

Psychedelic Medicines Working Group Report

Senate Bill 242 from the 2023 Legislative Session required the Department of Health and Human Services (DHHS) to establish the Psychedelic Medicines Working Group to study certain issues relating to the therapeutic use of entheogens during the 2023-2024 interim. This is the final report of the Working Group. See Appendix A for the text of the legislation.

Members

The legislation identified the roles of the members and required the Director of DHHS to serve as the Chair or to designate someone. Marla McDade Williams, who serves as the Administrator of the Division of Child and Family Services, was designated to serve as the Chair. The following are the other members of the Working Group:

Terry Kerns

Attorney General or his or her designee

Mark McBride, Deputy Director, Healthcare Services, NDVS

Director of the Department of Veteran Services or his or her designee

Scott Killebrew

President of the State Board of Pharmacy or his or her designee

Senator Rochelle Nguyen

One member appointed by the Majority Leader of the Senate

Lieutenant (Retired) Diane Goldstein

One member appointed by the Minority Leader of the Senate

Assemblyman Max Carter

One member appointed by the Speaker of the Assembly

Assemblywoman Danielle Gallant

One member appointed by the Minority Leader of the Assembly

Chief Warrant Officer Four (Retired) Jonathan Dalton

One member who has received an honorable discharge from the Armed Forces of the United States and who has experience with the use of entheogens to address post-traumatic stress disorder

Dr. Mujeeb Shad

One member who is a psychiatrist, or a psychologist with clinical experience, and who: (I) Is licensed to practice in this State; and (II) Has experience treating patients who have an alcohol or other substance use disorder

Dr. Burton Tabaac

One member who has experience treating post-traumatic stress disorder in a clinical setting

Dustin Hines, PhD., UNLV

One member who has experience researching the therapeutic use of entheogens pursuant to a

license issued by the Drug Enforcement Administration of the United States Department of Justice

John Ocegüera

One member who is a representative of a tribal government, as defined in NRS 239C.105, in this State

Kate Cotter

One member who is a representative of an organization that advocates for and provides education to the public regarding the therapeutic use of entheogens

Detective Joshua Garber, Las Vegas Metropolitan Police Department

One member who is a representative of a law enforcement agency in this State

Contents

Executive Summary.....	1
Summary of Key Findings.....	7
Mental Health in Veteran and First Responder Populations in Nevada.....	9
Law Enforcement, Public Safety, and Psychedelic Substances.....	12
Examination of Various Entheogens for Safety and Therapeutic Use.....	19
Psilocybin.....	19
5-MeO-DMT: A Comprehensive Review.....	21
Mescaline: A Comprehensive Review.....	24
Iboga (Ibogaine): A Comprehensive Review.....	27
Federal Laws and Regulations.....	30
State and Local Laws and Regulations.....	33
Recommendations for an Actionable and Strategic Plan.....	35
Appendix A.....	36
Text of SB242 Legislation.....	37
Appendix B.....	39
States with Decriminalization or Legalization Measures.....	39
States with Policies to Authorize Research.....	39
Lowest Law Enforcement Priority Initiatives in the United States.....	39
Federal Rescheduling by Petition.....	39
Federal Penalties for Psychedelic Compounds.....	39
Nevada State Penalties for Psychedelic Compounds.....	42
Appendix C.....	45
Overview of Oregon’s Regulated Framework and Agencies.....	45
Appendix D.....	48
Overview of Colorado’s Natural Medicine Access Program.....	48

Executive Summary*

Senate Bill 242 (2023) established the Psychedelic Medicines Working Group to examine the therapeutic potential of entheogens and develop a framework for their regulated use in Nevada. This comprehensive study occurs at a critical moment in the state's history, as Nevada faces unprecedented challenges in mental health care delivery and consistently ranks among the highest states for suicide rates, particularly among veterans and first responders. The timing of this investigation coincides with growing national recognition of psychedelic medicines' therapeutic potential, as evidenced by the FDA's designation of certain compounds as breakthrough therapies.

The Working Group's investigation revealed compelling evidence supporting the therapeutic potential of psilocybin and certain entheogens, particularly in treating conditions that have proven resistant to conventional therapies. Current clinical research demonstrates promising results for conditions including post-traumatic stress disorder (PTSD), treatment-resistant depression, and substance use disorders. These findings are particularly relevant given Nevada's mental health professional shortage areas, which encompass all 17 counties and affect 77% of the state's population. The shortage of mental health providers, combined with wait times exceeding six months for treatment, underscores the urgent need for innovative therapeutic approaches.

Populations studied were all Nevadan's with mental health disorders pertaining to depression, anxiety, addiction, suicidal ideation, and PTSD. Of particular significance is the potential impact on Nevada's veteran population, where the suicide rate of 50.7 per 100,000 significantly exceeds the national veteran rate of 33.9 per 100,000. Research presented to the Working Group demonstrates that psychedelics, particularly psilocybin, show promise as a transformative treatment for mental health conditions, with evidence supporting their efficacy in reducing symptoms of depression, anxiety, and PTSD.

Analysis of public safety data from jurisdictions with existing psychedelic therapy programs suggests minimal community impact. Psychedelic substances represent only 1.35% of all drug reports nationwide, and early results from states like Oregon and Colorado demonstrate that regulated access programs can be implemented safely while providing meaningful therapeutic benefits to residents. The Working Group's examination of these existing programs provided valuable insights into different regulatory approaches, from Oregon's single-substance focus to Colorado's more comprehensive framework.

The experiences of other states have shown that successful implementation requires careful attention to several key elements: comprehensive practitioner training, clear safety protocols, strong oversight mechanisms, and robust data collection systems. The Working Group's examination of these programs revealed that regulated access can be achieved while maintaining public safety through appropriate controls and monitoring systems. Notably,

* This section serves as a summary of the full report. Detailed references and citations are provided within the main report for further context and verification.

jurisdictions with established programs have not reported significant increases in emergency room visits or public safety incidents related to supervised therapeutic use.

The Working Group also considered the complex interface between mental health treatment and law enforcement, noting a paradigm shift toward treating substance use as a public health issue rather than primarily a criminal justice concern. This shift aligns with emerging evidence suggesting that psychedelic-assisted therapy may contribute to reduced recidivism rates and improved outcomes for individuals with substance use disorders.

Based on these findings, the Working Group recommends examining NRS statutes to reduce penalties for entheogenic plants and fungi, in addition to developing comprehensive legislation for the 2025 session to establish a regulated access (pilot or full) program for psychedelic-assisted therapy. This framework should include provisions for practitioner training, safety protocols, and oversight mechanisms modeled on successful programs in other states while addressing Nevada's unique geographical and demographic challenges. Additional recommendations include developing specialized training programs for law enforcement and emergency medical services personnel, implementing improved data collection systems, and exploring insurance coverage options to ensure accessibility of therapeutic services.

The framework must also address several critical challenges identified during the study, including the need for equitable access across Nevada's rural communities, integration with existing healthcare systems, and development of appropriate insurance coverage mechanisms. The Working Group emphasizes the importance of collecting robust data on program outcomes to inform ongoing refinement of the regulatory framework and ensure optimal therapeutic benefit while maintaining community health and public safety. The Working Group acknowledges rural communities are underserved and a future plan must include a solution to address this issue.

The Working Group's examination suggests that implementing regulated access to psychedelic-assisted therapy could provide significant benefits for Nevada residents, particularly for populations struggling with mental health conditions, PTSD, and substance use disorders. With appropriate oversight, training requirements, and safety protocols in place, such a program could help address Nevada's mental health crisis while maintaining public safety through careful regulation and monitoring. The time is opportune for Nevada to join other forward-thinking states in developing innovative solutions to address its significant mental health challenges.

Summary of Key Findings*

Mental Health in Nevada

Nevada's mental health landscape presents significant challenges, with rates of mental illness exceeding national averages across multiple measures. Approximately 24.6% of Nevada adults experienced mental illness in the past year, notably higher than the national average of 23.1%. The state faces particularly concerning suicide statistics, ranking ninth highest in the nation in 2021 with 691 suicide deaths, representing a 14.6% increase from the previous year. Access to care remains a critical issue, with all 17 Nevada counties designated as mental health professional shortage areas. The severity of the situation is further highlighted by the fact that 77% of Nevada's population lives in these shortage areas, and approximately 78.2% of Nevadans needing substance use treatment are unable to receive it. Wait times for treatment can extend beyond six months due to provider shortages, creating substantial barriers to care for those in need.

Mental Health in Veteran and First Responder Populations

The mental health crisis among veterans and first responders in Nevada is particularly acute. The state's veteran suicide rate of 50.7 per 100,000 significantly exceeds both the national veteran rate of 33.9 per 100,000 and the general population rate of 18.0 per 100,000. Between 2019 and 2023, there were 26 documented suicides of first responders, with 19 being law enforcement officers. The prevalence of PTSD is notably high, with studies indicating that 18-24% of dispatchers and 35% of police officers suffer from the condition. The testimony of Lieutenant General Martin Steele highlighted the potential of psychedelic therapies for these populations, emphasizing the need for better treatment options and the possibility of rapid, robust, and durable healing through carefully monitored psychedelic-assisted therapy protocols.

Law Enforcement, Public Safety, and Psychedelic Substances

Analysis of public safety data reveals that psychedelic substances represent a relatively small portion of law enforcement concerns. According to the National Forensic Laboratory Information System annual drug report, hallucinogenic substances in aggregate constitute only 1.35% of all drug reports tested across all 50 states. While Nevada lacks comprehensive data collection systems for psychedelic-specific incidents, early evidence from jurisdictions with regulated programs shows no significant increase in public safety issues. The Denver report, following the city's decriminalization of psilocybin, demonstrated a reduction in arrests without corresponding increases in public safety concerns. This aligns with a broader shift in law enforcement perspective toward treating substance use as a public health rather than criminal justice issue.

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Therapeutic Benefits and Safety of Psilocybin

Psilocybin, a psychedelic compound found naturally in certain mushroom species, demonstrates significant promise as a therapeutic intervention across multiple mental health conditions. Recent clinical research has shown remarkable efficacy in treating treatment-resistant depression (71% symptom reduction), anxiety in cancer patients (60% reduction), PTSD (62% symptom reduction), and substance use disorders (59% smoking cessation rate at 12 months). Operating primarily through 5-HT_{2A} receptor activation, psilocybin enhances neural connectivity and neuroplasticity, with a favorable safety profile when administered in controlled settings. The treatment protocol involves structured preparation, supervised administration (10-30mg dosage), and integration phases, though contraindications exist for patients with active psychotic disorders, severe cardiovascular conditions, or those using serotonergic medications. Given the robust evidence supporting its efficacy and safety, psilocybin represents a transformative tool in mental health treatment, particularly for individuals who have not responded to conventional therapies, warranting its careful integration into mainstream clinical practice through regulated frameworks.

Furthermore, psilocybin demonstrates a remarkably favorable safety profile, with toxicology studies indicating an exceptionally high lethal dose (LD₅₀) of 280mg/kg body weight - far beyond typical therapeutic or recreational doses. Standard dosing ranges from 1-3 grams of dried mushrooms for moderate effects, with clinical applications utilizing precisely calculated amounts in controlled settings. While physical toxicity risks are minimal, the intensity of psychological effects necessitates careful consideration of individual factors like body weight, metabolism, and prior experience. The primary risks stem not from toxicological concerns but from the compound's potent effects on serotonin receptors (particularly 5-HT_{2A}), which can produce intense psychological experiences. This underscores the importance of proper preparation, setting, and guidance during administration, as psychological discomfort or accidental harm may occur at higher doses despite low physical toxicity risks.

5-MeO-DMT

5-MeO-DMT is a potent naturally occurring psychedelic compound found in various plant species and *Bufo alvarius* toad secretions. Recent research suggests it has promising therapeutic potential for treating mental health conditions including depression, anxiety, PTSD, and substance use disorders. The compound acts primarily on serotonin receptors and is notable for its rapid onset (5-15 minutes) and short duration (30-60 minutes), making it potentially suitable for clinical settings. Early studies have shown significant positive outcomes, including a 79% reduction in depression and anxiety symptoms and 55% reduction in PTSD symptoms among veterans. While generally well-tolerated under controlled conditions, its intense effects require careful screening and medical supervision. The document emphasizes the need for a regulated medical framework, proper safety protocols, and further research to establish standardized treatment procedures, despite the promising preliminary results.

