

BRYCE PARDO, BEAU KILMER, RAJEEV RAMCHAND, CARRIE M. FARMER

Psychedelics and Veterans' Mental Health

The Evolving Legal and Policy Landscape in the United States

Addressing veterans' mental health needs is a top policy issue. In one nationally representative sample, approximately 16 percent of veterans screened positive for posttraumatic stress disorder (PTSD) (Stefanovics, Potenza, and Pietrzak, 2020). Over several years of data collection for another nationally representative survey, around one in ten veterans screened positive for depression (Liu et al., 2019). Although suicide has many precipitants, mental health is a known risk factor; each year, more than 6,000 veterans die from suicide (U.S. Department of Veterans Affairs [VA], Office of Mental Health and Suicide Prevention, 2021). For PTSD alone, the annual economic burden was more than \$230 billion in the United States in 2018, with more than \$42 billion of that attributable to the military population (Davis et al., 2022).

VA dedicates a considerable amount of its budget to addressing the mental health needs of those who have served in the military. Updated figures on VA's cost to treat PTSD are not available, but the Congressional Budget Office estimated that

VA spent more than \$2 billion to treat PTSD and traumatic brain injury among Iraq and Afghanistan veterans in fiscal year 2010 (Congressional Budget Office, 2012; Reisman, 2016). That year alone, the Veterans Health Administration obligated \$5.2 billion for mental health care—more than 10 percent of its total spending. The Congressional Budget Office also found that the health care costs for veterans with PTSD are 3.5 times greater than for those without PTSD (Congressional Budget Office, 2012).

Over the past 20 years, there has been a resurgence of interest in the use of compounds often referred to as *psychedelics* to address such mental health conditions as depression, anxiety, PTSD, and substance use disorders. Public sentiment on psychedelic treatment is starting to shift as well. Multiple jurisdictions, including around a dozen cities, three states, and the District of Columbia have

already relaxed laws or policies related to these substances, often with an eye toward their therapeutic use. Some publicly traded companies are making major investments in psychedelic research, acquiring patents for future therapies, and shaping a new public discussion around psychedelics (Phelps, Shah, and Lieberman, 2022).¹

In this Perspective, we examine evolving legal and policy issues surrounding the use of psychedelics to treat mental health disorders, with a particular focus on the veteran population. Specifically, we review current policy initiatives regarding psychedelics, drawing comparisons with the evolution of cannabis policy in the United States. Although we provide a brief overview of clinical research on psychedelics to date, we do not take a position on the (relative) efficacy of psychedelic therapy or the appropriateness of its use to treat veterans. Rather, we detail various

What Are Psychedelics?

Psychedelic (or “mind-manifesting”) substances comprise a broad category of different chemical compounds that elicit varied physiological effects, including altered mood, perception, and cognition. Psychedelics can temporarily produce significantly altered states of consciousness and may cause visual or auditory hallucinations.

The following are common types of psychedelics:

- LSD (lysergic acid diethylamide)
- psilocybin (produced by certain types of mushrooms)
- mescaline (4,3,5-trimethoxyphenethylamine, the active ingredient in peyote)
- DMT (N,N-dimethyltryptamine).

MDMA (3,4-methylenedioxymethamphetamine), also known as *ecstasy* or *molly*, is often referred to as a psychedelic, but it does not have the strong hallucinogenic properties of many other drugs in this class.

Several psychedelic substances, such as psilocybin and mescaline, are naturally occurring in fungi and plants; others, like MDMA and LSD are synthetic compounds made in labs. Psychedelics are sometimes referred to as entheogens, which connotes use for spiritual or religious purposes.

Now is the time for a thoughtful and deliberate conversation to maximize the potential benefits and minimize the potential harms of policy changes.

regulatory approaches that could be adopted to inform policymaking efforts.

VA, the largest provider of mental health care to veterans, has already funded research into some therapeutic applications of psychedelics, and many veterans' groups and others who advocate for veterans' health care have promoted psychedelic therapy as a potential means of addressing the significant burden of mental health conditions among veterans. The policy questions raised in this Perspective are not unique or limited to veterans. However, veterans represent a sizable proportion of U.S. mental health care consumers. Outside of the small number of veterans participating in clinical trials, it is becoming more common for veterans to seek out psychedelics for therapeutic purposes and to manage their treatment either on their own or with support from informal providers. Thus, the guidelines regarding how these substances are regulated and administered are critical policy issues.

Policymakers, regulatory agencies, patient advocacy groups, and health care providers—including those at VA—will need to be mindful of the path forward as a growing number of jurisdictions remove legal restrictions on psychedelic access and use. Now is the time for a thoughtful and deliberate conversation to maximize the potential benefits and minimize the possible harms of these policy changes.

The Reemergence of Psychedelic Therapy as a Clinical Option for Some Mental Health Disorders

Naturally occurring psychedelics have been used by traditional cultures and indigenous groups for thousands of years, but they are comparatively new to (Western) psychiatry and the general public. As chemists identified and synthesized psychedelic compounds in the mid-20th century, the fields of psychiatry and psychotherapy recognized their potential importance for understanding and treating mental illness.

The therapeutic mechanisms that make psychedelics apparently effective in treating mental health conditions are not fully understood. Many experts acknowledge that, in a treatment setting, a psychedelic compound could enhance the effectiveness of psychotherapy, allowing the participant to gain greater insights into their past trauma and potential root causes of their anxiety, depression, or other mental health condition (Griffiths et al., 2016; Griffiths et al., 2006). Participants sometimes characterize their experience with psychedelic treatment as mystical in nature, and research indicates that this correlates with a positive therapeutic response. However, some researchers contend that a compound's therapeutic effect is more

In recent years, interest has grown in the potential therapeutic effectiveness of psychedelics in treating PTSD and depression among veterans.

physical in nature and that mind-altering “psychedelic” experiences are not necessary to produce beneficial outcomes (Olson, 2020).

Research into psychedelics exploded from the mid-1950s to the early 1970s (Pearson, Siegel, and Gold, 2022). Initial research efforts focused on the potential use of psychedelics to treat alcohol use disorder and depression and to provide insights into psychotic disorders, such as schizophrenia (Kurland et al., 1967; McGlothlin, Cohen, and McGlothlin, 1964; Torrey and Peterson, 1974; Bowers and Freedman, 1966). Popularized by psychologist and advocate Timothy Leary and others, psychedelics soon made their way onto the recreational drug scene. The subsequent passage of the Controlled Substances Act in 1970 subjected many known psychedelics to extremely prohibitive controls, which effectively shut down research on their therapeutic potential (Pollan, 2018).

Over time, however, as societal attitudes toward these compounds changed, research slowly rebounded in the

1990s. The current psychedelic research “renaissance” began with groundbreaking studies out of Johns Hopkins University that employed rigorous research protocols, including double-blind randomized controlled trials on psilocybin administered by trained guides in controlled settings (Yaden, Yaden, and Griffiths, 2021). There were also studies aimed at understanding psychedelics’ effectiveness in decreasing depression and anxiety in terminal cancer patients (Griffiths et al., 2016; Griffiths et al., 2006). There are now wide-ranging research efforts investigating the potential therapeutic effects of psychedelics for major depressive disorder, anxiety disorders and PTSD, mild traumatic brain injuries, nicotine dependence and substance use disorders, and neurodegenerative diseases, including Alzheimer’s disease (Khan et al., 2021; Vann Jones and O’Kelly, 2020). However, questions have been raised about some of the research on psychedelics that is getting published in top medical journals and how the results are portrayed in the media (see, e.g., Hall and Humphreys, 2022; Yaden, Potash, and Griffiths, 2022).

In recent years, interest has grown in the potential therapeutic effectiveness of psychedelics in treating PTSD and depression among veterans.² Some early phase 2 and 3 trials using MDMA to treat PTSD in veteran populations have shown positive results with respect to reducing depression and suicidality (Dunlop and Rothbaum, 2019; Remick, 2022; Feduccia et al., 2019). In 2017, after early randomized controlled trials found benefits with respect to self-reported PTSD scores and suicidality among veterans with PTSD, the FDA granted MDMA breakthrough therapy designation, which fast-tracks its study and approval (Mithoefer et al., 2018; Cipriani and Cowen, 2018). A year later, the agency granted COMPASS Pathways—a

private company developing various forms of psilocybin therapy—with a breakthrough therapy designation to treat depression (COMPASS Pathways, 2018). It is anticipated that MDMA and psilocybin will receive FDA approval for certain indications in the coming years.

Other anecdotal reports and less-rigorous studies of psychedelic therapies employing other compounds, including DMT and 5-methoxy-N,N-dimethyltryptamine (5-MeO-DMT), conducted outside the United States suggest positive outcomes, such as reductions in suicidal ideation and PTSD symptoms among U.S. veteran populations (Reno, 2021; Davis et al., 2020; Mangini, Averill, and Davis, 2021).

