State of Hawaii
Department of Health
4348 Waialea Avenue #648
Honolulu, HI 96816

Instructions Medical Cannabis Registry

1. ALL items on the form MUST be completed.

2. Petitions and any supporting documents may be submitted as follows:

   a. Email to: medicalmarijuana@doh.hawaii.gov before the close of business (4:30PM) on **Wednesday, February 20, 2019.** Please use the subject line: Petition to Add New Condition.Note that the DOH will not make public any information that is protected pursuant to Chapter 92F,HRS,the Uniform Information Practices Act.

   b. Postal mail to: 4348 Waialae Avenue, #648, Honolulu, Hawaii 96816.Mailed petitions must be received by **Wednesday, February 20, 2019.**

   c. Hand delivered to: Kinau Hale at 1250 Punchbowl Street, Honolulu, Hawaii 96813 before the close of business (4:30PM) on **Wednesday, February 20, 2019**.Hand delivered petitions must be left with the security guard and addressed to the Medical Cannabis Registry Program **ATTN: Petition to Add New Condition.**

3. For best results, complete and thorough petitions that include substantiated and reputable research have the best chance of succeeding. DOH recommends that you do the following for items #2- #8 on the petition form:

   a. Please cite research, published evidence, or findings using the standard American Medical Association (AMA) format for each piece of research, published evidence, or findings that you reference in your submittal or at a minimum the following:

Author's Name;Title of Article;Name of Publication;Date of Publication;Volume/Section/Chapter/Page/Line as applicable;and URL (if applicable).

b. Please attach a PDF copy of the cited material to your submittal. These documents will NOT be returned.

   c. Please be sure to indicate the specific section, page(s), lines, etc., of the attachment that you want reviewed/considered as evidence.

4. To view a list of current conditions click here: Current Debilitating Medical Conditions

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Petitioner Content

(1) State the specific medical condition or its treatment for which the petition is being made.

Opioid Use Disorder DSM-5 F11.10 F11.20

(2) State the reason(s) why the medical condition or its treatment should be added to the list of qualifying debilitating medical conditions for which medical cannabis may be used. For best results, please cite research, published evidence, or scientific findings AND attach a PDF copy to your submittal. Indicate specific lines, page, section. Please use standard AMA format as outlined in the instructions.

We are in the depths of an opiate epidemic opiate overdoses are the leading cause of accidental death in both the United States and Canada . There have been numerous studies showing the effectiveness of Cannabis for treating pain. The most influential one was the 2017 study done by the National Academy of Sciences, Engineering and Medicine. This study did a comprehensive literature review and found that Cannabis is a safe and effective way to treat pain, both acute and chronic (1). Cannabis can be used in conjunction with Opiates and can decrease opiate use. In 2018 JAMA published a study showing that in states where medical cannabis was available Opiate prescriptions decreased by 5.88% in Medicaid enrollees. In states where adult-use cannabis is available, opiate prescriptions in Medicaid enrollees decreased by 6.38%. (2) Furthermore, there was a decrease in Opiate overdoses in States with Medical Cannabis laws (MCL). States with cannabis laws saw a decrease in opiate deaths by 24% from 1990-2010. (2,3,4). Cannabis and opiates work synergistically and can increase pain control when used together. Cannabis is opiate sparring and doesn't decrease respirations. (5). Cannabis can also be combined with opiates to treat patients with advanced cancer and hard to treat pain (6). MAT or Medication Assisted Treatment (for opiate use) "Results suggest that cannabis use strengthens, rather than weakens, the relationships between pain and depression and pain and anxiety. These effects appear to be driven by decreased self-efficacy in cannabis users. It is important to understand how self-efficacy can be improved through symptom self-management interventions and whether self-efficacy can improve distressing symptoms for people in MAT." (7). Another study in 2016 showed that women who used cannabis while on a MAT program had better treatment outcomes (8).