Mescaline

Mescaline, a naturally occurring psychedelic compound found in cacti species like Peyote and San Pedro, has been used for thousands of years in indigenous spiritual and healing practices, particularly among Native American tribes. Recent clinical research suggests promising therapeutic potential for treating mental health conditions including depression, anxiety, substance use disorders, and PTSD. The compound works primarily through serotonin 5-HT_{2A} receptors, promoting neuroplasticity and cognitive flexibility. Studies have shown significant positive outcomes, with 80% of participants reporting reduced depression and anxiety symptoms, and 70% reporting decreased substance use cravings. While generally considered safe in controlled settings, mescaline requires careful medical screening and supervision due to potential contraindications and side effects. The document emphasizes the need for structured treatment protocols, including preparation, supervised dosing sessions, and integration therapy, while calling for further research to establish standardized treatment guidelines.

Iboga (Ibogaine)

Ibogaine, a psychoactive compound from the Tabernanthe iboga plant, shows significant promise in treating substance use disorders, traumatic brain injury (TBI), and PTSD, particularly among veteran populations. Clinical studies have demonstrated impressive outcomes, including a 50% abstinence rate from opioids at one month post-treatment, and 61% abstinence rates among cocaine users with sustained effects lasting 5.5-8.4 months. A notable 2023 Stanford study with special operations veterans showed remarkable improvements, including 88% reduction in PTSD symptoms, 87% reduction in depression, and 81% reduction in anxiety at one-month follow-up. The compound works through multiple receptor systems and has been shown to promote neuroplasticity and reduce brain inflammation. While effective, ibogaine requires careful medical screening and monitoring due to potential cardiac risks and other contraindications. The document emphasizes the need for controlled medical settings, comprehensive screening protocols, and structured treatment frameworks, while acknowledging that further clinical trials are needed to validate these promising preliminary findings.

Federal Laws and Regulations

The regulatory landscape for psychedelic substances remains complex, with most classical psychedelics classified as Schedule I substances under the Controlled Substances Act, which means they have no medical value and a high potential for abuse. However, recent legislative developments, including provisions in the National Defense Authorization Act for FY2024 and the proposed VISIONS Act, indicate growing federal interest in examining psychedelics' therapeutic potential. Current legal pathways for access are limited to clinical research, expanded access programs, and specific religious exemptions, though this framework may evolve as research continues and federal policies adapt to new evidence.

State and Local Laws and Regulations

Nevada's current regulatory framework closely aligns with federal classifications, maintaining strict controls on psychedelic substances. However, various states have begun implementing alternative approaches, from research authorization to regulated access programs. At of this writing, ten states [1] have passed bills to authorize research (see Appendix B); New Jersey has removed felony status for psilocybin possession, and both Oregon and Colorado have implemented regulated access models for supervised psilocybin therapy. (For a summary of Oregon's regulated psilocybin program, see Appendix D, and for an overview of Colorado's Natural Medicine Access Program, see Appendix E.) Colorado has additionally legalized cultivation and sharing of various entheogenic plants and fungi [2]. Utah is also developing a pilot program [3] allowing select hospitals to administer psilocybin and MDMA for mental health treatments, and Connecticut is also establishing a pilot program that will provide psychedelic-assisted therapy, using MDMA and psilocybin, to qualifying veterans, retired first-responders, and frontline workers such as police and firefighters [4].

These initiatives and programs demonstrate a nationwide commitment to increasing access to psychedelic-assisted therapy for mental health treatment, and revising policies based on clinical research, therapeutic potential, and safety profiles.

Recommendations for an Actionable and Strategic Plan

- Legislation is needed during the 2025 legislative session to create and implement a regulated access program for psychedelic-assisted therapy as a pilot or full program.
 - Research the outcomes to provide data to the state
- Legislation may be needed during the 2025 legislative session to reschedule psilocybin and/or other therapies granted breakthrough therapy status if approved by the FDA
- Legislation may be needed during the 2025 legislative session to examine NRS statutes to reduce penalties for entheogenic plants and fungi
- Legislation may be needed during the 2025 legislative session to develop a training program to provide law enforcement, Emergency Medical Services (EMS), mental health co-responders risk management training that focuses on effective approaches to psilocybin-induced incidents
- During the 2025-2026 Interim, the Division of Insurance and the Department of Business and Industry should develop a system to ensure that a person's health insurance will cover this mental health care. If needed, the Division should present a bill to the 2027 Legislative Session for this authorization
- Request the Legislative Council Bureau (LCB) to review federal, state, and local laws and regulations concerning the therapeutic use of entheogens and identify any revisions to the laws and regulations of this State that may be necessary to enable entheogens to be used for therapeutic purposes in this State
- Request state and local law enforcement to provide data on psychedelic-specific drug arrests to include non-traditional psychedelics such as MDMA and ketamine

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Overview of Mental Health in Nevada

Nevada faces significant challenges in addressing mental health needs across its population, with higher rates of mental illness and substance use disorders compared to national averages, combined with substantial barriers to accessing care. Nevada's suicide rate is one of the worst in the nation [5] and is typically ranked dead last when it comes to Mental Health services in this State compared to the rest of the nation [6].

Mental Health Overview

According to the National Survey on Drug Use and Health, approximately 24.6% of Nevada adults experienced a mental illness in the past year, higher than the national average of 23.1%. Additionally, 6.8% of Nevada adults experienced a serious mental illness, compared to 5.9% nationally, and 5.8% had serious thoughts of suicide in the past year, higher than the national average of 5% [7]. To quote Robin Reedy, executive director of the Nevada Alliance on Mental Illness:

“Nevada has had studies, workgroups and anything else we could come up with that doesn't cost money. Now is the time to invest at the front end so that we save crisis dollars on the back end. We need to spend money to save money. We need to recognize that the money we save will not be in the same fund as the money we spend. This investment in our citizens will save law enforcement costs, indigent expenses for local governments, and most importantly lives [7].”

Anxiety and Depression

Anxiety has consistently been the leading mental health-related diagnosis in Nevada emergency departments since 2012. Anxiety-related emergency department visits increased significantly from 2012 to 2019, though decreased from 2019 to 2021. Depression is the second most common mental health diagnosis seen in emergency departments. Approximately 17% of Nevada adults have been diagnosed with a depressive disorder. It should be noted that females account for significantly more hospital visits for both anxiety (65%) and depression (61%) compared to males [7].

Post-Traumatic Stress Disorder (PTSD)

“About 6% of the U.S. population or 20 million Americans will have PTSD at some point in their lives. About 5 out of every 100 adults (or 5%) in the U.S. has PTSD in any given year and in 2020, about 13 million Americans had PTSD” [8] Women are approximately twice as likely as men to develop PTSD. In Nevada hospital data, females account for 55% of PTSD-related visits. PTSD rates are higher among veterans, with estimated rates of 6% for male veterans and 13% for female veterans.

Suicidal Ideation and Deaths

Nevada faces particularly concerning suicide statistics and ranked with the 9th highest suicide rate in the nation in 2021. There were 691 suicide deaths in 2021, a 14.6% increase from the previous year. 4.5% of adult Nevada residents, approximately 143,738 Nevadans, reported seriously considering suicide in the past 12 months. “More suicides occurred than homicides (264) and transportation deaths (422) combined” [5].

Access to Care Challenges

Nevada faces severe challenges in mental healthcare access. All 17 Nevada counties are designated as mental health professional shortage areas. 77% of Nevada's population lives in mental health shortage areas. Approximately 78.2% of Nevadans are classified as needing substance use treatment and did not receive it. Nevadans report long wait times for treatment, with some clients waiting over 6 months due to provider waitlists [6].

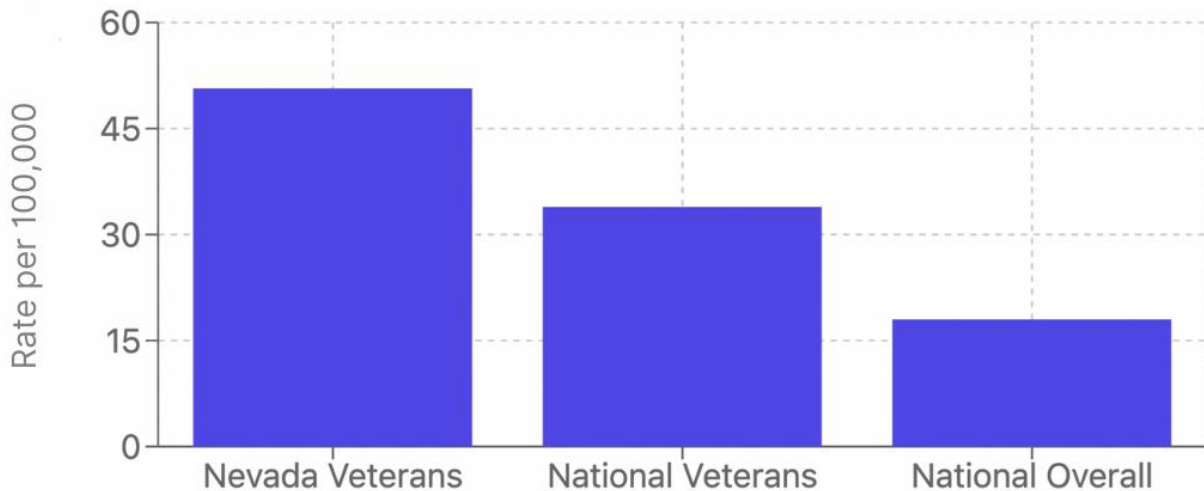
Mental Health in Veteran and First Responder Populations in Nevada

Nevada consistently ranks above the national average in mental health relating to veteran and first responder suicide, PTSD, anxiety disorders, and military sexual trauma. This report provides a comparison between Nevada's statistics and national averages.

Nevada has a veteran population of 219,698 which is 7% of the state population compared to the National average of 6.4% of state populations [9]. The Nevada veteran suicide rate is 50.7 per 100,000 vs. the national veteran rate of 33.9 per 100,000 and the national suicide rate of 18.0 per 100,000. The Nevada veteran suicide rate is significantly higher than the national veteran suicide rate by +49.56% [10] (Figure 1). In 2021, suicide was the 13th-leading cause of death for veterans overall and the second-leading cause of death among veterans under age 45-years-old [11].

Figure 1.

Suicide Rates Comparison (per 100,000)



The Department of Veterans Affairs (VA) estimates that 17.5 veterans commit suicide each day [11]. Their method for collecting data fails to identify veteran suicides by about 18% nor does it account for deaths aligned with self-harm, predominantly overdose. A new study by America's Warrior Partnership now estimates that 40-44 veterans take their own lives every day [12]. This means the above numbers for veteran suicide deaths in Nevada are almost certainly underreported.

Although there is an overall lack of data on first responder suicide in Nevada due to self-reporting by family members, there have been 26 documented suicides of first responders between 2019 and 2023 with a staggering 19 of those being law enforcement, and 10 of those

first responders were also veterans [13]. The Firefighter Behavioral Health Alliance (FBHA) estimates that approximately 40% of firefighter suicides are reported [14].

There is more national data regarding law enforcement deaths by suicide. From 2016-2022, there were 1,287 law enforcement and corrections officers who died by suicide [13]. Extensive research highlights the profound repercussions of poor wellness characteristics among public safety personnel (police and correctional officers), including cognitive dissonance toward society, feelings of isolation, and diminished self-worth, which potentially increase the risk of suicide attempts or deaths by suicide. 12.4% of surveyed police officers expressed a likelihood of future suicide attempts, with 13.2% acknowledging suicidal thoughts in the past year. Moreover, compared to the general population, law enforcement officers face a 54% higher risk of dying by suicide, underscoring the critical need for comprehensive wellness programs and support structures within the field [15]. Overall, the number of firefighters, EMTs, and officers who took their own lives outnumbered all line-of-duty deaths in 2017 [14].

PTSD Prevalence

Research has repeatedly shown that individuals with elevated symptoms of PTSD or a PTSD diagnosis are at increased risk for suicide. More specifically, PTSD has been shown to predict suicidal ideation and suicide mortality. Large-scale epidemiological investigations have demonstrated that PTSD is one of the few psychiatric disorders that predicts the transition from thinking about suicide to making a suicide attempt [16].

According to the National Health and Resilience in Veterans Study (NHRVS) national survey of veterans, the prevalence of lifetime PTSD was 23% in VA users and 7% in veterans who do not use the VA. The prevalence of current PTSD was 13% in VA users and 4% in veterans who do not use VA [17].

It's estimated that 18-24% of dispatchers and 35% of police officers suffer from PTSD [18], with a 54% higher suicide risk among law enforcement officers compared to civilians [19]. Stigma continues to be a barrier, and officers may feel shame or reluctance when it comes to pursuing mental health support [20]. Many first responders self-medicate with alcohol or other self-destructive and abusive behaviors in an effort to cope with the stress and trauma they deal with daily, and unfortunately, many of their agencies are not providing them with a supportive environment where they can get help [18].

The prevalence rates for PTSD in firefighters vary widely, from 6.5% to 37%, using various cutoff scores on a variety of measures (primarily self-report) with rather dissimilar samples and events [21].