Considerations Relevant to Decisions About Psychedelic Therapy Versus Standard Therapies

When considering the therapeutic use of psychedelics, it is important to distinguish between two modalities of use. First, psychedelics could be used in a formal therapeutic setting, generally with the assistance of a guide or therapist. Reflecting the model of formal psychological treatment, this modality is more controlled and may rely on specific clinical protocols. Alternatively, psychedelics could be used in an informal setting outside of the formal treatment system. This could include strictly recreational uses or “self-therapy,” in which an individual seeks to obtain therapeutic effects from a psychedelic substance outside a traditional or licensed treatment setting. Self-therapy may occur with or without supervision (e.g., from a friend or family member).

Formal psychedelic therapy is often administered over a limited number of sessions. Although these sessions are often lengthy and produce varied physiological and psychological states, the limited overall duration of treatment might afford advantages in terms of treatment adherence and completion. Current pharmacotherapy for depression, such as selective serotonin reuptake inhibitors (SSRIs), must be taken daily and continuously (Asnis et al., 2004; National Center for PTSD, 2017). Psychotherapy can take ten weekly sessions for patients to see the maximum effects, and dropout rates prior to ten sessions are high (Kehle-Forbes et al., 2016). In contrast, psychedelic-assisted therapy may be administered in one session lasting up to six or eight hours, with preparation and integration sessions before and after; however, there can be variation in the duration of treatment depending on the substance, the conditions for which the patient is being treated, and other factors.

Like any pharmacotherapy, it is essential to understand the potential side effects of psychedelic therapies and to create clinical protocols to minimize risk. Traditional antidepressant and anti-anxiety drugs are not free from side effects, including elevated suicidality, weight gain, and sexual dysfunction (Kelly, Posternak, and Alpert, 2008)—nor are psychedelics. Clinicians and others who seek to address mental health disorders must weigh the competing risks of unwanted side effects from traditional treatments and psychedelics in the overall scope of treating mental health conditions. In some cases, psychedelics may be useful adjuncts to other therapies.

Psychedelics’ effects on the brain during use can change sensory processing, making simple tasks difficult or dangerous in certain circumstances. This is why

It can be difficult to assess the risk of negative outcomes and adverse reactions, given the complexities of treating veterans with PTSD, hard-to-treat comorbidities, and other psychosocial challenges.

therapeutic protocols generally specify that psychedelics should be administered only in a supervised, controlled environment. Even under optimal conditions, some individuals may have adverse reactions, including upsetting or overwhelming thoughts, paranoia, despair, or frightening hallucinations and delusions (colloquially referred to as “a bad trip”). Clinical studies have identified other side effects associated with psychedelics, which are generally mild and transitory, including headache, muscle tension, and fatigue. A small number of participants also reported psychiatric treatment-emergent adverse events, such as anxiety, flashbacks, negative thoughts, and suicidal ideation (Mithoefer et al., 2018). These events underscore the importance of screening and supervision.

Other aspects of “set and setting” are important to maximize the beneficial treatment outcomes of psychedelics. The terms *set* and *setting* originated in the early psychedelic research of the 1960s and relate to the personal and context-specific nature of study participants’ experiences with psychedelics. *Set* refers to participants’ expectations, intentions, and psychology; *setting* refers to the environment in which a psychedelic experience takes place (Zinberg, 1984; Carhart-Harris et al., 2018; Leary, Litwin,

and Metzner, 1963). Efforts to ensure proper set and setting encourage a participant to establish the intention to derive positive or desired changes before a session, as well as creating a peaceful and safe environment that facilitates introspection.

It is particularly important to weigh these considerations when treating vulnerable populations and patients with traumatic exposure, such as combat trauma. It can be difficult to assess the risk of negative outcomes and adverse reactions, given the complexities of treating veterans with PTSD, hard-to-treat comorbidities, and other psychosocial challenges (e.g., veterans experiencing homelessness, physical disabilities, and injuries). Some veterans have experienced mixed or harmful effects from approved psychopharmacological therapies, including opioids for pain and benzodiazepines for anxiety (Dobscha et al., 2013; Hawkins et al., 2013; Hawkins et al., 2019). Additionally, evidence on the use of cannabis to address PTSD is mixed (see, e.g., Bonn-Miller et al., 2021; Bonn-Miller et al., 2022; Hicks et al., 2022; Metrik et al., 2022).

Although psychedelics hold great promise in addressing hard-to-treat mental health disorders, learning from clinical experiences with these and other substances—including

the potentially negative effects of cannabis on PTSD—can help avoid harm going forward. The overall efficacy of psychedelics could differ between veteran and nonveteran populations, and psychedelic treatment approaches might need to be customized to help veterans achieve optimal outcomes or to avoid harming vulnerable populations.

Laws and Policies on Psychedelics Are Shifting

In response to the increasing momentum of clinical research on psychedelics, jurisdictions are enacting legal and regulatory changes. Potential insights regarding the future legal trajectory of psychedelics might be gleaned from the evolution of cannabis legalization and regulation in the United States. Despite the federal prohibition on cannabis and many psychedelics, the U.S. federal system offers considerable leeway to states when it comes to criminalizing and regulating drugs. Indeed, current cannabis policy reflects a patchwork of laws and rules regarding supply and use, from decriminalizing cannabis possession (starting in the 1970s) to allowing use for medical purposes (beginning in the 1990s) and regulating the nonmedical commercial cannabis market (since 2012). Today, some states allow cannabis (in different forms and with different mixes of active ingredients) to be used for a range of medical purposes; others permit adults to access a wide variety of products for nonmedical uses (Smart and Pacula, 2019; Pacula and Smart, 2017).

Presently, under federal and most state laws, classic psychedelic compounds (e.g., LSD, psilocybin, mescaline, MDMA) are strictly prohibited outside of narrow exemptions for research; some substances, like mescaline, are

permitted for use in indigenous religious rites. Studies of psychedelics have obtained legal authorization from federal authorities that impose strict requirements for accessing, storing, and administering the compounds. Absent these narrow permissions, individuals can face arrest and prosecution for supplying or possessing psychedelics. However, that is changing as voters and elected officials advocate for more-lenient local policies or state laws on psychedelics. The changes that have occurred in the United States, so far, fall into five categories:³

1. **deprioritization**—does not change the penalties for certain offenses but makes their enforcement a low priority for law enforcement officials and/or prohibits funds from being used to enforce these laws
2. **defelonization**—reduces the penalties for certain offenses so they are no longer felonies
3. **decriminalization**—reduces the penalties for certain offenses so they are no longer criminal offenses, but there are still legal consequences (e.g., violators receive a fine)
4. **legalization of use, possession, cultivation, and sharing**—allows adults to consume as well as cultivate and give away plant-based psychedelics without remuneration
5. **legalization of supply for use under licensed supervision**—allows adults to legally consume certain psychedelics under the supervision of a licensed guide.

Starting in 2019 in Denver, Colorado, multiple jurisdictions have relaxed the enforcement of prohibitions on the possession and/or noncommercial supply of psychedelics, often citing their healing or therapeutic properties as

reported in the emergent research literature. For example, the 2020 voter-approved Initiative 81 in the District of Columbia (which passed with more than 76 percent in favor) was spearheaded by an activist who self-treated postpartum depression with psychedelic mushrooms (Cho, 2020). Since then, voters in a handful of other jurisdictions have approved legal changes to remove or reduce prohibitions. See Table 1 for a summary of policy and legal changes as of November 2022.

In 2020, voters in Oregon approved a form of psychedelic-assisted therapy, prior to FDA approval, allowing the supervised use of psilocybin in licensed centers. However, the initiative gave communities in Oregon the option to ban or impose a moratorium on these centers. More than 125 cities and counties (many rural) voted to delay or ban these centers in November 2022, but they will be available in the state's most populated areas (Vaughan, 2022).

In 2022, voters in Colorado passed an initiative that also allows for licensed psilocybin healing centers, but there are some noteworthy differences from what was passed in Oregon (Ballotpedia, undated). First, there is no formal option for local jurisdiction to opt out. Second, a newly created Natural Medicine Advisory Board will decide whether other plant-based psychedelics can be supplied at the centers in 2026. Third, the initiative also legalized the use, possession, cultivation, and sharing of psilocybin, psilocin, ibogaine, DMT, and mescaline (excluding peyote) *by anyone aged 21 and older*.⁴ But similar to Oregon, there is no provision for retail sales or transfers with remuneration.

Other states have put forward possible legislative changes, including to permit the therapeutic use of these

substances.⁵ But similar to cannabis, all these substances are prohibited under federal law. It is unclear whether federal officials will attempt to shut down these efforts or remain largely “hands-off” as they are with state-legal cannabis markets.

While many municipal-level policies mention or acknowledge the therapeutic potential of psychedelics and allow adults to self-administer them, only Oregon and Colorado legalized assisted therapeutic administration by licensed providers. As of November 2022, Oregon's therapeutic system was not yet operating because regulatory authorities were still deciding the specifics of the legal framework, including how to license providers and establish protocols regarding guided use. According to the newly established Oregon Psilocybin Services Section, work is underway to establish rules, develop facilitator training and approval systems, track production and distribution, and educate and train stakeholders (Oregon Health Authority, undated). Presently, draft regulations on psilocybin facilitator training require a minimum of 120 hours of learning and 40 hours of practical training (Goldhill, 2022). Colorado's system is expected to be operational in 2024.

