in reducing harm, its success is intricately tied to factors including accessibility, regulatory frameworks, and comprehensive support systems.

This comparative research seeks to dissect these dual facets—examining both the scientific evidence and societal outcomes associated with OST—under the provocative lens of whether we are witnessing groundbreaking science or spawning absolute chaos. By integrating clinical data, epidemiological trends, and current policy evaluations, this study aims to map the complex interplay between biological efficacy and social ramifications. Our approach acknowledges that while OST can restore stability for many individuals, its implementation must be continually scrutinized to ensure that the benefits decisively outweigh the risks.

In the sections that follow, we will explore the biochemical mechanisms underpinning OST, analyze epidemiological trends in morbidity and mortality, and evaluate the policy debates that sur-

round this treatment modality. Through this comprehensive, comparative analysis, we hope to offer clinicians, researchers, and policymakers a nuanced perspective on whether the therapeutic use of opioids in treating opioid addiction embodies a profound scientific breakthrough or if it inadvertently sows the seeds of therapeutic chaos.

Purposes of the Study: The primary aim of this study is to critically evaluate the multifaceted dimensions of opioid substitution therapy (OST) for treating opioid addiction—specifically focusing on the methadone treatment model employed in the United States, Canada, Australia and the United Kingdom. We will also be examining how the different healthcare systems have affected the success rates of the treatment.

Methods and Materials

This comparative study employs a mixed-methods approach that integrates a systematic literature review, policy analysis, and qualitative examination of patient narratives to evaluate opioid substitution therapy (OST) with a focus on methadone treatment. The study's objective is to contrast the U. S. model—which relies heavily on specialized Opioid Treatment Programs (OTPs) – with international frameworks that offer more accessible, prescription-based treatments. The following databases such as PubMed, NIH, ScienceDirect, and Google Scholar were used to search for articles. The following keywords were used to review the articles to support the study «opioids», «opioid use disorders», «opioid use disorders management», «methadone», «buprenorphine», «healthcare systems», «addiction recovery».

Research Results

Methadone is not accessible in all healthcare outlets in the United States and is only limited to specialty programs.

The article titled, «Recent modifications to the US methadone treatment system are a Band-Aid—not a solution—to the nation's broken opioid use disorder treatment system» provides an example of such a scenario with a patient case. Danielle was being treated for Opioid Use Disorder and while she wanted to get help she grew increasingly frustrated with the system and resorted to buying illicit forms of methadone instead. Moreover, the clinic visits would take too much of her time and it is too far for her to travel. Additionally, the staff working at these clinics were condescending and

judgmental when they should instead have been helpful and kind. The aforementioned traits are some of the biggest challenges found in the US system for tackling opioid treatment.

Methadone has been proven time and time again to be effective in reducing numbers of opioid use disorder cases and overdose due to illicit drug use.

According to research conducted by the authors of, «Methadone Matters: What the United States Can Learn from the Global Effort to Treat Opioid Addiction», the level of restrictions posed on this treatment within the United States is immense. Opioid treatment is only delivered to patients through special Opioid Treatment Programs. These clinics seem prejudiced in their work and do not seem to have a patient-centered approach in mind. In fact, these clinics are described by patients as «liquid handcuffs» and do not cover any major ground in terms of patient care. There are very few such clinics in existence and have rules in which the patient must arrive to receive treatment on a near-daily basis. Establishing OTPs within the healthcare sector itself can pose a long-term benefit for patients in terms of accessibility and decrease the number of overdose deaths.

COVID-19 alleviated some of the restrictions posed on methadone treatment allowing patients to obtain take home medication. This in fact turned out beneficial in patient outcomes and did not in fact harm the patients in question. Despite the changes made during COVID-19, the article reinstates that the problem lies within the OTPs themselves. The limited accessibility to OTPs creates a hurdle of challenges to those that want to quit their habits but cannot. Allowing prescription-based access through healthcare offices, pharmacies as well as specialty clinics. This appears to be the norm in most other countries including: Canada, Australia and the United Kingdom. Although such trials (Buprenorphine prescription) have been conducted in the United States with positive results the federal regulations of the country limit this program from actually being taken into effect.

Additionally, despite the ongoing debate as to how methadone treatment can increase mortality in patients it is safe to say that the aforementioned countries have overcome this so called barrier and achieved actual positive outcomes through this method. They've mitigated these challenges by supervising their hospital dosage and allowing patient-specific pharmacy prescriptions. The risk of Fentanyl overdose and increased tolerance is higher now more than ever and the

addition of this change could be a major benefit to patients.

Furthermore, institutions such as prisons, skilled nursing facilities elderly patients with OUD, and health-care systems could benefit from this transformation.

When it comes to countries aside from the United States, particularly those in Europe and Canada, regulations are much more lenient towards treatment options with Opioids.

In such countries, the greater leniency in access to Opioid treatment facilities resulted in reduced numbers of overdose related deaths. Moreover, General Practitioners are allowed to prescribe medications such as Methadone and Buprenorphine to patients enabling timely treatment and easier access. Other methods including public health campaigns, which were adopted by these countries to create awareness within the community, also lead to better treatment retention rates.

Table 01. The table summarizes the success rates of methadone treatment for OUD in the four countries below

Country	Success Rate (%)
Canada	70–80 %
Australia	60–80 %
United Kingdom	70 %
United States	40–60 %

Conclusion:

1. The United States employs specialized Opioid Treatment Programs (OTPs), which, limited in scope, create significant barriers for individuals seeking help for OUD. These restrictions force people to look for other means, underscoring the critical need for more accessible treatment and reform of policies.

2. More lenient approaches employed by Canada, Australia, and the United Kingdom show better outcomes, such as higher success rates and fewer overdose deaths. These examples highlight the benefits of integrating opioid treatment into regular healthcare systems to enhance patient care.

3. The COVID-19 pandemic has demonstrated a unique example of how reducing restrictions can improve patient access and outcomes. To manage the opioid crisis effectively, the United States should consider adopting a similar approach used in the countries mentioned in the study; these mainly include patient-centered care, reducing stigma, and expanding access to treatment.

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