Testimony by Lieutenant General Martin Steele: The Potential for Psychedelic Medicine to Help Veterans and First Responders

Lieutenant General Martin Steele testified during the working group and discussed the potential of psychedelic therapies for veterans, highlighting his extensive background in military service and veteran healthcare. He served as the associate vice president for veterans research and the executive director of military partnerships at the University of South Florida and Tampa,

Florida, working with scientists on exploring the comorbidities between traumatic brain injury, post-traumatic stress, military sexual trauma, prosthetics, and robotics. He was tasked by Congress to lead the U.S. Commission on Care to improve healthcare for veterans as a direct result of the future of VA healthcare, which was in crisis due to the high veteran suicide rate. Many of the Commission's recommendations resulted in legislation such as The Mission Act, The Wise Act, and The Pact Act. He also testified before Congress on three separate occasions on veteran suicide prevention.

General Steele emphasized the moral responsibility to provide the best care possible for veterans, especially given the high veteran suicide rate and the long-term effects of the global war on terror. He underscored the need for better mental health treatments, noting the limitations of current medications like SSRIs. He also addressed the FDA's recent decision to delay MDMA approval for PTSD, despite its potential benefits, and advocated for rescheduling psychedelics from Schedule I to Schedule II to facilitate research opportunities and expand treatment options.

General Steele also discussed the benefits of psychedelic therapies for veterans and first responders, including the use of substances like MDMA, psilocybin, DMT, Ibogaine, and 5-meO-DMT, administered in controlled settings with protocols that include preparation, carefully monitored dosing, and integration sessions—a process commonly referred to as psychedelic-assisted therapy. While additional research is needed, a growing body of evidence indicates that these psychedelic therapies can provide rapid, robust, and durable healing for a variety of mental health conditions, addressing root causes rather than merely masking symptoms.

Building on this, General Steele shared observations on the life-changing impact psychedelic therapies have had on veterans, and emphasized Nevada's potential to lead the nation in pursuing effective alternative mental health treatments:

I've been fortunate to work alongside many veterans who attribute psychedelic therapy to not only saving their lives but also to instilling a renewed sense of purpose, meaning, and connection to themselves, their families, and their communities. Of course, these therapies are not a magic bullet, as you've heard today—as with any treatment, they are not without risk...Nonetheless, considering the limited drug exposure and use in medically supervised contexts, the risk profile of psychedelic therapies for most patients may be comparable or better to that of daily SSRI use, with fewer side effects, and lower potential for dependence and withdrawal effects....I firmly believe that the state of Nevada can position itself as a leader in the clinical role of psychedelic-assisted therapy by investing in quality research and treatment initiatives that inform medical providers on best practices, empower insurance payers with quality data, and create training opportunities for prescribers and therapists. The need and urgency could not be greater than it is today.

Law Enforcement, Public Safety, and Psychedelic Substances

Policing professionals across the United States [22] have recognized that we can no longer rely on arrests as a means to address a public health issue. Saving lives and reducing the crime and disorder caused by underlying problematic drug use are not mutually exclusive. A response that can achieve both ends requires a paradigm shift toward evidence-based practices that closely link public health and law enforcement strategies with their most important outcomes: reducing the morbidity and mortality associated with drug use and addiction-related behaviors that range from crime to mental illness and homelessness.

Public polling clearly reflects that the majority of Americans recognize the policy failures of our current drug control strategies. In a 2021 public policy poll “nearly two-thirds of the country believes we need a new approach based in public health, not law enforcement. Moreover, 66%, including majorities of Independents and Democrats, would support eliminating all criminal penalties for drug possession and reinvesting saved resources into treatment and addiction services” [23].

The relationship between psychedelics, community health, and public safety is a complex and evolving topic that encompasses various perspectives, including medical, legal, societal, and psychological dimensions. The police perspective on psychedelics can vary widely depending on the region, local laws, and prevailing attitudes toward drug policy.

Though the intent of the working group is to craft an actionable plan for regulating the therapeutic use of psychedelics as an issue of public health, the plan must also include an analysis of public safety arrest data to determine the impact on community health and safety.

Law enforcement in Nevada, like many states across our country, lacks the appropriate data collection reporting systems to properly analyze either adverse interactions or the accurate number of arrests of people who use psychedelics to address public safety concerns. Collecting police data is crucial for informed decision-making that improves resource allocation and policing practices, and allows us to research the effectiveness and the outcomes of our drug control strategies on the health and safety of the people we serve.

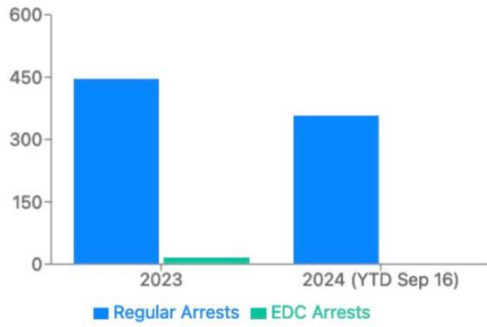
The following two figures represent data provided by the Las Vegas Metropolitan Police Department Narcotics Section regarding arrests and seizures for 2023 and 2024 (YTD September 16, 2024).

The data for Figure 1 does not reflect the entirety of all drug seizures or narcotics arrests in the Las Vegas Metropolitan area, but does compare the number of felony narcotic-related arrests at Electric Daisy Carnival (EDC). (Arrest data is not broken down by drug type.) EDC is relevant to psychedelic-related drug arrests and seizures in Nevada because it’s one of the largest electronic music festivals in the world, drawing hundreds of thousands of attendees to Las Vegas annually. Large festivals like EDC often see an increase in the use of psychedelics and other substances associated with the electronic music scene, leading to heightened law

enforcement activity aimed at monitoring drug use, preventing distribution, and prioritizing public safety.

Figure 1.

Detailed Arrests Breakdown (Las Vegas Metropolitan Area)



Year	Total	Regular	EDC
2023	461	445	16
2024 (YTD Sep 16)	357	357	N/A

Key Findings:

- 2023 saw a total of 461 arrests, with 16 during EDC
- 2024 data (as of Sep 16) shows 357 total arrests
- EDC arrests represent a small percentage of total arrests

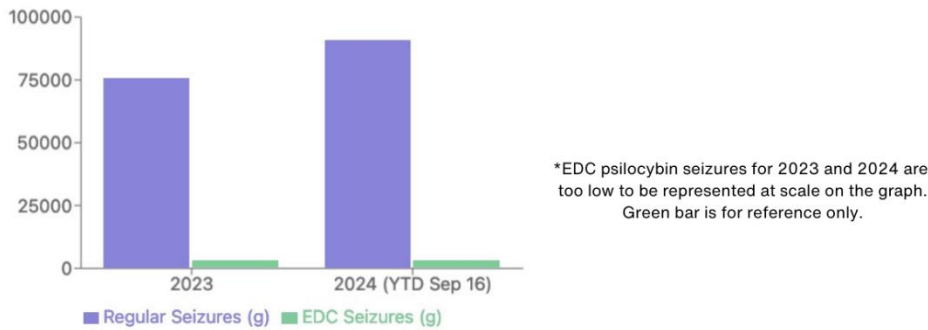
Data Limitations:

- Represents Las Vegas Metropolitan Area only
- Does not include all narcotics seized in the jurisdiction
- Arrests are not broken down by specific drug type

The data for Figure 2 does not reflect the entirety of all drug arrests or seizures but only the total amount of psilocybin seized in the Las Vegas Metropolitan Narcotics Section for 2023 and 2024 (YTD September 16, 2024) compared to the amount of psilocybin seized at EDC in 2023.

Figure 2.

Psilocybin Seizures Analysis (Las Vegas Metropolitan Area)



Year	Total (g/lbs)	Regular (g/lbs)	EDC (g/lbs)
2023	76,000g /167.55lbs	75,889.4g /167.31lbs	110.6g /0.24lbs
2024 (YTD Sep 16)	91,000g /200.62lbs	90,832g /200.25lbs	168g /0.37lbs

Key Observations:

- 2024 has already exceeded 2023's total seizures despite being partial year data
- EDC seizures represent a very small fraction of total seizures
- Significant increase in seizure amounts from 2023 to 2024

Data Limitations:

- Represents Las Vegas Metropolitan Area only
- Does not include all narcotics seized in the jurisdiction
- Arrests are not broken down by specific drug type

This gap in state-level data collection is mirrored at the national level, presenting a similar challenge for comprehensive analysis. According to a 2024 RAND Corporation research report [24], the “official national figures for the number of arrests involving psychedelics do not exist.” RAND calculated and made broad assumptions for the total number of psychedelic arrests through an analysis of data submitted in 2022 by 13,293 law enforcement agencies into the FBI National Incident-Based Reporting System (NIBRS). By using microdata [25], RAND calculated and then asserted “that the total number of arrests for psychedelics in 2022 was likely in the low double-digit thousands [26]” nationwide.

Given the lack of data at the national and state level we can look to the National Forensic Laboratory Information System annual drug report (NFLIS-Drug) [27] to provide information on emerging trends and insights on drug-related data to assess public health and safety concerns. The NFLIS-Drug report includes “data from forensic laboratories that handle the Nation’s drug analysis cases.” According to the 2022 report the “NFLIS-Drug participation rate, defined as the percentage of the national drug caseload represented by laboratories...is currently more than 98%. NFLIS-Drug includes 50 state systems and 111 local or municipal laboratories/laboratory systems, representing a total of 284 individual laboratories.”

The report includes a total of 1,181,750 drug reports that were identified by state and local forensic laboratories in the United States. Hallucinogenic substances in aggregate were only 1.35% of all drug reports tested across all 50 states [28]. Psilocin/psilocybin was 0.84% (9,932 reports) [29], LSD 0.23% (2,727 reports), and MDMA 0.28% (3,265 reports). This government report is in line with the 2024 annual Drug Enforcement Administration (DEA) National Drug Threat Assessment Report [30] which shows that psychedelic and psilocybin use is so low in the United States that historically it continues to not be mentioned as a public safety concern for our nation[31].

Despite the lack of available criminal justice data, there has been a shift in jurisdictions towards a more innovative approach to psychedelics regulation, particularly regarding decriminalization, deprioritization, or legalization for therapeutic use. This has led to varying responses from police departments, with some supporting these changes while others remain cautious. Overall, the police view on psychedelics is evolving, influenced by changing societal attitudes, emerging research, and shifts in drug policy. The future landscape will likely depend on ongoing discussions and developments in both law enforcement and public health policies and research.

In 2019, the City of Denver became the first major city in the United States to decriminalize psilocybin mushrooms through a ballot initiative known as Initiative 301. Following this change, the city conducted a comprehensive report [32] to assess the impact of this policy on public safety and related issues. Bryan Lang, a co-author of the report presented the findings to the working group[33].

Key Findings of the Denver Report [34]:

1. Reduction in Arrests:

The decriminalization of psilocybin resulted in a significant decrease in arrests related to psilocybin possession in Denver. This shift allowed law enforcement to redirect resources toward more serious crimes, potentially improving overall public safety.

2. Community Perception:

Many community members reported feeling safer due to the reduced criminalization of psilocybin use. The change in policy also contributed to a broader conversation about drug use and public health rather than criminal justice.

3. Public Health Focus:

The report emphasized the importance of treating substance use as a public health issue rather than solely a criminal justice one. This perspective aligns with growing evidence that psychedelics may have therapeutic benefits, particularly for mental health conditions.

4. Education and Awareness:

The need for public education about the responsible use of psilocybin was highlighted. As more individuals began to explore psilocybin, the report recognized the importance of providing information about safe practices and potential risks.

5. Increased Use and Interest:

Following decriminalization, there was a noticeable increase in interest and use of psilocybin within the community. This raised questions about the need for regulation and oversight to ensure safe and responsible use.

Challenges and Considerations

- **Regulatory Framework:** Although decriminalization reduced penalties for possession, it highlighted the need for a regulatory framework to ensure consumer safety, especially in the cultivation and distribution of psilocybin mushrooms.

- **Public Safety Concerns:** Some concerns were raised about the potential for increased public safety issues related to impaired judgment, driving under the influence, or unsafe use of psilocybin in public spaces. Gaps in training for first responders were identified as well as the needed monitoring and data collection required to address these concerns.
- **Ongoing Research:** The report underscored the importance of continued research into the effects of psilocybin and the implications of its decriminalization on public health and safety.

Since 2020 multiple states and local municipalities have changed their laws regarding psychedelics, reflecting a shift in public perception and scientific understanding of these substances. The *Psychedelics Legalization & Decriminalization Tracker* [35] reflects the broad range of public policy options that are being considered on the national level.

