Evaluation of a Vermont Law Eliminating State Criminal Penalties for Possessing 224 Milligrams or Less of Buprenorphine

A report prepared by the Johns Hopkins Evaluation Team of the Bloomberg Overdose Prevention Initiative for Monica Hutt, Chief Prevention Officer, State of Vermont.

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Rehabilitation Services (HCRS), Martha's Kitchen, Northeast Kingdom Human Services, Franklin Grand Isle Restorative Justice Center, ANEW Place, Age Well, Northern Green Mountain Family Medicine

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Executive Summary

Vermont Act 46 repealed all criminal penalties for possessing 224 milligrams or less of buprenorphine for persons age 21 and older, effective June 1, 2021. Act 46 also established a "sunset" date of July 1, 2023, at which time criminal penalties for buprenorphine possession will be restored absent further legislative action. Vermont Executive Order 05-21 ordered the Chief Prevention Officer to evaluate the impact of Act 46.

This report investigates the use of non-prescribed buprenorphine in Vermont and the potential impact of decriminalization on the health and criminal justice experiences of people who use drugs in Vermont.

This investigation is comprised of two parts:

1. A survey of Vermont residents who used opioid drugs illicitly or participated in treatment for opioid use disorder in the past 90 days
2. A survey of Vermont clinicians who prescribed buprenorphine within the past year

A third component of the investigation – analyzing Vermont law enforcement incident reports involving buprenorphine – will be submitted separately.

Key goals include: examining the prevalence of non-prescribed buprenorphine and prescribed buprenorphine use among adults who use opioid drugs; describing the motivations for, and effects of, using non-prescribed buprenorphine; assessing support for buprenorphine decriminalization among two important constituencies affected by Act 46 – people who use drugs and the health care providers who serve them; assessing whether Act 46 has changed, or is likely to change, the behaviors of people who use drugs and the health care providers who serve

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them; and assessing whether Act 46 has changed, or is likely to change, the experiences people who use drugs have interacting with the criminal justice system.

In our survey of people who use opioid drugs or are in treatment for opioid use disorder, we found that about three quarters of respondents had ever taken buprenorphine that was not prescribed to them, mostly when trying to prevent the symptoms of withdrawal. A similar proportion had participated in buprenorphine treatment for opioid use disorder, and most respondents who had used both prescribed and non-prescribed buprenorphine said they started with non-prescribed buprenorphine. Nine in ten respondents who had used non-prescribed buprenorphine described doing so to prevent withdrawal symptoms, often at times when non-prescribed use was easier than obtaining a prescription or when respondents were facing barriers to care or interruptions in their treatment program. Respondents mostly described positive effects of using non-prescribed buprenorphine, mainly preventing withdrawal and other general health benefits, but also avoiding other drug use and better ability to maintain employment. Approximately two-thirds of respondents were not aware buprenorphine is decriminalized, and among the third who were aware, almost none said that decriminalization has caused them to either increase their use of non-prescribed buprenorphine or increase diverting their buprenorphine prescriptions to others. One in five respondents had been arrested at least once while in possession of buprenorphine, and one in ten had been punished for violating the terms of their parole or probation because of buprenorphine possession: both punishments were more common among respondents identifying with race/ethnic groups other than White non-Hispanic. Finally, eight in ten respondents supported decriminalization.

In our survey of healthcare providers who had recently prescribed buprenorphine, only three in five were aware buprenorphine was decriminalized. Just under half of prescribers believed

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decriminalization will increase the shares of their patients who use non-prescribed buprenorphine and who give, sell, or trade their prescribed buprenorphine to others. Despite this, almost no providers had changed the number of patients they prescribe to, the average days-supply they prescribe, or the average dose they prescribe, as a result of decriminalization. Nine in ten prescribers supported decriminalization.

Taken together, these findings suggest that buprenorphine decriminalization is a popular policy among two of the most important constituencies affected by the law: people who use opioid drugs and the providers who serve them. In the short term, it is unlikely Act 46 has substantially impacted the health of people who use drugs in Vermont because most people we surveyed were not aware buprenorphine is decriminalized and those who were aware have not changed their behaviors in any way because of the law. If Act 46 were to increase the use of non-prescribed buprenorphine among people who use opioid drugs, the evidence compiled here suggests this could have health benefits for people who use drugs. Respondents to our survey usually used non-prescribed buprenorphine to prevent withdrawal symptoms, often when accessing prescribed buprenorphine was difficult or when they had trouble accessing treatment. When they did use non-prescribed buprenorphine, respondents mostly described that it had positive effects on their lives, principally preventing withdrawal and helping them avoid other drugs. There is also no evidence that Act 46 will have the inadvertent effect of changing prescriber behavior, since prescribers mostly support the policy and say they have not changed their prescribing behavior since it was passed. Finally, Act 46 may be effective at reducing overall contact with the criminal justice system and reducing race-based disparities, because a non-trivial fraction of people who use drugs reported a history of criminal justice involvement

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associated with buprenorphine possession, and justice involvement related to buprenorphine was more common among respondents who were not White non-Hispanic.