(3) Describe the extent to which the medical condition is generally accepted by the medical community as a valid, existing medical condition. For best results, please cite research, published evidence, or scientific findings AND attach a PDF copy to your submittal. Indicate specific lines, page, section. Please use standard AMA format as outlined in the instructions.

DSM 5 Diagnostic criteria

Opioids are often taken in larger amounts or over a longer period of time than intended. There is a persistent desire or unsuccessful efforts to cut down or control opioid use. A great deal of time is spent in activities necessary to obtain the opioid, use the opioid, or recover from its effects, craving, or a strong desire to use opioids. Recurrent opioid use resulting in failure to fulfill major role obligations at work, school or home. Continued opioid use despite having persistent or recurrent social or interpersonal problems caused or exacerbated by the effects of opioids. Important social, occupational or recreational activities are given up or reduced because of opioid use. Recurrent opioid use in situations in which it is physically hazardous Continued use despite knowledge of having a persistent or recurrent physical or psychological problem that is likely to have been caused or exacerbated by opioids. *Tolerance, as defined by either of the following: (a) a need for markedly increased amounts of opioids to achieve intoxication or desired effect (b) markedly diminished effect with continued use of the same amount of an opioid *Withdrawal, as manifested by either of the following: (a) the characteristic opioid withdrawal syndrome (b) the same (or a closely related) substance are taken to relieve or avoid. (9)

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(4) Describe the symptoms and other physiological or psychological effects experienced by an individual suffering from the medical condition or its treatment and the extent to which these symptoms and physiological or psychological effects are debilitating. Note:"Debilitating" generally means impairing the ability of a person to accomplish activities of daily living. For best results, please cite research, published evidence, or scientific findings AND attach a PDF copy to your submittal. Indicate specific lines, page, section. Please use standard AMA format as outlined in the instructions.

Opioid Use Disorder DSM-5 F11.10 F11.20 has many symptoms. Clinicians have been using well-established tools as a guideline to manage symptoms of opioid use disorder. CINA and COWS are used widely in inpatient and outpatient settings. They list the most common symptoms of opioid use disorder.
Anxiety
Temperature changes
GI upset
Abdominal pain
Restlessness
Bone or joint aches
Sweating
Runny nose/Tearing
Tremor
Gooseflesh
Yawning
Pupil size
Pulse rate
Systolic Blood pressure (10)

(5) If one or more treatments for the medical condition, rather than the condition itself, are alleged to be the cause of a person's suffering, describe the extent to which the treatments causing suffering are generally accepted by the medical community as valid treatments for the medical condition. For best results, please cite research, published evidence, or scientific findings AND attach a PDF copy to your submittal. Indicate specific lines, page, section. Please use standard AMA format as outlined in the instructions.

MAT, medication-assisted therapy, is the standard for Opioid Use Disorder DSM-5 F11.10 F11.20. In the above literature review, I highlight articles that show MAT, when combined with cannabinoid therapy is a viable option

(6) Describe the availability of conventional medical therapies other than those that cause suffering to alleviate symptoms caused by the medical condition or its treatment. For best results, please cite research, published evidence, or scientific findings AND attach a PDF copy to your submittal. Indicate specific lines, page, section. Please use standard AMA format as outlined in the instructions.

MAT or Medication-Assisted Therapy

Suboxone has similar outcomes to methadone and in some studies at one year follow up 75% of patients are still in treatment (Valander 2018). Suboxone and methadone programs are limited in Hawaii and in the US. The DOH lists substance abuse treatment centers in our state 14 on Oahu 2 on Hawaii island, 3 on Maui 1 on Molokai and 2 on Kauai. (DOH, 2019) With a population of almost 1.42 million, the shortage of

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treatment options is apparent.

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7) Describe the extent to which evidence supports a finding that the use of cannabis alleviates symptoms caused by the medical condition or its treatment. For best results, please cite research, published evidence, or scientific findings AND attach a PDF copy to your submittal. Indicate specific lines, page, section. Please use standard AMA format as outlined in the instructions.

