## A PETITION TO ADD OPIOID REPLACEMENT & OPIOID USE DISORDER TO THE ACCEPTED LIST OF CONDITIONS FOR MEDICAL MARIJUANA IN DELAWARE

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### **1** DECLARATION OF INTENT

#### 1.1 PURPOSE

I am requesting to add Opioid Replacement and Opioid Use Disorder to the accepted list of qualifying conditions for Medical Marijuana to Delaware, under Title 16.

#### 1.2 CANNABIS IS SAFER THAN OPIOIDS

No other intervention, policy, pharmacotherapy, or treatment paradigm has been as impactful as cannabis legislation has been on the rates of opioid consumption, overdose, and death.

To date I have lost seven friends and family members to opiates and prescription drugs. I've attended too many funerals and I cannot stay silent and watch this cycle of addiction continue to repeat itself in other families.

Prescription drug addiction is killing my generation. It's time for a different approach. Delaware's approach to the opioid epidemic focused on funding new treatment centers and subsidizing overdose medications. Funding new treatment centers doesn't break the cycle of addiction, and subsidizing overdose medications clearly isn't working.

Addiction isn't something you can attack with more pills or tougher enforcement. If we have learned anything from the failed war on drugs, we learned that wars cannot be fought against things, wars are fought against people. It is impossible to win a war on an idea without education.

Critics argue marijuana is dangerous but in all of human history, no one has ever died from a marijuana overdose. A study from American Scientist confirmed it only takes 10 times the recommended serving of alcohol to lead to death. By contrast, a marijuana smoker would have to consume 20,000 to 40,000 times the amount of THC in a joint in order to be at risk of dying, according to the DEA.

The National Cancer Institute says very succinctly "cannabinoid receptors, unlike opioid receptors, are not located in the brainstem areas controlling respiration, therefore lethal overdoses from Cannabis and cannabinoids do not occur."

Critics claim marijuana causes schizophrenia. Schizophrenia occurs naturally in 1 percent of the global population — if marijuana did cause it, did data would exist to show a significant rise in schizophrenia cases in states that legalize cannabis, but that data doesn't exist.

Recent studies have shown that Cannabidiol, the non-psychoactive cannabinoid found in the cannabis plant, can control seizures, reduce inflammation, relieve anxiety as well as treat both schizophrenia and Tourette's syndrome.

Marijuana is not a gateway, it's an exit drug. Study after study has proven consistently that the real gateway drugs are tobacco and alcohol, which teens turn to first before trying marijuana. Less than 9 percent of marijuana users become dependent, making Cannabis less addictive than all other drugs.

More clinical studies have been performed on cannabis than most legal medications approved by the FDA. A quick search for "marijuana" or "cannabinoids" in the PubMed database yields tens of thousands of studies. This research provides clear evidence of marijuana's minimal risks and versatile uses.

By contrast, an analysis of 200 FDA-approved drugs showing that almost a third of those were passed based on a single study.

The growing body of research supporting the medical use of cannabis creates an evidence-based rationale for governments, health care providers, and academic researchers to consider the implementation of cannabis-based interventions in the opioid crisis. The Washington Post reported that doctors in medical marijuana states prescribe 1826 fewer doses of pain medication and 562 fewer doses of anxiety medications.

Cannabis works as an alternative to these drugs because, unlike other commonly used drugs, cannabinoids are excreted at a low rate so even abrupt cessation of cannabis use is not associated with rapid declines in plasma that would precipitate severe or abrupt withdrawal symptoms. Studies have also shown CBD can blunt cravings in individuals with opioid dependence following a period of abstinence.

Growing pre-clinical and clinical evidence supports the use of cannabis as an Opioid Replacement for treatment of Opioid Use Disorder. The evidence summarized in this article demonstrates the potential cannabis has to ease opioid withdrawal symptoms, reduce opioid consumption, ameliorate opioid cravings, prevent opioid relapse, improve OUD treatment retention, and reduce overdose deaths. Cannabis' greatest potential to positively impact the opioid epidemic may be due to its promising role as a first line analgesic in lieu of or in addition to opioids.

#### 1.3 CDC GUIDELINES DO NOT RECOMMEND PRESCRIBING OPIOIDS FOR CHRONIC PAIN (2016)

https://www.cdc.gov/mmwr/volumes/65/rr/rr6501e1.htm?CDC\_AA\_refVal=https%3A%2F%2Fwww.cdc.gov%2Fmmwr% 2Fvolumes%2F65%2Frr%2Frr6501e1er.htm

The Center for Disease Control Guidelines for prescribing opioids for chronic pain states explicitly there is no evidence of long term use of opioids for Chronic Pain.

No evidence shows a long-term benefit of opioids in pain and function versus no opioids for chronic pain with outcomes examined at least 1 year later (with most placebo-controlled randomized trials  $\leq 6$  weeks in duration).

Extensive evidence shows the possible harms of opioids (including opioid use disorder, overdose, and motor vehicle injury).

Extensive evidence suggests some benefits of nonpharmacologic and nonopioid pharmacologic treatments compared with long-term opioid therapy, with less harm.

Nonpharmacologic therapy and nonopioid pharmacologic therapy are preferred for chronic pain. Clinicians should consider opioid therapy only if expected benefits for both pain and function are anticipated to outweigh risks to the patient. If opioids are used, they should be combined with nonpharmacologic therapy and nonopioid pharmacologic therapy, as appropriate.

### 2 THE EXTENT TO WHICH A LEGAL PRECEDENT EXISTS

2.1 New Jersey Adds Opiate Use Disorder as a Qualifying CONDITION (March 2018)

https://www.nj.com/marijuana/2018/03/might\_you\_qualify\_for\_medical\_marijuana\_in\_nj\_here.html

These conditions were immediately added Tuesday: Anxiety; Migraines; Tourette's syndrome; Chronic pain related to musculoskeletal disorders, which include rheumatoid arthritis, lupus, and fibromyalgia and opioid use disorder; Chronic pain affecting of "visceral origin," which includes pancreatitis, irritable bowel syndrome and bowel dysfunction. A medical marijuana advisory panel comprised of physicians, pharmacists and other health professionals recommended adding the new conditions last fall. Health Commissioner Shereef Elhanal would be able to expand the list at his discretion in the future, Murphy said.