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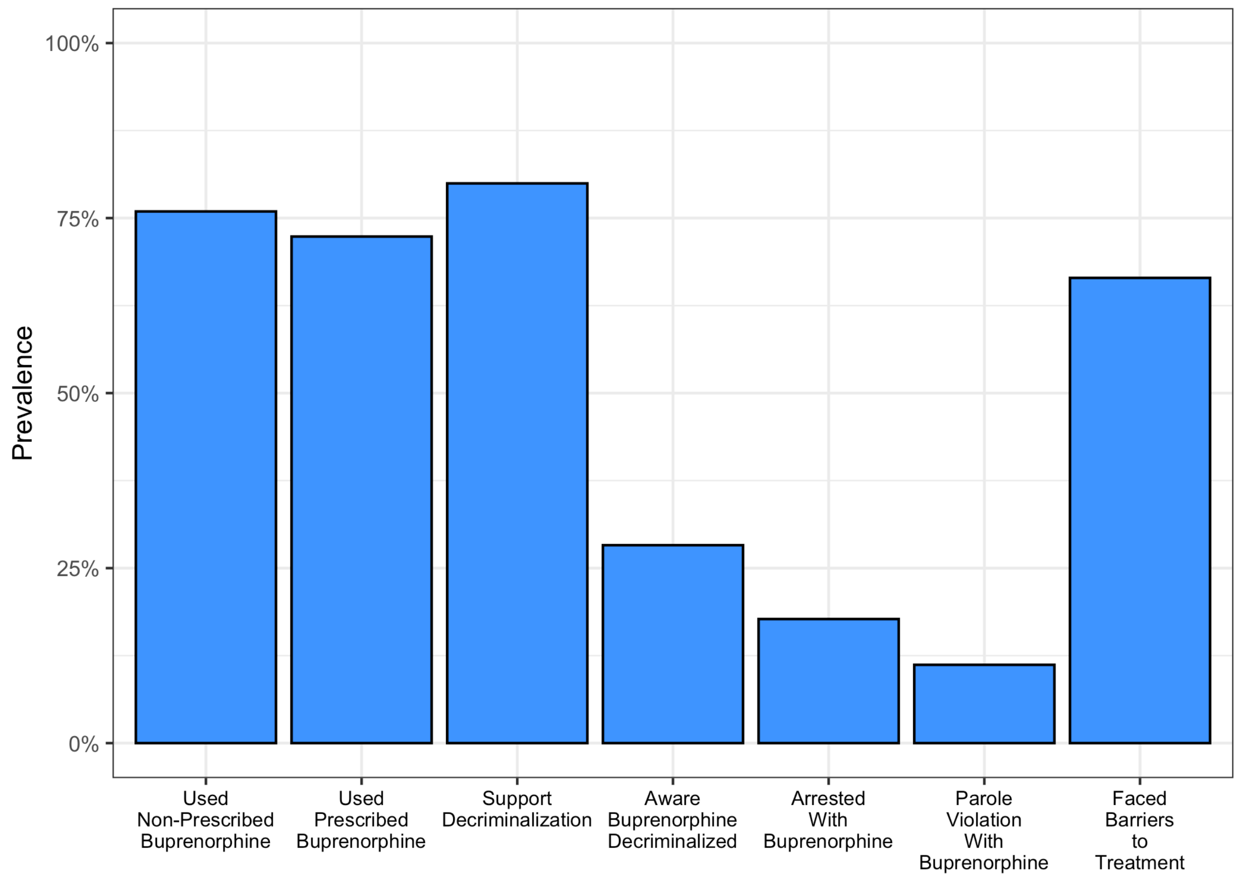
Summary Figure 1. Prevalence of beliefs about, and lifetime experiences with, non-prescribed buprenorphine in a sample of 474 Vermont residents who misused opioids or received medication treatment for opioid use disorder in the past 90 days



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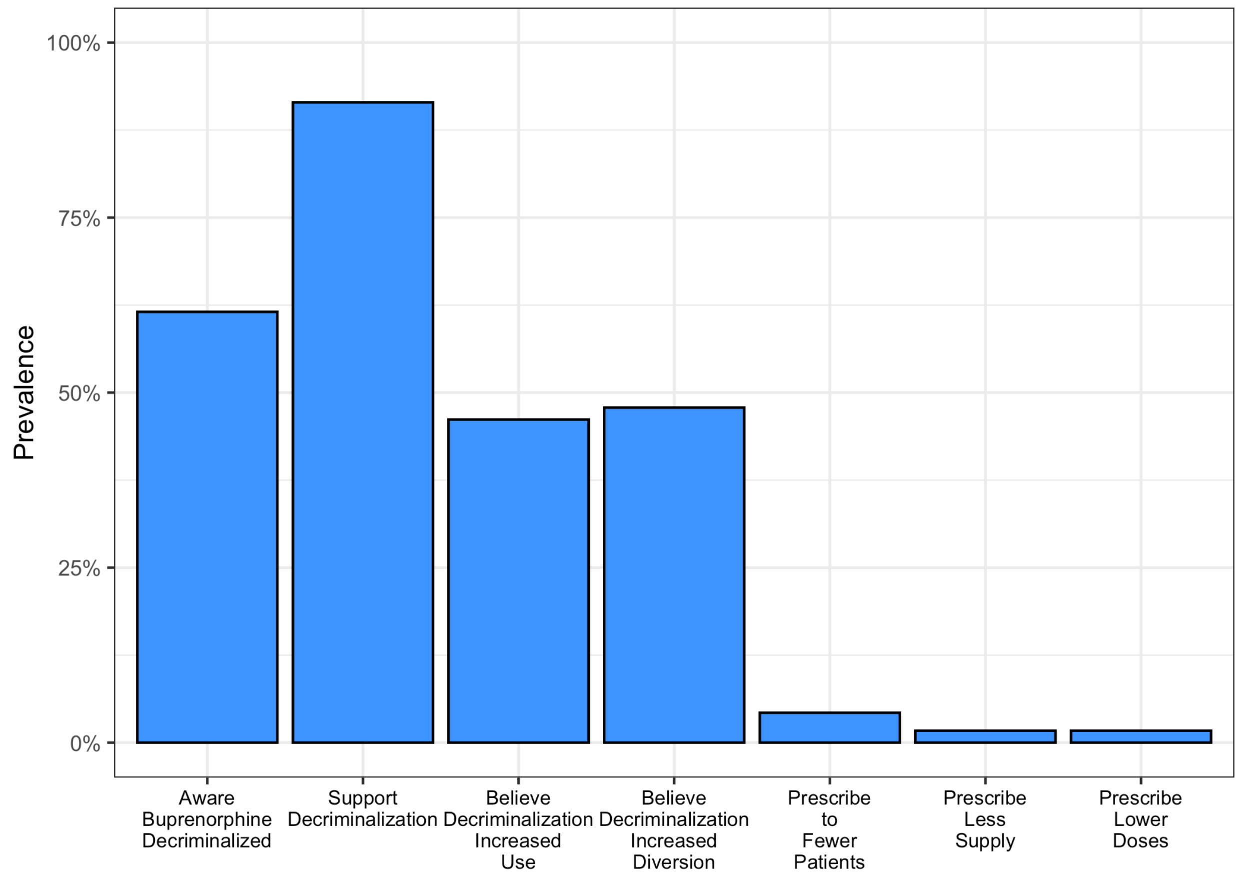
Summary Figure 2. Prevalence of beliefs about non-prescribed buprenorphine in a sample of 117 Vermont clinicians who have prescribed buprenorphine in the past year



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1. Statement of project goals and approach

On June 1, 2021, the State of Vermont enacted Act 46. This law repealed all criminal penalties for possessing 224 milligrams or less of buprenorphine for persons age 21 and older. Act 46 also established a "sunset" date of July 1, 2023, at which time criminal penalties for buprenorphine possession will be restored absent further legislative action.

On June 1, 2021, Governor Phil Scott also issued Executive Order 05-21, requiring Vermont's Chief Prevention Officer to assess and report back to the Governor on the impact of Act 46.

Chief Prevention Officer Monica Hutt and Health Commissioner Dr. Mark Levine entered into a partnership with a team of researchers at Johns Hopkins to conduct a multi-part investigation into the impacts of buprenorphine decriminalization in Vermont. We – the Johns Hopkins team – examined the health, safety, and criminal justice impacts of Act 46 by combining two modes of inquiry:

1. A survey of Vermont residents who used opioid drugs illicitly or participated in treatment for opioid use disorder in the past 90 days
2. A survey of Vermont clinicians who prescribed buprenorphine within the past year

A third part of our investigation – an analysis of incident reports documenting law enforcement incidents involving buprenorphine in Vermont – will be submitted separately.