Cannabis annd Opiate Use Disorder: Cannabis can be used in conjunction with Opiates and can decrease opiate use. In 2018 JAMA published a study showing that in states where medical cannabis was available Opiate prescriptions decreased by 5.88% in Medicaid enrollees. In states where adult-use cannabis is available, opiate prescriptions in Medicaid enrollees decreased by 6.38%. (2) Furthermore, there was a decrease in Opiate overdoses in States with Medical Cannabis laws (MCL). States with cannabis laws saw a decrease in opiate deaths by 24% from 1990-2010. (2,3,4).

Cannabis and opiates work synergistically and can increase pain control when used together. Cannabis is opiate sparring and doesn't decrease respirations. (5). Cannabis can also be combined with opiates to treat patients with advanced cancer and hard to treat pain (6).

MAT or Medication Assisted Treatment (for opiate use) "Results suggest that cannabis use strengthens, rather than weakens, the relationships between pain and depression and pain and anxiety. These effects appear to be driven by decreased self-efficacy in cannabis users. It is important to understand how self-efficacy can be improved through symptom self-management interventions and whether self-efficacy can improve distressing symptoms for people in MAT." (7). Another study in 2016 showed that women who used cannabis while on a MAT program had better treatment outcomes (8).

Anxiety: Cannabis in preclinical and clinical trials has shown some efficacy as an anxiolytic. Cannabis CBD is showing potential in fear extinction, assisting in compulsion, and aiding in stress-induced anxiety (11). In a 2019 study, Dr. Hurd showed that CBD can reduce the craving for heroin and decrease anxiety in drug abstinent heroin users over placebo. (12)

Nausea: Cannabis has been used for thousands of years for nausea and it continues to be used for nausea in several settings. Patients receiving chemotherapy often experience debilitating nausea. Cannabis has similar outcomes when compared to other medications in controlling nausea for patients receiving chemotherapy (14).Cannabis blocks both acute and delayed nausea, and can be more effective than many modern drugs (15)

(8) Provide any information, studies, or research reports regarding any beneficial or adverse effects from the use of cannabis in patients with the medical condition. For best results, please cite research, published evidence, or scientific findings AND attach a PDF copy to your submittal. Indicate specific lines, page, section. Please use standard AMA format as outlined in the instructions.

Use of Cannabis in adolescent rats show an increase in Herion use in adult rats, In a study 90%of Herion users report a history of cannabis use, opposed to 47% who report using prescription (15)

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(9) Attach letters of support from physicians or other licensed health care professionals knowledgeable about the medical condition.

Thomas Cook, M.D.

Psychiatry & General Mental Health
1401 S. Beretania St. Suite 340
Honolulu, HI, 96814

Date: 7-20-19

To Whom It May Concern:

I am writing this letter in support of a provision to include patients with opioid dependency in Hawaii's medical cannabis program.

In my clinic we have extensive experience treating opioid dependence with psychotherapy, counseling, and medication management. I frequently prescribe suboxone, (*buprenorphine*) an opioid replacement drug, for the treatment of opioid dependence. I also certify for medical cannabis for PTSD and severe pain and other conditions, thus, I sometimes see patients who are attempting to stop using opioids and who also have a cannabis card. Thus, my practice is ideal as an intersection of these two issues, opioids and cannabis. I do not prescribe traditional opioid medications, since I am a psychiatrist, however, I am intimately familiar with both opioids in their effects, since many patients come to me already addicted to them.

My evidence is anecdotal, however, I can say that within my practice, a person's chance of stopping opioids nearly doubles if they are also utilizing medical cannabis. The statistics show that suboxone helps people get off opioids about 30% of the time, and that is generally what I have seen for my patients who do not have a medical cannabis card. However, among my opioid addicted patients that do have a cannabis card, I would estimate their chance of stopping opioids rises to about 50%.

