

ELSI RESEARCH REPORT
STATE REGULATION OF PSILOCYBIN: RECOMMENDATIONS FOR THE OREGON HEALTH AUTHORITY

Harm Reduction

In the drug policy field, the term harm reduction refers to strategies for reducing the potential harms associated with substance use and other behaviors associated with health or safety risks.¹ Modern approaches to harm reduction originated in the 1980s as alternatives to abstinence-only public health interventions,² and they have successfully reduced the morbidity and mortality of people who use substances.³ For example, needle-exchange programs have reduced the spread of HIV, hepatitis, and other blood borne illnesses.⁴ Sex education can reduce the risk of contracting sexually transmitting diseases, and methadone maintenance programs can reduced the risk of overdose and death in people who use opioids.⁵

Because with the risks associated with psilocybin use are minimal, harm reduction strategies tend to focus on substances that are perceived as riskier. Psilocybin and other classic psychedelics, such as lysergic acid diethylamide (LSD) and N,N-dimethyltryptamine (DMT), are less frequently associated with addiction, dependence, and toxicity. Consequently, harm reduction efforts associated with these substances are less common and robust.⁶ But that does not mean that they are non-existent or unimportant, especially as the use of psilocybin and other classic psychedelics is increasing. Subsection II.a.1 discusses the traditional harms and harm-reduction strategies associated with psilocybin, Subsection II.a.2 discusses additional harms and potential harm-reduction strategies associated with supervised psilocybin use, and Subsection II.a.3 discusses the ways in which psilocybin can be used as a tool to reduce the harms associated with other substances, such as alcohol, tobacco, and opioids.

¹ See *Harm Reduction: An Approach to Reducing Risky Health Behaviours in Adolescents*, 13 PAEDIATRIC CHILD HEALTH 53, 53 (2008); *Principles of Harm Reduction*, NAT'L HARM REDUCTION COALITION, <https://harmreduction.org/about-us/principles-of-harm-reduction/> (last visited Oct. 22, 2021, 9:49 AM).

² Mary Hawk, *Harm Reduction Principles for Healthcare Settings*, 14 HARM REDUCTION J. 70, 70 (2017); *Harm Reduction: An Approach to Reducing Risky Health Behaviours in Adolescents*, 13 PAEDIATRIC CHILD HEALTH 53, 53 (2008); *Evolution of the Movement*, NAT'L HARM REDUCTION COALITION, <https://harmreduction.org/movement/evolution/> (last accessed Oct. 22, 2021, 9:52 AM).

³ *Harm Reduction: An Approach to Reducing Risky Health Behaviours in Adolescents*, 13 PAEDIATRIC CHILD HEALTH 53, 53 (2008).

⁴ Melissa Vallejo, Note, *Safer Bathrooms in Syringe Exchange Programs: Injecting Progress into the Harm Reduction Movement*, 118 COLUM. L. REV. 1185, 1190 (2018); *Harm Reduction: An Approach to Reducing Risky Health Behaviours in Adolescents*, 13 PAEDIATRIC CHILD HEALTH 53, 53 (2008); Mary Hawk, *Harm Reduction Principles for Healthcare Settings*, 14 HARM REDUCTION J. 70, 70-71 (2017).

⁵ *Harm Reduction: An Approach to Reducing Risky Health Behaviours in Adolescents*, 13 PAEDIATRIC CHILD HEALTH 53, 53 (2008).

⁶ See Toby Lea et al., *Microdosing Psychedelics: Motivations, Subjective Effects and Harm Reduction*, INT. J. DRUG POLICY, Jan. 2020 (“While much has been published about harm reduction practices among MDMA users – with MDMA categorised as a stimulant or entactogen – relatively little has been published about psychedelic harm reduction.”).

1. Forms of Psilocybin Harm Reduction

Despite psilocybin's relative safety, consuming it is not entirely without risk. Physiologically, psilocybin exhibits low toxicity and very low potential for dependence or addiction, let alone overdose or death, which is believed to be practically impossible, especially when consuming fungal products containing psilocybin.⁷ However, there is a risk that people consuming mushrooms found in nature might mistake poisonous fungi for non-toxic psilocybin producing fungi⁸ or that those consuming psilocybin could engage in risky behaviors that endanger themselves or others.⁹ Psilocybin may also pose physiologic risks to people with certain

⁷ See, e.g., Matthew W. Johnson et al., *The Abuse Potential of Medical Psilocybin According to the 8 Factors of the Controlled Substances Act*, 142 NEUROPHARMACOLOGY 143, 150 (2018) (stating that “psilocybin carries a low risk of overdose toxicity” and that “[i]ts lethal dose in humans has been theoretically estimated at approximately 1000 times an effective dose”); Theresa M. Carbonaro et al., *Survey Study of Challenging Experiences After Ingesting Psilocybin Mushrooms: Acute and Enduring Positive and Negative Consequences*, 30 J. PSYCHOPHARMACOLOGY 1268, 1268-69 (2016) (stating that “psilocybin has very low physiological toxicity” and that “the incidence of psilocybin toxicity is extremely low relative to other drugs used non-medically”); Erich Studerus, *Acute, Subacute and Long-Term Subjective Effects of Psilocybin in Healthy Humans: A Pooled Analysis of Experimental Studies*, 25 JOURNAL OF PSYCHOPHARMACOLOGY 1434, 1435, 1449 (2011) (stating that psilocybin mushrooms “are considered relatively safe physiologically and do not produce dependence” and finding that the study’s “experimental data from 227 psilocybin administrations have demonstrated safety and tolerability not only acutely, but also in the long run”); William E. Brandenburg & Karlee J. Ward, *Mushroom Poisoning Epidemiology in the United States*, 110 MYCOLOGIA 637, 638 (2018) (“There has only been one reported single-ingestion fatality, a 19-year-old in 2002, from hallucinogenic mushrooms over the last 18 years.”). In its rapid evidence review, the Oregon Psilocybin Advisory Board discussed the physiological risks of psilocybin, including transient effects like anxiety, nausea, vomiting, and increased heart rate and longer-term risks like “serotonin syndrome.” THE OREGON PSILOCYBIN EVIDENCE REVIEW WRITING GROUP, OREGON PSILOCYBIN ADVISORY BOARD RAPID EVIDENCE REVIEW AND RECOMMENDATIONS 9-10 (2021), [available at https://www.oregon.gov/oha/PH/PREVENTIONWELLNESS/Documents/Psilocybin%20evidence%20report%20to%20OHA%206-30-21_Submitted.pdf](https://www.oregon.gov/oha/PH/PREVENTIONWELLNESS/Documents/Psilocybin%20evidence%20report%20to%20OHA%206-30-21_Submitted.pdf). When doing so, it noted that the evidence for these long-term risks is sparse and that, in general, “many of these effects have not been definitively linked to any actual harms and some (e.g., anxiety) might be positively correlated with therapeutic benefit.” *Id.*