The results of our investigation are presented in this report. Our goal is to provide evidence on key public health and criminal justice related outcomes that can inform the legislature's understanding of the early implementation context of Act 46. Our data do not, however, allow us to draw any comprehensive conclusions about the impact of Act 46 or to

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conclude whether decriminalization "worked." To that end, our report seeks to answer the following questions:

1. How common is non-prescribed buprenorphine use, and what characteristics are associated with non-prescribed buprenorphine use? Why do Vermont residents use non-prescribed buprenorphine, and what impact does non-prescribed buprenorphine have on their life?
2. How common is prescribed buprenorphine use and, among those with a prescription, how common is giving, selling, or trading those prescribed medications to others?
3. Are people who use opioids aware buprenorphine is decriminalized, and what characteristics are associated with awareness? Are people more likely to use non-prescribed buprenorphine or divert their buprenorphine prescription once they learn buprenorphine is decriminalized?
4. Do people who use opioids believe buprenorphine *should* be decriminalized, and if so why?
5. How common is criminal punishment for, or associated with, non-prescribed buprenorphine possession, and what characteristics are associated with punishment?
6. What barriers, historically, prevent Vermont residents from obtaining substance use treatment they want, and what are the consequences of not getting treatment?
7. Do providers waivered to prescribe buprenorphine in Vermont know buprenorphine is decriminalized?
8. Do providers waivered to prescribe buprenorphine in Vermont believe buprenorphine *should* be decriminalized, and if so why?

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9. Do providers who prescribe buprenorphine in Vermont believe that their patients are now, because of decriminalization, more likely to use non-prescribed buprenorphine? Or more likely to give, sell, or trade their buprenorphine to someone else?
10. Have providers changed the number of patients they prescribe to or average dosage or days supply they prescribe as a result of decriminalization?

We begin with a review of what is known from published scientific literature and publicly available data on the prevalence of non-prescribed buprenorphine use, why people choose to use non-prescribed buprenorphine, and what the health and social impacts of use are (Section 2). We then present the results of each of our studies: the survey of people who use opioid drugs (Section 3) and the survey of prescribers (Section 4). We conclude with a qualitative summary of our findings and discuss some of their possible implications for the State of Vermont as it considers whether criminal penalties for buprenorphine possession should be further extended (Section 5).

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2. Review of literature on non-prescribed buprenorphine

Buprenorphine is a partial opioid agonist that is one of three medications approved by the Food and Drug Administration (FDA) for the treatment of opioid use disorder, along with methadone (a full agonist) and naltrexone (an antagonist). There is substantial evidence that buprenorphine is effective for treating opioid use disorder. Patients receiving buprenorphine treatment for opioid use disorder are less likely to overdose or receive acute care related to opioid use as compared to patients not receiving treatment, receiving inpatient detoxification, in residential treatment, in intensive behavioral health treatment, on naltrexone, and on-intensive behavioral health treatment respectively; only methadone is comparably effective (1). Participation in buprenorphine treatment is also associated with improved patient social functioning, employment rates, and retention in treatment (2). Patients with opioid use disorder living with HIV who are engaged in treatment with buprenorphine or methadone are more likely to be adherent to anti-retroviral therapy and virally suppressed than patients not in medication treatment (3).

Despite its remarkable benefit for reducing overdose risk and improving functional and communicable disease outcomes, prescribing of buprenorphine is unusually restricted in the United States. Under federal law, buprenorphine is a Schedule III narcotic medication and is also subject to additional federal regulations under the Drug Addiction and Treatment Act of 2000 (DATA 2000). While in many countries, buprenorphine can be prescribed by a clinician similar to other medications, in the United States, clinicians wishing to prescribe buprenorphine to more than 30 patients must complete additional training and apply for a special waiver (4). Many patients have few waivered prescribers in-network (5), and struggle to get an initial appointment

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(6). Further, providers eligible to prescribe buprenorphine usually have a patient caseload below their maximum (7).

In the United States, buprenorphine is also among the medications most frequently diverted from people with a prescription to people without a prescription, and diversion has increased concomitantly with increases in prescriptions (8). However, research shows that it is people who experience opioid withdrawal symptoms who are most likely to use non-prescribed buprenorphine (9,10), and people who use non-prescribed buprenorphine and methadone usually do so to prevent symptoms of opioid withdrawal; few do so to experience euphoria (9,11–14). Most people who need opioid agonist treatment do not receive it (15), in part because of the access limitations noted above, and inability to access buprenorphine treatment is a strong predictor of illicit buprenorphine use (16). Most persons using illicit buprenorphine would prefer to receive their own prescription (17), and use of non-prescribed buprenorphine is often a precursor to obtaining a buprenorphine prescription (13). One study found frequent non-prescribed buprenorphine use was associated with fewer overdoses (18). Together, these findings suggest people using non-prescribed buprenorphine and methadone do so as a "harm reduction" strategy to alleviate withdrawal while avoiding risks conferred by taking other opioids, like fentanyl, which confer higher risk for overdose and may also confer higher risk for communicable disease transmission if injected.

In June of 2018, the City of Burlington's chief of police and state's attorney adopted a joint policy to end all arrests and prosecutions in their jurisdiction for possession of buprenorphine. In a 2020 article discussing this policy, these public officials offer three justifications for this policy of *de facto* decriminalization (19):

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"1) To correct the error of criminalizing a person struggling with opioid addiction for possessing an effective means to treat it; 2) To reduce stigma against the use of partial agonist medications to treat opioid use disorder; and 3) to compensate for a serious gap in medication-assisted treatment capacity."

In 2018, overdose deaths also fell in Chittenden county from 34 to 17, even as they increased elsewhere in Vermont. It is difficult to assess the contribution of buprenorphine decriminalization to this shift, because decriminalization was only one of several new policies and programs focused on overdose prevention adopted or expanded that year (19,20).

Following the example of Burlington, on June 1, 2021, the State of Vermont enacted Act 46, which repealed all criminal penalties for possessing 224 milligrams or less of buprenorphine for persons age 21 and older.

Advocates for decriminalization pointed to three potential benefits (21): 1) If, among people who use illicit opioid drugs, decriminalization increases the proportion who use a partial opioid agonist like buprenorphine instead of full opioid agonists like fentanyl or heroin, this may reduce drug overdoses. 2) Because non-prescribed buprenorphine use is often a precursor to initiating buprenorphine treatment (13), decriminalization could increase the proportion of Vermonters participating in buprenorphine treatment. 3) By removing criminal penalties for a particular drug class, decriminalizing buprenorphine could directly reduce the number of people arrested, charged, and punished for drug offenses, and any health, economic, and social costs associated with these criminal penalties.