Following the passage of Colorado Proposition 122 in 2022 which decriminalized certain psychedelics and established a regulated framework for their therapeutic use, Reason Foundation [36] conducted a policy analysis to assess any health or public safety harms:

1. Reports indicated that after the legalization of psilocybin, there was no notable increase in emergency room visits related to psychedelic use. This suggests that the legal use of plant-based natural medicines did not lead to an uptick in adverse health events.
2. Law enforcement and public safety measures remained stable, with no indication that decriminalization resulted in increased crime or public disorder related to psychedelics. This finding aligns with trends observed in other jurisdictions that have decriminalized or legalized similar substances.
3. The emphasis on education regarding the responsible use of psychedelics has been crucial. Initiatives aimed at informing the public about safe practices and potential risks have likely contributed to the absence of significant health or public safety harms.

The early data from Colorado's regulation of psychedelics suggests that, so far, there have been no significant health or public safety harms associated with the policy change. These data suggest that regulated access to psychedelics, when coupled with education and responsible use, can lead to positive outcomes for individuals and communities. As research continues and more data becomes available, it will be essential to monitor the long-term effects of these policy changes on public health and safety. The findings in Colorado and other states may also inform future discussions and decisions regarding psychedelics in other jurisdictions including Nevada which is considering similar reforms.

Community health and public safety are inextricably linked. Legislators and criminal justice leaders have long ignored the potential of psychedelics to reduce crime. The topic is complex and multifaceted. Research into psychedelics has shown potential benefits in mental health treatment, such as reducing anxiety, depression, and PTSD, which could theoretically lead to lower crime rates by improving individuals' mental well-being and social functioning.

Researchers posit that psychedelics can foster empathy, increase emotional awareness, and promote prosocial behavior, which could contribute to a reduction in violent or criminal behavior. Programs that involve psychedelics in therapeutic or controlled settings have shown promise, especially in helping individuals with substance use disorders [37], which can be linked to

criminal activity. Other research reflects that for those who have already been arrested for a crime, psychedelics have been shown by a study of over 200,000 inmates to substantially reduce the likelihood of reoffending [38], particularly those who have a substance use problem [39].

Despite these findings, there are concerns and challenges. The effects of psychedelics can vary widely among individuals, and improper use can lead to negative outcomes. The legal and societal implications of using these substances in a broader context also need to be considered. Ultimately, while there is potential for psychedelics to contribute to crime reduction indirectly through improved mental health, more research is needed to understand their efficacy and implications fully.

Future Considerations

Public Safety Concerns: The Las Vegas Metro Police Department presented concerns including the potential for impaired judgment, dangerous behavior, or accidents associated with psychedelic use resulting in increased youth use and crime.

Training and Education: In areas where psychedelics are being decriminalized or legalized, some police departments are beginning to engage in training and education that enhances the knowledge and skills needed to manage adverse reactions that promote safety while reducing risk and liability to individuals in a psychedelic crisis.

Community Relations: The approach of law enforcement towards psychedelics can impact community relations. In communities where there is a strong push for psychedelic reform, police attitudes can influence public trust and cooperation.

Public Health and Public Safety Data Collection: Implement systems that ensure data is collected consistently and accurately that fosters a culture of informed decision-making that improves resource allocation, and policing practices and allows us to research the effectiveness and the outcomes of our drug control strategies on the health and safety of the people we serve.

Harm Reduction: In states or jurisdictions that have changed their laws there are emerging collaborations with public health organizations to promote harm reduction strategies that focus on minimizing the negative consequences of drug use rather than strict enforcement.

Research and Evidence: Some police officials recognize the growing body of research supporting the therapeutic benefits of psychedelics. This awareness may lead to more nuanced discussions about drug policy and enforcement priorities, as well as the development of model policies for the treatment of behavioral health issues, including post-traumatic stress disorder for law enforcement.

Regulation and Legalization: As more jurisdictions explore the legalization or decriminalization of psychedelics, regulations are being developed to ensure their safe use. Proper frameworks can help minimize risks associated with their misuse and promote responsible consumption by consumers.

Public Perception: The stigma around psychedelics can influence public safety discussions. Education and awareness campaigns can help change perceptions, highlighting both risks and benefits, leading to more informed choices.

Research and Data: Continued research into the safety profile of psychedelics is crucial. Gathering data on their effects when used in controlled environments can help inform public policy and safety measures.

Risks and Misuse: While psychedelics can be beneficial, there are risks, including potential adverse psychological distress or unsafe behaviors when used irresponsibly. Public safety and public health initiatives must address these concerns and provide clear guidelines for safe use and enforcement strategies.

Examination of Various Entheogens for Therapeutic Use

Psilocybin: A Comprehensive Review

Executive Summary

Psilocybin, a naturally occurring psychedelic compound found in certain species of mushrooms, has garnered significant attention for its potential therapeutic applications. Emerging research supports its use in treating various mental health conditions, including depression, anxiety, PTSD, and substance use disorders. This document synthesizes the current evidence base and outlines recommendations for implementing psilocybin therapy within a regulated medical framework, emphasizing safety and clinical guidelines.

Historical Context and Traditional Use

Psilocybin has a long history of ceremonial and medicinal use, particularly among indigenous cultures in Mesoamerica. The Mazatec and other groups have traditionally used psilocybin-containing mushrooms in spiritual and healing rituals. Western scientific interest began in the mid-20th century, catalyzed by the work of R. Gordon Wasson and subsequent research in the 1950s and 1960s exploring its psychotherapeutic potential [40]. After a period of prohibition, the recent resurgence in psychedelic research has renewed focus on psilocybin's clinical applications [41].

Clinical Evidence and Therapeutic Applications

Extensive clinical research highlights psilocybin's efficacy in treating a range of mental health conditions.

Depression and Anxiety

In a landmark 2020 study, 24 participants with treatment-resistant depression were administered two doses of psilocybin (25 mg each) alongside psychotherapy. Results showed a 71% reduction in depressive symptoms on the Montgomery-Åsberg Depression Rating Scale (MADRS) at 1-week post-treatment, with 58% maintaining significant improvement at 3-month follow-up [42].

A separate study in cancer patients with anxiety and depression reported sustained reductions in anxiety (60%) and depressive symptoms (80%) six months post-treatment [43].

PTSD

A recent phase 2 trial involving 90 participants with PTSD demonstrated a 62% reduction in symptoms as measured by the Clinician-Administered PTSD Scale (CAPS-5) following two psilocybin-assisted sessions. These improvements were sustained at the 6-month follow-up, with over half of the participants no longer meeting diagnostic criteria for PTSD [44].

Substance Use Disorders

Psilocybin has also shown promise in treating addiction. A 2022 study in smokers reported a 59% abstinence rate at 12 months post-treatment, significantly higher than standard smoking cessation therapies [45]. Additionally, a pilot study targeting alcohol use disorder found a 48% reduction in heavy drinking days following psilocybin-assisted therapy [46].

Mechanism of Action and Therapeutic Process

Psilocybin exerts its effects primarily through activation of the 5-HT_{2A} receptor, leading to alterations in neural connectivity and increased neuroplasticity. Neuroimaging studies reveal psilocybin enhances functional connectivity between the default mode network (DMN) and other brain networks, facilitating shifts in perspective and cognitive flexibility [47]. Additionally, increased levels of brain-derived neurotrophic factor (BDNF) post-treatment suggest potential for long-term neuroadaptive changes [48].

Safety Considerations and Risk Management

Psilocybin has a favorable safety profile when administered in controlled settings. Common adverse effects include transient increases in blood pressure, nausea, and emotional distress during the acute phase. Serious adverse events are rare but may include persistent psychological distress or, in extreme cases, psychotic episodes in individuals with predisposed conditions [49].

Contraindications

A comprehensive pre-treatment assessment is critical to identify contraindications, which include:

- **Active psychotic disorders** (e.g., schizophrenia, bipolar I disorder)
- **Severe cardiovascular conditions** (e.g., uncontrolled hypertension)
- **History of severe adverse reactions to psychedelics**
- **Current use of serotonergic medications** (e.g., SSRIs)

Treatment Protocol and Implementation Framework

Psilocybin therapy involves a structured protocol comprising three phases:

1. **Preparation**
 - Comprehensive medical and psychiatric evaluation
 - Establishment of therapeutic goals and rapport building
2. **Administration**

- Conducted in a controlled environment under medical supervision
 - Dosage typically ranges from 10-30 mg depending on individual factors
- 3. Integration**
- Post-session psychotherapy to process experiences and reinforce insights
 - Follow-up support to promote sustained behavioral and psychological changes

Psilocybin represents a transformative tool in mental health treatment, offering profound benefits for individuals unresponsive to conventional therapies. The robust body of evidence supporting its efficacy and safety underscores the need for its integration into modern clinical practice. Future research should focus on optimizing dosing regimens, expanding patient eligibility, and further elucidating its long-term effects. A carefully regulated framework, similar to the FDA's expanded access programs, will be essential to ensure patient safety and treatment efficacy as psilocybin transitions from experimental to mainstream therapeutic use.

Psilocybin Dose and Tox

Psilocybin, the active compound found in certain species of mushrooms, has been the focus of increasing research due to its potential therapeutic effects on mental health conditions such as depression, anxiety, and PTSD [50,51,52]. Dosing psilocybin requires careful consideration as individual responses can vary based on factors such as body weight, metabolic rate, and prior experience with psychedelics [53]. Typical doses range from 1 to 3 grams of dried mushrooms for moderate effects, often producing perceptual changes and introspective experiences [54]. For clinical purposes, doses are carefully calculated and administered in controlled environments to maximize therapeutic benefits while minimizing risks [55].

Interestingly, the lethal dose (LD50) of psilocybin is exceptionally high in animal studies, estimated at approximately 280 milligrams per kilogram of body weight [56]. This suggests that the substance has a relatively low toxicity profile, especially when compared to many other psychoactive substances. For humans, the LD50 is far beyond any dose typically consumed for recreational or therapeutic purposes, reinforcing the idea that psilocybin itself is not inherently toxic, even at doses well beyond the typical range [57].

However, consuming high doses of psilocybin can lead to profound psychological experiences that may be overwhelming or distressing without proper preparation and guidance [58]. These effects, while intense, are not typically due to the toxicological properties of psilocybin but rather its potent action on serotonin receptors in the brain, particularly the 5-HT_{2A} receptor [59]. It's crucial to approach higher doses with caution, as the risk of psychological discomfort or accidental harm increases, even though physical toxicity remains low. This highlights the importance of setting, intention, and guidance when working with psilocybin, regardless of the dose [60,61].

5-MeO-DMT: A Comprehensive Review

Executive Summary

5-MeO-DMT (5-methoxy-N,N-dimethyltryptamine), a potent naturally occurring psychedelic, has gained attention for its potential therapeutic applications in treating mental health conditions such as depression, anxiety, PTSD, and substance use disorders. Preliminary research and anecdotal evidence suggest rapid and profound therapeutic benefits. This document reviews the current state of evidence, explores mechanisms of action, and offers recommendations for implementing 5-MeO-DMT therapy within a regulated medical framework, prioritizing safety and clinical efficacy.

Historical Context and Traditional Use

5-MeO-DMT is found in a variety of plant species and in the secretion of the *Bufo alvarius* toad. Indigenous peoples in South America have used 5-MeO-DMT-containing snuffs in ritual and medicinal contexts for centuries [62]. Western interest began in the mid-20th century, with the first isolation and synthesis in the 1950s. In recent decades, interest has surged due to anecdotal reports of transformative experiences and therapeutic benefits, particularly in ceremonial and retreat settings [63].

Clinical Evidence and Therapeutic Applications

Though clinical research on 5-MeO-DMT is in its early stages, existing studies and observational reports highlight its potential as a rapid-acting therapeutic agent.

Depression and Anxiety

A 2019 observational study evaluated 42 participants who received 5-MeO-DMT in a ceremonial setting. Results showed a 79% reduction in symptoms of depression and anxiety at 4 weeks post-treatment [64]. These improvements were comparable to those seen in more extensively studied psychedelics such as psilocybin and ketamine.

PTSD

In a study involving military veterans with treatment-resistant PTSD, a combination of 5-MeO-DMT and ibogaine showed significant reductions in PTSD symptoms. CAPS-5 scores decreased by 55% at 3-month follow-up, with many participants reporting lasting relief from intrusive thoughts and hypervigilance [65].

Substance Use Disorders

Preliminary findings suggest 5-MeO-DMT may help reduce addictive behaviors. In one study, 20 individuals with a history of substance use underwent 5-MeO-DMT treatment, with 85% reporting reduced cravings and substance use at 6-month follow-up [66]. These results indicate that 5-MeO-DMT may interrupt habitual patterns of substance abuse, potentially through its impact on emotional regulation and self-reflection.