⁸ See *How Can We Reduce the Harms Associated with Using Psilocybin Mushrooms?*, DRUG POL’Y ALL., <https://drugpolicy.org/drug-facts/reduce-harms-psilocybin-mushrooms> (last accessed Oct. 22, 2021, 11:38 AM) (“People attempting to pick psilocybin mushrooms in the wild may accidentally take poisonous mushrooms instead. Similarly, though also very unlikely, poisonous mushrooms are sometimes misrepresented and sold as psilocybin, and these do come with more physical risks, including fatal overdose.”); *Mushrooms Psilocybin*, DANCESAFE, <https://dancesafe.org/magic-mushrooms/> (last accessed Oct. 22, 2021, 11:40 AM) (similar). This risk is also small, with only 52 mushroom-related fatalities overall between 1999 and 2016. William E. Brandenburg & Karlee J. Ward, *Mushroom Poisoning Epidemiology in the United States*, 110 MYCOLOGIA 637, 638 (2018); cf. also THE OREGON PSILOCYBIN EVIDENCE REVIEW WRITING GROUP, OREGON PSILOCYBIN ADVISORY BOARD RAPID EVIDENCE REVIEW AND RECOMMENDATIONS 10 (2021), [available at https://www.oregon.gov/oha/PH/PREVENTIONWELLNESS/Documents/Psilocybin%20evidence%20report%20to%20OHA%206-30-21_Submitted.pdf](https://www.oregon.gov/oha/PH/PREVENTIONWELLNESS/Documents/Psilocybin%20evidence%20report%20to%20OHA%206-30-21_Submitted.pdf) (“Individuals with fungal allergies are at risk for adverse reactions from whole fungal products.”).

⁹ See, e.g., Matthew W. Johnson et al., *Human Hallucinogen Research: Guidelines for Safety*, 22 J. OF PSYCHOPHARMACOLOGY 603 (2008) (stating that, in unprepared individuals or uncontrolled settings, those consuming psilocybin may engage in “erratic and potentially dangerous behaviours, including aggression against self or others,” though such reports are rare); Manfred R. Moeller & Thomas Kraemer, *Drugs of Abuse Monitoring in Blood for*

preexisting health conditions, such as heart disease.¹⁰ Finally, there is some evidence that psilocybin may cause adverse reactions when consumed in combination with certain medications, including lithium and tramadol.¹¹

Psilocybin consumption may also carry psychological risks. Some experts believe that the use of psilocybin, and other classic psychedelics, may increase the risk of psychosis or exacerbation of other latent psychological issues in people with personal or family histories of certain mental health conditions such as schizophrenia or bipolar disorder. However, these populations are often excluded from clinical trials due to the perceived risk, and consequently, the evidence for a link between psilocybin and exacerbation of their symptoms is not well established or understood.¹² With further research, it may be shown that these populations are not good

Control of Driving Under the Influence of Drugs, 24 THE DRUG MONITOR 210, 217-18 (2002) (stating that psychedelic substances like psilocybin and LSD “can markedly impair driving ability”); *Psilocybin Mushrooms*, HARM REDUCTION TO, <https://harmreductionto.ca/psilocybin-mushrooms> (last accessed Oct. 22, 2021, 1:30 PM) (“Do not drive, operate heavy machinery, or engage in risky behaviours either during or after the consumption of psilocybin.”).

¹⁰ See Matthew W. Johnson et al., *The Abuse Potential of Medical Psilocybin According to the 8 Factors of the Controlled Substances Act*, 142 NEUROPHARMACOLOGY 143, 150 (2018) (stating that “[t]he authors are aware of only one documented case of acute overdose poisoning death likely caused by psilocybin”: a 24-year-old woman who had received a heart transplant 10 years prior and experienced cardiac arrest 2 - 3 hours after consuming psilocybin); ANGELA CARTER, OPAB PSILOCYBIN RECIPIENT SCREENING TOOLS AND CONSIDERATIONS (2021), available at <https://www.oregon.gov/oha/PH/PREVENTIONWELLNESS/Documents/OPAB%20psilocybin%20recipient%20screening%20tools.pdf> (listing elevated blood pressure, tachyarrhythmia (WPW, Atrial Fib, etc), and heart disease as physical conditions with a possible direct concern for psilocybin use).

¹¹ See Sandeep M. Nayak et al., *Classic Psychedelic Coadministration with Lithium, but Not Lamotrigine, Is Associated with Seizures: An Analysis of Online Psychedelic Experience Reports*, 54 Pharmacopsychiatry 240, 241-42 (2021) (analyzing online reports from Erowid.org, Shroomery.org, and Reddit.com of use of “classic psychedelics (e.g., LSD or psilocybin)” among those taking mood stabilizers and finding that 47% of those taking both psychedelics and lithium reported seizures, while an additional 18% reported challenging experiences); Halden A. Geiger et al., *DARK Classics in Chemical Neuroscience: Psilocybin*, 9 ACS CHEM. NEUROSCIENCE 2438 (2018) (“The concomitant use of tramadol, a muopioid receptor agonist with additional serotonin and norepinephrine reuptake inhibitor properties, may increase the risk of seizures due to its innate potential to lower the seizure threshold, which is thought to be primarily caused by its inhibition of the norepinephrine transporter.”); ANGELA CARTER, OPAB PSILOCYBIN RECIPIENT SCREENING TOOLS AND CONSIDERATIONS (2021), available at <https://www.oregon.gov/oha/PH/PREVENTIONWELLNESS/Documents/OPAB%20psilocybin%20recipient%20screening%20tools.pdf> (listing the following as physical conditions with a possible direct concern for psilocybin use: “Concomitant use of certain medications/drugs (MAOI, Tramadol, Haloperidol, other psychedelics, methamphetamines, etc, see psilocybin/drug interaction chart”).