My numbers are anecdotal, however, they are based on many dozens of patients I have seen over the years. In the realm of addiction treatment, 50% is remarkable. The groups, Narcotics and Alcoholics Anonymous, are by comparison no more than 5-10% effective.

This anecdotal data concurs with old wisdom: prior to the prohibition of cannabis in the late 1930's, cannabis was understood to have an opiate-sparing effect.

There was an old mixture of morphine, cannabis, and capsicum (pepper) that was extremely popular back then, called *Chloranodyne*. This was in most doctor's bags in the early 1900's. It was manufactured by the Parke-Davis drug company in Michigan. It was common sense back then that cannabis oil reduced the nausea and constipation and poor appetite commonly caused by morphine. It was mixed into pain preparations because it helped doctors give less morphine.

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We have reached such a crisis today that some hospitals in the third world have shortages of morphine due to excessive use of morphine. Americans consume 80% of the world's opioids, but are 5% of the world's population. I have heard stories, as a physician, of family members dying from prescription opiate medication mixing with other deadly medications. It breaks my heart to hear these stories over and over, when cannabis is now available for pain and has never been known to be fatal to anyone.

Many of the opioid addicted patients get started by using opioids as chronic pain medications, (or after a surgery), and then they transition into full blown addiction. Thus, chronic pain- a certifiable condition- is an issue with a large degree of overlap with opioid addiction, unfortunately. Thus, if medical cannabis helps reduce opioid use among patients with severe chronic pain, it is highly likely to reduce opioid usage among patients who do not have a pain issue, but are simply addicted to opioids. It is well known that opioids sensitizes the brain to various normal aches and pains, and many opioid addicted patients begin to complain of pain. Again, the demographic overlap is significant.

Please allow me to quote from one study published in *JAMA Internal Medicine* on April 2, 2018.

The authors were Wen, and Hockenberry: they looked at opioid prescriptions from 2011 to 2016. Eight states utilized medical cannabis during that timeframe: Connecticut, Delaware, Illinois, Maryland, Massachusetts, Minnesota, New Hampshire, and New York. Four other states had recreational adult use: Alaska, Colorado, Oregon, and Washington. The states with medical cannabis laws were found to have a 6% decrease in opioid prescriptions. Whereas recreational states had a 9.78% decrease in opioid prescriptions.

These numbers are incredibly important, because they look at number of prescriptions, not the dose of the opioid. These studies do ***not*** discuss reduction in opioid dosage, only discontinuation of use (or reduction in prescription counts, which is roughly the same thing.)

Thus, it is likely that the reduction in opioid dosage in recreational states is much higher than 9.78%. On a large scale, this is a life-saving difference.

JAMA has published other articles worth reviewing, such as the one by Ashley Bradford on the reduction in medicare part D prescriptions for opioids.

The evidence is both old and new that medical cannabis is very helpful to both prevent, and treat, opioid dependence, and I would urge the Hawaii legislature to consider adding opiate dependence to the list of certifiable conditions.

I am a licensed physician, in state of HI, MD license 16978, expiration date 1/31/2020.

You may call my business line with any questions.

Cordially,

Thomas Cook, M.D.
Ph# (808) 457-1082 Fx# (808) 356-1649 [*www.drcook.org*](http://www.drcook.org)

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You **MUST** provide a Number and Name for each Attachment referenced above and provide a list of these attachments here. This way we can ensure that your petition was submitted with all of the applicable attachments:

References

1.National Academies of Sciences, Engineering, and Medicine. 2017. The health effects of cannabis and cannabinoids: The current state of evidence and recommendations for research. Washington, DC: The National Academies Press.

doi: 10.17226/24625.