#### 2.2 PENNSYLVANIA ADDS OPIATE USE DISORDER AS A QUALIFYING CONDITION (MAY 2018)

On Monday, May 14, 2018, Pennsylvania became the first state to add opioid addiction to its list of approved conditions for medicinal cannabis. In a **press release from Pennsylvania Governor Tom Wolf** it was stated that the Department of Health developed temporary regulations to implement the recommendations of the Medical Marijuana Advisory Board. These temporary regulations took effect on May 17, 2018.

https://www.governor.pa.gov/wolf-administration-approves-eight-universities-certified-medical-marijuana-academicclinical-research-centers/

In light of the current opioid crisis and issues with accessibility of treatments for opioid use disorders, it is time for us to look for alternative treatments that can increase access. Medical marijuana is one potential treatment alternative, which is more readily available to individuals in need across the country. It is estimated that sixty percent of Americans live in a state with at least some form of legal medical marijuana and nearly 21% live in states with legal recreational marijuana. We know that there are close interactions between cannabinoid system and the opioid system. These shared pharmacological properties may help to explain why we have already seen decreased admissions for opioid-related treatment and dramatically reduced rates of opioid overdoses in states with medical marijuana laws. Opioid users may find cannabis to be an appealing alternative to opioids.

Subjective reports of medical marijuana patients in the US and Canada make a stronger case as to why some find marijuana as a helpful substitution treatment. (In this context, "substitution" means when someone uses one substance intentionally in place of another substance associated with more harms and negative consequences.) A study with 350 medical marijuana patients in California found that 26% of respondents reported they used marijuana as a substitute for illicit drugs and 65.8% for prescription drugs. When asked why they preferred marijuana as a substitution, the most common reasons included fewer harmful side effects, helpfulness in managing their symptoms, lower likelihood of withdrawal, and better availability. A study with 404 medical marijuana patients in Canada found similar results; 36.1% of respondents reported marijuana was a substitute for illicit drugs and 67.8% for prescription drugs. The commonly reported reasons for substitution were the same as in the aforementioned US study. Given these results, there is reason to believe that there are already individuals using medical marijuana as a substitute for opioids and other drugs.

Pennsylvania is the first state to add opioid-use disorder separately as an approved condition for medical marijuana patients.

## 2.3 New York State Adds Opioid Replacement Now a Qualifying Condition for Medical Marijuana (July 2018)

https://www.health.ny.gov/press/releases/2018/2018-07-12\_opioid\_replacement.htm

Effective immediately, registered practitioners may certify patients to use medical marijuana as a replacement for opioids, provided that the precise underlying condition for which an opioid would otherwise be prescribed is stated on the patient's certification. This allows patients with severe pain that doesn't meet the definition of chronic pain to use medical marijuana as a replacement for opioids.

In addition, the regulation adds opioid use disorder as an associated condition. This allows patients with opioid use disorder who are enrolled in a certified treatment program to use medical marijuana as an opioid replacement.

### 3 THE EXTENT TO WHICH THE CONDITION IS GENERAL ACCEPTED AS A VALID, EXISTING DEBILITATING MEDICAL CONDITION

#### 3.1 OPIOID REPLACEMENT

#### http://www.who.int/substance\_abuse/information-sheet/en/

Opioids are substances derived from the opium poppy, or synthetic analogues with similar effects. Examples are morphine, heroin, tramadol, oxycodone and methadone. Opioids have the potential to cause substance dependence that is characterized by a strong desire to take opioids, impaired control over opioid use, persistent opioid use despite harmful consequences, a higher priority given to opioid use than to other activities and obligations, increased tolerance, and a physical withdrawal reaction when opioids are discontinued. Dependence on prescription opioids includes iatrogenic dependence following the treatment of chronic pain, and dependence following the diversion and theft of prescription opioids from patients, medical facilities, pharmacies and the manufacturing and distribution chains.

#### 3.2 OPIOID OVERDOSES

#### http://www.who.int/substance\_abuse/information-sheet/en/

Due to their effect on the part of the brain which regulates breathing, opioids in high doses can cause respiratory depression and death. An opioid overdose can be identified by a combination of three signs and symptoms referred to as the "opioid overdose triad". The symptoms of the triad are:

- pinpoint pupils
- unconsciousness
- Respiratory depression.

Combining opioids with alcohol and sedative medication increases the risk of respiratory depression and death, and combinations of opioids, alcohol and sedatives are often present in fatal drug overdoses.

Because of their capacity to cause respiratory depression, opioids are responsible for a high proportion of fatal drug overdoses around the world. The number of opioid overdoses has increased in recent years, in part due to the increased use of opioids in the management of chronic non-cancer pain<sup>1</sup>. In the United States of America alone in 2016, there were an estimated 63 632 deaths due to drug overdose, which is a 21% increase from previous years. This was largely due to a rise in deaths associated with prescription opioids. This group of opioids (excluding methadone) was implicated in 19 413 deaths in the country, more than double the number in 2015.

3.2.1 WHYY: MONTHLY OVERDOSE DEATHS BREAK RECORD IN DELAWARE https://whyy.org/articles/monthly-overdose-deaths-break-record-in-delaware/

More people died in August of suspected drug overdoses in a single month than ever before in Delaware, according to the Department of Health and Social Services.

*Last month, 39 fatal overdoses were reported, eclipsing the previous record of 27 that occurred in April.* 

Twenty-seven of the August deaths were in New Castle County, nine in Kent County and three in Sussex County.

#### 3.3 OPIOID USE DISORDER

#### https://en.wikipedia.org/wiki/Opioid\_use\_disorder

Opioid use disorder is a problematic pattern of opioid use that causes significant impairment or distress. Symptoms of the disorder include a strong desire to use opioids, increased tolerance to opioids, failure to fulfill obligations, trouble reducing use, and withdrawal syndrome with discontinuation. Opioid withdrawal symptoms may include nausea, muscle aches, diarrhea, trouble sleeping, or a low mood. Addiction and dependence are components of a substance use disorder. Complications may include opioid overdose, suicide, HIV/AIDS, hepatitis C, marriage problems, or unemployment.

Opioids include substances such as heroin, morphine, fentanyl, codeine, oxycodone, and hydrocodone. In the United States, a majority of heroin users begin by using prescription opioids. These can be bought illegally or prescribed. Diagnosis may be based on criteria by the American Psychiatric Association in the DSM-5. If more than two of eleven criteria are present during a year the diagnosis is said to be present. Individuals with an opioid use disorders are often treated with opioid replacement therapy using methadone or buprenorphine.