¹² See Theresa M. Carbonaro et al., *Survey Study of Challenging Experiences After Ingesting Psilocybin Mushrooms: Acute and Enduring Positive and Negative Consequences*, 30 J. PSYCHOPHARMACOLOGY 1268, 1275-76 (2016) (identifying, in a survey of about 2,000 people who experienced challenging psilocybin experience, three respondents who self-reported the “onset of enduring and impairing psychotic symptoms,” one of whom reported later receiving a diagnosis of schizophrenia and another of whom reported later receiving diagnoses of bipolar disorder and post-traumatic stress disorder); Filip Tylš et al., *Psilocybin – Summary of Knowledge and New Perspectives*, 24 EUR. NEUROPSYCHOPHARMACOLOGY 342, 349 (2014) (discussing the evidence of psilocybin triggering psychotic episodes or accentuating psychotic symptoms); Matthew W. Johnson et al., *Human Hallucinogen Research: Guidelines for Safety*, 22 J. OF PSYCHOPHARMACOLOGY 603, 607-08 (2008) (discussing the evidence that psychedelics may provoke the onset of prolonged psychosis, lasting days or even months, which generally occurred in people who consumed LSD, not psilocybin, and noting that these reactions are rare and that it is unclear whether the precipitation of psychosis

candidates for psilocybin services. However, because psilocybin promotes neuroplasticity, it cannot be ruled out that psilocybin could be beneficial for some people with schizophrenia, bipolar disorder, and other conditions, or certain subpopulations of these communities.

Psilocybin also carries a risk of challenging psychedelic experiences, which can be unpleasant and, in some cases, even traumatic.¹³ Adverse effects may include feelings of anxiety, confusion, disorientation, memory loss, and isolation.¹⁴ However, research suggests that these effects are usually temporary and mild.¹⁵ Moreover, these feelings, and the features and characteristic of challenging psychedelic experience generally, may not always be harmful per se;¹⁶ instead, they may in some cases be essential parts of the experiences that provide meaningful and rewarding conflict and resolution.

A variety of sources support this conclusion. First, psychotherapists studying psychedelics in clinical trials have reported that the resolution of challenging experiences “may result in

in these susceptible individuals represents a psychotic reaction that would have never occurred in the absence of psychedelic use, or whether it represents an earlier onset of a psychotic break that would have inevitably occurred).

¹³ See, e.g., Ingmar Gorman et al., *Psychedelic Harm Reduction and Integration: A Transtheoretical Model for Clinical Practice*, FRONTIERS IN PSYCHOLOGY, Mar. 15, 2021, at 8 (stating that some challenging psilocybin experiences can be “negative or even traumatic”); Bheatrix Bienemann et al., *Self-Reported Negative Outcomes of Psilocybin Users: A Quantitative Textual Analysis*, PLOS ONE, Feb. 21, 2020, at 2; *How Can We Reduce the Harms Associated with Using Psilocybin Mushrooms?*, DRUG POL’Y ALL., <https://drugpolicy.org/drug-facts/reduce-harms-psilocybin-mushrooms> (last accessed Oct. 22, 2021, 11:38 AM); *Mushrooms Psilocybin*, DANCESAFE, <https://dancesafe.org/magic-mushrooms/> (last accessed Oct. 22, 2021, 11:40 AM).

¹⁴ See, e.g., Ingmar Gorman et al., *Psychedelic Harm Reduction and Integration: A Transtheoretical Model for Clinical Practice*, FRONTIERS IN PSYCHOLOGY, Mar. 15, 2021, at 8 (“For example, regarding psilocybin use, certain cognitive states (e.g., preoccupation and confusion) are correlated with memorable, adverse experiences linked to feelings of discomfort, vulnerability, and fear.” (internal citation omitted)); *How Can We Reduce the Harms Associated with Using Psilocybin Mushrooms?*, DRUG POL’Y ALL., <https://drugpolicy.org/drug-facts/reduce-harms-psilocybin-mushrooms> (last accessed Oct. 22, 2021, 11:38 AM); *Mushrooms Psilocybin*, DANCESAFE, <https://dancesafe.org/magic-mushrooms/> (last accessed Oct. 22, 2021, 11:40 AM).

¹⁵ See, e.g., THE OREGON PSILOCYBIN EVIDENCE REVIEW WRITING GROUP, OREGON PSILOCYBIN ADVISORY BOARD RAPID EVIDENCE REVIEW AND RECOMMENDATIONS 9-10 (2021), available at https://www.oregon.gov/oha/PH/PREVENTIONWELLNESS/Documents/Psilocybin%20evidence%20report%20to%20OHA%206-30-21_Submitted.pdf (“Examples of transient adverse physical effects include nausea, vomiting, headache, increases in heart rate, increases in blood pressure, and QT interval prolongation (a change in electrical conduction in the heart). . . . Examples of transient psychological effects include grief, anxiety or fear, feelings of insanity, feelings of isolation, preoccupation with death, transient thought disorder, and transient paranoia. Some of the transient adverse effects listed above can co-occur with transient and lasting benefits.” (internal footnotes omitted)); Theresa M. Carbonaro et al., *Survey Study of Challenging Experiences After Ingesting Psilocybin Mushrooms: Acute and Enduring Positive and Negative Consequences*, 30 J. PSYCHOPHARMACOLOGY 1268, 1274 (2016) (finding, in a survey regarding the single most challenging psilocybin experience among people who had had such experiences, that only a quarter of respondents reported experiencing a week or more of fear, anxiety, depression, paranoia, and/or “other” negative psychological symptoms and only 10% reported experiencing such symptoms for a year or more).

¹⁶ See, e.g., THE OREGON PSILOCYBIN EVIDENCE REVIEW WRITING GROUP, OREGON PSILOCYBIN ADVISORY BOARD RAPID EVIDENCE REVIEW AND RECOMMENDATIONS 9 (2021), available at https://www.oregon.gov/oha/PH/PREVENTIONWELLNESS/Documents/Psilocybin%20evidence%20report%20to%20OHA%206-30-21_Submitted.pdf (“We also emphasize that many of these effects have not been definitively linked to any actual harms and some (e.g., anxiety) might be positively correlated with therapeutic benefit.”).

attribution of meaning, spiritual significance, and increased life satisfaction, sometimes described as catharsis.”¹⁷ Second, when Rick Doblin conducted a long-term follow-up survey to Walter Pahnke’s “Good Friday Experiment,” respondents reported that, compared to their subsequent experiences of a mystical nature that did not involve substances, the ones they experienced after consuming psilocybin were “both more intense and composed of a wider emotional range,” often including “moments of great fear, agony and self-doubt.”¹⁸ Nevertheless, “[e]ach of the psilocybin subjects felt that the experience had significantly affected his life in a positive way and expressed appreciation for having participated in the experiment.”¹⁹