Mechanism of Action and Therapeutic Process

5-MeO-DMT primarily acts as a potent agonist of the 5-HT_{1A} and 5-HT_{2A} receptors. Unlike other psychedelics, its effects are rapid in onset, with peak experiences typically occurring within 5-15 minutes of administration and resolving within 30-60 minutes. This short duration makes it uniquely suited for therapeutic settings where extended monitoring may be challenging [67].

Neuroimaging studies reveal 5-MeO-DMT induces a marked reduction in default mode network (DMN) activity, facilitating ego dissolution and profound shifts in self-perception. Additionally, increased levels of brain-derived neurotrophic factor (BDNF) and reduced markers of neuroinflammation suggest potential for long-term neuroplastic changes [68].

Safety Considerations and Risk Management

While 5-MeO-DMT is generally well-tolerated in controlled settings, it is associated with intense and sometimes overwhelming subjective experiences. Proper screening and preparation are essential to mitigate risks. Common side effects include increased heart rate, blood pressure, and transient emotional distress. Serious adverse events, such as psychological destabilization, are rare but may occur, particularly in individuals with pre-existing psychiatric conditions [69].

Contraindications

- **Active psychotic disorders** (e.g., schizophrenia, bipolar I disorder)
- **Severe cardiovascular conditions** (e.g., uncontrolled hypertension)
- **History of severe adverse reactions to psychedelics**
- **Current use of serotonergic medications** (e.g., SSRIs, SNRIs, MAOIs)

Treatment Protocol and Implementation Framework

5-MeO-DMT therapy involves a structured protocol to maximize therapeutic outcomes and ensure safety:

1. **Preparation**
 - Comprehensive medical and psychiatric evaluation
 - Setting intentions and preparing participants for the intense nature of the experience
2. **Administration**
 - Delivered via inhalation, intramuscular injection, or buccal routes in a controlled setting
 - Continuous monitoring of vital signs during the session
3. **Integration**
 - Post-session psychotherapy to process insights and integrate the experience into daily life
 - Ongoing support to reinforce behavioral and psychological changes

Conclusion

5-MeO-DMT shows immense promise as a rapid-acting therapeutic tool, particularly in addressing depression, anxiety, PTSD, and addiction. Its short duration and profound

psychological effects make it an attractive option for integration into modern clinical practice. However, further research is needed to establish standardized treatment protocols and better understand its long-term effects. A regulated framework, with strict adherence to safety protocols, will be critical for its successful implementation in therapeutic contexts.

Mescaline: A Comprehensive Review

Executive Summary

Mescaline, a naturally occurring psychedelic compound found in certain cacti species such as *Peyote (Lophophora williamsii)* and *San Pedro (Echinopsis pachanoi)*, is emerging as a potential therapeutic agent for mental health disorders, including depression, anxiety, substance use disorders, and PTSD. This report reviews the historical and clinical context of mescaline, its mechanisms of action, and its therapeutic applications, along with safety considerations and implementation guidelines for its use in regulated medical settings.

Historical Context and Traditional Use

Mescaline has been used for thousands of years in spiritual and healing practices by indigenous peoples in North and South America. The Huichol, Navajo, and other Native American tribes have employed mescaline-containing cacti in ceremonial contexts, particularly within the Native American Church, where its use is protected for religious purposes. Early Western scientific exploration of mescaline began in the late 19th and early 20th centuries, with notable studies by Arthur Heffter, who first isolated mescaline in 1897, and Ernst Späth, who synthesized it in 1919 [70].

Clinical Evidence and Therapeutic Applications

Although clinical research on mescaline is less extensive than that for other psychedelics like psilocybin and LSD, emerging evidence suggests its efficacy in treating various mental health conditions:

Depression and Anxiety

- **Mood Disorders:** Preliminary studies and observational reports indicate that mescaline can produce significant improvements in mood and anxiety, particularly in individuals with treatment-resistant depression or anxiety disorders. A 2021 observational study found that 80% of participants reported significant reductions in depressive and anxiety symptoms following ceremonial use of mescaline, with effects lasting weeks to months. [71]

Substance Use Disorders

- **Addiction Treatment:** Anecdotal and early clinical evidence suggests mescaline's efficacy in reducing substance use. In a study of participants with alcohol and opioid use disorders, 70% reported reduced cravings and substance use after mescaline treatment, with many attributing their success to the profound psychological insights and emotional breakthroughs facilitated by the experience. [71]

PTSD and Trauma

- **Psychological Healing:** Mescaline's ability to facilitate emotional processing and self-reflection has shown promise in addressing PTSD symptoms. A small study of veterans with PTSD reported significant reductions in symptoms, with participants experiencing greater emotional resilience and reduced hyperarousal following mescaline-assisted therapy [72]

Mechanism of Action and Therapeutic Process

Mescaline primarily acts as a partial agonist at serotonin 5-HT_{2A} receptors, similar to other classical psychedelics. This receptor activity leads to alterations in perception, cognition, and emotional regulation, which are central to its therapeutic effects.

Neuroplasticity and Cognitive Flexibility

- Neuroimaging studies suggest increased connectivity between the default mode network (DMN) and other brain regions, facilitating shifts in rigid thought patterns often associated with depression and trauma [73].

Psychological Effects

- Mescaline induces introspection, emotional catharsis, and a sense of interconnectedness, which can aid in addressing deep-seated psychological issues [74].
- Many users report a profound sense of self-compassion and acceptance, which may underlie its long-term therapeutic benefits [75].

Safety Considerations and Risk Management

Mescaline is generally considered safe when used in controlled settings, but its use requires thorough medical and psychological screening to minimize risks:

Contraindications

- Active psychosis or schizophrenia
- Severe cardiovascular conditions, including hypertension

- Use of SSRIs, SNRIs, or MAOIs (requiring a washout period) [70]

Adverse Effects

- Common side effects include nausea, vomiting, and mild anxiety during the acute phase.
- Rare but serious risks include prolonged psychosis or hallucinogen-persisting perception disorder (HPPD).

Safety Protocols

- Pre-treatment evaluation should include medical and psychiatric assessments to identify potential contraindications.
- Treatment should be conducted in a supervised setting, with trained professionals providing psychological support and monitoring physical well-being. [73]

Treatment Protocol and Implementation Framework

A structured mescaline-assisted therapy program consists of the following stages:

1. **Preparation**
 - Comprehensive psychological evaluation and therapeutic goal setting
 - Pre-treatment education to manage expectations and reduce anxiety
2. **Dosing Session**
 - Administration of mescaline under clinical supervision in a supportive environment
 - Monitoring of physical and psychological responses throughout the experience
3. **Integration**
 - Post-treatment therapy to help patients process their experiences and apply insights to their daily lives
 - Continued support through follow-up sessions to reinforce therapeutic outcomes

Conclusion

Mescaline presents a compelling therapeutic option for addressing various mental health challenges. Although further clinical trials are necessary to establish standardized treatment protocols, existing evidence supports its potential in treating depression, anxiety, substance use disorders, and PTSD. Proper integration of mescaline into clinical practice will require rigorous safety measures, comprehensive training for facilitators, and ongoing research to optimize its therapeutic application.

Iboga (Ibogaine): A Comprehensive Review

Executive Summary

Ibogaine, a naturally occurring psychoactive compound derived from the *Tabernanthe iboga* plant, has emerged as a promising therapeutic agent in the treatment of substance use disorders, traumatic brain injury (TBI), and certain mental health conditions such as post-traumatic stress disorder (PTSD). This report examines the current evidence supporting its therapeutic use and provides comprehensive recommendations for implementation within a regulated medical framework, with particular attention to safety protocols and clinical guidelines.

Historical Context and Traditional Use

The therapeutic application of ibogaine is deeply rooted in traditional African medicine, particularly in Gabon and Cameroon where the *Tabernanthe iboga* plant is indigenous. The Bwiti spiritual practice has utilized iboga in healing ceremonies and initiation rites for generations, developing sophisticated protocols for its safe administration. Modern medical interest in ibogaine began in the 1960s when its anti-addictive properties were first observed, leading to decades of research and clinical investigation.

Clinical Evidence and Therapeutic Applications

Multiple studies indicate that ibogaine shows promise as a treatment for both opioid and stimulant addiction, with evidence supporting both acute detoxification effects and longer-term impacts on drug use. In a large observational study of 191 subjects seeking detoxification from opioids and cocaine, ibogaine effectively decreased drug withdrawal symptoms and cravings when administered in doses between 8-12 mg/kg [76]. Single doses significantly reduced withdrawal symptoms on the Subjective Opioid Withdrawal Scale (SOWS) from 31.0 to 14.0 points within approximately 76.5 hours of treatment [77]. A systematic review found that a single dose or few treatments with ibogaine could significantly reduce drug withdrawal symptoms, craving, and self-administration in dependent individuals, with effects lasting from 24 hours to weeks or months [78]. At one month post-treatment, 50% of subjects reported no opioid use during the previous 30 days, notably higher than the 8.6-26% abstinence rates typically seen following conventional opioid detoxification [77].

Longer-term outcomes appear promising across different substances and populations. In a study of 75 primarily cocaine and crack cocaine users in Brazil, 61% of participants achieved abstinence, with those receiving single ibogaine treatments reporting median abstinence periods of 5.5 months, and those receiving multiple treatments achieving 8.4 months [79]. In opioid-dependent patients followed for 12 months, significant improvements in drug use scores were maintained throughout the follow-up period, though effects were strongest at 1 month post-treatment [77]. A 2023 study of Special Operations Forces Veterans (n=86) receiving combined ibogaine and 5-MeO-DMT therapy showed significant improvements in PTSD symptoms, depression, anxiety, insomnia severity, and cognitive functioning at one month that were sustained at 3- and 6-month follow-ups [80]. These positive outcomes were achieved in

populations that had previously attempted other treatments without success, with study participants averaging 3.1 prior failed treatment episodes [77]. The treatments were also associated with significant reductions in depression symptoms and improvements in mood that persisted at follow-up [76].

Beyond addiction treatment, ibogaine has shown promising results in mental health applications, particularly for the treatment of TBI and PTSD. A recent and noteworthy Stanford study [81] with 30 special operations veterans with a history of TBI and blast exposure demonstrated substantial reductions in PTSD symptoms and increased cognitive function [81].

At the beginning of the study, participants were experiencing clinically significant levels of disability as measured by the World Health Organization Disability Assessment Scale 2.0, which assesses disability in six functional domains, including cognition, mobility, self-care, getting along, life activities, and community participation. In addition, 23 met the criteria for PTSD, 14 for an anxiety disorder, and 15 for alcohol use disorder. In their lifetimes, 19 participants had been suicidal and seven had attempted suicide. On average, treatment with ibogaine immediately led to significant improvements in functioning, PTSD, depression, and anxiety [81]. Moreover, those effects persisted until at least one month after treatment (the endpoint of the study).

Before treatment, the veterans had an average disability rating of 30.2 on the disability assessment scale, equivalent to mild to moderate disability. One month after treatment, that rating improved to 5.1, indicating no disability. Similarly, one month after treatment participants experienced average reductions of 88% in PTSD symptoms, 87% in depression symptoms, and 81% in anxiety symptoms relative to how they were before ibogaine treatment. Formal cognitive testing also revealed improvements in participants' concentration, information processing, memory, and impulsivity [81].

These findings suggest broader therapeutic potential beyond addiction treatment, though more research is needed to fully understand the scope of possible applications.

Mechanism of Action and Therapeutic Process

Ibogaine interacts with multiple receptor systems in the central nervous system, including NMDA receptors, serotonin transporters, sigma2 receptors, and kappa-opioid receptors [76]. Research has shown that ibogaine and its metabolite noribogaine can modulate the expression of neurotrophic factors such as GDNF and BDNF in key brain regions associated with addiction, particularly the ventral tegmental area (VTA) and nucleus accumbens (NAcc) [82]. The higher dose of ibogaine (40 mg/kg) selectively increases GDNF in the VTA, which may be relevant to its reported effects on drug-seeking behavior [82][83].

Cherian KN et al.'s neuroimaging studies documented substantial changes in neural connectivity patterns following ibogaine treatment. Their research demonstrated three key findings: the formation of new neural pathways, particularly in regions affected by TBI; enhanced functional connectivity between the default mode network and executive control networks; and significant reductions in inflammatory markers throughout the brain. These findings provide a mechanistic basis for the observed improvements in both cognitive function and addiction-related behaviors [81].

Safety Considerations and Risk Management

The safe administration of ibogaine requires comprehensive medical screening and monitoring protocols. Cardiovascular assessment, including ECG evaluation and QT interval monitoring, is essential given the compound's known cardiac effects. General health screening must include liver function tests, kidney function evaluation, and careful assessment of potential drug interactions. Contraindications include cardiac conditions, liver disease, certain psychiatric medications, and pregnancy.