In 2013, opioid use disorders affected about 0.4% of people.<sup>[4]</sup> As of 2015, it was estimated that about 16 million people worldwide have been affected at one point in their lives.<sup>[15]</sup> Onset is often in young adulthood.<sup>[4]</sup> Males are affected more often than females. It resulted in 122,000 deaths worldwide in 2015, up from 18,000 deaths in 1990. In the United States during 2016, there were more than 42,000 deaths due to opioid overdose, of which more than 15,000 were the result of heroin use.<sup>[17]</sup>

The opioid overdose epidemic is arguably the worst public health crisis in U.S. history. At the time of this publication, more people are dying than at the peak of the AIDS epidemic, and for the first time, drug overdoses outnumber automobile and handgun deaths.

#### 3.3.1 RISK FACTORS FOR OPIOID OVERDOSE

People dependent on opioids are the group most likely to suffer an overdose. The incidence of fatal opioid overdose among opioid-dependent individuals is estimated at 0.65% per year. Non-fatal overdoses are several times more common than fatal opioid overdoses. About 45% of drug users experience nonfatal overdose and about 70% witness drug overdose (including fatal) during their lifetime.

#### 3.3.2 PEOPLE AT HIGHER RISK OF OPIOID OVERDOSE

- people with opioid dependence, in particular following reduced tolerance (following detoxification, release from incarceration, cessation of treatment);
- people who inject opioids;
- people who use prescription opioids, in particular those taking higher doses;
- people who use opioids in combination with other sedating substances;

- people who use opioids and have medical conditions such as HIV, liver or lung disease or suffer from depression;
- household members of people in possession of opioids (including prescription opioids).

#### 3.3.3 PEOPLE LIKELY TO WITNESS AN OPIOID OVERDOSE

- people at risk of an opioid overdose, their friends and families;
- people whose work brings them into contact with people who overdose (health-care workers, police, emergency service workers, people providing accommodation to people who use drugs, peer education and outreach workers).

Risk factors for overdoses with prescribed opioids include a history of substance use disorders, high prescribed dosage (over 100mg of morphine or equivalent daily), male gender, older age, multiple prescriptions including benzodiazepines, mental health conditions and lower socioeconomic status.

#### 3.4 THE OPIATE OVERDOSE CRISIS IN AMERICA

#### https://www.drugabuse.gov/drugs-abuse/opioids/opioid-overdose-crisis

Every day, more than 115 people in the United States die after overdosing on opioids.<sup>1</sup> The misuse of and addiction to opioids—including <u>prescription pain relievers</u>, <u>heroin</u>, and synthetic opioids such as <u>fentanyl</u>—is a serious national crisis that affects public health as well as social and economic welfare. The Centers for Disease Control and Prevention estimates that the total "economic burden" of prescription opioid misuse alone in the United States is \$78.5 billion a year, including the costs of healthcare, lost productivity, addiction treatment, and criminal justice involvement.<sup>2</sup>

In the late 1990s, pharmaceutical companies reassured the medical community that patients would not become addicted to prescription opioid pain relievers, and healthcare providers began to prescribe them at greater rates. This subsequently led to widespread diversion and misuse of these medications before it became clear that these medications could indeed be highly addictive. Opioid overdose rates began to increase.

In 2015, more than 33,000 Americans died as a result of an opioid overdose, including prescription opioids, heroin, and illicitly manufactured fentanyl, a powerful synthetic opioid.<sup>1</sup> That same year, an estimated 2 million people in the United States suffered from substance use disorders related to prescription opioid pain relievers, and 591,000 suffered from a heroin use disorder (not mutually exclusive).

#### 3.5 OTHER IMPACTS

- Roughly 21 to 29 percent of patients prescribed opioids for chronic pain misuse them.<sup>6</sup>
- Between 8 and 12 percent develop an opioid use disorder.
- An estimated 4 to 6 percent who misuse prescription opioids transition to heroin.
- About 80 percent of people who use heroin first misused prescription opioids.
- Opioid overdoses increased 30 percent from July 2016 through September 2017 in 52 areas in 45 states.
- The Midwestern region saw opioid overdoses increase 70 percent from July 2016 through September 2017.
- Opioid overdoses in large cities increase by 54 percent in 16 states.<sup>1</sup>

This issue has become a public health crisis with devastating consequences including increases in opioid misuse and related overdoses, as well as the rising incidence of neonatal abstinence syndrome due to opioid use and misuse during pregnancy.

## 4 THE EXTENT TO WHICH THE CONDITION CAUSES SEVERE SUFFERING, OR OTHERWISE SEVERELY IMPAIR THE PATIENT'S ABILITY TO CARRY ON ACTIVITIES OF DAILY LIVING

#### 4.1 CDC GUIDELINES DO NOT RECOMMEND PRESCRIBING OPIOIDS FOR CHRONIC PAIN (2016)

https://www.cdc.gov/mmwr/volumes/65/rr/rr6501e1.htm?CDC\_AA\_refVal=https%3A%2F%2Fwww.cdc.gov%2Fmmwr% 2Fvolumes%2F65%2Frr%2Frr6501e1er.htm

The Center for Disease Control Guidelines for prescribing opioids for chronic pain states explicitly there is no evidence of long term use of opioids for Chronic Pain.

No evidence shows a long-term benefit of opioids in pain and function versus no opioids for chronic pain with outcomes examined at least 1 year later (with most placebo-controlled randomized trials  $\leq 6$  weeks in duration).

Extensive evidence shows the possible harms of opioids (including opioid use disorder, overdose, and motor vehicle injury).

*Extensive evidence suggests some benefits of nonpharmacologic and nonopioid pharmacologic treatments compared with long-term opioid therapy, with less harm.* 

Nonpharmacologic therapy and nonopioid pharmacologic therapy are preferred for chronic pain. Clinicians should consider opioid therapy only if expected benefits for both pain and function are anticipated to outweigh risks to the patient. If opioids are used, they should be combined with nonpharmacologic therapy and nonopioid pharmacologic therapy, as appropriate.

4.2 OPIOID-RELATED OVERDOSE DEATHS IN DELAWARE

https://www.drugabuse.gov/drugs-abuse/opioids/opioid-summaries-by-state/delaware-opioid-summary

In 2016, there were 154 opioid-related overdose deaths in Delaware—a rate of 16.9 deaths per 100,000 persons and more than the national rate of 13.3 deaths per 100,000 persons.