Finally, researchers from Johns Hopkins University School of Medicine administered an online survey to approximately 2,000 people who had endured challenging experiences after consuming psilocybin mushrooms.²⁰ Participants answered questions about their “single most psychologically difficult or challenging [psilocybin] experience.”²¹ Strikingly similar numbers of participants indicated that the experience was among the “most psychologically difficult or challenging” experiences of their lives as indicated that it was among the “most personally meaningful” and “most spiritually significant” experiences of their lives.²² The survey further found that 84% of respondents reported that they benefited from their single-most challenging psilocybin experience, 76% reported that it led to increases in current well-being and life satisfaction, and 46% reported that they would want to repeat the experience, including the challenging portions.²³ Still, for a small percentage of participants, the experience was overwhelmingly negative, with several respondents indicating that it caused long-term negative psychological symptoms.²⁴

¹⁷ Theresa M. Carbonaro et al., *Survey Study of Challenging Experiences After Ingesting Psilocybin Mushrooms: Acute and Enduring Positive and Negative Consequences*, 30 J. PSYCHOPHARMACOLOGY 1268, 1276 (2016) (internal citation omitted) (citing WILLIAM RICHARDS, SACRED KNOWLEDGE: PSYCHEDELICS AND RELIGIOUS EXPERIENCES (2015)).

¹⁸ Rick Doblin, *Pahnke’s “Good Friday Experiment”: A Long-Term Follow-Up and Methodological Critique*, 23 J. OF TRANSPERSONAL PSYCH. 1, 13-14 (1991).

¹⁹ Rick Doblin, *Pahnke’s “Good Friday Experiment”: A Long-Term Follow-Up and Methodological Critique*, 23 J. OF TRANSPERSONAL PSYCH. 1, 14 (1991).

²⁰ Theresa M. Carbonaro et al., *Survey Study of Challenging Experiences After Ingesting Psilocybin Mushrooms: Acute and Enduring Positive and Negative Consequences*, 30 J. PSYCHOPHARMACOLOGY 1268 (2016).

²¹ Theresa M. Carbonaro et al., *Survey Study of Challenging Experiences After Ingesting Psilocybin Mushrooms: Acute and Enduring Positive and Negative Consequences*, 30 J. PSYCHOPHARMACOLOGY 1268 (2016).

²² See Theresa M. Carbonaro et al., *Survey Study of Challenging Experiences After Ingesting Psilocybin Mushrooms: Acute and Enduring Positive and Negative Consequences*, 30 J. PSYCHOPHARMACOLOGY 1268, 1271, 1275-76 (2016) (stating that 62% of respondents placed the experience in the top ten most “psychologically difficult or challenging” experiences of their lives, 39% placed it top five, and 11% placed it number one, while 62%, 39%, and 11% placed it top ten, five, and one, respectively, “most personally meaningful” experiences and 31% and 8.6% place it top five and one, respectively, “most spiritually significant” experiences).

²³ Theresa M. Carbonaro et al., *Survey Study of Challenging Experiences After Ingesting Psilocybin Mushrooms: Acute and Enduring Positive and Negative Consequences*, 30 J. PSYCHOPHARMACOLOGY 1268, 1271, 1276 (2016).

²⁴ See, e.g., Theresa M. Carbonaro et al., *Survey Study of Challenging Experiences After Ingesting Psilocybin Mushrooms: Acute and Enduring Positive and Negative Consequences*, 30 J. PSYCHOPHARMACOLOGY 1268, 1271, 1274 (2016) (finding, in a survey regarding the single most challenging psilocybin experience among people who had

With these potential harms in mind, several organizations have made harm-reduction resources available online and elsewhere.²⁵ The existing psilocybin harm-reduction literature and resources advance the solutions discussed below.

Education. By providing users with knowledge of the risks inherent in psilocybin use, education can empower users to protect themselves, whether by avoiding poisonous or potentially adulterated or contaminated sources of psilocybin, avoiding potentially dangerous situations while under the influence of psilocybin, and avoiding psilocybin altogether for those taking certain medications and those with personal or family histories of certain mental-health conditions.²⁶ Education can also help mitigate the harms associated with challenging experiences by:

had such experiences, that a quarter of respondents reported experiencing a week or more of fear, anxiety, depression, paranoia, and/or “other” negative psychological symptoms; that 10% reported experiencing such symptoms for a year or more; that 8% reported that their challenging experience led to decreases in their long-term wellbeing and life satisfaction; that three individuals reported that their challenging experience triggered the “onset of enduring and impairing psychotic symptoms”; and that three individuals reported attempting suicide as a result of their challenging experience). Note, however, that, overall, the Johns Hopkins survey included “evidence of both increased suicidality (five cases) and decreased suicidality (six cases).” *Id.* at 1274; *cf. also* Peter S. Hendricks et al., *Psilocybin, Psychological Distress, and Suicidality*, 29 J. OF PSYCHOPHARMACOLOGY 1041, 1043 (2015) (finding, in a survey of American adults, that lifetime use of psilocybin correlated significantly reduced odds of current psychological distress or suicidality).

Note also that the rates of negative experiences found in the Johns Hopkins survey “are likely much higher than the expected population rates of problems with a single exposure to psilocybin because survey participants completed the survey based on their worst ‘bad trip,’ with participants reporting a median of 6-10 prior psilocybin experiences.” *Id.* at 1275-76. Indeed, the rates and severity of acute and enduring problems in the Johns Hopkins survey are far higher than those observed in laboratory settings, where researchers administer psilocybin to carefully screened, well-prepared, and closely monitored volunteers. *Id.* at 1276 (citing Matthew W. Johnson et al., *Pilot Study of the 5-HT_{2A}R Agonist Psilocybin in the Treatment of Tobacco Addiction*, 28 J. of Psychopharmacology 983 (2014); Roland R. Griffiths et al., *Psilocybin Occasioned Mystical-Type Experiences: Immediate and Persisting Dose-Related Effects*, 218 PSYCHOPHARMACOLOGY 649 (2011); Erich Studerus et al., *Psychometric Evaluation of the Altered States of Consciousness Rating Scale (OAV)*, PLOS ONE, vol. 5, iss. 8, Aug. 31, 2010; Roland R. Griffiths et al., *Mystical-Type Experiences Occasioned by Psilocybin Mediate the Attribution of Personal Meaning and Spiritual Significance 14 Months Later*, 22 J. OF PSYCHOPHARMACOLOGY 621 (2008); Roland R. Griffiths et al., *Psilocybin Can Occasion Mystical-Type Experiences Having Substantial and Sustained Personal Meaning and Spiritual Significance*, 187 PSYCHOPHARMACOLOGY 268 (2006)).