Treatment Protocol and Implementation Framework

The implementation of ibogaine therapy requires a structured approach beginning with thorough pre-treatment evaluation. This includes comprehensive physical examination, psychiatric assessment, medication review, and risk factor analysis. The treatment itself must occur in a controlled medical setting under licensed medical supervision with continuous cardiac monitoring and emergency response capability. The immediate treatment period typically spans 24-36 hours, followed by a structured integration and aftercare program.

Conclusion

The evidence supporting ibogaine's therapeutic potential, particularly in treating addiction, traumatic brain injury, and PTSD, warrants serious consideration for medical authorization within a carefully regulated framework. While these findings are promising, the importance of proper screening and safety protocols cannot be overstated. The Stanford MISTIC protocol, which combines ibogaine with magnesium supplementation and careful medical screening/monitoring, demonstrated safety in a small study of 30 carefully selected veterans, with no serious adverse events. While the therapeutic outcomes were promising, the authors emphasize these findings are preliminary and require validation through controlled clinical trials.

Federal Laws and Regulations

Introduction

Historically, various Indigenous cultures have used certain psychedelic substances; however, federal regulation in the United States began primarily in the mid-20th century. The Controlled Substances Act (CSA) of 1970, established as Title II of the Comprehensive Drug Abuse Prevention and Control Act, consolidated and replaced previous drug-related legislation. This Act was implemented amid a period of significant social and political change in the U.S. and was publicly justified as a response to increasing drug use and associated public health concerns. Notably, in a 1994 interview [84], John Ehrlichman, a senior official in the Nixon administration, claimed that the “war on drugs” was influenced by political motivations beyond public health, suggesting it was used as a means to target specific societal groups. The Act particularly impacted psychedelic substances, placing them in Schedule I despite ongoing medical research [85]. Currently, most psychedelics are still federally classified as Schedule I, which means they have no medical value and carry a high potential for abuse. MDMA and psilocybin have both been granted Breakthrough Therapy Designation by the FDA, indicating that these compounds show substantial potential for treating serious conditions—an apparent contradiction in the regulatory framework.

Recent Legislative Developments

The 118th United States Congress has introduced significant proposals related to psychedelic policy reform. The National Defense Authorization Act for FY2024 [86] includes provisions to fund research on psychedelic treatments for PTSD and traumatic brain injury (TBI) among active-duty service members. Additionally, the proposed **VISIONS Act** [87] aims to shield state-legal psilocybin programs from federal enforcement in states where such programs are authorized.

A bill currently under review, the **Right to Try Clarification Act** [88], seeks to expand terminally ill patients’ access to investigational psychedelics by clarifying their rights to pursue alternative therapies. Collectively, these legislative efforts indicate a growing federal interest in examining psychedelics’ potential for treating conditions such as PTSD, depression, anxiety, and addiction.

The Controlled Substance Act

Chapter 13 [89] of the CSA created a comprehensive legal framework for regulating controlled substances in the U.S. This framework includes two main components: the scheduling of drugs and the regulatory and enforcement guidelines for handling controlled substances. Key sections of the CSA include:

- **21 U.S.C. § 812:** Schedules of Controlled Substances, which classify drugs based on their potential for abuse and accepted medical use.
- **21 U.S.C. § 823:** Registration Requirements for entities manufacturing or distributing controlled substances.

- **21 U.S.C. § 841:** Prohibited Acts A, which details criminal penalties for the manufacture, distribution, or possession with intent to distribute controlled substances.
- **21 U.S.C. § 846:** Attempt and Conspiracy, which addresses penalties related to attempts and conspiracies to commit drug-related offenses.

The CSA, specifically Chapter 13 [89], established the legal framework for regulating the manufacture, distribution, and use of controlled substances in the United States. There are two primary components to the CSA: drug schedules, and enforcement and regulation. Key sections of the CSA can be found in Appendix B.

This revised system for categorizing controlled substances established a five-schedule classification system for controlled substances, with Schedule I being the most restrictive [90]. Substances are categorized based on:

- Medical utility
- Abuse potential
- Safety under medical supervision

The Schedule I status indicates that these substances are deemed to have:

1. High potential for abuse
2. No accepted medical use
3. Lack of accepted safety for use under medical supervision

Under 21 U.S.C. § 812 [90], all major classic psychedelics and psychedelic-related compounds currently reside in Schedule I. (See Appendix B).

Legal Pathways for Access to Psychedelics

Federal law, **21 U.S.C. § 823** [91] establishes requirements for DEA registration to manufacture, distribute, or research controlled substances, including Schedule I psychedelics. This section mandates security protocols, record-keeping, and demonstration of "public interest." The DEA reviews applications based on experience with controlled substances, compliance history, and diversion prevention capacity. This framework enables legal access to Schedule I substances for scientific research while maintaining safeguards.

Although there are firm regulations surrounding Schedule I substances, three primary legal avenues exist for accessing psychedelics under federal law:

1. **Clinical Research**
 - Requires DEA registration [92]
 - Approval of study protocol by the FDA
 - Oversight by an Institutional Review Board (IRB)
 - Implementation of enhanced security measures
2. **Expanded Access (Compassionate Use)**
 - FDA program allowing access for individuals with serious medical conditions
 - Requires agreement from the drug manufacturer

- Restricted to specific, approved programs [93]
- 3. Religious Exemptions**
- Protected under the Religious Freedom Restoration Act (RFRA) [94]
 - Specific exemptions, such as for peyote use by the Native American Church
 - Case-by-case review by the DEA for other applications
-

Criminal Prohibitions and Penalties

Under 21 U.S.C. § 841 (Prohibited Acts A), federal law prohibits the manufacture, distribution, or possession with intent to distribute controlled substances, including Schedule I substances such as psychedelics. Penalties vary based on the amount of the substance involved, any prior convictions, and the presence of aggravating factors, such as distribution near schools. Enhanced penalties may include fines, imprisonment, and asset forfeiture, making this statute a primary tool for federal drug prosecution. Additionally, 21 U.S.C. § 844 outlines the penalties for unlawful possession, specifying fines and imprisonment terms for first and repeat offenses, with heightened penalties for possession in proximity to schools or involving minors.

For details on federal penalties related to psychedelics, refer to Appendix B.

Enforcement and Regulation

The Drug Enforcement Administration (DEA) and the Food and Drug Administration (FDA) collaborate to ensure that drug scheduling decisions are informed by both scientific evidence and enforcement considerations.

The DEA is the primary enforcement agency for the CSA. This agency is responsible for scheduling, rescheduling, and enforcing controlled substance regulations. It also regulates the manufacture, distribution, and dispensing of controlled substances. While the DEA maintains primary federal enforcement authority [95], federal agencies typically focus on large-scale trafficking operations, international smuggling, and bulk manufacturing [96].

The FDA plays a critical role in the scientific and medical evaluation of substances, providing recommendations to the DEA regarding their appropriate scheduling based on medical use, safety, and abuse potential.

Rescheduling a Substance

Congress can directly change the scheduling through legislation, or a petition can be submitted by the DEA, the Department of Health and Human Services (HHS), or an external party (researchers, pharmaceutical companies, advocacy groups) may submit a petition. See *Appendix B*.

State and Local Laws and Regulations

Nevada Regulations on Psychedelic Substances

In Nevada, state law closely aligns with federal regulations regarding controlled substances, as outlined in NRS Chapter 453. This statute enforces strict penalties for the possession, distribution, and trafficking of psychedelics, restricting access primarily to approved research contexts.

As opposed to federal law, Nevada does not have a specific conversion table to define penalties for quantities of individual psychedelic substances. Alternatively, it applies weight-based penalties to Schedule I substances under NRS 453. Consequently, penalties are assigned based on the overall weight of controlled substances rather than substance-specific thresholds.

Legislative Developments

In 2023, **SB242** established a Psychedelic Medicines Working Group to examine the potential therapeutic benefits of various entheogens to address certain mental health issues, and to develop a plan to allow access to such entheogens for therapeutic purposes.

At of this writing, ten states [97] have passed bills to authorize research (*see Appendix B*); New Jersey has removed felony status for psilocybin possession, and both Oregon and Colorado have implemented regulated access models for supervised psilocybin therapy. (*For a summary of Oregon's regulated psilocybin program, see Appendix D, and for an overview of Colorado's Natural Medicine Access Program, see Appendix E.*) Colorado has additionally legalized cultivation and sharing of various entheogenic plants and fungi [98]. Utah is also developing a pilot program [99] allowing select hospitals to administer psilocybin and MDMA for mental health treatments, with a legislative report on program outcomes expected after three years.

Scheduling and Classification

Under NRS **453.166** [100], the following psychedelics are specifically listed as Schedule I controlled substances:

- 5-methoxy-3,4-methylenedioxy amphetamine (MDMA)
- Bufotenine (5-meO-DMT)
- Ibogaine
- Lysergic acid diethylamide (LSD)
- Mescaline;
- Peyote
- Psilocybin

- Psilocyn

Nevada Revised Statutes (NRS) Chapter 453 outlines penalties for possession and trafficking of controlled substances, including psychedelics. Specifically, **NRS 453.336** classifies possession penalties as either misdemeanors or felonies, depending on the quantity and prior offenses. Trafficking penalties escalate under **NRS 453.3385** to **NRS 453.3395**, with increased penalties for larger quantities and aggravating factors such as trafficking near schools or involving minors.

For a detailed list of Nevada state penalties, refer to Appendix E.

Local Regulations on Psychedelic Substances

As of this writing, no Nevada counties or municipalities have enacted ordinances that permit therapeutic use of entheogens. Additionally, no local measures have been introduced to deprioritize the enforcement of existing laws related to entheogen use.

Legislative Developments

As of this writing, 24 cities and 2 counties [97] (*see Appendix B*) in the United States have made prosecuting offenses related to entheogenic plants and fungi “lowest law enforcement priority.” Local Nevada jurisdictions have yet to deprioritize enforcement, but tribal nations retain limited ceremonial use protections under federal law for peyote.

Tribal Jurisdictions

In Nevada, Native American tribes have specific rights under the American Indian Religious Freedom Act Amendments of 1994 [101] to use peyote for traditional ceremonial purposes. These protections do not apply to non-traditional or therapeutic use.

Requirements for Research Programs

Institutions seeking to conduct research must:

- Obtain DEA research registration
- Secure FDA approval for human subjects research
- Receive state board approvals
- Implement strict security protocols

Conclusion

Nevada currently enforces strict prohibitions on the therapeutic use of entheogens, consistent with federal law. No legal pathways exist for therapeutic use outside research protocols.

Recommendations for an Actionable and Strategic Plan

The following points are offered as an actionable plan for the Nevada Legislature:

Based on its comprehensive review, the Working Group recommends a series of coordinated legislative and administrative actions to establish a safe and effective framework for psychedelic-assisted therapy in Nevada. Central to these recommendations is the development of legislation for the 2025 session to establish a regulated access program for psychedelic-assisted therapy. This program, which could be implemented either as a pilot or full-scale initiative, should include robust mechanisms for data collection and outcome analysis to inform future policy decisions.

Additional legislative measures recommended for the 2025 session include provisions to align state scheduling of psychedelic compounds with FDA determinations, particularly for substances granted breakthrough therapy status. The Working Group also recommends reviewing and potentially revising current NRS statutes to implement more appropriate penalties for entheogenic plants and fungi, reflecting evolving understanding of their therapeutic potential and public health implications.

To ensure public safety and appropriate emergency response, legislation should establish comprehensive training programs for law enforcement, Emergency Medical Services (EMS) personnel, and mental health co-responders. These programs should focus specifically on risk management strategies and effective approaches to managing psilocybin-induced crises, enhancing first responders' ability to handle these situations safely and effectively.

The Working Group further recommends that during the 2025-2026 Interim period, the Division of Insurance within the Department of Business and Industry develop frameworks to ensure health insurance coverage for psychedelic-assisted therapy. Should statutory changes be necessary to implement these coverage requirements, the Division should prepare appropriate legislation for consideration during the 2027 Legislative Session.

To support these initiatives, the Working Group recommends engaging the Legislative Counsel Bureau to conduct a comprehensive review of federal, state, and local laws and regulations concerning therapeutic use of entheogens. This review should identify necessary statutory and regulatory revisions to enable the safe and effective therapeutic use of these substances within Nevada.

Finally, to better understand current enforcement patterns and inform policy development, the Working Group recommends establishing requirements for state and local law enforcement agencies to collect and report data on psychedelic-specific drug arrests, including non-traditional psychedelics such as MDMA and ketamine. This data collection effort will provide crucial insights for ongoing policy refinement and program evaluation.