4.3 OPIOID PAIN RELIEVER PRESCRIPTIONS

In 2015, providers in Delaware wrote 768,974 prescriptions for opioid pain relievers or 80 prescriptions for every 100 persons. This was a 7.1 percent decline since 2013—compared to the average U.S. rate of 71 opioid prescriptions per 100 persons.



4.4 NEONATAL ABSTINENCE SYNDROME (NAS)

According to hospital discharge data, during 2010 to 2013 in Delaware, 639 cases of NAS were identified with an incidence of 15.6 cases per 1,000 births. The incidence of NAS increased 56 percent, from 11.9 cases per 1,000 births in 2010 to 18.5 cases per 1,000 births in 2013. Delaware's 2012 and 2013 NAS rates (17.8 and 18.5 cases per 1,000 births, respectively) were 3 times that of the 2012 average U.S. rate (5.8 cases per 1,000 births).

4.5 HIV Prevalence and HIV Diagnoses Attributed to Injection Drug Use (IDU)

- **U.S. Incidence**: In 2015, 9.1 percent (3,594) of the 39,513 new diagnoses of HIV in the United States were attributed to IDU. Among new cases, 8.2 percent (2,614) of cases among men and 13.2 percent (980) of cases among women were transmitted via IDU (<u>CDC</u>).
- **U.S. Prevalence**: In 2014, 955,081 Americans were living with a diagnosed HIV infection—a rate of 299.5 per 100,000 persons. Of these, 18.1 percent (131,056) of males and 22.6 percent (52,013) of females were living with HIV attributed to IDU (<u>CDC</u>).
- **State Incidence**: Of the new HIV cases in 2015, 109 occurred in Delaware, with 4.7 percent<sup>1</sup> of new cases in males and 8.7 percent of new cases in females attributed to IDU.

- **State Prevalence**: In 2014, an estimated 3,213 persons were living with a diagnosed HIV infection in Delaware—a rate of 407 per 100,000 persons. Of these, 25.7 percent<sup>1</sup> of males and 26.3 percent of females were living with HIV attributed to IDU.
- Hepatitis C (HCV) Prevalence and HCV Diagnoses Attributed to Injection Drug Use
- **U.S. Incidence**: In 2015, there were 181,871 reported cases of chronic HCV and 33,900 estimated cases of acute HCV<sup>2</sup> (<u>CDC</u>). Where data were available, 64.2 percent of acute cases reported IDU (<u>CDC</u>).
- **U.S. Prevalence**: An estimated 3.5 million Americans are living with HCV, including approximately 2.7 million living with chronic infections (<u>CDC</u>).
- **State Incidence**: In 2015, Delaware reported 31 cases of chronic HCV and 4 cases of acute HCV (0.4 per 100,000 persons) (<u>CDC</u>).
- **State Prevalence**: Current state prevalence data are not available. As of 2010, an estimated 13,600 (1,970 per 100,000) persons were living with HCV in Delaware.

### 5 THE EXTENT TO WHICH EXISTING TREATMENTS CAUSE OR ALLEVIATE SUFFERING

#### 5.1 METHADONE

#### https://www.northpointrecovery.com/blog/methadone-scary-truth/

Since 1947, methadone has been approved for use in the United States as treatment for opioid addiction. Methadone is the most commonly-prescribed first-line treatment for ORT, and maintenance clinics around the country dispense dosages to many thousands of suffering and opioid addicts, giving them a fighting chance to recover.

But as important a medication as methadone is, it is not without its problems:

#### 5.1.1 METHADONE POISONING

Even though methadone is dispensed as a way to reduce harm associated with addiction to other opioids, it is itself a highly-addictive and powerful opioid –*up to five times stronger than morphine*.

- In 2011, 4418 people died in the United States because of methadone poisoning.
- That number represents **26%** of ALL opioid poisoning deaths.
- In 1999, the number of methadone deaths was only 790.
- In 2006, the FDA released a caution about the medication, saying, "Methadone use for pain control may result in death".

#### 5.1.2 METHADONE'S NEGATIVE SIDE EFFECTS

As with any medication, the positives of methadone – *harm reduction* – must be weighed against the negatives:

- Methadone has a high potential for abuse. This is why ORT dosages are so highly regulated and dispensed by clinics.
- It is possible to become dependent upon and addicted to methadone.
- Methadone is dispensed over the long-term. It is not unusual for a person to be on a methadone maintenance plan for over a year, and some individuals must take methadone for an even longer, indefinite period.
- A person can take methadone and still continue to use illicit opioids.
- While structure IS important to addicts, the rigid protocol of some methadone clinics can cause patients to feel that they have no control over their own lives and no input about their own treatment.
- Methadone will show up on employment drug screens, making it difficult for methadone patients to get or keep a job.
- Having to travel to the methadone clinic every day can be problematic for those patients who either have jobs or do not have a car.
- Require daily attendance at the methadone clinic can prohibit overnight travel.
- The clinical environment can result in lowered self-esteem.
- Methadone can interact dangerously with several other medications, particularly with benzodiazepines such as Klonopin, Xanax, or Valium.
- Drinking alcohol after taking methadone can be potentially fatal.
- Menstrual Problems
- Decreased Libido/Impotence/Difficulty in Achieving Orgasm

For many people, the adverse side effects of methadone can be unpleasant enough to spur them into discontinuing the maintenance program:

- Breathing Difficulties
- Low Blood Pressure
- Chest Pain
- Constipation/Urinary Problems
- Nausea/Vomiting/Diarrhea/Stomach Pains
- Profuse Sweating/Intolerance to Heat
- Red, Flushed Appearance
- Weakness/Dizziness/Fainting
- Exhaustion/Chronic Fatigue
- Sleep disturbances Extreme Insomnia or Difficulty Staying Asleep
- Headache/Confusion
- Swelling of the Extremities
- Mood Swings Anxiety, Agitation, Disorientation
- Blurred Vision
- Loss of Appetite/Anorexia
- Itching/Skin Rash

#### 5.2 SUBOXONE

#### https://www.linkedin.com/pulse/truth-suboxone-detox-drug-your-next-addiction-fried-cap-icadc-chc

Suboxone is classified as a semi-synthetic opioid and largely used to reduce the painful and difficult withdrawal symptoms associated with heroin and other opiate dependence. In a monitored, medical detox setting, Suboxone is often prescribed as a taper which brings an individual through heroin or opiate withdrawal in a much more comfortable way than "cold turkey."