Vermont was the first state in the country to remove criminal penalties for possessing small amounts of buprenorphine. Oregon eliminated criminal penalties for possession of most illegal drugs, including buprenorphine, in February 2021, but the broader set of drug classes

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affected by that policy change make it difficult to compare to Act 46. Rhode Island passed legislation similar to Vermont, also in 2021 (22). Further, the context for buprenorphine decriminalization in Vermont is unique. Vermont prescribes more buprenorphine per capita than any other state, has more providers waivered to prescribe buprenorphine than any other state, and has the highest per capita rate of patients in buprenorphine treatment of any state in the country (23,24). Vermont's "hub and spoke" model for increasing access to medication treatment for opioid use disorder has been identified by both patients and clinicians as dramatically improving patient outcomes (25,26), and has served as a model for other states (27,28). Vermont also has historically had lower overdose death rates than other New England states, although since the start of the COVID-19 pandemic, rates have converged toward these neighboring states (Figure 1.1).

Act 46 contains a sunset clause: in the absence of further legislative action, criminal penalties for buprenorphine possession will be restored on July 1, 2023. In an effort to generate new evidence to inform the General Assembly's decision about whether to continue decriminalization, on June 1, 2021, Governor Phil Scott issued Executive Order 05-21, requiring Vermont's Chief Prevention Officer to assess and report back to the Governor on the impact of Act 46. Because, as noted, Vermont is the first state to remove criminal penalties for buprenorphine possession specifically, this report also has the potential to inform the experience of other states that enact similar laws.

This report examines the use of non-prescribed buprenorphine in Vermont and the impacts of temporarily removing criminal penalties for small amounts of buprenorphine possession.

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3. Study 1: Survey of Vermont residents who use opioids illicitly

3.1. Study Overview and Goals

Our first study – a survey of Vermont residents who have recently used illicit opioids or recently participated in medication treatment for opioid use disorder – examined the following questions:

1. How common is non-prescribed buprenorphine use, and what characteristics are associated with non-prescribed buprenorphine use? Why do Vermont residents use non-prescribed buprenorphine, and what impact does non-prescribed buprenorphine have on their life?
2. How common is prescribed buprenorphine use and, among those with a prescription, how common is giving, selling, or trading those prescribed medications to others?
3. Are people who use opioids aware buprenorphine is decriminalized, and what characteristics are associated with awareness? Are people more likely to use non-prescribed buprenorphine or divert their buprenorphine prescription once they learn buprenorphine is decriminalized?
4. Do people who use opioids believe buprenorphine *should* be decriminalized, and if so why?
5. How common is criminal punishment for, or associated with, non-prescribed buprenorphine possession, and what characteristics are associated with punishment?
6. What barriers, historically, prevent Vermont residents from obtaining substance use treatment they want, and what are the consequences of not getting treatment?

3.2 Methods

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3.2.1 Study Participants. Between May and October of 2022, 532 adults 18 or older and living in Vermont were recruited for participation in a survey about non-prescribed buprenorphine use. Surveys were conducted by trained interviewers with experience working with people who have used illicit drugs.

Participants were recruited to participate in the study by staff at syringe services and opioid treatment programs, and from flyers posted in public settings like laundromats or community-based agencies. Some participants learned about the study secondhand through peers who referred them to participate. Individuals interested in participating were provided a phone number to contact our interview team and inquire about the survey. In addition, 88 participants were recruited directly by the interview team for in-person interviews conducted within syringe services and opioid treatment programs. Recruitment materials are shown in Appendix 1. Participants were initially asked to verify they were 18 or older and lived in Vermont. Participants meeting these minimum criteria were read a description of the study, its associated risks and benefits, their rights as participants, and the incentives they would receive for participating. Participants were then asked if they wished to proceed with the survey.

Participants who consented to participate were then asked about their past 90 day use of opioid drugs—including fentanyl, heroin, opioids that were not prescribed a physician or not taken as prescribed – as well as their use of prescribed or non-prescribed buprenorphine or methadone, and their use of prescribed naltrexone. Participants endorsing at least one were administered the remainder of the survey.

All participants who consented to participate in the survey were paid a $25 gift card for their participation. No participant identifying information was collected beyond what was required to send participants their incentive payments, and no participant names or birthdates

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were collected. All interviews were audio recorded for quality assurance and to facilitate analysis of free response items (see below). All recruitment, consent, survey administration, and payment activities were conducted by a team from Pacific Institute for Research and Evaluation with experience working with and conducting research with people who use drugs. The recruitment, consent, survey, and data security protocols and materials were reviewed and approved by Johns Hopkins Bloomberg School of Public Health Institutional Review Board.

Of the 532 respondents who initiated the survey, a total of 474 survey responses (89%) were ultimately completed and included in our analysis. The remaining 11% were excluded for one of the following reasons: a) The respondent did not consent to participate in the study, so the interview was ended; b) The respondent disclosed they had already completed the survey once, and so the interview was ended; c) Study interviewers suspected that an individual was completing the survey a second time, so the respondent was allowed to complete the survey but the results were excluded from analysis; d) In post-hoc analysis, the survey was excluded as a likely duplicate because the responses exactly matched the responses of another survey on all demographic questions and recent opioid use screening questions; e) The respondent did not endorse any recent opioid use or treatment for opioid use disorder. Of these 474, a subset of 369 (79%) were included in analysis of free-response items; seven were excluded because improperly stored or incomprehensible audio recordings precluded transcription and qualitative analysis of these items. Free-response items were analyzed until the point of content saturation was reached (29).

3.2.2 Measures. Our survey employed a "mixed methods" approach. It included both multiple-choice items where participants were constrained to select from a prespecified set of possible answers (e.g., "Do you believe there should be criminal penalties for possessing a small

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amount of buprenorphine that was not prescribed to you? Yes or no?"), and free-response items intended to probe participants' actions and motivations by allowing them to speak extemporaneously (e.g., "Why do you think there should/should not be criminal penalties for possessing a small amount of buprenorphine that was not prescribed to you?"). There were six primary outcome measures:

3.2.2.1 Use of non-prescribed buprenorphine. Whether respondents report lifetime use of non-prescribed buprenorphine. Follow up multiple-choice questions probed whether respondents used non-prescribed buprenorphine to prevent withdrawal symptoms or to get high. Among those who were aware buprenorphine was decriminalized (see 3.2.2.3), follow-up questions probed whether respondents increased their use of non-prescribed buprenorphine because of decriminalization. Free response follow-up questions probed participants' detailed motivations for using non-prescribed buprenorphine instead of obtaining a prescription, and the effects taking non-prescribed buprenorphine had on participants' lives.

3.2.2.2 Use and diversion of prescribed buprenorphine. Whether respondents report lifetime use of prescribed buprenorphine. Follow up multiple-choice questions probed whether respondents ever gave, sold, or traded their prescribed buprenorphine to others, and whether this behavior had changed since buprenorphine was decriminalized.

3.2.2.3 Awareness of decriminalization. Whether, when asked, respondents correctly stated that Vermont does not impose criminal penalties for small amounts of buprenorphine possession. Follow-up multiple-choice questions assessed whether participants believed they were more likely to use non-prescribed buprenorphine or divert a buprenorphine prescription now that buprenorphine was decriminalized.