Note, finally, that the Johns Hopkins researchers state that “because recruiting for the survey was primarily conducted via psychedelic-focused internet media, the participant sample was likely biased toward individuals with current favorable interest in psychedelic drugs. As such, the survey may have underestimated the severity of negative effects because individuals who had severe negative effects would be less likely to have heard about the survey.” *Id.* at 1277.

²⁵ See, e.g., *How Can We Reduce the Harms Associated with Using Psilocybin Mushrooms?*, DRUG POL’Y ALL., <https://drugpolicy.org/drug-facts/reduce-harms-psilocybin-mushrooms> (last accessed Oct. 22, 2021, 11:38 AM); *Mushrooms Psilocybin*, DANCESAFE, <https://dancesafe.org/magic-mushrooms/> (last accessed Oct. 22, 2021, 11:40 AM); *Psilocybin Mushrooms*, HARM REDUCTION TO, <https://harmreductionto.ca/psilocybin-mushrooms> (last accessed Oct. 22, 2021, 1:30 PM); *About*, ZENDO PROJECT, <https://zendoproject.org/about/> (last accessed Oct. 22, 2021, 2:48 PM).

²⁶ See, e.g., *How Can We Reduce the Harms Associated with Using Psilocybin Mushrooms?*, DRUG POL’Y ALL., <https://drugpolicy.org/drug-facts/reduce-harms-psilocybin-mushrooms> (last accessed Oct. 22, 2021, 11:38 AM).

- Making people who consume psilocybin aware that challenging experiences can happen; advising them to embrace difficult thoughts or emotions, rather than avoiding them; and encouraging them to seek help from others should they need it.²⁷
- Emphasizing that people who consume psilocybin should be mindful of *set and setting*, which can significantly impact on the nature and course of a psychedelic experience.²⁸ In other words, users should take care to establish the appropriate mindset before taking psychedelics and find the appropriate physical and social setting for the experience.²⁹
- Technology can potentially be used to prepare people for psychedelic experiences.

AM); *Mushrooms Psilocybin*, DANCESAFE, <https://dancesafe.org/magic-mushrooms/> (last accessed Oct. 22, 2021, 11:40 AM); *Psilocybin Mushrooms*, HARM REDUCTION TO, <https://harmreductionto.ca/psilocybin-mushrooms> (last accessed Oct. 22, 2021, 1:30 PM).

²⁷ See, e.g., Theresa M. Carbonaro et al., *Survey Study of Challenging Experiences After Ingesting Psilocybin Mushrooms: Acute and Enduring Positive and Negative Consequences*, 30 J. PSYCHOPHARMACOLOGY 1268, 1271, 1276 (2016) (finding, in a survey of approximately 2000 people who had endured challenging psilocybin experiences, that “personal meaning, spiritual significance, and increases in well-being all positively and significantly related to difficulty of experience” and all three of these outcome measures “significantly negatively related” to the duration of the difficult the experience); *id.* at 1274 (finding that strategies attempted to stop the challenging experience “were only modestly effective”); Filip Tylš et al., *Psilocybin – Summary of Knowledge and New Perspectives*, 24 EUR. NEUROPSYCHOPHARMACOLOGY 342, 349 (2014) (explaining that the harms associated with psilocybin can be significantly reduced by “educating [the] individual”); Ingmar Gorman et al., *Psychedelic Harm Reduction and Integration: A Transtheoretical Model for Clinical Practice*, FRONTIERS IN PSYCHOLOGY, Mar. 15, 2021, at 7 (discussing the importance of expectation management); *How Can We Reduce the Harms Associated with Using Psilocybin Mushrooms?*, DRUG POL’Y ALL., <https://drugpolicy.org/drug-facts/reduce-harms-psilocybin-mushrooms> (last accessed Oct. 22, 2021, 11:38 AM) (“[I]f someone makes the decision to use psilocybin mushrooms, it is important for that person to be prepared to deal with unusual – and perhaps even challenging – thoughts, images, and feelings in an open and thoughtful manner.”); *Can You Overdose on Mushrooms?*, ARETE RECOVERY, <https://areterecovery.com/psilocybin/overdose/> (last accessed Oct. 22, 2021, 2:31 PM) (stating that severe side effects are more common among those who do not know what to expect).

²⁸ See, e.g., THE OREGON PSILOCYBIN EVIDENCE REVIEW WRITING GROUP, OREGON PSILOCYBIN ADVISORY BOARD RAPID EVIDENCE REVIEW AND RECOMMENDATIONS 9-10 (2021), available at https://www.oregon.gov/oha/PH/PREVENTIONWELLNESS/Documents/Psilocybin%20evidence%20report%20to%20OHA%206-30-21_Submitted.pdf (“Many adverse incidents and crises related to psychedelics can be prevented by increasing public education and awareness around the importance of set and setting, preparation and integration, and providing tools and knowledge that increase the likelihood of safer use.”); Ingmar Gorman et al., *Psychedelic Harm Reduction and Integration: A Transtheoretical Model for Clinical Practice*, FRONTIERS IN PSYCHOLOGY, Mar. 15, 2021, at 6-9 (discussing the importance of set and setting); Filip Tylš et al., *Psilocybin – Summary of Knowledge and New Perspectives*, 24 EUR. NEUROPSYCHOPHARMACOLOGY 342, 349 (2014) (explaining that the harms associated with psilocybin can be significantly reduced by taking proper care of set and setting).

²⁹ See, e.g., Theresa M. Carbonaro et al., *Survey Study of Challenging Experiences After Ingesting Psilocybin Mushrooms: Acute and Enduring Positive and Negative Consequences*, 30 J. PSYCHOPHARMACOLOGY 1268, 1272-74 (2016) (finding, in a survey of approximately 2000 people who had endured challenging psilocybin experiences, that emotional state before ingesting psilocybin mushrooms, physical comfort of setting, and social support present during the session were significantly negatively correlated with both the degree of difficulty and duration of challenging experiences); Jan van Amsterdam et al., *Harm Potential of Magic Mushroom Use: A Review*, 59 REGULATORY TOXICOLOGY & PHARMACOLOGY 423, 425 (2011) (discussing the importance of set and setting).