Cannabis decreasing Opiate use

2. Wen H, Hockenberry JM. Association of Medical and Adult-Use Marijuana Laws with Opioid Prescribing for Medicaid Enrollees. JAMA Intern Med. 2018;178(5):673–679. doi:10.1001/jamainternmed.2018.1007

Cannabis decreasing opiate overdose deaths

3. Philippe, Lucas. Rationale for cannabis-based interventions in the opioid overdose crisis. Harm Reduction Journal. 2018

doi: 10.1186/s12954-017-0183-9

4. Melvin D. Livingston, Tracey E. Barnett, Chris Delcher, Alexander C.Wagenaar, "Recreational Cannabis Legalization and Opioid-Related Deaths in Colorado, 2000–2015", American Journal of Public Health 107, no. 11 (November 1, 2017): pp. 1827-1829.

doi: 10.2105/AJPH.2017.304059

Cannabis and opiates increase pain control when used together

5. Ziva D. Cooper et al. Impact of co-administration of oxycodone and smoked cannabis on analgesia and abuse liability Neuropsychopharmacologyvolume 43, pages2046–2055 (2018)

DOI: 10.1038/s41386-018-0011-2

6. Fallon, M. T., Lux, E. A., McQuade, R., Rossetti, S., Sanchez, R., Sun, W., … Kornyeyeva, E. (2017). Sativex Oromucosal spray as adjunctive therapy in advanced cancer patients with chronic pain unalleviated by optimized opioid therapy: two double-blind, randomized, placebo-controlled phase 3 studies. British Journal of Pain, 11(3), 119–133.

doi:https://doi.org/10.1177/2049463717710042

Cannabis used to assist in decreasing opiate use

7. Marian, Wilson et all Cannabis use Moderates the Relationship Between Pain and Negative Affects in Adults with opioid use disorder. Addictive Behaviors, Volume 77 (2), 225-221

doi: https://doi.org/10.1016/j.addbeh.2017.10.012

8. Zylinkski, Lauren et al. Association between cannabis use and methadone maintenance treatment outcomes: an investigation into sex differences. Biology of Sex Differences20178:8

https://doi.org/10.1186/s13293-017-0130-1

9. DSM IV OUD https://www.ncbi.nlm.nih.gov/books/NBK535277/box/p2.b4/?report=objectonly

10. D. Andrew Tompkins, M.D.1, George E. Bigelow, Ph.D.1, Joseph A. Harrison, B.S.1, Rolley E. Johnson, Pharm.D.1,2, Paul J. Fudala, Ph.D.2, and Eric C. Strain, M.D.1
Drug Alcohol Depend. 2009 November 1; 105(1-2): 154–159.
doi:10.1016/j.drugalcdep.2009.07.001.

11. Esther M. Blessing, Steenkamp, J. Manzanares, C. Marmar Cannabidiol as a Potential Treatment for Anxiety Disorders; Neurotherapeutics (2015) 12:825–836
DOI 10.1007/s13311-015-0387-1

12. Hurd, et al, Cannabidiol for the reduction od Cue Induced Craving and Anxiety in Drug-Abstinent Individuals With Heroin Use Disorder: A Double Blind Randomized Placebos- Controlled Trial; American Journal of Psychiatry (2019)
https://ajp.psychiatryonline.org/doi/10.1176/appi.ajp.2019.18101191

13. Beth Wiese and Adrianne R. Wilson-Poe, Emerging Evidence for Cannabis' Role in Opioid Use Disorder Cannabis and Cannabinoid Research Volume 3.1, 2018
DOI: 10.1089/can.2018.0022

14. Smith LA, Azariah F, Lavender VTC, Stoner NS, Bettiol S. Cannabinoids for nausea and vomiting in adults with cancer receiving chemotherapy. Cochrane Database of Systematic Reviews 2015, Issue 11. Art. No.: CD009464.

15. Sharkey, K.A., Damani, M.A., Parker,L.A. Regulation of nausea and vomiting by cannabinoids and the endocannabinoid system EUR J Pharmacol, (2014) 722; 134- 136

doi: 10.1016/j.ejphar.2013.09.068

16. Finn Kenneth. Why Marijuana Will Not Fix the Opioid Epidemic. Mo Med (2018) 115; 3 191-193
https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6140166/pdf/ms115_p0191.pdf

REFERENCE #1

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