As shown in Table 1, jurisdictions are increasingly removing some barriers to the supply and use of these substances without addressing the more complicated matters of supervision or regulation. This creates opportunities for those seeking psychedelic therapy to do so on their own or in informal (i.e., unregulated) settings. There are already informal treatment programs that offer psychedelics to veterans and others who are experiencing anxiety and depression. Some of these programs organize retreats in countries with less-restrictive drug regimes, such as the

TABLE 1
 Legal and Policy Reforms Related to Psychedelics in the United States

Jurisdiction	Date	Legal Mechanism	Policy Change	Activity	Substances
Cities					
Denver, Colo.	May 2019	Voter initiative passed	Deprioritization	Possession and use by adults (21+)	Psilocybin mushrooms
Oakland, Calif.	June 2019	City council ordinance passed	Deprioritization	Supply, possession, and use by adults (not defined)	“Entheogenic plants,” including psilocybin mushrooms, cacti, iboga, and plants used in ayahuasca
Santa Cruz, Calif.	January 2020	City council ordinance passed	Deprioritization	Possession and use by adults (21+)	“Entheogenic plants and fungi”
Ann Arbor (and Washtentaw County), Mich.	September 2020	City council ordinance passed	Deprioritization, with guidelines for county prosecutor’s office	Possession, supply, and use; prohibits commercial supply, supply to minors, driving under the influence	“Entheogenic plants, fungi, and natural materials”
Somerville, Mass.	January 2021	City council ordinance passed	Deprioritization	Possession and therapeutic use by adults (not defined); prohibits commercial supply, supply to minors, driving under the influence	“Entheogenic plants, fungi, and natural materials”
Arcata, Calif.	October 2021	City council ordinance passed	Deprioritization	Supply, possession, and use by adults (21+); prohibits commercial supply, supply to minors, driving under the influence	“Entheogenic plants, fungi, and natural materials”
Seattle, Wash.	October 2021	City council ordinance passed	Deprioritization, no confiscation of substances	Cultivation, sharing for religious, spiritual, or personal growth without financial consideration	“Entheogens” such as plant or fungal material
Detroit, Mich.	November 2021	Voter initiative passed	Deprioritization	Possession and therapeutic use by adults (not defined)	“Entheogenic plants, fungi, and natural materials”
Port Townsend, Wash.	December 2021	City council ordinance passed	Deprioritization	Supply, possession, and use by adults (18+)	“Entheogens” (origin not defined), that are used in “religious, spiritual, healing, or personal growth practices”

Table 1—Continued

Jurisdiction	Date	Legal Mechanism	Policy Change	Activity	Substances
San Francisco, Calif.	September 2022	Board of Supervisors measure passed and signed by mayor	Deprioritization	Supply, possession, and use by adults (not defined)	“Entheogenic plants on Federal Schedule 1”
States and Washington, D.C.					
Washington, D.C.	November 2020	Voter initiative passed	Deprioritization	Supply, possession, and use by adults (18+)	“Entheogenic plants and fungi”
Oregon	November 2020	Voter initiative passed	Decriminalization	Possession for personal use; quantity limits specified for LSD, psilocybin, and psilocin; limits for other psychedelics unclear	All controlled substances
	November 2020	Voter initiative passed	Legalization of supervised consumption	License supply and administration under regulations developed by Oregon Health Authority for use by adults (21+); must be licensed to supply and administer; further restrictions may apply, per regulations	Psilocybin in natural or synthetic form
New Jersey	February 2021	State legislature passed law	Defelonization	Possession of up to an ounce of psilocybin-containing mushrooms subject to 6 months imprisonment or \$1,000 fine	Psilocybin mushrooms
Colorado	November 2022	Voter initiative passed	Legalization of supervised consumption	License supply and administration under regulations developed by Colorado Department of Regulatory Agencies for use by adults (21+); must be licensed to supply and administer; further restrictions may apply, per regulations	Psilocybin, psilocin (may be expanded to other plant-based psychedelics in 2026)
	November 2022	Voter initiative passed	Legalization	Use, possession, cultivation, and sharing with other adults (21+) with no remuneration; home cultivation must occur in a private residence inaccessible to minors	Psilocybin, psilocin, ibogaine, DMT, and mescaline (excluding peyote)

SOURCE: Based on information from Psychedelic Alpha (2022) and Colorado’s Measure 122 (see Ballotpedia, undated).

Jurisdictions are increasingly removing barriers to the supply and use of these substances without addressing the more complicated matters of supervision or regulation.

Netherlands. As the policy landscape changes, treatment programs that offer naturally occurring psychedelics (e.g., psilocybin mushrooms) are likely to proliferate and become more accessible. To manage the risk that these substances could pose to vulnerable populations and those with comorbidities, it is critical to identify and disseminate evidence-based guidelines for dosing and supervision.

In some ways, the evolution of psychedelic law and policy in the United States resembles what happened with cannabis starting some decades ago. There was a series of efforts to decriminalize or deprioritize the enforcement of cannabis possession laws before the passage of voter-led initiatives on medical cannabis (Kilmer and MacCoun, 2017). Veteran groups played an important role in shaping the general public's perceptions of medical cannabis (Hudak and Stenglein, 2020), noting that the drug might help alleviate PTSD symptoms and chronic pain, both of which are common among veterans. Similarly, some veteran groups are active in current conversations about removing prohibitions on psychedelics (Jacobs, 2021). However, there are some noteworthy differences between cannabis and psychedelic policies. There has always been

a larger constituency of people who have ever used cannabis compared with those who have ever used psychedelics. According to estimates from national survey data, that ratio was roughly 3.5 to 1 in 1979 (Fishburne, Abelson, and Cisin, 1979) and approximately 3 to 1 in 2019 (Substance Abuse and Mental Health Services Administration, undated). Additionally, the time between decriminalizing possession and allowing medical use has been much shorter for psychedelics. As noted, the transition from local jurisdictions deprioritizing enforcement to a state legalizing psilocybin use in controlled settings took only a few years. Given the speed with which policy changes are occurring, it is likely that a growing number of jurisdictions will enact new laws before these pioneers have identified best practices.

Frameworks for Thinking About Psychedelic Policy

Psychedelics will require a unique set of regulations and policies. In Table 2, we present three emerging frameworks that can be applied to psychedelic policy. Specifically, we

TABLE 2
Comparing Potential Frameworks for Psychedelic-Related Policies

Factor	Individual	Spiritual/Wellness	Medical/Therapeutic
Key principles	Civil or cognitive liberties, self-exploration, self-therapy	Religious/spiritual community or other social clubs; traditional and indigenous rites	Doctors, therapists, or pharmacists in a clinical environment treating specific conditions
Objective	Remove/reduce penalties for supply and use	Permit traditional supply and use under guidance	Regulated supply and licensed supervised use
Supply	Noncommercial, self-cultivation, and generally unregulated	Noncommercial, potentially communal, and lightly regulated if at all	Potentially commercial and regulated
Dosing	Informal and less precise	Based on tradition and practice but less precise, using weights of naturally occurring psychedelics	Controlled and usually very precise, often using exact doses of synthesized psychedelics
Screening, administration, and supervision	No formal preparation or screening requirements; no formal supervision	Guided administration; may include preparation and screening	Clinical setting; supervised administration with preparation and screening
Level of integration	No formal integration	Possible integration of psychedelic session with guide	Likely integration of psychedelic session with guide
Restrictions on users	Minimal to none for adults when used in private	Modest; may depend on guide or tradition	Reserved for clinically diagnosable conditions
Examples	U.S. cities that have recently deprioritized enforcing laws against some psychedelics	Native American Church; ayahuasca or psilocybin retreat centers	Current clinical research and FDA approval; aspects of Oregon's initiative for therapeutic use

detail (1) an *individual* framework that emphasizes individual liberties and self-treatment, (2) a *spiritual/wellness* framework that emphasizes use in the context of traditional and indigenous rites, and (3) a *medical/therapeutic* framework that emphasizes use in a clinical environment for the treatment of specific conditions. As we discuss, these frameworks are not mutually exclusive, and are all likely to influence policy efforts to varying degrees in the coming years.

Comparing the Frameworks

Presently, many jurisdictions, including cities, that are deprioritizing enforcement of prohibitions on psychedelics are doing so in accordance with the values articulated in the *individual* framework. Under this approach, individuals must acquire and use the substances on their own. This framework largely focuses on access to “naturally occurring” psychedelics (e.g., psilocybin-containing mushrooms, peyote, ibogaine, plants that contain DMT), which may be cultivated at home. Self-treatment with homegrown mush-

rooms can be very different from a guided therapy session with a trained and licensed specialist using precise doses. Specific regulatory considerations are largely absent (i.e., a distinction between homegrown versus commercial sale, standards for purity or quality). Unlike for cannabis, there has not been much discussion about retail venues for the commercial sale of psychedelics. Thus, a byproduct of the individual framework could be an unregulated and underground network of suppliers. A jurisdiction that moves forward with such a framework might also consider whether and how it will regulate the distribution of homegrown psychedelics, as well as harm reduction strategies for users.