- Clarifying the appropriate dose for each person’s intended experience. The incidence of both challenging experiences and mystical experiences appear to increase with the dosage.³⁰ Some people may seek intense and even challenging experiences; others may want more limited “aesthetic experiences” or to take a subperceptual “microdose” of psilocybin.³¹ Allowing for different doses allows clients to have different types of experiences depending on their goals.³²
- Informing users that it is a best practice to have a facilitator (colloquially, a “trip sitter”) present to help them through challenging experiences and prevent them from engaging in potentially harmful behaviors.³³ This is especially true as the dose of psilocybin administered increases.³⁴

³⁰ See Theresa M. Carbonaro et al., *Survey Study of Challenging Experiences After Ingesting Psilocybin Mushrooms: Acute and Enduring Positive and Negative Consequences*, 30 J. PSYCHOPHARMACOLOGY 1268, 1272-74 (2016) (finding, consistent with laboratory studies, that the frequency of challenging experiences increases with the dose) (citing Erich Studerus et al., *Prediction of Psilocybin Response in Healthy Volunteers*, PLOS ONE, vol. 7, Feb. 17, 2012; Roland R. Griffiths et al., *Psilocybin Occasioned Mystical-Type Experiences: Immediate and Persisting Dose-Related Effects*, 218 PSYCHOPHARMACOLOGY 649 (2011)); Ingmar Gorman et al., *Psychedelic Harm Reduction and Integration: A Transtheoretical Model for Clinical Practice*, FRONTIERS IN PSYCHOLOGY, Mar. 15, 2021, at 7, 8 (discussing the importance of dose); Erich Studerus, *Acute, Subacute and Long-Term Subjective Effects of Psilocybin in Healthy Humans: A Pooled Analysis of Experimental Studies*, 25 JOURNAL OF PSYCHOPHARMACOLOGY 1434, 1449 (2011) (finding that challenging experiences occurred “in a small proportion of subjects in the two highest dose conditions”); Bheatrix Bienemann et al., *Self-Reported Negative Outcomes of Psilocybin Users: A Quantitative Textual Analysis*, PLOS ONE, Feb. 21, 2020, at 10.

³¹ See Ingmar Gorman et al., *Psychedelic Harm Reduction and Integration: A Transtheoretical Model for Clinical Practice*, FRONTIERS IN PSYCHOLOGY, Mar. 15, 2021, at 7, 8 (discussing the importance of dose); Toby Lea et al., *Microdosing Psychedelics: Motivations, Subjective Effects and Harm Reduction*, INT. J. DRUG POLICY, Jan. 2020 (discussing microdosing); Toby Lea et al., *Psychedelic Microdosing: A Subreddit Analysis*, 52 J. PSYCHOACTIVE DRUGS 101 (2020) (same).

³² See, e.g., Ingmar Gorman et al., *Psychedelic Harm Reduction and Integration: A Transtheoretical Model for Clinical Practice*, FRONTIERS IN PSYCHOLOGY, Mar. 15, 2021, at 7, 8 (discussing the importance of dose); *How Can We Reduce the Harms Associated with Using Psilocybin Mushrooms?*, DRUG POL’Y ALL., <https://drugpolicy.org/drug-facts/reduce-harms-psilocybin-mushrooms> (last accessed Oct. 22, 2021, 11:38 AM); *Mushrooms Psilocybin*, DANCESAFE, <https://dancesafe.org/magic-mushrooms/> (last accessed Oct. 22, 2021, 11:40 AM); *Psilocybin Mushrooms*, HARM REDUCTION TO, <https://harmreductionto.ca/psilocybin-mushrooms> (last accessed Oct. 22, 2021, 1:30 PM).

³³ See, e.g., Filip Tylš et al., *Psilocybin – Summary of Knowledge and New Perspectives*, 24 EUR. NEUROPSYCHOPHARMACOLOGY 342, 349 (2014) (explaining that the harms associated with psilocybin can be significantly reduced by “building rapport” with an experienced sitter).

³⁴ See Theresa M. Carbonaro et al., *Survey Study of Challenging Experiences After Ingesting Psilocybin Mushrooms: Acute and Enduring Positive and Negative Consequences*, 30 J. PSYCHOPHARMACOLOGY 1268, 1272-74 (2016) (finding, in a survey of approximately 2000 people who had endured challenging psilocybin experiences, that the presence of a facilitator was significantly negatively correlated with duration of difficult experience, but not with degree of difficulty, a combination that appeared to increase the likelihood that respondents found personal meaning, spiritual significance, and increases in well-being in their challenging experiences).

- Advising users to avoid consuming psilocybin in conjunction with other substances or to proceed with caution if they choose to consume them together. The conventional wisdom is that certain substances mix better with psilocybin than others,³⁵ but these combinations are not well understood from a medical or scientific perspective.³⁶ In addition to the evidence cited above that consuming psilocybin mushrooms while taking certain medications can cause adverse reactions,³⁷ the conventional wisdom is that even purportedly “good” combinations of substances require special attention to dosing, given the potential for each substance to enhance the other’s effects.³⁸

Testing substances. One of the harm reduction measures offered by non-profit organizations like DanceSafe and Bunk Police is substance testing at music festivals and other events, as well as the sale of testing kits for use at home.³⁹ These tests determine the type of substance (not its potency) to assess whether it has been adulterated or misrepresented by the underground sources from which it was obtained.⁴⁰ Reports suggest that underground sources frequently adulterate or misrepresent the content of formulations that are purported to contain

³⁵ See Geoffrey P. Hunt et al., *Combining Different Substances in the Dance Scene: Enhancing Pleasure, Managing Risk and Timing Effects*, 39 J. OF DRUG ISSUES 495, 503 (2009) (discussing lay reports regarding the combination of various substances); *Drug Combinations*, TRIPSIT, <https://combo.tripsit.me> (last accessed Nov. 16, 2021, 11:08 AM) (same); *Psilocybin Mushrooms*, PSYCHONAUTWIKI, https://psychonautwiki.org/wiki/Psilocybin_mushrooms#cite_ref-7 (last accessed Oct. 22, 2021, 2:44 PM) (discussing the combination of psilocybin mushrooms with other substances); *Drug Combinations*, TRIPSIT, <https://combo.tripsit.me> (last accessed Oct. 22, 2021, 2:46 PM) (same).

³⁶ See Jan van Amsterdam et al., *Harm Potential of Magic Mushroom Use: A Review*, 59 REGULATORY TOXICOLOGY & PHARMACOLOGY 423, 425 (2011) (stating that “it is speculated” that consuming psilocybin mushrooms in combination with other psychoactive substances, including alcohol, may increase the risk of challenging experiences).

³⁷ See *supra* note 36 and accompanying text.