Suboxone is just the brand name. The active ingredient in the drug is buprenorphine, which is also found in Subutex, Norspan, Zubslov, Butrans, and Buprenex. Although Suboxone can be a welcome relief to individuals who desire to quit using drugs such as heroin, morphine, and prescription painkillers, much controversy surrounds the drug due to its use in lengthy (and even life-long) maintenance programs keeping patients using the drug far longer than medically necessary.

#### 5.2.1 HIGH RISK FOR ADDICTION

#### https://drugabuse.com/library/the-effects-of-suboxone-use/

Because Suboxone contains an opioid, it can lead to dependence. This means your body has come to depend on it to feel well and you will feel uncomfortable when you stop using it.

One of the key signs of Suboxone dependence is that you start to suffer from withdrawal after ceasing use of the drug. Because it is a long-acting opioid, early withdrawal might not begin until up to 36 hours from the last use.<sup>9</sup>

Withdrawal symptoms can mimic the flu, but they can last for more than a week.<sup>9</sup> It is a sign that the opioid and its ultimately toxic influences are finally relinquishing their grip on a wide range of the body's systems and functioning.

Suboxone dependence often requires a medically monitored detox period to keep the user comfortable and help protect them from relapsing to alleviate their

Although some say the euphoric effects pale in comparison to other drugs, it is still classified as an opiate, with a high potential for physical dependency if consumed on a regular basis for an extended period of time.

Because the opioid receptors of the brain are used to binding with a chemical that tells them when to release dopamine, withdrawal begins when this chemical is absent. This is true for any opiate. Suboxone Maintenance

Suboxone maintenance can be a threat to recovery, as well as your physical health.

Much like the methadone maintenance programs, Suboxone is becoming increasingly used by many doctors. The rationale behind this may be that it is safer to be taking prescribed Suboxone on a daily basis than it is to be out scoring harder drugs. But in reality, it is trading one bandage for another and the user is still dependent on a substance to make it through the day.

A New York Times investigation into Suboxone found that its manufacturer, Reckitt Benckiser, has employed aggressive tactics to locate physicians interested in rolling the painkiller market over into Suboxone-lifers. And, they push any studies that support the concept of maintenance and ignore those that support short-term use. I know this might seem crazy to anyone in the recovery community, but much of the general medical population still believes that an individual with a history of painkiller abuse can never be drug-free. I have had doctors tell em that opioid users have zero chance of success without a maintenance program. This flies in the face of the science and data collected over many decades.

#### 5.3 NALOXONE

#### https://www.ncbi.nlm.nih.gov/pubmed/17367258

Naloxone is a non-selective, short-acting opioid receptor antagonist that has a long clinical history of successful use and is presently considered a safe drug over a wide dose range (up to 10 mg). In opioid-dependent patients, naloxone is used in the treatment of opioid-overdose-induced respiratory depression, in (ultra)rapid detoxification and in combination with buprenorphine for maintenance therapy (to prevent intravenous abuse).

Risks related to naloxone use in opioid-dependent patients are: i) the induction of an acute withdrawal syndrome (the occurrence of vomiting and aspiration is potentially life threatening); ii) the effect of naloxone may wear off prematurely when used for treatment of opioid-induced respiratory depression; and iii) in patients treated for severe pain with an opioid, high-dose naloxone and/or rapidly infused naloxone may cause catecholamine release and consequently pulmonary edema and cardiac arrhythmias. These risks warrant the cautious use of naloxone and adequate monitoring of the cardiorespiratory status of the patient after naloxone administration where indicated.

#### 5.3.1 SKYROCKETING COST

https://www.businessinsider.com/price-of-naloxone-narcan-skyrocketing-2016-7

All five pharmaceutical companies that produce naloxone have seen price hikes in recent years or, for the newer entrants such as Adapt, priced their product far above the industry average several years ago.

Frequently referred to as an "antidote" for opioid overdoses, naloxone has seen drastic price increases in recent years, according to information provided by <u>Truven Health</u> <u>Analytics</u>, a healthcare-analytics company. A popular injectable version of the drug has gone from \$0.92 a dose to more than \$15 a dose over the last decade. An auto-injector version is up to more than \$2,000 a dose.

"We're not talking about a limited commodity. Naloxone is a medicine that is almost as cheap as sterile sodium chloride — salt water," Dan Bigg, the executive director of the Chicago Recovery Alliance, an outreach organization that has been providing naloxone to drug users for nearly 20 years, told Business Insider.

"At the same time this epidemic is killing tens of thousands of Americans a year, we're seeing the price of naloxone go up by 1000% or more," McCaskill wrote. "Maybe there's a great reason for the price increases, but given the heart-breaking gravity of this epidemic and the need for this drug, I think we have to demand some answers."

# 6 THE EVIDENCE SUPPORTS A FINDING THAT THE USE OF MARIJUANA ALLEVIATE SUFFERING

6.1 NJ: New Jersey Adds Opiate Use Disorder as a Qualifying CONDITION (March 2018)

https://www.nj.com/marijuana/2018/03/might\_you\_qualify\_for\_medical\_marijuana\_in\_nj\_here.html

6.2 PA: PENNSYLVANIA ADDS OPIATE USE DISORDER AS A QUALIFYING CONDITION (MAY 2018)

https://www.governor.pa.gov/wolf-administration-approves-eight-universities-certified-medical-marijuana-academicclinical-research-centers/

6.3 NY: NEW YORK ADDS OPIOID REPLACEMENT NOW A QUALIFYING CONDITION FOR MEDICAL MARIJUANA (JULY 2018)

https://www.health.ny.gov/press/releases/2018/2018-07-12\_opioid\_replacement.htm

6.4 MARIJUANA POLICY PROJECT – MEDICAL MARIJUANA BY THE NUMBERS

https://www.mpp.org/issues/medical-marijuana/medical-marijuana-numbers/

#### **Medical Marijuana and Opioids**

- 25% average decrease in opioid overdose deaths in the first year of patient access to a medical marijuana program<sup>1</sup>
- 33% average decrease in opioid overdose deaths after five years of patient access to a medical marijuana program<sup>2</sup>
- 48% reduction in patients' opioid use after three months of medical marijuana treatment<sup>3</sup>
- 78% of patients either reduced or stopped opioid use altogether.<sup>4</sup>
- 1,826 fewer doses of painkillers on average per year, per state, for patients participating in Medicare Part D<sup>5</sup>

#### Prescription Medications

- 500,000 people died of prescription drug overdoses between 2000 and 2015.<sup>6</sup>
- 20% of prescriptions are "off label" prescribed for a condition for which they are not FDA-approved.<sup>7</sup>
- 0 people have died from marijuana overdoses in all of recorded history.