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3.2.2.4 Support for decriminalization. Whether participants believe Vermont should impose criminal penalties for possessing non-prescribed buprenorphine. Follow-up free-response questioning probed the reasons participants support or oppose decriminalization.

3.2.2.5 Punishment for buprenorphine possession. Whether respondents have ever been arrested while in possession of buprenorphine. Follow up multiple-choice questions assessed whether participants were punished while in possession of prescribed or non-prescribed buprenorphine, and whether arrests were for buprenorphine possession alone or also for some other reason.

3.2.2.6 Barriers to treatment. Whether respondents reported a time when they wanted substance use treatment but could not or did not obtain it. Follow-up multiple-choice questions probed reasons for not obtaining treatment, and free response questions probed self-reported consequences of not obtaining treatment.

3.2.2.7 Contextual variables. The survey also assessed several contextual factors that were not primary outcomes of interest but were used to describe the sample of participants in the survey and examine characteristics associated with each of the primary outcomes. Domains assessed include recent use of drug use; lifetime use of substance use treatment; lifetime involvement with the criminal justice system; and participant demographics.

The full survey text is included in Appendix 2.

3.2.3. Analytic Approach.

3.2.3.1. Analysis of multiple-choice items. Prior to analysis, missing values for all primary outcomes and stratifying variables were imputed using single imputation with logistic regression based on all other variables. A total of 10 values were imputed. For each of the six primary multiple-choice outcomes listed above – non-prescribed use, prescribed use, awareness

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of decriminalization, support for decriminalization, punishment for buprenorphine possession, and barriers to treatment – we computed the sample prevalence of that outcome. For secondary outcomes listed above, prevalence estimates were computed within relevant subsamples, e.g., the proportion of people who ever gave, sold, or traded their prescribed buprenorphine is given as a proportion of people who have ever had a buprenorphine prescription.

We also assessed whether any contextual variables were associated with participant responses on each main outcome variable by conducting stratified analysis of the prevalence of each outcome for each contextual variable. Statistically significant differences in the prevalence of each outcome between strata were estimated using chi-squared tests. Significant results are highlighted in text; complete results are shown in tables.

Quantitative analyses were conducted in R 4.1.3. Multiple imputation was conducted using the package "mice" Version 3.14.0

3.2.3.1 Analysis of free-response items. Audio-recordings were transcribed using an Auto-Transcription service from Rev.com. Resulting transcripts were uploaded to and analyzed in mixed-methods analysis software Dedoose.

Free-response items were analyzed for key themes using a hybrid coding approach (30). We created a draft codebook of deductive codes comprised of anticipated themes based on the interview guide, findings from the quantitative analysis, and feedback from the interviewers. The codebook draft was piloted and new codes were created to capture additional themes that emerged in the transcripts. The codebook was refined until the coding team reached agreement on the final set of codes and their definitions; the final codebook included a total of 43 codes. In total, 26 (7%) of transcripts were coded and discussed as a group to establish intercoder reliability before the remaining transcripts were coded independently. Throughout the coding

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process, the coding team leads responded to questions raised by coders. Any discrepancies in coding were discussed as a group to ensure intercoder agreement throughout the coding process. Coding continued until content saturation was reached (369, or 79% of transcripts).

Code frequencies were analyzed in the coding software to assess which perspectives or experiences were most common across the respondents. Exemplary quotes from the major themes and the frequencies of which codes were applied are reported below. Demographics of the sample included in qualitative analysis are shown in Table 2.6. Code frequencies are shown in Table 2.7. Additional exemplary quotes are shown in Tables 2.8-2.10.

3.3. Results

3.3.1. Description of respondents. Respondents' self-described demographics were 50% women, 24% over 45, and 81% white non-Hispanic. Places of residence were Chittenden County (28%), Windham (14%), Orleans (15%), Caledonia (9%), Rutland (9%), and all other Vermont Counties. Respondents' most commonly used opioid drug in the past 90 days was fentanyl (64%). Of all respondents, 74% reported having been in buprenorphine treatment at some point in their lifetime and 22% had been arrested in the past year.

3.3.2. Use of non-prescribed buprenorphine. Of 474 respondents, 360 (76%) reported lifetime use of non-prescribed buprenorphine. Of these, 95% reported having used non-prescribed buprenorphine to prevent withdrawal, and 42% reported having used non-prescribed buprenorphine to get high (Table 2.1). Among 132 respondents who correctly stated buprenorphine is decriminalized in Vermont decriminalized (see 3.3.4) and chose to provide a response to the relevant questions, 3 (4%) reported taking non-prescribed buprenorphine *more* because buprenorphine is now decriminalized.

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Demographic characteristics associated with greater likelihood of lifetime non-prescribed buprenorphine use included being age 35-45, and being male or a gender other than woman (Table 2.2). Respondents who reported lifetime history of buprenorphine treatment were significantly more likely to report having used non-prescribed buprenorphine, as were those with a lifetime history of naltrexone treatment, substance use counseling, and residential treatment (Table 2.3). Participants with past 90 day use of methamphetamine use were significantly more likely to report lifetime non-prescribed buprenorphine use (Table 2.4). Finally, participants who had been on parole or probation in the past 12 months were significantly more likely to report lifetime non-prescribed buprenorphine use (Table 2.5).

Respondents' motivations for using non-prescribed buprenorphine instead of going to a doctor varied. The most common reason for using non-prescribed buprenorphine was to mitigate opioid withdrawal symptoms (28%). For example, one respondent described accidentally missing a prescription refill day and going into withdrawal, prompting them to use non-prescribed buprenorphine:

> *I was still at the clinic and I missed my day to go get my refill cause I was only going every two weeks. I completely forgot and I missed the day. So the next day I woke up and I was in withdrawal. And the withdrawal is what led me to take some that was not prescribed to me. Cause the withdrawals are brutal. They're very brutal.*

Not being able to obtain a prescription or experiencing a stopgap in prescribed buprenorphine were common (both 15%). Barriers to obtaining prescriptions that resulted in the use of non-prescribed buprenorphine ranged from a lack of time to visit a provider, long waiting lists, being incarcerated before MOUD programs were expanded to jails, lack of transportation,

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and affordability concerns. For example, one respondent noted that they had not yet enrolled in treatment but benefited from mutual aid of a friend:

> *I didn't really have the chance yet to get it from a health provider and I didn't want to go back to heroin at the time. So I just got it from someone who I knew already had a prescription and didn't mind helping me out.*

Maintaining access to non-prescribed buprenorphine was described as a helpful tool for those facing a stopgap in treatment until they could obtain or continue taking buprenorphine. Participants described gaps in their care that encouraged them to seek non-prescribed buprenorphine to protect them from relapse or overdose. For example, one respondent shared about an interruption or stopgap in their care continuity upon being discharged from treatment without a prescription for buprenorphine:

> *I was desperate because I had been in rehab. I went to rehab for 34 days and I told them that if I left without being on something, I knew I would use because my head was not right. Even though I was there for 34 days and they still had me go, they gave me a number. So I leave rehab and I immediately called the hub and they said they could not get me in to see the doctor for two days. I immediately freaked out and my mind went, oh my God. Oh my God. Immediately to wanting to use, you know, even though I wasn't sick anymore, but I still wanted to use, so I was scared. So my friend got me two eight milligram Suboxone strips and she gave those to me and I took those for those two days until I get into the doctor. And then they put me on 16 milligrams when I got to the doctor, but I was desperate. I didn't wanna use. And I knew if I got the Suboxone I wouldn't use, so yep… It was a struggle.*

Another respondent experienced a stopgap in buprenorphine access upon release from jail:

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I had tried to set up through a healthcare provider. When I initially got outta prison I was supposed to have an appointment set up and for whatever reason, they didn't have that appointment when I got out so it ended up taking them a few days to get me my Suboxone. So I just went to the street and bought it.

Another described a similar stopgap upon discharge from the emergency department:

I left the emergency room and I was headed to rehab, and the rehab had called and canceled my intake spot because they had a staff member quit, so there wasn't enough staffing for me, so I was left on the streets with no medication for a week or so.

Several respondents (15%) stated that non-prescribed buprenorphine was generally easier or more convenient than going to a treatment program or seeing a medical provider, though many noted that access to treatment providers had improved in recent years. As one respondent described:

I wanna say it was just some issues with getting into a doc, a provider, or the clinic [that led me to take non-prescribed buprenorphine], cause it's not always a quick process. But now it's lot different. Like, cause as you said, the laws have changed and the providers seem like they can take on more patients than they used to be able to.

Though still, others felt that treatment services were high-threshold and found treatment program requirements to be a major deterrent:

The guy who was actually getting it [and giving it to me] was getting it (buprenorphine) from a health provider. The health providers, it's like a hassle. They got criteria you have to do and stuff like that.

Additionally, some participants (3%) were uncomfortable seeing a treatment provider due to stigma or described not being ready to seek treatment services. As one respondent shared:

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Going to somebody, you don't know, and pouring your heart out, or telling, explain[ing] to someone that you do this, that, and that you need help. It's hard to admit you need help or hard to ask for help sometimes. And you also think that you can take care of the problem on your own so that would be why I would've taken it (non-prescribed buprenorphine).

Another described wanting to avoid being stigmatized or face consequences in their other medical care for being on buprenorphine, noting that patients taking buprenorphine are treated differently:

I take other mental health meds and if I were to go get on the program, then I wouldn't be able to get on my other meds along with the fact that it's just, it's stigmatized…Once you get on a program in Vermont, you're just like branded no matter what… You're not treated the same.

Last, a few respondents described using non-prescribed buprenorphine to get high (7%). One respondent described getting a high from buprenorphine but feeling safer using buprenorphine than other substances:

I did get somewhat of a high from it, but I also felt safer using that than trying to use opiates or heroin or something like that.

Additional quotes about reasons for taking non-prescribed buprenorphine are provided in Table 2.8.

Respondents also described the impact taking non-prescribed buprenorphine had on their life, describing that it mitigated withdrawal (34%), reduced other drug use (15%), allowed them to maintain employment (11%), and improved relationships with friends and family (7%).

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For example, a respondent shared how taking non-prescribed buprenorphine impacted their life in each of these domains:

> *It was helpful...It kept me from doing heroin, that's my goal to get out the heroin...It made it so I could go to work. I was always trying to just chase staying straight-- keeping the withdrawal symptoms away. So, when I'm doing heroin, I have to do it every couple of hours, so I can't hold down a job. But with Suboxone I can take it once a day and I can be quote unquote normal and feel alright and not have to worry about getting sick and [in] withdrawal. So, I can actually function, and I can hold down a job, I can take care of my kids.*

Specific to using non-prescribed buprenorphine for withdrawal management, one respondent shared their experience during a gap in care:

> *It was helpful...I didn't have restless legs anymore and I was calm. [I thought] I could get more, [I thought] my provider or somebody would help me today, but nobody said nothing until Monday.*"

Of reducing other drug use, another respondent said:

> *It helped keep me sober that week until they had a bed for me in rehab. So, I think it kept me alive.*

Other respondents explained that using non-prescribed buprenorphine had financial and employment benefits. Notably, one respondent commented that non-prescribed buprenorphine was beneficial over prescribed buprenorphine to avoid treatment program counseling requirements and taking time off work to attend treatment:

> *It was helpful at the time for sure. I've always worked a lot, so it helped me…I found that it was almost easier for me to get it off the streets, because I was able to go to work and I*

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wouldn't have to go to counseling. It's hard to go to counseling and take care of kids, and do the whole life thing when you got to go to counseling like two to three times a week and then you got to go see a doctor and then you got to go do UAs out of nowhere. Not every job likes to let you go and do that.

Some respondents commented that using non-prescribed buprenorphine improved their ability to contribute to family life. For instance, one participant said:

It was very helpful...It was affordable at the time...It just makes it so you don't have those withdrawals, [you're] still able to work and you're still able to take care of your family and do everything that you need to do...It enables you to just be a normal everyday person and go to work and come home and just be a dad.

Few respondents reported negative effects of taking non-prescribed buprenorphine. Of them, less than seven percent described precipitated withdrawal experiences, and less than one percent reported being arrested for possession of non-prescribed buprenorphine.

Additional quotes about the impact of taking non-prescribed buprenorphine are provided in Table 2.7.

3.3.3. Use and diversion of prescribed buprenorphine. Seventy-two percent of respondents had received a buprenorphine prescription for treatment at some point in their lifetime. Of these, 59% said that they had, at least once, given, sold, or traded their prescribed buprenorphine to someone else. Among 298 respondents who reported lifetime use of both non-prescribed buprenorphine and prescribed buprenorphine treatment, 221 (74%) said they started with non-prescribed buprenorphine. Among 70 respondents who correctly stated buprenorphine is decriminalized in Vermont (see 3.3.4), had a buprenorphine prescription, and chose to provide

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a response to the relevant questions, 3 (4%) reported giving, selling, or trading their prescribed buprenorphine to others *more* because buprenorphine is now decriminalized.

Demographic characteristics associated with increased likelihood of having received a buprenorphine prescription for treatment include being 18-34 or 35-44. There was also significant variation between counties (Table 2.2). Participants who reported lifetime use of other forms of treatment – including naltrexone, hospital detoxification, counseling, and residential treatment – were more likely to report lifetime buprenorphine treatment (Table 2.3). Participants reporting past-90-day use of painkillers (other than as prescribed) were more likely to report lifetime buprenorphine treatment (Table 2.4), as were respondents who had been in jail in the past year (Table 2.5).