The *spiritual/wellness* framework incorporates a higher level of supervision and screening, sometimes adhering to practices and standards that involve traditional or formal post-session integration. However, this framework might allow or facilitate guided sessions for small groups of individuals in which multiple people benefit at once. The spiritual/wellness framework is likely to draw on traditional practices, but care will be needed to ensure that cultural rites or traditions and participants' religious views (or lack thereof) are respected. Dosing is likely to be informed by the facilitator's past experiences and involve naturally occurring psychedelics in their original form, such as dried mushrooms or plants.

The *medical/therapeutic* framework is similar to the spiritual/wellness framework in that there is participant supervision, but it is likely to be more involved and to incorporate closer screening for risks. Unlike the spiritual/wellness framework, the medical/therapeutic approach is likely to restrict access to a single participant at a time. Those who present with harder-to-treat syndromes might be better served by the medical/therapeutic framework,

given the higher levels of screening and supervision. Restrictions on use are likely greatest for the medical/therapeutic framework, which is limited to participants with some diagnosable condition, such as depression, anxiety, or PTSD. Because therapy occurs in a clinical setting, it is likely to involve psychedelic compounds sourced from a lab and measured out in milligram quantities of active ingredients to ensure precise dosing.

The latter two frameworks—spiritual/wellness and medical/therapeutic—offer “assisted” settings for the use of psychedelics in treating mental health disorders or other conditions. The individual framework offers virtually no assistance, at least formally, and may serve those who are interested in self-treatment or self-discovery. Regulatory efforts aimed at ensuring positive therapeutic outcomes from psychedelic use in assisted settings should consider the following four variables that are generally noted in some practices and traditions:

1. **dosing**—identifying the quantity of the active ingredient (i.e., dose) needed to elicit a desired effect while minimizing adverse effects
2. **screening**—determining the suitability of participants (i.e., screening for conditions that may be contraindicated, such as certain physical and psychological conditions that can be associated with more serious adverse events)⁶
3. **supervision**—ensuring the safety of participants while they undergo a psychedelic experience, especially at larger doses
4. **integration**—having participants process their psychedelic experience and incorporate any insights, often with assistance from a guide or therapist.

Apart from Oregon’s early efforts, no jurisdiction has attempted to address the critical aspects of dosing, screening, supervision, and integration that could optimize outcomes when treating certain mental health disorders with psychedelics. These considerations could be addressed through specific licensing rules for practitioners, therapists, and suppliers, as well as protocols to exclude high-risk participants, ensure safety during a session, and provide post-session support and integration. Currently, there are no FDA-approved clinical guidelines or protocols to protect participants and maximize the therapeutic potential of these substances. Improper or insufficient screening or supervision may result in harmful outcomes for participants, and there are concerns that unlicensed or unscrupulous guides could take advantage of vulnerable individuals during or after a psychedelic-induced experience in violation of their ethical and professional codes (Busby, 2022). Notably, regulating guided therapy, including elements related to set and setting, would be an expansion of FDA’s jurisdiction; the agency’s mission is to ensure the safety,

The three frameworks are not mutually exclusive, and other approaches could emerge in the coming years.

efficacy, and security of “drugs, biological products, and medical devices” (FDA, 2018).

Applying the Frameworks to Policy Decisions

The three frameworks are not mutually exclusive, and other approaches could emerge in the coming years. For example, the FDA might soon approve MDMA and psilocybin therapy, while states could legalize possession and noncommercial supply of psilocybin and other naturally occurring psychedelics. Veterans and many others who are seeking treatment for depression, PTSD, or other mental health conditions might avail themselves of various options, including going overseas to seek psychedelic therapy or doing so on their own. Thus, there is a need to discuss policy-related details regarding psychedelic therapy.

The individual framework offers virtually no assistance, at least formally, and could be an option for those who are interested in self-treatment or self-discovery. The spiritual/wellness and medical/therapeutic frameworks provide structured settings that could facilitate standardized dosing of psychedelic compounds, as well as participant screening and experience integration. However, these structured “gatekeeper” frameworks would likely restrict access to psychedelics to a greater degree than the individual framework. Research and policy will need to consider matters of equitable access to psychedelic treatment, as well as the impacts of adopting policies in the context of an existing underground psychedelic market.

Depending on the frameworks put forward, existing capacity for supervised guided sessions is likely to be a critical bottleneck in accessing psychedelic-assisted

therapy. This is especially true if policymakers exclusively prioritize the medical/therapeutic model. Few studies have estimated the capacity or demand for psychedelic-assisted therapy, although some have suggested that as many as 100,000 trained guides would be needed (Devine, 2022). To put that into context, there are between 25,000 and 45,000 psychiatrists in the United States.⁷ VA estimates that there are about 12 million adults with PTSD in the United States (National Center for PTSD, 2022). An unknown share of those patients and perhaps millions more who are suffering from depression, anxiety, and other conditions might seek psychedelic-assisted therapy. The number of guides needed to meet potential demand is unknown but could be well into the tens of thousands, depending on the policy frameworks that are adopted.

The medical/therapeutic framework is perhaps most likely to reduce the risk of adverse experiences, but it is the costliest, most time-consuming, and most restrictive framework. Ongoing clinical trials involve a single patient at a time, often with two or more clinicians in the room plus additional support staff. This framework is perhaps ideal for the hardest-to-treat cases that often include risky comorbidities—for example, patients with severe or treatment-resistant mental health conditions who may also be suicidal; those for whom a psychedelic session could be risky, given their mental “set”; or those with certain physical conditions that elevate the risk of harm during psychedelic use. This framework could eventually be integrated into existing mental health systems and covered by insurance.

The spiritual/wellness framework might include group therapy sessions, as currently offered by psilocybin retreat centers outside the United States and some Native

American churches. This framework could expand access by allowing small group therapy sessions for a handful of participants (up to a dozen or more) guided by two or three facilitators. This approach could be less restrictive than the medical/therapeutic framework, and retreat programs or centers could be encouraged to specialize in treating particular subpopulations (e.g., those with substance use disorder, depression, or anxiety). Positive outcomes might be less likely, however, because guides would have to divide their attention among participants before, during, or after a session. Psychedelic therapy under this framework is not evidence-based, according to clinical research. Rather, some participants will be informed by the (cultural) knowledge of experienced practitioners, and there is a chance that “wellness retreat centers” will pop up offering treatment regimens that are not well vetted by either experienced users or clinical research. There would be other concerns about the quality and efficacy of some of these centers, depending on the level of regulatory oversight; health care practitioners have cautioned that some centers could prey on eager participants seeking to get better (Wexler and Sisti, 2022). Psychedelic therapy outside the formal medical system will likely be viewed as “alternative medicine.” This could stigmatize and dissuade some potential participants, and it could mean that such therapy is less likely to be covered by insurance and would thus be less financially accessible.

The individual framework affords the least-regulated access and is the direction in which numerous jurisdictions are heading. Treatment is accessible to adults who seek it, but the likelihood of risk is greatest because there is no formal guide or integration, and the lack of screening means that some who should not use these substances

could be harmed. However, one could envision a system that includes educational campaigns to encourage participants to self-prepare or instruct participants in how to organize guided sessions with a trusted friend or confidant. Going further, after a few guided sessions or perhaps at a retreat, a participant could earn a certificate in self-therapy. Otherwise, perhaps educational or wellness groups can help fill the gap by offering basic services to train people to self-treat, including how to cultivate the appropriate setting, how to set positive intentions, and how to reflect on the experience afterward.

How Will VA Respond to Psychedelic Use Among Veterans?

Although the contours of the psychedelic legal and policy landscape are still evolving, it is possible that other states will follow Oregon and Colorado's approach to legalizing supervised psilocybin session (and, in the case of Colorado, the use, possession, cultivation, and sharing of plant-based psychedelics by adults). Other states might remove legal prohibitions for nonmedical and potentially even commercial supply. This raises questions about VA's potential policy responses to veterans' use of psychedelic treatment in both jurisdictions where it is legalized and where it is

prohibited, as well as potential efforts to offer psychedelic treatment to veterans through the VA system.

VA faced similar questions when states started legalizing cannabis for medical purposes even though it was still prohibited under federal law. VA providers have never been allowed to recommend medical cannabis to patients, even in states that allow medical cannabis. And, early on, VA providers were not explicitly authorized to discuss medical cannabis with their patients, although conversations about cannabis did sometimes take place (Clark, 2017). There were also reports that some veterans were removed from VA pain management programs after testing positive for cannabis (Andrews, 2018), but it is unclear how often this happened. In December 2017, VA published a directive that changed some of these policies. While VA providers were still prohibited from recommending medical cannabis to patients, patients were "encouraged to discuss marijuana use with their VA providers" (VA, 2022). The directive also stated that veterans would not be denied VA benefits because of their medical cannabis use.