#### **Qualifying Conditions**

- 27 states' programs include a general category for severe or chronic pain.
- 3 states that do not include pain have no reduction in opioid overdose deaths and some of the highest prices for medical marijuana.
- 7,000 rare medical conditions have been identified, many of which cause severe pain.<sup>8</sup>

#### 6.5 SCIENCE DAILY: LEGALIZED MEDICAL CANNABIS LOWERS OPIOID USE, STUDY FINDS

https://www.sciencedaily.com/releases/2018/04/180402202236.htm

In states with medical cannabis dispensaries, the researchers observed a 14.4 percent reduction in use of prescription opioids and nearly a 7 percent reduction in opiate prescriptions filled in states with home-cultivation-only medical cannabis laws...Our findings suggest quite clearly that medical cannabis could be one useful tool in the policy arsenal that can be used to diminish the harm of prescription opioids, and that's worthy of serious consideration," David Bradford said.

## 6.6 Study: The Evidence Is Overwhelming: Cannabis Is an Exit Drug for Major Addictions, Not a Gateway to New Ones

https://www.alternet.org/drugs/evidence-overwhelming-cannabis-exit-drug-major-addictions-not-gateway-new-ones

For example, in jurisdictions where marijuana use is legally regulated, researchers have reported year-over-year declines in opioid-related <u>abuse</u> and <u>mortality</u>. According to data published in the Journal of the American Medical Association, deaths attributable to both

prescription opiates and heroin fell by 20 percent shortly after marijuana legalization and by 33 percent within six years. Overall, the study's investigators <u>CONCluded</u>, "States with medical cannabis laws had a 24.8 percent lower mean annual opioid overdose mortality rate compared with states without medical cannabis laws." Data published this past April in the journal Drug and Alcohol Dependence also reports a <u>dramatic decline</u> in opioid pain reliever related hospitalizations following legalization.

Patients' use of other prescription drugs has also been shown to fall in states where marijuana is legally accessible. Newly published data from both the United States and Canada finds that patients curb their use of <u>anti-depressants</u>, <u>anti-anxiety</u> <u>drugs</u> and <u>sleep</u> <u>aids</u> after initiating cannabis use—a reality that is quantified in their spending habits. According to researchers at the University of Georgia's Department of Public Policy, Medicare recipients residing in medical marijuana states <u>Spent millions less</u> on prescription drugs as compared to patients with similar ailments in non-legal states. Patients' spending on Medicaid related services is also <u>Significantly lower</u> in cannabis-friendly states.

6.7 STUDY: CANNABIS IN PALLIATIVE MEDICINE: IMPROVING CARE AND REDUCING OPIOID-RELATED MORBIDITY (2011)

http://www.ncbi.nlm.nih.gov/pubmed/21444324

"Unlike hospice, long-term drug safety is an important issue in palliative medicine. Opioids may produce significant morbidity. Cannabis is a safer alternative with broad applicability for palliative care. Yet the Drug Enforcement Agency (DEA) classifies cannabis as Schedule I (dangerous, without medical uses). Dronabinol, a Schedule III prescription drug, is 100% tetrahydrocannabinol (THC), the most psychoactive ingredient in cannabis. Cannabis contains 20% THC or less but has other therapeutic cannabinoids, all working together to produce therapeutic effects. As palliative medicine grows, so does the need to reclassify cannabis. This article provides an evidence-based overview and comparison of cannabis and opioids. Using this foundation, an argument is made for reclassifying cannabis in the context of improving palliative care and reducing opioid-related morbidity."

#### 6.8 STUDY: THERAPEUTIC BENEFITS OF CANNABIS: A PATIENT SURVEY (2014)

http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3998228/

Other reported therapeutic benefits included relief from stress/anxiety (50% of respondents), relief of insomnia (45%), improved appetite (12%), decreased nausea (10%), increased focus/concentration (9%), and relief from depression (7%). Several patients wrote notes (see below) relating that cannabis helped them to decrease or discontinue medications for

pain, anxiety, and insomnia. Other reported benefits did not extend to 5% or more of respondents. Six patients (6%) wrote brief notes relating how cannabis helped them to decrease or to discontinue other medications.

Comments included the following: "Medical cannabis replaced my need for oxycodone. Now I don't need them at all." **"I do not need Xanax anymore." "In the last two years I have been able to drop meds for anxiety, sleep, and depression."** "I've cut back 18 pills on my morphine dosage."

#### CONCLUSIONS:

More research needs to be pursued to discover degrees of efficacy in other areas of promise such as in treating anxiety, depression, bipolar disorder, autism, nausea, vomiting, muscle spasms, seizures, and many neurologic disorders. Patients deserve to have cannabis released from its current federal prohibition so that scientific research can proceed and so that physicians can prescribe cannabis with the same freedom accorded any other safe and effective medications.

#### 6.9 STUDY: EMERGING EVIDENCE FOR CANNABIS' ROLE IN OPIOID USE DISORDER (2018)

#### https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6135562/#B167

Many of the barriers that prevent people from accessing traditional OUD treatment do not apply to cannabis therapy, and access to cannabis medicine is rapidly growing as more U.S. states roll back prohibition.

Patients, healthcare providers, and regulating bodies would all greatly benefit from additional evidence that fills in massive gaps in the knowledge base about the utility of cannabis for OUD treatment: dosing, cannabinoid content and ratios, bioavailability, contraindications, misuse liability, route of administration, and many other questions remain. Even the clinical work that has been conducted thus far may have little validity in the modern landscape of legalized cannabis; all federally-funded cannabis research in the United States is conducted using a single source of cannabis (NIDA drug supply), which is notoriously low in potency and quality, and does not resemble the staggering phytochemical variability in whole-plant cannabis products in regulated state markets.<sup>36</sup> These barriers to research funding and access to "real world" cannabis for clinical research directly contribute to our inability to address the opioid epidemic with what appears to be a safe and efficacious tool.

#### 6.10 STUDY: CANNABIDIOL AS A POTENTIAL TREATMENT FOR ANXIETY DISORDERS (2015).

#### http://www.ncbi.nlm.nih.gov/pubmed/26341731

CBD's potential as a treatment for anxiety-related disorders, by assessing evidence from preclinical, human experimental, clinical, and epidemiological studies.