3.3.4. Awareness of decriminalization. 134 respondents (28%) stated, correctly, that Vermont does not have criminal penalties for possessing a small amount of buprenorphine that is not prescribed to you. 312 (66%) incorrectly believed that Vermont does have criminal penalties for buprenorphine possession, and the remaining participants were unsure. All respondents were subsequently told that Vermont does not have criminal penalties for possessing small amounts of buprenorphine. Among respondents who were not previously aware buprenorphine was decriminalized, 15% said they thought they were now more likely to use non-prescribed buprenorphine, and 36% thought they were now more likely to give, sell, or trade a hypothetical buprenorphine prescription to someone else.

The only characteristic significantly associated with awareness of buprenorphine decriminalization was county of residence: Chittenden county residents were most likely to correctly state that buprenorphine possession is decriminalized.

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3.3.5. Support for decriminalization. Eighty-seven percent of respondents believe Vermont should not impose criminal penalties for possessing non-prescribed buprenorphine, while 17% believe Vermont should impose criminal penalties, and 3% were unsure or expressed some support for both positions.

Support for decriminalization varied significantly between counties and was highest in Chittenden County (Table 2.2). Participants who reported lifetime participation in buprenorphine treatment, counseling, and residential treatment were all respectively more likely to support decriminalization (Table 2.3). Finally, participants reporting past-90-day use of heroin or fentanyl were both more likely to support decriminalization (Table 2.4).

When asked about motivations for supporting buprenorphine decriminalization, improved safety from overdose when using buprenorphine versus other drugs was the most cited reason (40%). One respondent commented:

The likelihood of overdose on buprenorphine is less likely than the overdose on heroin...And it could possibly save a lot of lives, even if it is not necessarily prescribed by a doctor, because I had a period of time where I couldn't get into a doctor, so I was buying it on the street until I could.

Similarly, another respondent said:

Well, because it's a lot safer for people to take Suboxone than it is for people to be out shooting heroin. So if they can get their hands on Suboxone instead of some heroin and know that it's safe for them to do that, that might end up saving people's lives.

Other respondents (32%) indicated that decriminalization reduced punishment or stigma associated with receiving treatment and using buprenorphine. Several respondents emphasized

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the need for decriminalization because they associated buprenorphine possession with a desire for self-improvement. One respondent shared their own experience:

> *I feel like I know from my own experience that when I was trying to get sober, the first time...I got pulled over and I had some of [buprenorphine in] my possessions, so I actually got a charge over it, but I was trying to do the right thing, you know what I mean? I was trying to better myself by taking the buprenorphine instead of, you know, doing the heroin or the other stuff. So I feel if somebody's got a little bit they're probably trying to better theirselves, so I don't feel like they should be criminalized for it.*

Another respondent commented about the need for justice systems to encourage rather than punish medication treatment for opioid use disorder:

> *Well, I just think that a lot of the system in the past has been so judgmental on people that are addicts that they just put 'em in jail and let 'em fend for themselves instead of just trying to help them and make it [legal], give them resources and tools to be able to safely use, actively use to be able to get better.*

Increased access to buprenorphine was also frequently described to support decriminalization (26%). Respondents cited barriers to treatment clinics or physicians' appointments and other difficulty accessing health care as reasons to decriminalize buprenorphine:

> *I don't think that there should be criminal penalty for that because I think it's much better than the alternative...A lot of people have a hard time getting into treatment. I'll tell you some places, some clinics have waitlists, or some people can't go to a clinic because they work and the clinic's not open during their time. And some, you know, with bupe, it's hard to get into a doctor so their choice is continue to buy heroin or buy the bupe and maybe it*

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would deter them from buying bupe with knowing that they're committing a crime and it's a prescription.

Other respondents described compounding logistical difficulties as barriers to receiving care that could be alleviated by decriminalizing buprenorphine:

Some people don't have time. Some people have, you know, two jobs, three jobs, they have children…They're doing everything by themselves. A single mother, single father, they can't jump through all the hoops that the clinic or the doctor's offices are asking people to jump through…If there are only chances to buy it (buprenorphine) off of the street, you know, and they're staying clean that way, then I don't think that they should be punished for it.

Finally, a few respondents (7%) described mutual aid, or sharing buprenorphine prescriptions, as motivations for supporting decriminalization. One reason for supplying non-prescribed buprenorphine to others was ease of access compared to seeking a prescription from a doctor, especially during a lapse in prescription coverage:

I myself have been on bupe and it has been very difficult to get sometimes and it's easier to get on the streets...You know, it makes it easier to get. You don't have to go call a doctor, you just go to a friend and it's a lot easier. It's cause everybody can have it that way cause either everybody will have a doctor or everybody will have it. So if you don't have it and you're sick, you can just go to a friend and get it.

Another respondent indicated that decriminalization enhances a sense of community and interpersonal dedication to help others maintain sobriety:

In the world of addiction...there's a whole community of us are all suffering from the same disease. And so we see this, these maintenance drugs out there a lot, and they're

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very often passed between people and I think they help a lot of people, and I can perhaps get other people off the street narcotics and onto the safer drugs.

Primary motivations for opposing decriminalization were to stop diversion and encourage people to get their own prescriptions (both 7%). The main rationale to stop diversion was that people should take buprenorphine for their own sobriety. One respondent succinctly stated,

If people are prescribed the medicine for help, they shouldn't be selling it to get money off of it. They should be actually taking it for their wellbeing.

Of respondents who indicated buprenorphine criminalization encourages getting a prescription, some expressed that seeking buprenorphine through healthcare providers was more conducive to treatment. For example, one respondent said:

I would say that I feel like there should be penalties because like in order to get on those medications, you have to go through a MAT [Medication Assisted Treatment] provider and you have to do counseling and all that other stuff, which is supposed to help benefit you in your recovery.

Similarly, another respondent suggested that decriminalization would disincentivize people from seeking care from health providers altogether:

I think the person that's doing that [getting non-prescribed buprenorphine] should be directed to the correct way of doing things by going to a doctor. And if there's no ways of penalizing someone from, you know, stopping, just buying a little bit here and there on the streets, you know, then why bother getting help? So they can just go and get it from someone down the street.

Few respondents (<2%) did not support buprenorphine decriminalization because they were concerned for children's safety. As one respondent commented:

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I also know that people don't take care of where they're using it, how they're using it, and it puts people at risk...puts children at risk. I have had a few friends that have had their children get in contact with it and get sick from it...unless you're prescribed it, you shouldn't have it.

Some respondents (<5%) were conflicted about whether buprenorphine should be decriminalized. Many conflicted respondents said small amounts of buprenorphine should not be criminalized, but larger amounts should. For instance, a respondent said:

Because a small amount, somebody is trying to come off of the drugs. In a larger amount, somebody is more or less trying to sell the drugs. And if, you know, if somebody has a small amount, you know, up to, you know, I typically, I'd say up to 24 milligrams cause that's what it typically takes sometimes for somebody to feel well throughout the day on Suboxone.