Similarly, VA will have to determine whether it will strictly follow federal regulations regarding psychedelics (i.e., allowing use by participants in registered clinical trials or the use of FDA-approved psychedelic therapies) or if it will also honor regulations at the state and local levels.

VA faced similar questions when states started legalizing cannabis for medical purposes even though it was still illegal under federal law.

For example, when Oregon allows psilocybin to be supplied under licensed supervision in 2023 (Acker, 2022; Goldhill, 2022), will veteran participants be at risk of losing their VA benefits? Questions also arise regarding veterans in states where psychedelic use remains prohibited. How will VA providers there answer patient questions about psychedelic treatments? Will VA clinicians receive training in psychedelics and how they might interact with conventional treatments for mental health disorders? Will VA encourage veterans to discuss their psychedelic use with their providers?

As the evidence base on psychedelic therapies continues to grow, VA might need to consider *how* to integrate these therapies into its own treatment protocols. VA researchers are planning at least five clinical trials, two using MDMA and three that include synthetic psilocybin (Londoño, 2022). Given the interest in these potential treatments, VA might begin now to consider how such treatments will be integrated into its current mental health offerings. Planning ahead is especially critical because current protocols for psychedelic-assisted therapy require therapists to dedicate a significant number of hours to a patient's treatment. For example, the phase 3 trial of MDMA for PTSD required two therapists per patient for experimental sessions that lasted eight hours each (Multidisciplinary Association for Psychedelic Studies, 2020). Questions about how to incorporate this type of protocol into current VA mental health offerings—and its impact on the availability of mental health care for veterans—will need to be carefully considered. If such care were available through VA's Community Care Program, VA would need to consider how non-VA psychedelic treatment would be integrated with the mental health care provided directly by VA.⁸ Finally, considerations surrounding

self-therapy with psychedelics find a noteworthy parallel in those involving the use of cannabis by veterans to alleviate certain conditions. Those lessons can guide VA in addressing veterans' future psychedelic use, as some veterans are already self-treating with substances not approved by the FDA.

Policy Implications for Veterans' Health Care

Indeed, changes to the psychedelic legal and policy landscape have been rapid. Federally authorized clinical trials are demonstrating positive results from psychedelic treatments for some mental health disorders, and an increasing number of local jurisdictions and states have liberalized their policies regarding some psychedelics. There is also a burgeoning industry looking to profit and capture market share should there be further changes with respect to producing, distributing, and selling psychedelics. In some ways, what we are seeing with shifts in psychedelic policy mirrors what happened with cannabis in the United States; however, the changes are happening more quickly, and there is no guarantee that psychedelics will follow the same policy pathways or regulatory frameworks.

Emerging literature points to many positive outcomes from psychedelic therapy, associated with reductions in symptoms of depression, anxiety, and PTSD. But the potential risks of psychedelics are different from those of other psychoactive drugs, including cannabis and alcohol, so it is critical to consider how the rules and protocols governing the administration, supervision, and integration of psychedelics in therapeutic settings can mitigate risk. Thoughtful policies are necessary for optimizing therapeutic outcomes

and minimizing harms associated with these substances. Other broader concerns about access and equity remain: How will participants access high-quality treatment if access is restricted to diagnosable conditions? Will insurance providers—including VA benefits, TRICARE (the U.S. military’s insurance program), Medicaid, and Medicare—offer coverage for psychedelic treatments? How can regulatory entities ensure the quality of psychedelic-assisted therapy and adequate numbers of trained providers to deliver it? How will local jurisdictions protect individuals who use psychedelics and respond to growing underground markets for these substances?

Finally, major questions remain about how VA will address veterans’ use of psychedelics outside of federally approved contexts. Will VA hold off on developing guidelines on patients’ psychedelic use for its providers (as was the case for medical cannabis), or will it be more proactive? VA has already invested in research on these compounds, and it is time to consider how it might integrate such treatments into clinical practice. If VA is not working on a directive to provide guidance to its patients and clinicians, it would be prudent to start these discussions now.

Notes

¹ Projections of the size of the legal psychedelic market for 2027 range from \$7 billion to \$11 billion (Financial News Media, 2021). Of course, the industry has an incentive to inflate its worth, and some of these firms might support future ballot initiatives to liberalize psychedelic laws and politicians who are sympathetic to their cause.

² In 2019, the Food and Drug Administration (FDA) approved a nasal spray formulation of ketamine—which has a long history of use as an anesthetic—as a therapy for treatment-resistant depression (FDA, 2019). VA has also recently expanded the use of ketamine therapy to treat veterans suffering from depression (Nostrant, 2022). Ketamine is not a psychedelic but, rather, a dissociative that has been used off-label for some time to alleviate symptoms of depression and suicidality. The mind-altering states produced by the drug when taken under supervision are reported to immediately benefit patients suffering from treatment-resistant depression. A growing number of studies, including several randomized controlled trials, point to generally positive outcomes. However, additional research may be needed to explore the safety and efficacy of ketamine, given concerns that it may be addictive and toxic to the bladder with increasing doses or frequency of use (Corrigan and Pickering, 2019; Short et al., 2018; Rosenblat et al., 2019).

³ This is not an exhaustive list of alternatives to drug prohibition. For more, see MacCoun and Reuter, 2001; Caulkins et al., 2015; and Stevens et al., 2022.

⁴ The applicable text of the measure reads as follows:

12-170-109. Personal Use. (1) Subject to the limitations in this Article 170, but notwithstanding any other provision of law, the following acts are not an offense under state law or the laws of any locality within the state or subject to a civil fine, penalty, or sanction, or the basis for detention, search, or arrest, or to deny any right or privilege, or to seize or forfeit assets under state law or the laws of any locality, if the person is twenty-one years of age or older: (a) Possessing, storing, using, processing, transporting, purchasing, obtaining, or ingesting natural medicine for personal use, or giving away natural medicine for personal use without remuneration to a person or persons twenty-one years of age or older. (b) Growing, cultivating, or processing plants or fungi capable of producing natural medicine for personal use if: (I) the plants and fungi are kept in or on the grounds of a private home or residence; and (II) the plants and fungi are secured from access by persons under twenty-one years of age.

⁵ Psychedelic Alpha’s Psychedelic Legalization and Decriminalization Tracker monitors the status of working groups, legislation, court decisions, and laws on psychedelic drugs (Psychedelic Alpha, 2022).

In 2022, Connecticut signed into law allowances for a pilot study using psilocybin or MDMA for treating trauma among first responders upon FDA approval of these therapies (Connecticut General Assembly, 2022; Fenster, 2022).

⁶ For example, MDMA can elevate the heart rate, so screening potential users for heart conditions could help avoid some risks. Other psychedelics, such as ibogaine, which is used to treat opioid use disorder in some clinics outside the United States, can also present acute heart risks to users with preexisting conditions (Litjens and Brunt, 2016). Other researchers have noted the elevated risks of precipitated psychosis for those predisposed to certain psychological conditions, such as schizophrenia (Freckska, 2007; dos Santos, Bouso, and Hallak, 2017).

⁷ The U.S. Bureau of Labor Statistics estimates that there are 25,000 psychiatrists in the United States, while the American Psychiatric Association puts that number higher, at 45,000 (U.S. Bureau of Labor Statistics, 2021; American Psychiatric Association, undated).

⁸ Note that this concern about treatment integration across VA and private-sector care providers is not unique to psychedelic-assisted therapy; see Rasmussen and Farmer (2022) for a more detailed discussion about the integration of VA and non-VA care for veterans.

References

Acker, Lizzy, “How Soon Will It Be Before Oregonians Can Access Legal Therapeutic Psilocybin?” *OregonLive*, January 22, 2022. As of November 10, 2022:

<https://www.oregonlive.com/pacific-northwest-news/2022/01/how-soon-will-it-be-before-oregonians-can-access-legal-therapeutic-psilocybin.html>

American Psychiatric Association, “What is Psychiatry?” webpage, undated. As of November 10, 2022:

<https://psychiatry.org/patients-families/what-is-psychiatry>

Andrews, Michelle, “VA Clears the Air on Talking to Patients About Marijuana Use,” *Washington Post*, January 9, 2018.

Ansnis, Gregory M., Shari R. Kohn, Margaret Henderson, and Nicole L. Brown, “SSRIs Versus Non-SSRIs in Post-Traumatic Stress Disorder: An Update with Recommendations,” *Drugs*, Vol. 64, No. 4, 2004, pp. 383–404.