We found that existing preclinical evidence strongly supports CBD as a treatment for generalized anxiety disorder, panic disorder, social anxiety disorder, obsessive-compulsive disorder, and post-traumatic stress disorder when administered acutely; however, few studies have investigated chronic CBD dosing. Likewise, evidence from human studies supports an anxiolytic role of CBD, but is currently limited to acute dosing, also with few studies in clinical populations. Overall, current evidence indicates CBD has considerable potential as a treatment for multiple anxiety disorders, with need for further study of chronic and therapeutic effects in relevant clinical populations.

## 6.11 Study: Medical Cannabis Laws and Opioid Analgesic Overdose Mortality in the United States, 1999-2010

https://jamanetwork.com/journals/jamainternalmedicine/fullarticle/1898878

Three states (California, Oregon, and Washington) had medical cannabis laws effective prior to 1999. Ten states (Alaska, Colorado, Hawaii, Maine, Michigan, Montana, Nevada, New Mexico, Rhode Island, and Vermont) enacted medical cannabis laws between 1999 and 2010. States with medical cannabis laws had a 24.8% lower mean annual opioid overdose mortality rate (95% CI, -37.5% to -9.5%; P = .003) compared with states without medical cannabis laws. Examination of the association between medical cannabis laws and opioid analgesic overdose mortality in each year after implementation of the law showed that such laws were associated with a lower rate of overdose mortality that generally strengthened over time: year 1 (-19.9%; 95% CI, -30.6% to -7.7%; P = .002), year 2 (-25.2%; 95% CI, -40.6% to -5.9%; P = .01), year 3 (-23.6%; 95% CI, -41.1% to -1.0%; P = .04), year 4 (-20.2%; 95% CI, -33.6% to -4.0%; P = .02), year 5 (-33.7%; 95% CI, -50.9% to -10.4%; P = .008), and year 6 (-33.3%; 95% CI, -44.7% to -19.6%; P < .001). In secondary analyses, the findings remained similar.

**Conclusions and Relevance** Medical cannabis laws are associated with significantly lower state-level opioid overdose mortality rates. Further investigation is required to determine how medical cannabis laws may interact with policies aimed at preventing opioid analgesic overdose.

#### 6.12 STUDY: MEDICAL MARIJUANA CUTS USE OF PRESCRIPTION DRUGS

https://drugabuse.com/study-medical-marijuana-cuts-use-of-prescription-drugs/

The study was conducted at Depaul and Rush universities and consisted of thirty participants at an average age of 45 years old. At the conclusion of the study, participants said marijuana worked faster to relieve their pain than other prescription medication and had fewer side effects.

6.13 STUDY: CANNABIS AS A SUBSTITUTE FOR OPIOID-BASED PAIN MEDICATION: PATIENT SELF-REPORT

https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5569620/

Thirty-four percent of the sample reported using opioid-based pain medication in the past 6 months. Respondents overwhelmingly reported that cannabis provided relief on par with their other medications, but without the unwanted side effects. Ninety-seven percent of the samples "strongly agreed/agreed" that they are able to decrease the amount of opiates they consume when they also use cannabis, and 81% "strongly agreed/agreed" that taking cannabis by itself was more effective at treating their condition than taking cannabis with opioids. Results were similar for those using cannabis with nonopioid-based pain medications.

## 6.14 FORBES: JOINT RESEARCH: PRESCRIPTION DRUG OVERDOSE DEATHS LOWER IN STATES WITH LEGAL MEDICAL MARIJUANA

https://hub.jhu.edu/2014/08/26/medical-marijuana-prescription-drugs/

In states where it is legal to use medical marijuana to manage chronic pain and other conditions, the annual number of deaths from prescription drug overdose is 25 percent lower than in states where medical marijuana remains illegal, new research suggests.

#### 6.15 CNN: GETTING OFF OPIOIDS WITH MEDICAL MARIJUANA: PATIENTS TURN TO POT OVER PILLS (2018)

https://www.cnn.com/2018/04/29/health/medical-marijuana-opioids/index.html

Sulak's review of the medical literature resulted in the same conclusion. He points out that when opioids are used in combination with cannabis in animals, marijuana can boost an opioid's effectiveness without requiring higher dosages.

Slinker is now a patient of Sulak's integrative health practice. Instead of taking 25 pills a day, she supplements smoking a gram of marijuana every three or four weeks with marijuana tinctures, oils and vapor. She also uses a drug called naltrexone to help with her autoimmune-related issues.

She credits her life now to cannabis and wants others to know about it. "I want people to know that they have options. Do not be afraid to tell your doctor that you do not want these chemicals in your body," she said.

6.16 NBC: AMID OPIOID CRISIS, RESEARCHERS AIM TO PUT MEDICAL MARIJUANA TO THE TEST

https://www.nbcnews.com/storyline/legal-pot/amid-opioid-crisis-researchers-aim-put-medical-marijuana-test-n904276

Some research has been encouraging. In one of two five-year studies published in April in the Journal of the American Medical Association's <u>JAMA Internal Medicine</u>, researchers found that states with medical marijuana laws had about 6 percent fewer opioid prescriptions among Medicaid patients compared with states without such laws. The second study, which looked at Medicare Part D patients, found a drop of 8.5 percent in such prescriptions in the medical marijuana states.

#### 6.17 NPR: AFTER MEDICAL MARIJUANA LEGALIZED, MEDICARE PRESCRIPTIONS DROP FOR MANY DRUGS

https://www.npr.org/sections/health-shots/2016/07/06/484977159/after-medical-marijuana-legalized-medicareprescriptions-drop-for-many-drugs

If the trend bears out, it could have other public health ramifications. In states that legalized medical uses of marijuana, painkiller prescriptions dropped — on average, the study found, by about 1,800 daily doses filled each year per doctor. That tracks with research on the subject.

Marijuana is unlike other drugs, such as opioids, overdoses of which can be fatal, said Deepak D'Souza, a professor of psychiatry at Yale School of Medicine, who has researched marijuana. "That doesn't happen with marijuana," he added.

#### 6.18 NPR: LAWMAKERS IN ILLINOIS EMBRACE MEDICAL MARIJUANA AS AN OPIOID ALTERNATIVE

https://www.npr.org/sections/health-shots/2018/06/15/620080148/lawmakers-in-illinois-embrace-medical-marijuanaas-an-opioid-alternative

6.19 BUSINESS INSIDER: A DRUG DERIVED FROM MARIJUANA HAS TRIGGERED THE FIRST FEDERAL SHIFT ON CANNABIS IN HALF A CENTURY, AND EXPERTS PREDICT AN AVALANCHE EFFECT

https://www.businessinsider.com/marijuana-epilepsy-drug-approved-dea-cbd-2018-9

This is the first time in 46 years that the Drug Enforcement Administration has shifted its stance on cannabis.