Appendix A

Text of SB242 Legislation

82nd Session (2023)

Senate Bill No. 242—Senators Nguyen, Donate; Flores, Hansen, D. Harris, Ohrenschall and Stone

Joint Sponsors: Assemblymen Carter and Marzola

CHAPTER.....

AN ACT relating to controlled substances; requiring the Department of Health and Human Services to establish the Psychedelic Medicines Working Group to study certain issues relating to the therapeutic use of entheogens during the 2023-2024 interim; prescribing the membership and duties of the Working Group; and providing other matters properly relating thereto.

Legislative Counsel's Digest: This bill requires the Department of Health and Human Services to establish the Psychedelic Medicines Working Group to study certain issues relating to the therapeutic use of entheogens during the 2023-2024 interim. This bill defines "entheogen" to include, without limitation, psilocybin and psilocin. This bill also: (1) prescribes the membership and duties of the Working group; and (2) requires the Department of Health and Human Services to submit a written report describing the activities, finding, conclusions and recommendations of the Working Group for transmittal to the 83rd Session of the Legislature. EXPLANATION – Matter in bolded italics is new; matter between brackets [omitted material] is material to be omitted.

WHEREAS, Nevada has a high prevalence of adults with behavioral health conditions; and

WHEREAS, Studies conducted by nationally and internationally recognized medical institutions indicate that psilocybin has shown efficacy and safety in the treatment of a variety of behavioral health conditions, including, without limitation, addiction, treatment-resistant depression, major depressive disorder, post-traumatic stress disorder and psychological distress relating to the end of life; and

WHEREAS, The United States Food and Drug Administration has determined that preliminary clinical evidence indicates that psilocybin may demonstrate substantial improvement over available therapies for treatment-resistant depression and major depressive disorder and has accordingly granted Breakthrough Therapy designation for treatment that uses psilocybin as a therapy for treatment-resistant depression and major depressive disorder; and

WHEREAS, Numerous state and local lawmaking bodies throughout the United States have already enacted or are currently considering legislation decriminalizing certain conduct by certain persons relating to psilocybin and psilocin; now, therefore

THE PEOPLE OF THE STATE OF NEVADA, REPRESENTED IN SENATE AND ASSEMBLY,
DO ENACT AS FOLLOWS:

Sections 1-3. (Deleted by amendment.)

Sec. 3.5. 1. The Department of Health and Human Services shall establish the Psychedelic Medicines Working Group to study certain issues relating to the therapeutic use of entheogens during the 2023-2024 interim. The Working Group must consist of:

- (a) The Director of the Department of Health and Human Services or his or her designee;
 - (b) The Attorney General or his or her designee;
 - (c) The Director of the Department of Veterans Services or his or her designee;
 - (d) The President of the State Board of Pharmacy or his or her designee;
 - (e) One member appointed by the Majority Leader of the Senate;
 - (f) One member appointed by the Minority Leader of the Senate;
 - (g) One member appointed by the Speaker of the Assembly;
 - (h) One member appointed by the Minority Leader of the Assembly; and
 - (i) The following members appointed by the Governor, each of whom must be a bona fide resident of this State for not less than 1 year immediately preceding his or her appointment:
 1. One member who has received an honorable discharge from the Armed Forces of the United States and who has experience with the use of entheogens to address post-traumatic stress disorder;
 2. One member who is a psychiatrist, or a psychologist with clinical experience, and who:
 - (I) Is licensed to practice in this State; and
 - (II) Has experience treating patients who have an alcohol or other substance use disorder;
 3. One member who has experience treating post-traumatic stress disorder in a clinical setting;
 3. One member who has experience researching the therapeutic use of entheogens pursuant to a license issued by the Drug Enforcement Administration of the United States Department of Justice;
 3. One member who is a representative of a tribal government, as defined in NRS 239C.105, in this State;
 3. One member who is a representative of an organization that advocates for and provides education to the public regarding the therapeutic use of entheogens; and
 3. One member who is a representative of a law enforcement agency in this State.
2. The Working Group shall, during the 2023-2024 interim:
- a. Examine various entheogens to determine which entheogens may be beneficial for therapeutic use in reducing suicidal ideation and improving mental health, including, without limitation, through the use of entheogens in the treatment of post-traumatic stress disorder, substance use disorder, major depressive disorder or psychological distress relating to the end of life;
 - b. Review federal, state and local laws and regulations concerning the therapeutic use of entheogens and identify any revisions to the laws and regulations of this State that may be necessary to enable entheogens to be used for therapeutic purposes in this State;
 - c. Review existing and ongoing research on the therapeutic use of entheogens; and
 - d. Develop a strategic, measurable and actionable plan to allow access to safe and affordable entheogens so that such entheogens may be used for therapeutic purposes.
3. The Director of the Department of Health and Human Services shall serve as Vice Chair of the Working Group. The Attorney General or his or her designee shall serve as Vice Chair of the Working Group.

4. A majority of the members of the Working Group constitutes a quorum for the transaction of business, and a majority of those members present at any meeting is sufficient for any official action taken by the Working Group.
 5. The Chair of the Working Group may appoint subcommittees composed of members of the public who have relevant experience or knowledge to consider specific issues or other matters relating to the therapeutic use of entheogens.
 6. Each member of the Working Group:
 - a. Serves without compensation; and
 - b. While engaged in the business of the Working Group, is entitled to receive the per diem allowance and travel expenses provided for state officers and employees generally.
 7. The Department of Health and Human Services shall provide the Working Group with such administrative support as is necessary to assist the Working Group in carrying out its duties pursuant to this section.
 8. The Department of Health and Human Services shall, on or before December 31, 2024, prepare and submit a written report describing the activities, findings, conclusions and recommendations of the Working Group to the Director of the Legislative Counsel Bureau for transmittal to the 83rd Session of the Legislature.
 9. As used in this section, "entheogen" includes, without limitation, psilocybin and psilocin.
- Sec. 4.** This act becomes effective upon passage and approval.

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Appendix B

States with Decriminalization or Legalization Measures [102]

- Oregon (January 2021)
 - Legalization of supervised consumption
 - Decriminalization (significantly amended in April 2024)
 - New Jersey (February 2021)
 - Defelonization
 - Colorado (November 2022)
 - Legalization of cultivation and sharing
 - Legalization of supervised consumption
-

States with Policies to Authorize Research [103]

- Washington (March 2022, January 2023)
 - Nevada (June 2023)
 - Arizona (January 2023)
 - Texas (June 2021)
 - Minnesota (February 2023)
 - Indiana (March 2024)
 - Maryland (May 2022)
 - Connecticut (June 2021)
 - New Mexico (February 2024)
 - Vermont (May 2024)
 - Utah (March 2022)
-

Lowest Law Enforcement Priority Initiatives in the United States Entheogenic Plants and Fungi [104]

- Denver, CO (May 2019) **psilocybin only*
- Oakland, CA (June 2019)
- Ann Arbor, MI (September 2020)
- District of Columbia (November 2020)
- Somerville, MA (January 2021)
- Washtenaw County, MI (January 2021)
- Cambridge, MA (February 2021)
- Northampton, MA (March 2021)
- Santa Cruz, CA (September 2021)
- Grand Rapids, MI (September 2021)
- Easthampton, MA (October 2021)
- Detroit, MI (October 2021)
- Seattle, WA (October 2021)

- Arcata, CA (October 2021)
 - Port Townsend, WA (December 2021)
 - Hazel Park, MI (March 2022)
 - Amherst, MA (July 2022)
 - San Francisco, CA (September 2022)
 - Ferndale, MI (February 2023)
 - Jefferson County, WA (May 2023)
 - Salem, MA (June 2023)
 - Berkeley, CA (July 2023)
 - Minneapolis, MN (July 2023)
 - Portland, ME (October 2023)
 - Eureka, CA (October 2023)
 - Provincetown, MA (December 2023)
-

Federal Rescheduling by Petition

- Initiate petition is submitted.
- The FDA conducts an eight-factor analysis to assess the drug's abuse potential, medical utility, and safety.
- The FDA submits findings HHS, which then provides a recommendation to the DEA.
- The DEA reviews the recommendation, considers public comments, and makes a final decision.
- Rulemaking Process [105]: If the DEA agrees to reschedule, they publish a proposed rule and open a public comment period.
- Final Rule: After considering the comments, the DEA issues a final rule rescheduling the drug.

Federal Penalties for Psychedelic Compounds

Manufacturing, Distributing, and Dispensing (Trafficking) - 21 U.S.C. § 841:

Less than 50 grams:

- First Offense: Up to 20 years
- Second Offense: Up to 30 years
- If death/serious injury results: 20 years to life
- If death/serious injury + prior conviction: Life imprisonment

50-100 grams:

- First Offense: 5-40 years
- Second Offense: 10 years to life
- If death/serious injury: 20 years to life
- If death/serious injury + prior conviction: Life imprisonment

100+ grams:

- First Offense: 10 years to life
- Second Offense: 20 years to life

- If death/serious injury: Life imprisonment

Simple Possession - 21 U.S.C. § 844(a):

First Offense:

- Up to 1 year imprisonment
- Minimum \$1,000 fine
- Or both

Second Offense:

- Minimum 15 days, up to 2 years imprisonment
- Minimum \$2,500 fine
- Or both

Third or Subsequent Offense:

- Minimum 90 days, up to 3 years imprisonment
- Minimum \$5,000 fine
- Or both

Import/Export - 21 U.S.C. § 960:

First Offense:

- Up to 20 years
- If death/serious injury: 20 years to life

Second Offense:

- Up to 30 years
- If death/serious injury: Life imprisonment

Conspiracy - 21 U.S.C. § 846:

- Same penalties as the underlying offense

Distribution to Persons Under 21 - 21 U.S.C. § 859:

- First Offense: Twice the maximum penalties
- Second Offense: Three times the maximum penalties

Distribution Near Schools - 21 U.S.C. § 860:

- Additional penalty up to twice the maximum sentence
- Minimum 1 year imprisonment

Using Persons Under 18 - 21 U.S.C. § 861:

- First Offense: Up to twice the maximum sentence
- Second Offense: Up to three times the maximum sentence

Criminal Forfeiture - 21 U.S.C. § 853:

- All proceeds and property used in violation

Civil Forfeiture - 21 U.S.C. § 881:

- All controlled substances
- Raw materials, equipment, containers
- Vehicles used for distribution

- Money and property connected to violations

For Schedule I psychedelics, the federal sentencing structure is different from other controlled substances (like certain opioids). For Schedule I psychedelics, the penalties under 21 U.S.C. § 841 are not strictly tied to specific gram amounts. Instead, penalties for psychedelics like psilocybin, LSD, and MDMA follow different quantity calculations [106]:

- For LSD, penalties are based on dosage units or weight of the mixture
- For MDMA, penalties are based on mixture weight or number of tablets
- For psilocybin mushrooms, penalties are typically based on total weight including the mushroom material

The U.S. Sentencing Guidelines provide specific "drug equivalency tables" or "converted drug weight tables" for different substances, and each psychedelic has its own conversion ratio.

Nevada State Penalties for Psychedelic Compounds

Penalties for Possession - NRS 453.336

First Offense:

- Less than 14 grams: Category E felony - NRS 453.336(2)(a)
 - 1-4 years imprisonment
 - Mandatory probation with drug treatment for first offense
 - May be reduced to a misdemeanor upon successful completion of probation
- 14-28 grams: Category D felony - NRS 453.336(2)(b)
 - 1-4 years imprisonment
 - Up to \$5,000 fine

Second Offense:

- Less than 28 grams: Category D felony - NRS 453.336(2)(b)
 - 1-4 years imprisonment
 - Up to \$5,000 fine

Third or Subsequent Offense:

- Less than 28 grams: Category D felony - NRS 453.336(2)(b)
 - 1-4 years imprisonment
 - Up to \$5,000 fine

Penalties for Sale/Distribution [NRS 453.321]

- Any amount: Category B felony [NRS 453.321(1)(a)]
 - First offense: 1-6 years imprisonment, up to \$20,000 fine
 - Second offense: 2-10 years imprisonment, up to \$20,000 fine
 - Third or subsequent offense: 3-15 years imprisonment, up to \$20,000 fine

Penalties for Trafficking - NRS 453.3385

Level 1 Trafficking:

- 28-42 grams: Category B felony - NRS 453.3385(1)
 - 1-6 years imprisonment
 - Up to \$50,000 fine

Level 2 Trafficking:

- 42-100 grams: Category B felony - NRS 453.3385(2)
 - 2-15 years imprisonment
 - Up to \$100,000 fine

Level 3 Trafficking:

- 100+ grams: Category A felony - NRS 453.3385(3)
 - 25 years to life imprisonment
 - Up to \$500,000 fine

Additional Provisions

Research Exceptions - NRS 453.256:

- Requires registration with State Board of Pharmacy
- Must comply with federal DEA requirements
- Annual renewal required
- Subject to inspection and audit

Religious Use Exception - NRS 453.541:

- Exempts peyote use in bona fide religious ceremonies
- Limited to members of Native American Church
- Must be in accordance with American Indian Religious Freedom Act

Property Forfeiture - NRS 453.301:

- All controlled substances may be seized and forfeited
- Vehicles, equipment, money, and property used in violations subject to forfeiture
- Proceeds from sale of forfeited property go to law enforcement

School Zone Enhancement - NRS 453.3345:

- Additional penalty for violations within 1,000 feet of:
 - School
 - School bus stop
 - Public park
 - Public pool

- Video arcade

- Doubles the term of imprisonment and fine

It's important to note that Nevada does not currently have a specific conversion table for the quantities of psychedelic substances, unlike the federal system, which includes conversion factors used by the DEA to define thresholds for various penalties. Instead, Nevada law generally follows guidelines set by the NRS 453, which specifies penalties based on the weight or quantity of substances in categories such as possession, trafficking, and sale for controlled substances, including psychedelics. However, there are no specific measurement conversions for individual psychedelics like psilocybin or LSD in the Nevada state statutes, which means penalties are applied broadly to Schedule I substances by weight rather than substance-specific thresholds.