Ballotpedia, “Colorado Proposition 122, Decriminalization and Regulated Access Program for Certain Psychedelic Plants and Fungi Initiative (2022),” webpage, undated. As of November 30, 2022: [https://ballotpedia.org/Colorado_Proposition_122,_Decriminalization_and_Regulated_Access_Program_for_Certain_Psychedelic_Plants_and_Fungi_Initiative_\(2022\)](https://ballotpedia.org/Colorado_Proposition_122,_Decriminalization_and_Regulated_Access_Program_for_Certain_Psychedelic_Plants_and_Fungi_Initiative_(2022))

Bonn-Miller, Marcel O., Megan Brunstetter, Alex Simonian, Mallory J. Loflin, Ryan Vandrey, Kimberly A. Babson, and Hal Wortzel, “The Long-Term, Prospective, Therapeutic Impact of Cannabis on Post-Traumatic Stress Disorder,” *Cannabis and Cannabinoid Research*, Vol. 7, No. 2, April 2022, pp. 214–223.

Bonn-Miller, Marcel O., Sue Sisley, Paula Riggs, Berra Yazar-Klosinski, Julie B. Wang, Mallory J. E. Loflin, Benjamin Shechet, Colin Hennigan, Rebecca Matthews, Amy Emerson, and Rick Doblin, “The Short-Term Impact of 3 Smoked Cannabis Preparations Versus Placebo on PTSD Symptoms: A Randomized Cross-Over Clinical Trial,” *PLOS ONE*, Vol. 16, No. 3, March 17, 2021.

Bowers, Malcolm B., Jr., and Daniel X. Freedman, “‘Psychedelic’ Experiences in Acute Psychoses,” *Archives of General Psychiatry*, Vol. 15, No. 3, September 1966, pp. 240–248.

Busby, Mattha, “MDMA Trials Under Review in Canada Over Alleged Abuse of Study Participants,” *The Guardian*, June 20, 2022. As of November 10, 2022: <https://www.theguardian.com/world/2022/jun/20/mdma-trials-canada-review-alleged-abuse>

- Carhart-Harris, Robin L., Leor Roseman, Eline Haijen, David Erritzoe, Rosalind Watts, Igor Branchi, and Mendel Kaelen, “Psychedelics and the Essential Importance of Context,” *Journal of Psychopharmacology*, Vol. 32, No. 7, July 2018, pp. 725–731.
- Caulkins, Jonathan P., Beau Kilmer, Mark A. R. Kleiman, Robert J. MacCoun, Gregory Midgette, Pat Oglesby, Rosalie Liccardo Pacula, and Peter H. Reuter, *Considering Marijuana Legalization: Insights for Vermont and Other Jurisdictions*, RAND Corporation, RR-864, 2015. As of November 10, 2022: https://www.rand.org/pubs/research_reports/RR864.html
- Cho, Aimee, “DC Woman Who Led Initiative 81 Effort Used Magic Mushrooms for Postpartum Depression,” NBC4 Washington, November 5, 2020. As of November 10, 2022: <https://www.nbcwashington.com/news/politics/decision-2020/dc-woman-who-led-initiative-81-effort-used-magic-mushrooms-for-postpartum-depression/2463692>
- Cipriani, Andrea, and Philip J. Cowen, “3,4-Methylenedioxymethamphetamine (MDMA)-Assisted Psychotherapy for Post-Traumatic Stress Disorder in Service Personnel,” *The Lancet Psychiatry*, Vol. 5, No. 6, June 1, 2018, pp. 453–455.
- Clark, James, “A Well-Kept Secret: How Vets and Their Doctors Are Getting Around the VA’s Medical Marijuana Policy,” *Task & Purpose*, October 26, 2017. As of November 10, 2022: <https://taskandpurpose.com/military-life/va-medical-marijuana-policy-veterans>
- COMPASS Pathways, “COMPASS Pathways Receives FDA Breakthrough Therapy Designation for Psilocybin Therapy for Treatment-Resistant Depression,” press release, October 23, 2018. As of November 10, 2022: <https://compasspathways.com/compass-pathways-receives-fda-breakthrough-therapy-designation-for-psilocybin-therapy-for-treatment-resistant-depression>
- Congressional Budget Office, *The Veterans Health Administration’s Treatment of PTSD and Traumatic Brain Injury Among Recent Combat Veterans*, February 2012.
- Connecticut General Assembly, Public Act No. 22-118, House Bill No. 5506, An Act Adjusting the State Budget for the Biennium Ending June 30, 2023, Concerning Provisions Related to Revenue, School Construction and Other Items to Implement the State Budget and Authorizing and Adjusting Bonds of the State, May 24, 2022.
- Corrigan, Alexandrine, and Gisèle Pickering, “Ketamine and Depression: A Narrative Review,” *Drug Design, Development and Therapy*, Vol. 13, August 2019, pp. 3051–3067.
- Davis, Alan K., Lynnette A. Averill, Nathan D. Sepeda, Joseph P. Barsuglia, and Timothy Amoroso, “Psychedelic Treatment for Trauma-Related Psychological and Cognitive Impairment Among US Special Operations Forces Veterans,” *Chronic Stress*, Vol. 4, January 2020.
- Davis, Lori L., Jeff Schein, Martin Cloutier, Patrick Gagnon-Sanschagrin, Jessica Maitland, Annette Urganus, Annie Guerin, Patrick Lefebvre, and Christy R. Houle, “The Economic Burden of Posttraumatic Stress Disorder in the United States from a Societal Perspective,” *Psychiatrist*, Vol. 83, No. 3, April 25, 2022.
- Devine, Jimi, “The Need for 100,000 Psychedelic Facilitators Is Real,” *LA Weekly*, August 3, 2022. As of November 10, 2022: <https://www.laweekly.com/the-need-for-100000-psychedelic-facilitators-is-real>
- Dobscha, Steven K., Benjamin J. Morasco, Jonathan P. Duckart, Tara Macey, and Richard A. Deyo, “Correlates of Prescription Opioid Initiation and Long-Term Opioid Use in Veterans with Persistent Pain,” *Clinical Journal of Pain*, Vol. 29, No. 2, February 2013, pp. 102–108.
- dos Santos, Rafael G., José Carlos Bouso, and Jaime E. C. Hallak, “Ayahuasca, Dimethyltryptamine, and Psychosis: A Systematic Review of Human Studies,” *Therapeutic Advances in Psychopharmacology*, Vol. 7, No. 4, April 2017, pp. 141–157.
- Dunlop, Boadie W., and Barbara O. Rothbaum, “Medication-Assisted Psychotherapy for PTSD,” *PTSD Research Quarterly*, Vol. 30, No. 3, 2019.
- FDA—See Food and Drug Administration.
- Feduccia, Allison A., Lisa Jerome, Berra Yazar-Klosinski, Amy Emerson, Michael C. Mithoefer, and Rick Doblin, “Breakthrough for Trauma Treatment: Safety and Efficacy of MDMA-Assisted Psychotherapy Compared to Paroxetine and Sertraline,” *Frontiers in Psychiatry*, Vol. 10, September 12, 2019.
- Fenster, Jordan Nathaniel, “New CT Law Paves Way for Widespread Psychedelic Therapy,” *CT Insider*, May 11, 2022. As of November 10, 2022: <https://www.ctinsider.com/news/article/New-CT-law-paves-way-for-widespread-psychedelic-17165230.php>
- Financial News Media, “Psychedelic Drugs Market Size Is Projected to Reach \$10.75 Billion by 2027,” *PR Newswire*, April 21, 2021. As of November 10, 2022: <https://www.prnewswire.com/news-releases/psychedelic-drugs-market-size-is-projected-to-reach-10-75-billion-by-2027--301273405.html>
- Fishburne, P. M., H. I. Abelson, and I. Cisin, *National Survey on Drug Abuse: Main Findings, 1979*, U.S. Department of Health, Education, and Welfare, 1979.

Food and Drug Administration, “What We Do,” webpage, last updated March 28, 2018. As of November 30, 2022: <https://www.fda.gov/about-fda/what-we-do>

———, “FDA Approves New Nasal Spray Medication for Treatment-Resistant Depression; Available Only at a Certified Doctor’s Office or Clinic,” press release, March 5, 2019. As of November 10, 2022: <https://www.fda.gov/news-events/press-announcements/fda-approves-new-nasal-spray-medication-treatment-resistant-depression-available-only-certified>

Frecska, Ede, “Therapeutic Guidelines: Dangers and Contra-Indications in Therapeutic Applications of Hallucinogens,” in Michael J. Winkelman and Thomas B. Roberts, eds., *Psychedelic Medicine: New Evidence for Hallucinogenic Substances as Treatments*, Praeger, 2007, pp. 69–95.

Goldhill, Olivia, “‘It’s Not Medical’: Oregon Wrestles with How to Offer Psychedelics Outside the Health Care System,” *STAT*, March 10, 2022. As of November 10, 2022: <https://www.statnews.com/2022/03/10/oregon-wrestles-with-offering-psychedelic-therapy-outside-health-care-system>

Griffiths, Roland R., Matthew W. Johnson, Michael A. Carducci, Annie Umbricht, William A. Richards, Brian D. Richards, Mary P. Cosimano, and Margaret A. Klinedinst, “Psilocybin Produces Substantial and Sustained Decreases in Depression and Anxiety in Patients with Life-Threatening Cancer: A Randomized Double-Blind Trial,” *Journal of Psychopharmacology*, Vol. 30, No. 12, December 2016, pp. 1181–1197.