When the FDA approved Epidiolex in June, it triggered a 90-day countdown clock for the DEA to change its stance on marijuana.

"We don't have a choice on that," the DEA's public-affairs officer, Barbara Carreno, told Business Insider just after Epidiolex's approval. CBD, she said, "absolutely has to become <u>Schedule 2, 3, 4, or 5</u>."

That's not exactly what happened. Instead of rescheduling CBD, the agency chose to reschedule drugs containing CBD that the FDA has already approved; those drugs will now be classified as Schedule 5. But at the moment, the only drug that fits the description is Epidiolex.

#### 6.20 NEW YORK POST: WEED IS HELPING ME QUIT OPIOIDS

https://nypost.com/2018/03/05/weed-is-helping-me-quit-opioids/

"Cannabis breaks the cycle of pleasure and reward being programmed by opiates," says Dr. Bonni Goldstein, a cannabis-focused M.D., as well as owner and medical director of Canna-Centers Wellness & Education in Southern California. A 2016 study by investigators at Scripps Research institute in La Jolla, Calif., and Icahn School of Medicine at Mount Sinai in NYC, reports that the class of neurotransmitters activated in the brain by marijuana "modulates the rewarding effects of addictive drugs."

"The cannabinoid receptors are located in areas of the brain that control pleasure and reward. If there is a dysfunction in that part of the brain, causing the driving force for addiction, cannabis tells the cells to stop seeking drugs," says Goldstein. "It breaks the drug-seeking message."

#### 6.21 WASHINGTON POST: HOW MEDICAL MARIJUANA COULD LITERALLY SAVE LIVES

https://www.washingtonpost.com/news/wonk/wp/2015/07/14/how-medical-marijuana-could-literally-savelives/?utm\_term=.4f491243cd5b

The researchers on the NBER paper, however, found that access to state-sanctioned medical marijuana dispensaries is linked to a significant decrease in both prescription painkiller abuse, and in overdose deaths from prescription painkillers. The study authors examined admissions to substance abuse treatment programs for opiate addiction as well as opiate overdose deaths in states that do and do not have medical marijuana laws.

They found that the presence of marijuana dispensaries was associated with a 15 to 35 percent decrease in substance abuse admissions. Opiate overdose deaths decreased by a similar amount. "Our findings suggest that providing broader access to medical marijuana may have the potential benefit of reducing abuse of highly addictive painkillers," the researchers conclude.

This paper builds on previous work showing that "states with medical marijuana laws on the books saw 24.8 percent fewer deaths from painkiller overdoses compared to states that didn't have such laws." But the new paper's findings are more robust -- it uses more data, and the authors drew on a broader range of statistical methods to test the validity of their data.

#### 6.22 WASHINGTON POST: MARIJUANA MAY BE EVEN SAFER THAN PREVIOUSLY THOUGHT, RESEARCHERS SAY

https://www.washingtonpost.com/news/wonk/wp/2015/02/23/marijuana-may-be-even-safer-than-previously-thoughtresearchers-say/?noredirect=on&utm\_term=.f7f8662547ff

## By a wide margin, cannabis is the least risky recreational drug



WASHINGTONPOST.COM/WONKBLOG

Source: "Comparative risk assessment of alcohol, tobacco, cannabis and other illicit drugs using the margin of exposure approach"

#### 6.23 WASHINGTON POST: ONE STRIKING CHART SHOWS WHY PHARMA COMPANIES ARE FIGHTING LEGAL

#### MARIJUANA

https://www.washingtonpost.com/news/wonk/wp/2016/07/13/one-striking-chart-shows-why-pharma-companies-are-fighting-legal-marijuana/?noredirect=on&utm\_term=.145dee32494d

### Fewer pills prescribed in medical pot states

Difference between annual drug doses prescribed per physician in medical marijuana states, and in states without medical marijuana laws, by drug category



#### 6.24 NEW YORK TIMES: WHAT SCIENCE SAYS ABOUT MARIJUANA

https://www.nytimes.com/2014/07/31/opinion/what-science-says-about-marijuana.html

Who Got Hooked
An Institute of Medicine study found dependency rates for marijuana were far lower than those for other substances.
PERCENT OF GENERAL POPULATION WHO HAD OF THOSE USERS, PERCENT WHO EVER EVER USED: BECAME DEPENDENT ON THE DRUG: I Tobacco
76% 32%
Heroin 2 23
Cocaine 16 <b>17</b>
Alcohol 92 <b>15</b>
Anti-anxiety drugs
Marijuana
46 9
Source: Institute of Medicine, 1999

#### 6.25 INQUISITR: MARIJUANA ADDICTION TREATMENT FOR OPIOID DEPENDENCY (2016)

https://www.inquisitr.com/3773040/marijuana-addiction-treatment-for-opioid-dependency/

Marijuana addiction treatment for opioid dependency is prescribed to combat withdrawal symptoms and other physical issues that reduce a patient's quality of life. Chronic pain, nausea, tremors, and anxiety have all been treated successfully in a clear majority of patients with medicinal marijuana. The treatment is not new. In 1931, Time Magazine <u>addressed the issue</u> in an article stating that "in spite of the legends, no case of physical, mental or moral degeneration has ever been traced exclusively to marijuana... doctors have recently been experimenting with the drug as an aid in curing opium addiction."

6.26 NATIONAL CANCER INSTITUTE: LETHAL OVERDOSES FROM CANNABIS AND CANNABINOIDS DO NOT OCCUR.

https://www.cancer.gov/about-cancer/treatment/cam/hp/cannabis-pdq#section/\_11

Lethal overdoses from cannabis and cannabinoids do not occur.

#### 6.27 HUFFINGTON POST: ZERO PEOPLE HAVE FATALLY OVERDOSED ON MARIJUANA

http://www.huffingtonpost.com/entry/marijuana-deaths-2014\_us\_56816417e4b06fa68880a217

The rate of absolutely zero deaths from a marijuana overdose remained steady from last year, according to figures released this month by the Centers for Disease Control. But while Americans aren't dying as a result of marijuana overdoses, the same can't be said for a range of other substances, both legal and illicit.