³⁸ See Geoffrey P. Hunt et al., *Combining Different Substances in the Dance Scene: Enhancing Pleasure, Managing Risk and Timing Effects*, 39 J. OF DRUG ISSUES 495, 503 (2009) (discussing lay reports regarding the combination of various substances); *Drug Combinations*, TRIPSIT, <https://combo.tripsit.me> (last accessed Nov. 16, 2021, 11:08 AM) (same); *Psilocybin Mushrooms*, PSYCHONAUTWIKI, https://psychonautwiki.org/wiki/Psilocybin_mushrooms#cite_ref-7 (last accessed Oct. 22, 2021, 2:44 PM) (discussing the combination of psilocybin mushrooms with other substances); *Drug Combinations*, TRIPSIT, <https://combo.tripsit.me> (last accessed Oct. 22, 2021, 2:46 PM) (same); see also Theresa M. Carbonaro et al., *Survey Study of Challenging Experiences After Ingesting Psilocybin Mushrooms: Acute and Enduring Positive and Negative Consequences*, 30 J. PSYCHOPHARMACOLOGY 1268, 1272-74 (2016) (finding, in a survey of approximately 2000 people who had endured challenging psilocybin experiences, that the use of cannabis and/or another mood-altering substances (excluding nicotine) immediately before or during the session were significantly negatively correlated with difficulty of experience, but not with duration of difficult experience, a combination that appeared to reduce the likelihood that respondents found personal meaning or spiritual significance in the challenging experience and appeared to increase the likelihood that the experience reduced their long-term well-being).

³⁹ See *Drug Checking*, DANCESAFE, <https://dancesafe.org/drug-checking/> (last accessed Nov. 15, 2021, 12:27 PM) (describing DanceSafe’s testing products and services); *Home*, BUNK POLICE, <https://bunkpolice.com> (last accessed Nov. 15, 2021, 12:39 PM) (discussing Bunk Police’s testing products and services).

⁴⁰ See, e.g., *Home*, ANKORS, <https://www.ankorsvolunteer.com> (last accessed Nov. 15, 2021, 12:44 PM) (providing a spreadsheet listing substance test results from Shambhala Music Festival).

MDMA, and lab tests often reveal a range of substances from methamphetamine, and other non-MDMA phenethylamines, to caffeine, cocaine, “unknown substance[s],” and beyond.⁴¹

The most concerning adulterant in recent years has been fentanyl, a powerful opioid that has caused countless overdoses, many fatal, and that has adulterated not only heroin but also cocaine, cannabis, and other substances.⁴² The record number of U.S. overdose deaths documented in the past year (over 100,000), are largely due to fentanyl adulteration. Fentanyl comes with an increased overdose risk, even among experienced opioid users, because the substance is far stronger than heroin and often present in unpredictable amounts in heroin and other opioids.⁴³ Fentanyl also poses a danger to those who consume non-opioid substances, who may have no expectation that their substance would contain opioids and no tolerance to that class of substances.⁴⁴

Access to support. Another harm reduction approach for psilocybin consumption involves ensuring that people have access to healthcare and other types of support. Prohibition and stigma can lead people who use substances, including psilocybin, to avoid seeking help when they need it, especially from readily accessible source including hospitals, healthcare providers, and family members.

Some non-profit groups have tried to fill this void. The Fireside Project, for example, is a peer-support line based in San Francisco that launched in the spring of 2021.⁴⁵ The Project’s trained volunteers are available during select hours five days a week—the Fireside Project seeks to expand to 24/7 coverage next year—to provide emotional or other support by call or text for those currently having a psychedelic experience, those currently supporting others’ psychedelic

⁴¹ See, e.g., *Drug Checking*, DANCESAFE, <https://dancesafe.org/drug-checking/> (last accessed Nov. 15, 2021, 12:27 PM) (stating that “[t]he MDMA market, in particular, is a highly adulterated illicit drug market” and identifying adulterants found in substances represented as MDMA); *Home*, ANKORS, <https://www.ankorsvolunteer.com> (last accessed Nov. 15, 2021, 12:44 PM) (providing a spreadsheet listing substance test results from Shambhala Music Festival).

⁴² See, e.g., Jennifer Percy, *Trapped by the ‘Walmart of Heroin,’* N.Y. TIMES (Oct. 10, 2018), <https://www.nytimes.com/2018/10/10/magazine/kensington-heroin-opioid-philadelphia.html> (discussing heroin adulterated with fentanyl); Caroline Lewis, *Overdoses Involving Cocaine and Fentanyl Are on the Rise*, NPR (July 7, 2021, 2:11 PM), <https://www.npr.org/2021/07/05/1013203805/party-drugs-are-being-increasingly-laced-with-fentanyl> (discussing cocaine and other substances adulterated with fentanyl); Associated Press, *New York State Issues Alert over Fentanyl-Laced Marijuana*, N.Y. DAILY NEWS (Apr. 12, 2019, 12:05 PM), <https://www.nydailynews.com/news/ny-fentanyl-marijuana-20190412-yunty6yigjfdvcju2lg3tvvyhxe-story.html> (discussing marijuana adulterated with fentanyl).

⁴³ See, e.g., Jennifer Percy, *Trapped by the ‘Walmart of Heroin,’* N.Y. TIMES (Oct. 10, 2018), <https://www.nytimes.com/2018/10/10/magazine/kensington-heroin-opioid-philadelphia.html>.

⁴⁴ See, e.g., Caroline Lewis, *Overdoses Involving Cocaine and Fentanyl Are on the Rise*, NPR (July 7, 2021, 2:11 PM), <https://www.npr.org/2021/07/05/1013203805/party-drugs-are-being-increasingly-laced-with-fentanyl>.