Griffiths, Roland R., William A. Richards, Una McCann, and Robert Jesse, “Psilocybin Can Occasion Mystical-Type Experiences Having Substantial and Sustained Personal Meaning and Spiritual Significance,” *Psychopharmacology*, Vol. 187, No. 3, August 2006, pp. 268–283.

Hall, Wayne D., and Keith Humphreys, “Is Good Science Leading the Way in the Therapeutic Use of Psychedelic Drugs?” *Psychological Medicine*, Vol. 52, No. 14, October 2022, pp. 2849–2851.

Hawkins, Eric J., Simon B. Goldberg, Carol A. Malte, and Andrew J. Saxon, “New Coprescription of Opioids and Benzodiazepines and Mortality Among Veterans Affairs Patients with Posttraumatic Stress Disorder,” *Journal of Clinical Psychiatry*, Vol. 80, No. 4, July 9, 2019.

Hawkins, Eric J., Carol A. Malte, Joel Grossbard, Andrew J. Saxon, Zac E. Imel, and Daniel R. Kivlahan, “Comparative Safety of Benzodiazepines and Opioids Among Veterans Affairs Patients with Posttraumatic Stress Disorder,” *Journal of Addiction Medicine*, Vol. 7, No. 5, September–October 2013, pp. 354–362.

Hicks, Terrell A., Angela J. Zaur, Jared W. Keeley, and Ananda B. Amstadter, “The Association Between Recreational Cannabis Use and Posttraumatic Stress Disorder: A Systematic Review and Methodological Critique of the Literature,” *Drug and Alcohol Dependence*, November 1, 2022.

Hudak, John, and Christine Stenglein, “Public Opinion and America’s Experimentation with Cannabis Reform,” in Jonathan H. Adler, ed., *Marijuana Federalism: Uncle Sam and Mary Jane*, Brookings Institution, 2020, pp. 15–34.

Jacobs, Andrew, “Veterans Have Become Unlikely Lobbyists in Push to Legalize Psychedelic Drugs,” *New York Times*, November 11, 2021.

Kehle-Forbes, Shannon M., Laura A. Meis, Michele R. Spoont, and Melissa A. Polusny, “Treatment Initiation and Dropout from Prolonged Exposure and Cognitive Processing Therapy in a VA Outpatient Clinic,” *Psychological Trauma: Theory, Research, Practice, and Policy*, Vol. 8, No. 1, January 2016, pp. 107–114.

Kelly, Karen, Michael Posternak, and Jonathan E. Alpert, “Toward Achieving Optimal Response: Understanding and Managing Antidepressant Side Effects,” *Dialogues in Clinical Neuroscience*, Vol. 10, No. 4, 2008, pp. 409–418.

Khan, Shariq Mansoor, Gregory T. Carter, Sunil K. Aggarwal, and Julie Holland, “Psychedelics for Brain Injury: A Mini-Review,” *Frontiers in Neurology*, Vol. 12, July 29, 2021.

Kilmer, Beau, and Robert J. MacCoun, “How Medical Marijuana Smoothed the Transition to Marijuana Legalization in the United States,” *Annual Review of Law and Social Science*, Vol. 13, No. 1, October 2017, pp. 181–202.

Kurland, Albert A., Sanford Unger, John W. Shaffer, and Charles Savage, “Psychedelic Therapy Utilizing LSD in the Treatment of the Alcoholic Patient: A Preliminary Report,” *American Journal of Psychiatry*, Vol. 123, No. 10, April 1967, pp. 1202–1209.

Leary, Timothy, George H. Litwin, and Ralph Metzner, “Reactions to Psilocybin Administered in a Supportive Environment,” *Journal of Nervous and Mental Disease*, Vol. 137, No. 6, December 1963, pp. 561–573.

Litjens, Ruud P. W., and Tibor M. Brunt, “How Toxic Is Ibogaine?” *Clinical Toxicology*, Vol. 54, No. 4, 2016, pp. 297–302.

Liu, Ying, Candice Collins, Kesheng Wang, Xin Xie, and Ronghai Bie, “The Prevalence and Trend of Depression Among Veterans in the United States,” *Journal of Affective Disorders*, Vol. 245, February 15, 2019, pp. 724–727.

- Londoño, Ernesto, “After Six-Decade Hiatus, Experimental Psychedelic Therapy Returns to the V.A.,” *New York Times*, June 24, 2022.
- MacCoun, Robert J., and Peter Reuter, *Drug War Heresies: Learning from Other Vices, Times, and Places*, Cambridge University Press, 2001.
- Mangini, Pratheek, Lynnette A. Averill, and Alan K. Davis, “Psychedelic Treatment for Co-Occurring Alcohol Misuse and Post-Traumatic Stress Symptoms Among United States Special Operations Forces Veterans,” *Journal of Psychedelic Studies*, Vol. 5, No. 3, 2021, pp. 149–155.
- McGlothlin, William H., Sidney Cohen, and Marcela S. McGlothlin, “Short-Term Effects of LSD on Anxiety, Attitudes and Performance,” *Journal of Nervous and Mental Disease*, Vol. 139, No. 3, September 1964, pp. 266–273.
- Metrik, Jane, Angela K. Stevens, Rachel L. Gunn, Brian Borsari, and Kristina M. Jackson, “Cannabis Use and Posttraumatic Stress Disorder: Prospective Evidence from a Longitudinal Study of Veterans,” *Psychological Medicine*, Vol. 52, No. 3, February 2022, pp. 446–456.
- Mithoefer, Michael C., Ann T. Mithoefer, Allison A. Feduccia, Lisa Jerome, Mark Wagner, Joy Wymer, Julie Holland, Scott Hamilton, Berra Yazar-Klosinski, Amy Emerson, and Rick Doblin, “3, 4-Methylenedioxymethamphetamine (MDMA)–Assisted Psychotherapy for Post-Traumatic Stress Disorder in Military Veterans, Firefighters, and Police Officers: A Randomised, Double-Blind, Dose-Response, Phase 2 Clinical Trial,” *The Lancet Psychiatry*, Vol. 5, No. 6, June 2018, pp. 486–497.
- Multidisciplinary Association for Psychedelic Studies, *A Randomized, Double-Blind, Placebo-Controlled, Multi-Site Phase 3 Study of the Efficacy and Safety of Manualized MDMA-Assisted Psychotherapy for the Treatment of Severe Posttraumatic Stress Disorder*, amendment 4, version 1, May 2020.
- National Center for PTSD, “PTSD Treatment Decision Aid: The Choice Is Yours,” factsheet, May 12, 2017. As of November 10, 2022: <https://www.ptsd.va.gov/apps/decisionaid/resources/PTSDDecisionAidSSRI.pdf>
- , “How Common is PTSD in Adults?” webpage, last updated August 29, 2022. As of November 10, 2022: https://www.ptsd.va.gov/understand/common/common_adults.asp
- Nostrant, Rachel, “VA Community Clinics Expand Ketamine Treatment Options for Depression,” *Military Times*, September 29, 2022. As of November 10, 2022: <https://www.militarytimes.com/off-duty/military-culture/2022/09/29/va-community-clinics-expand-ketamine-treatment-options-for-depression>
- Olson, David E., “The Subjective Effects of Psychedelics May Not Be Necessary for Their Enduring Therapeutic Effects,” *ACS Pharmacology and Translational Science*, Vol. 4, No. 2, December 10, 2020, pp. 563–567.
- Oregon Health Authority, “Oregon Psilocybin Services,” webpage, undated. As of November 10, 2022: <https://www.oregon.gov/oha/ph/preventionwellness/pages/oregon-psilocybin-services.aspx>
- Pacula, Rosalie Liccardo, and Rosanna Smart, “Medical Marijuana and Marijuana Legalization,” *Annual Review of Clinical Psychology*, Vol. 13, 2017, pp. 397–419.
- Pearson, Craig, Joshua Siegel, and Jessica A. Gold, “Psilocybin-Assisted Psychotherapy for Depression: Emerging Research on a Psychedelic Compound with a Rich History,” *Journal of the Neurological Sciences*, Vol. 434, March 15, 2022.
- Phelps, Joshua, Ravi N. Shah, and Jeffrey A. Lieberman, “The Rapid Rise in Investment in Psychedelics—Cart Before the Horse,” *JAMA Psychiatry*, Vol. 79, No. 3, March 1, 2022, pp. 189–190.
- Pollan, Michael, *How to Change Your Mind: What the New Science of Psychedelics Teaches Us about Consciousness, Dying, Addiction, Depression, and Transcendence*, Penguin, 2018.
- Psychedelic Alpha, “Psychedelic Legalization and Decriminalization Tracker,” webpage, last updated October 18, 2022. As of November 10, 2022: <https://psychedelicalpha.com/data/psychedelic-laws>
- Rasmussen, Petra, and Carrie M. Farmer, *The Promise and Challenges of VA Community Care: Veterans’ Issues in Focus*, RAND Corporation, PE-A1363-5, 2022. As of November 10, 2022: <https://www.rand.org/pubs/perspectives/PEA1363-5.html>
- Reisman, Miriam, “PTSD Treatment for Veterans: What’s Working, What’s New, and What’s Next,” *Pharmacy and Therapeutics*, Vol. 41, No. 10, October 2016, pp. 623–634.
- Remick, Shannon, “Open-Label Phase 2 Study of MDMA-Assisted Psychotherapy in Veterans with Combat-Related, Refractory PTSD,” clinical trial registration NCT04264026, National Institutes of Health, U.S. National Library of Medicine, updated October 14, 2022. As of November 10, 2022: <https://clinicaltrials.gov/ct2/show/NCT04264026>
- Reno, Jamie, “How Psychedelic Drugs Are Helping Veterans with PTSD,” *Healthline*, November 19, 2021. As of November 10, 2022: <https://www.healthline.com/health-news/how-psychedelic-drugs-are-helping-veterans-and-others-with-ptsd-depression>