Appendix C

Overview of Oregon's Regulated Framework and Agencies

In January 2021, Oregon became the first state to establish regulated access to psilocybin services through the passage of Measure 109, the Oregon Psilocybin Services Act (OPSA). The program established a groundbreaking framework for supervised psilocybin services, focusing exclusively on this single compound while outlining standards for safety, training, and service delivery.

Program Authority and Scope

The Oregon Psilocybin Services Act provides the foundational authority for the program, with implementation guidelines established through the Oregon Health Authority (OHA) and its dedicated Oregon Psilocybin Services (OPS) division. The regulatory framework was developed through extensive consultation with the Oregon Psilocybin Advisory Board, establishing comprehensive regulations for facilitator licensing, manufacturing standards, and service delivery protocols [107].

License Types and Requirements

Oregon's psilocybin framework established four distinct license categories: Facilitator, Service Center, Manufacturer, and Laboratory licenses. Each category serves specific functions within the regulatory framework while maintaining strict operational boundaries to ensure public safety and program integrity.

The Facilitator License represents the program's foundational credential for direct service provision. Facilitators must be Oregon residents aged 21 or older with a minimum of a high school diploma or equivalent. Beyond these basic qualifications, licensees must complete an OPS-approved training program, pass a criminal background check, and successfully complete an OPS-administered examination. Facilitators are strictly prohibited from diagnosing or treating physical or mental health conditions during psilocybin services [108].

Service Centers must be licensed, and operate as the exclusive locations for psilocybin administration, requiring dedicated facilities that meet strict safety and operational standards. Manufacturer licenses enable the production and processing of psilocybin products, while Laboratory licenses authorize facilities to conduct required safety and potency testing [109].

Implementation Timeline and Progress

The program's implementation has followed a methodical timeline since its 2021 enactment. The first state-licensed service centers opened in spring 2023, and as of March 2024, the state has licensed:

- 276 facilitators
- 23 service centers
- 9 manufacturers
- 2 testing laboratories [110]

Training and Education Requirements

Oregon's training framework emphasizes both theoretical knowledge and practical experience while maintaining accessibility for diverse practitioners. The program requires the completion of 120 hours of instruction through an OPS-approved curriculum, followed by 40 hours of supervised practicum training. Facilitators are also required to score a minimum of 75% on the OPS-administered exam. This educational pathway must occur through programs that maintain dual approval: curriculum approval from OPS and educational licensing through the Oregon Higher Education Coordinating Commission (HECC) [111].

Training programs must demonstrate rigorous standards in curriculum development, instruction, and evaluation. The educational framework covers essential areas including safety protocols, client screening, facilitation techniques, and professional ethics. This comprehensive approach ensures facilitators develop competency in both technical knowledge and practical application [112].

Service Delivery Framework

The Oregon model implements a structured three-phase approach to psilocybin services. This begins with mandatory preparation sessions where facilitators conduct comprehensive screening and provide detailed information about the process. Client eligibility requirements include:

- Minimum age of 21 years
- No history of psychosis
- No current suicidal ideation
- No lithium use within 30 days prior to services [113]

The administration session must occur at a licensed service center, with precise protocols governing dosage, supervision, and safety monitoring. Following administration, clients may opt for integration sessions, though these remain voluntary under the regulatory framework [114].

Program Administration and Oversight

OHA maintains comprehensive oversight through the OPS division, implementing detailed monitoring and compliance protocols. Beginning in 2025, Senate Bill 303 will establish mandatory data collection requirements for service centers, enhancing program evaluation capabilities while maintaining client confidentiality. Client consent remains necessary for any disclosure of de-identified data to third parties [115].

Quality assurance measures include regular facility inspections, product testing requirements, and ongoing monitoring of facilitator compliance. The regulatory framework emphasizes public safety while maintaining program accessibility, creating a balanced approach to service delivery [116].

Comparative Analysis with Colorado's Regulated Access Model

Oregon's pioneering program differs from Colorado's regulated access model in its single-substance focus and strict separation from healthcare services. Oregon's more conservative approach to the scope of practice - specifically prohibiting facilitators from providing healthcare services during sessions - contrasts with Colorado's more integrated model. Notable distinctions include:

- Exclusive focus on psilocybin rather than multiple substances
- Resident-only requirements for facilitators
- Lower total training hours compared to Colorado's state program
- Strict separation between psilocybin services and healthcare delivery
- Absence of tiered licensing systems for different practitioner types

Appendix D

Overview of Colorado's Natural Medicine Access Program

In November 2022, Colorado voters passed Proposition 122 by a thin margin, establishing the Natural Medicine Access Program [117]. Unlike Oregon's initiative, Colorado's program creates a comprehensive framework that extends beyond a single substance approach, beginning with psilocybin and psilocin while establishing mechanisms for future expansion to additional medicines [118]. The program design reflects a balanced approach between personal use rights and supervised administration within licensed healing centers, creating a more expansive model than seen in other states [119].

Program Authority and Scope

The Natural Medicine Health Act (NMHA) provides the foundational authority for the program, with detailed implementation guidelines established under 4 CCR 755-1 [120]. In Colorado's program, regulatory oversight is divided between two state agencies. The Department of Regulatory Agencies (DORA), through its Office of Natural Medicine Licensure, is responsible for licensing and regulating facilitators as well as approving and overseeing facilitator training programs. Meanwhile, the Department of Revenue (DOR), through its Division of Natural Medicine, handles the licensing and regulation of the commercial aspects of the program, including healing centers, manufacturers, testing laboratories, cultivators, and transporters. This dual-agency approach allows for specialized oversight of both the therapeutic and commercial elements of the program.

License Types and Requirements

Colorado's natural medicine framework expanded upon Oregon's model by establishing a tiered licensing program with four distinct license types, each carefully designed to serve specific roles within the broader ecosystem of psychedelic services [121]:

- Facilitator
- Clinical Facilitator
- Distinguished Educator
- Training

The Facilitator License serves as the program's foundational credential. Applicants must be at least 21 years old [122] and complete 150 hours of approved training, 40 hours of supervised practicum work, and 50 hours of professional consultation. All facilitators must maintain current Basic Life Support certification. These professionals can independently provide natural medicine services, conduct safety screenings, and guide clients through preparation and integration. However, their scope of practice specifically excludes working with clients who present significant medical or psychological risk factors [123].

The Clinical Facilitator License represents an advanced credential for healthcare professionals who wish to incorporate natural medicine services into their existing practice. Beyond meeting all basic facilitator requirements, these practitioners must maintain active Colorado licensure in specific medical or mental health professions. Eligible practitioners include physicians (MD/DO), advanced practice nurses, physician assistants, psychologists, and various mental health professionals including licensed social workers, marriage and family therapists, professional counselors, and addiction counselors [124]. Their expanded scope of practice allows them to treat physical and behavioral health conditions, manage higher-risk clients, and collaborate extensively with other healthcare providers [125].

The Distinguished Educator License creates a pathway for experienced practitioners to contribute to professional development within the field. This specialized credential requires demonstrated expertise in natural medicine services and an invitation from an approved training program. Practice under this license is specifically tied to academic roles, with annual renewal requirements ensuring continued educational contribution [126].

The Training License facilitates the development of new practitioners through a structured apprenticeship model. Limited to a two-year duration, this credential requires completion of didactic education and Basic Life Support certification. Training license holders must practice under supervision and cannot provide independent services [127], creating a safe environment for skill development while ensuring public safety.

Implementation Timeline

The NMHA establishes a methodical implementation schedule that balances the urgency of program establishment with the need for careful system development. Beginning with decriminalization in January 2023, the timeline progresses through rule adoption in January 2024 and healing center applications in September 2024. The framework includes provisions for potential expansion to additional substances, including DMT, ibogaine, and mescaline, by June 2026 [128].

Training and Education Requirements

Through DORA-approved training programs, facilitators must complete an educational curriculum that balances theoretical knowledge with practical experience [129]. The training requirements are as follows:

- Completion of state-approved training program (DORA)
- Basic Life Support (BLS)
- 150 hours of instruction
- 40 hours of practicum training
- 50 hours of consultation over min 6 months (with competency evaluation)
- 20 hours of continuing education annually

Program Administration and Oversight

Training program administration in Colorado follows a structured model designed to ensure consistent quality and accountability. Programs serving more than 50 students must maintain formal governing bodies, while all programs must meet strict standards for program direction and faculty qualifications [130].

Comprehensive documentation requirements ensure program quality and facilitate ongoing evaluation. Programs must maintain detailed records of:

- Student progress and achievements
- Program activities and outcomes
- Faculty credentials and development
- Evaluation metrics and improvement initiatives [131]

Quality assurance measures include mandatory biennial program reviews, continuous student outcome tracking, and regular curriculum assessment. Programs must actively seek and integrate community input, ensuring responsiveness to evolving community needs [132].

Operational Standards and Safety Protocols

Practitioners must conduct comprehensive screening processes including a detailed medical history review, mental health assessment, medication evaluation, and thorough risk factor identification [133].

The service delivery framework emphasizes client preparation and support through mandatory preparation sessions, detailed informed consent protocols, and integrated support services. Practitioners must maintain comprehensive documentation throughout the process, ensuring continuity of care and program accountability [134].

Regulatory Oversight and Compliance

The Office of Natural Medicine Licensure oversees program quality and safety through comprehensive monitoring [135]. Training programs undergo biennial evaluations and site visits, with continuous tracking of modifications and outcomes. Programs must maintain documentation, track metrics, and follow safety protocols [136], while the Department of Regulatory Agencies (DORA) retains authority over approvals and enforcement [137]. Programs maintain appeal rights for regulatory decisions, and practitioners must report criminal convictions and professional conduct issues as part of a disciplinary framework that addresses violations while protecting public safety [138].

Comparative Analysis with Oregon's Regulated Access Program

Colorado's program expands beyond Oregon's single-substance model, allowing for the possibility of introducing other entheogens (such as iboga, DMT, and mescaline (excluding peyote)) no sooner than 2026. They also differ by expanding on the Facilitator license to include Clinical Facilitator, Distinguished Educator, and Training roles. Where Oregon has Service Center, Manufacturer, and Laboratory licenses, Colorado similarly has Healing Center,

Manufacturer, and Testing Facility licenses. Colorado additionally added Cultivator and Transporter licenses.

The regulatory frameworks for psilocybin services in Oregon and Colorado also reflect different approaches to integration with healthcare and wellness services. Oregon takes a more restrictive stance, limiting facilitators to providing only psilocybin-specific services and explicitly prohibiting them from diagnosing or treating health conditions during sessions. In contrast, Colorado allows for broader service integration—healing centers can offer additional wellness treatments, and clinically-licensed facilitators can leverage their professional credentials to provide other therapeutic services alongside psilocybin work.

Furthermore, Colorado’s healing center approach differs from Oregon’s service centers with an emphasis on indigenous practices and future expansion. The framework includes comprehensive infrastructure planning, data collection, and equity measures ensuring geographic distribution and cultural accessibility.

In regard to the training requirements, Colorado’s program is more intensive, with 150 hours of instruction (vs. 120 hours), 50 hours of consultation, 20 hours of continuing education, and Basic Life Support required. Both programs require facilitators to be 21 or older, have a minimum of a high school diploma or equivalent, and pass a criminal background check (certain felony convictions may not disqualify). Oregon allows only state residents to apply whereas Colorado allows nonresidents to apply with priority granted to residents.

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