⁴⁵ *Mission + Guiding Principles*, FIRESIDE PROJECT, <https://firesideproject.org/about> (last accessed Nov. 14, 2021, 5:21 PM); Abigail Covington, *Fireside Project Is a New Psychedelic Support Line Working to Ensure You Have a Good Trip*, ESQUIRE (Apr. 14, 2021), <https://www.esquire.com/lifestyle/health/a36118844/psychedelic-drug-trip-support-line-fireside-project/>.

experiences, and those seeking to process and integrate past psychedelic experiences.⁴⁶ [potential point of recommendation]

Other examples of non-profit efforts to expand access to help for those taking psilocybin and other psychedelics are the groups that tend to people having challenging psychedelic experiences at music festivals. The Multidisciplinary Association for Psychedelic Studies' (MAPS) *Zendo Project* is one such organization.⁴⁷ Since 2012, it has been offering a safe, calming space—as well as empathetic in-person peer support—for people having challenging psychedelic experiences while attending Burning Man and other music festivals around the world.⁴⁸ Shambhala, a Canadian music festival, provides similar services at its “Sanctuary”;⁴⁹ DanceWize NSW, an Australian harm-reduction organization provides similar services at Australian music festivals;⁵⁰ and Kosmicare, a Portuguese harm-reduction organization, provides similar services at Portugal’s Boom Festival, at Kosmicare’s location in Lisbon, and elsewhere.⁵¹

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⁴⁶ *Mission + Guiding Principles*, FIRESIDE PROJECT, <https://firesideproject.org/about> (last accessed Nov. 14, 2021, 5:21 PM); Abigail Covington, *Fireside Project Is a New Psychedelic Support Line Working to Ensure You Have a Good Trip*, ESQUIRE (Apr. 14, 2021), <https://www.esquire.com/lifestyle/health/a36118844/psychedelic-drug-trip-support-line-fireside-project/>; see also *Community Resources*, FIRESIDE PROJECT, <https://firesideproject.org/community> (last accessed Nov. 16, 2021; 11:10 AM) (listing other resources).

⁴⁷ See *About*, ZENDO PROJECT, <https://zendoproject.org/about/> (last accessed Nov. 14, 2021, 5:34 PM).

⁴⁸ See *Zendo Project: Psychedelic Peer Support*, ZENDO PROJECT, <https://zendoproject.org> (last accessed Nov. 14, 2021, 5:34 PM); Kristen Gwynne, *Meet the People Who Want to Make It Safer to Take Drugs at Festivals*, ROLLING STONE (Aug. 7, 2015, 6:41 PM), <https://www.rollingstone.com/music/music-news/meet-the-people-who-want-to-make-it-safer-to-take-drugs-at-festivals-49560/>.

Despite their usefulness, these and other harm reduction strategies, like substance testing, are widespread at American music festivals. That is because the “Rave Act” (formally, the Illicit Drug Anti-Proliferation Act) allows prosecutors to fine or imprison business owners, property owners, and event promoters for failing to prevent drug-related offenses at their events. *DEA Must Not Be Allowed to Chill Speech or Shut Down Electronic Music Events*, ACLU, <https://www.aclu.org/other/dea-must-not-be-allowed-chill-speech-or-shut-down-electronic-music-events> (last accessed Nov. 15, 2021, 4:00 PM). Several major music festivals have shut down harm reduction measures at their events for fear that those measures could be used as evidence that the organizers knew of drug use at the event and failed to prevent it. See, e.g., *Drug Checking*, DANCESAFE, <https://dancesafe.org/drug-checking/> (last accessed Nov. 15, 2021, 12:27 PM) (stating that fear of Rave Act liability has caused event organizers to prevent DanceSafe from providing harm-reduction services); *Bunkbot*, BUNK POLICE, <https://bunkpolice.com/bunkbot/> (last accessed Nov. 15, 2021, 12:37 PM) (similar).

⁴⁹ See *Harm Reduction*, SHAMBHALA MUSIC FESTIVAL, <https://shambhalamusicfestival.com/info/> (last accessed Nov. 14, 2021, 7:31 PM) (discussing the Sanctuary).

⁵⁰ *About Us*, DANCEWIZE, <https://www.dancewizensw.org.au/about-us> (last accessed Nov. 14, 2021, 8:18 PM) (stating that its “peer-based harm reduction services” include the “provision of care Spaces and roving teams at festivals”); *Volunteer*, DANCEWIZE, <https://www.dancewizensw.org.au/volunteer/> (last accessed Nov. 14, 2021, 8:21 PM) (discussing “Care Interventions,” which occur primarily in “Care Spaces”).

⁵¹ See *Kosmicare*, BOOM FESTIVAL, <https://boomfestival.org/boom2022/guide/kosmicare/> (last accessed Nov. 14, 2021, 6:19 PM) (discussing Kosmicare’s services at Boom Festival); *Drop-In*, KOSMICARE, <https://kosmicare.org/services?id=3> (last accessed Nov. 14, 2021, 6:23 PM) (discussing the services Kosmicare provides at its Lisbon location).

Fortunately, the psilocybin services program created by Measure 109 builds many of these harm-reduction strategies into its model.⁵² For example, the Oregon model includes an educational preparation session and support during the administration session provided by a trained and licensed psilocybin facilitator.⁵³ The OHA should ensure both that these aspects of its program fulfill their harm-reduction potential and that the program does not overlook other harm-reduction strategies.⁵⁴

⁵² See Brian Pilecki et al., *Ethical and Legal Issues in Psychedelic Harm Reduction and Integration Therapy*, HARM REDUCTION J., 2021, at 3-4, available at <https://harmreductionjournal.biomedcentral.com/track/pdf/10.1186/s12954-021-00489-1.pdf> (comparing the risk of harm associated with black-market psychedelic use and with psychedelic therapy).

⁵³ Brian Pilecki et al., *Ethical and Legal Issues in Psychedelic Harm Reduction and Integration Therapy*, HARM REDUCTION J., 2021, at 3-4, available at <https://harmreductionjournal.biomedcentral.com/track/pdf/10.1186/s12954-021-00489-1.pdf>; see also Theresa M. Carbonaro et al., *Survey Study of Challenging Experiences After Ingesting Psilocybin Mushrooms: Acute and Enduring Positive and Negative Consequences*, 30 J. PSYCHOPHARMACOLOGY 1268, 1276-77 (2016) (discussing the factors that likely contributed to the higher rates of acute and enduring problems reported in their survey than in laboratory studies, including the absence of psychological screening, inconsistent care given to set and setting, inconsistent use of a facilitator, and high rates of mixing psilocybin mushrooms with cannabis).

⁵⁴ Cf. Brian Pilecki et al., *Ethical and Legal Issues in Psychedelic Harm Reduction and Integration Therapy*, HARM REDUCTION J., 2021, at 1-6, 9, 11-12, available at <https://harmreductionjournal.biomedcentral.com/track/pdf/10.1186/s12954-021-00489-1.pdf> (discussing how traditional therapists can reduce the harms and maximize the benefits associated with their patients' illegal use of psychedelics); Ingmar Gorman et al., *Psychedelic Harm Reduction and Integration: A Transtheoretical Model for Clinical Practice*, FRONTIERS IN PSYCHOLOGY, Mar. 15, 2021, at 7-11 (same).