Rosenblat, Joshua D., Andre F. Carvalho, Madeline Li, Yena Lee, Mehala Subramaniepillai, and Roger S. McIntyre, “Oral Ketamine for Depression: A Systematic Review,” *Journal of Clinical Psychiatry*, Vol. 80, No. 3, April 16, 2019.

Short, Brooke, Joanna Fong, Veronica Galvez, William Shelker, and Colleen K. Loo, “Side-Effects Associated with Ketamine Use in Depression: A Systematic Review,” *The Lancet Psychiatry*, Vol. 5, No. 1, January 1, 2018, pp. 65–78.

Smart, Rosanna, and Rosalie Liccardo Pacula, “Early Evidence of the Impact of Cannabis Legalization on Cannabis Use, Cannabis Use Disorder, and the Use of Other Substances: Findings from State Policy Evaluations,” *American Journal of Drug and Alcohol Abuse*, Vol. 45, No. 6, 2019, pp. 644–663.

Stefanovics, Elina A., Marc N. Potenza, and Robert H. Pietrzak, “PTSD and Obesity in U.S. Military Veterans: Prevalence, Health Burden, and Suicidality,” *Psychiatry Research*, Vol. 291, September 2020.

Stevens, Alex, Caitlin Elizabeth Hughes, Shann Hulme, and Rebecca Cassidy, “Depenalization, Diversion and Decriminalization: A Realist Review and Programme Theory of Alternatives to Criminalization for Simple Drug Possession,” *European Journal of Criminology*, Vol. 19, No. 1, January 2022, pp. 29–54.

Substance Abuse and Mental Health Services Administration, “National Survey on Drug Use and Health, 2019,” database, undated. As of November 10, 2022: <https://pdas.samhsa.gov/#/survey/NSDUH-2019-DS0001>

Torrey, E. Fuller, and Michael R. Peterson, “Schizophrenia and the Limbic System,” *The Lancet*, Vol. 304, No. 7886, October 19, 1974, pp. 942–946.

U.S. Bureau of Labor Statistics, “Occupational Employment and Wages, May 2021: 29-1223 Psychiatrists,” webpage, May 2021. As of November 10, 2022: <https://www.bls.gov/oes/current/oes291223.htm>

U.S. Department of Veterans Affairs, “VA and Marijuana—What Veterans Need to Know,” webpage, last updated May 2, 2022. As of November 10, 2022: <https://www.publichealth.va.gov/marijuana.asp>

U.S. Department of Veterans Affairs, Office of Mental Health and Suicide Prevention, *2021 National Veteran Suicide Prevention Annual Report*, Washington, D.C., September 2021.

VA—See U.S. Department of Veterans Affairs.

Vann Jones, Simon Andrew, and Allison O’Kelly, “Psychedelics as a Treatment for Alzheimer’s Disease Dementia,” *Frontiers in Synaptic Neuroscience*, Vol. 12, October 26, 2020.

Vaughan, Jane, “Several Rural Oregon Counties Vote Against Therapeutic Use of Psilocybin,” Oregon Public Broadcasting, November 9, 2022. As of November 30, 2022: <https://www.opb.org/article/2022/11/09/several-rural-oregon-counties-vote-against-therapeutic-use-of-psilocybin>

Wexler, Anna, and Dominic Sisti, “Brain Wellness ‘Spas’—Anticipating the Off-Label Promotion of Psychedelics,” *JAMA Psychiatry*, Vol. 79, No. 8, August 1, 2022, pp. 748–749.

Yaden, David B., James B. Potash, and Roland R. Griffiths, “Preparing for the Bursting of the Psychedelic Hype Bubble,” *JAMA Psychiatry*, Vol. 79, No. 10, October 1, 2022, pp. 943–944.

Yaden, David B., Mary E. Yaden, and Roland R. Griffiths, “Psychedelics in Psychiatry—Keeping the Renaissance from Going off the Rails,” *JAMA Psychiatry*, Vol. 78, No. 5, May 1, 2021, pp. 469–470.

Zinberg, Norman E., *Drug, Set, and Setting: The Basis for Controlled Intoxicant Use*, Yale University Press, 1984.

About This Perspective

Over the past 20 years, there has been a resurgence of interest in the potential therapeutic use of psychedelics to address a variety of mental health conditions that are common among veterans.

Veterans represent a sizable segment of mental health care consumers in the United States, and the U.S. Department of Veterans Affairs—the largest provider of mental health care to veterans—has already conducted research into psychedelic treatments. With jurisdictions across the country loosening controls on psychedelics, the stakes are high for the federal government as it considers how best to support veterans and the providers who are responsible for their care.

RAND Epstein Family Veterans Policy Research Institute

Funding for this publication was made possible by a generous gift from Daniel J. Epstein through the Epstein Family Foundation, which established the RAND Epstein Family Veterans Policy Research Institute in 2021. The institute is dedicated to conducting innovative, evidence-based research and analysis to improve the lives of those who have served in the U.S. military. Building on decades of interdisciplinary expertise at the RAND Corporation, the institute prioritizes creative, equitable, and inclusive solutions and interventions that meet the needs of diverse veteran populations while engaging and empowering those who support them. For more information about the RAND Epstein Family Veterans Policy Research Institute, visit veterans.rand.org.

RAND Drug Policy Research Center

Since 1989, the RAND Drug Policy Research Center has promoted healthier and more just societies throughout the world by improving knowledge and policy on alcohol and other drugs.

About the Authors

At the time of this writing, **Bryce Pardo** was a policy researcher and associate director of the RAND Drug Policy Research Center. His drug policy research has focused on cannabis regulation, opioid control, new psychoactive substance markets, and fentanyl and other synthetic opioids. He has a Ph.D. in public policy.

Beau Kilmer is a senior policy researcher and codirector of the RAND Drug Policy Research Center and holds the McCauley Chair in Drug Policy Innovation. He conducts research at the intersection of public health and public policy, with an emphasis on crime control, substance use, and illegal markets. He has a Ph.D. in public policy.

Rajeev Ramchand is a senior behavioral scientist and codirector of the RAND Epstein Family Veterans Policy Research Institute. He studies suicide prevention and the prevalence, prevention, and treatment of mental health and substance use disorders among service members and veterans. He has a Ph.D. in psychiatric epidemiology.

Carrie M. Farmer is a senior policy researcher and codirector of the RAND Epstein Family Veterans Policy Research Institute. Her research focuses on military and veteran policy and health care quality. She has a Ph.D. in health policy.

The RAND Corporation is a research organization that develops solutions to public policy challenges to help make communities throughout the world safer and more secure, healthier and more prosperous. RAND is nonprofit, nonpartisan, and committed to the public interest.

Research Integrity

Our mission to help improve policy and decisionmaking through research and analysis is enabled through our core values of quality and objectivity and our unwavering commitment to the highest level of integrity and ethical behavior. To help ensure our research and analysis are rigorous, objective, and nonpartisan, we subject our research publications to a robust and exacting quality-assurance process; avoid both the appearance and reality of financial and other conflicts of interest through staff training, project screening, and a policy of mandatory disclosure; and pursue transparency in our research engagements through our commitment to the open publication of our research findings and recommendations, disclosure of the source of funding of published research, and policies to ensure intellectual independence. For more information, visit www.rand.org/about/research-integrity.

RAND's publications do not necessarily reflect the opinions of its research clients and sponsors. **RAND**® is a registered trademark.

Limited Print and Electronic Distribution Rights

This publication and trademark(s) contained herein are protected by law. This representation of RAND intellectual property is provided for noncommercial use only. Unauthorized posting of this publication online is prohibited; linking directly to its webpage on rand.org is encouraged. Permission is required from RAND to reproduce, or reuse in another form, any of its research products for commercial purposes. For information on reprint and reuse permissions, please visit www.rand.org/pubs/permissions.

For more information on this publication, visit www.rand.org/t/PEA1363-6.

© 2022 RAND Corporation



www.rand.org