Other conflicted respondents indicated that buprenorphine possession should be illegal but criminal punishment should be rehabilitation or other supportive treatment:

Cause I know I really think people should not self-prescribe and they should go to a doctor... I think it should be totally un criminal. It should be a fine or some, some something to it. Like maybe your punishment's gonna be gotta go to drug rehab. You know, something like that. Kinda no jail but some something to force you to kind of, or work to go through rehab. Cause you're already on the first step if you're taking to buprenorphine, you're trying to stay away from the heroin.

3.3.6. Punishment for buprenorphine possession. Eighty-four respondents (18%) stated they had been arrested at least once while in possession of buprenorphine. Of these 84, 52% had been arrested at least once while in possession of non-prescribed buprenorphine, 50% at least

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once while in possession of buprenorphine that was prescribed to them; 30% (5% of the full sample) said they were arrested for buprenorphine possession and no other reason. In addition, 11% of all respondents said that, at least once, they had been punished for violating the terms of parole or probation because of possession of non-prescribed buprenorphine.

There was significant variability across counties in the proportion arrested while in possession of buprenorphine, with the highest prevalences in respondents from Rutland county and from small counties (counties other than Chittenden, Windham, Orleans, Caledonia, and Rutland) that had too small a sample of respondents too be examined individually. Younger respondents, respondents who identified as men or other genders, and respondents who identified as a race/ethnic group other than White non-Hispanic were more likely to report arrests while in possession of buprenorphine (Table 2.2.) Respondents with histories of buprenorphine, hospital detoxification, counseling, and residential treatment were each more likely to report having been arrested while in possession of buprenorphine (Table 2.3). Respondents with an overdose in the past 90 days were more likely to report having been arrested while in possession of buprenorphine (Table 2.4). Finally, respondents who reported a past-year arrest, jail stay, or time on probation were also more likely to report having been arrested in their lifetime while in possession of buprenorphine.

3.3.7. Barriers to treatment. Three hundred and fifteen respondents (66%) reported there was at least one time in their life when they wanted treatment but could not or did not obtain it. These 315 endorsed the following barriers to treatment, from most common to least common: not being ready to stop using (71%), not having transportation (66%), not being able to find a program with an opening (57%), fear of negative effects on work (47%), fear of stigma or being looked down on by members of their community (46%), not being able to find the right

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type of treatment (45%), not having time (43%), having no insurance or not being able to pay (37%), not thinking treatment was necessary (36%), not knowing where to go (32%), having insurance that didn't cover treatment (22%), and not being able to find childcare (18%).

Participants described a range of experiences when they were unable to obtain or did not obtain treatment they wanted, with using drugs (30%) as the most reported barrier. One respondent described their experience using drugs after searching for a buprenorphine prescriber with availability:

> *I tried to call this doctor that I knew was a big [bupe] guy and they said they weren't even taking patients…I mean, I remember crying, like trying to find a doctor that I could get [buprenorphine from]…I was trying to save my relationships, my work…And it was really, really hard and I could not find anything. I remember specifically going on a using streak that was really bad…that ended up [with] me being in a residential treatment.*

Second to using drugs, respondents also discussed using non-prescribed buprenorphine when they were unable to get treatment (11%). Participants described accessing non-prescribed buprenorphine as beneficial for mitigating withdrawal, helping them abstain from using opioids, and even saving their life:

> *I was buying off the streets, stuff like that. I had to turn to that. And I mean, it really, honestly, I think it (buprenorphine) saved my life… I mean, I was getting into it really bad. I was running cross state lines, you know, just doing whatever I could. Started stealing, stuff like that, you know, and I'm not like that. Like, I have never been like that, like, [with] a clean record at 32 years old… So for me it was demoralizing to be in such a situation where I felt helpless. So when I found somebody to start buying the bupe off of,*

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it kind of gave me confidence that things were going to be okay. You know, like, I'm going to make it through this.

Respondents also explained that when they couldn't access treatment they would buy buprenorphine off the streets, which was a cost they couldn't sustain:

So first of all, it's extremely expensive if you're buying it off the street. It's like $25 per 12 milligram strip and you know, 12 milligrams is about a normal dose. So it was about $25 a day when I was homeless and had no access to money. It was, it was really hard. And if I didn't get it, I was sick, I was miserable, I was suicidal. It was just, it wasn't fun.

Being arrested or punished was less commonly reported (4%) by respondents because of not accessing treatment. Those who discussed being arrested or punished cited barriers to treatment or getting help:

At the time I was homeless and prostituting and just didn't have a way to really get to the places I needed to go. And then finally I got in some trouble. I kind of got in trouble on purpose so I could get into the system to get the help I needed…I ended up going to jail and then a rehab…And then got on maintenance.

Another respondent described a similar experience in the criminal legal system due to a lack of available treatment:

I think, you know, I just didn't get clean. I ended up going back to jail because obviously I didn't stop using. I think you can have all the want in the world, but if you don't have things lined up, like at that point I didn't have stable housing…So just so many things got in the way, and I had so much that it kind of just pushed me over the edge. And then at that point their only solution is jail. And you know, maybe if somebody's a criminal "just

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because" jail's a place for them, but [not] when they've literally reached out asking for help a million times and they get cut down.

Some respondents (<5%) discussed overdosing as a consequence of not being able to access treatment when desired, and a number of responses detailed multiple overdoses before entering treatment:

I mean the last time I would say was probably right before I went to, well, a little bit before I went to prison. And, I mean I died [from overdosing] like three times [over the] course of a couple of months…And I just didn't wanna live like that, but I was so scared of how intense… at how deep my habit had become that I just was scared. There had been a couple of times I had gone to a clinic and forced into precipitated withdrawals and it was hell, I couldn't do it. I ended up going to the methadone clinic just because I fucked up so much.

Few respondents reported seeking non-prescribed methadone (<2%). Respondents cited long waiting lists, resulting in them seeking out methadone from family or friends, or from the street. One individual explained using buprenorphine or methadone to hold them over until gaining access to treatment:

Well, I called a few detoxes and they were all full, no beds available and like I said to the methadone clinic and everything, they were full like a year, couple years out waiting (list). So I waited. I had to wait until there was an opening for a bed, and in the meantime, I just managed the symptoms and treatment myself [by] getting the stuff off the street. Buprenorphine or methadone, whatever, and managed it myself at home until a bed opened up and I was able to get into a residential detox.

3.4. Summary, Implications, and Limitations

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In this survey of 474 Vermont residents who recently used opioids or participated in treatment for opioid use disorder, about three-quarters of respondents had used non-prescribed buprenorphine, and three quarters had used prescribed buprenorphine. Consistent with past research (see Literature Review), respondents with a history of non-prescribed buprenorphine use were more likely to have also taken prescribed buprenorphine for treatment, and users of both prescribed and non-prescribed buprenorphine were also more likely to have participated in other forms of treatment like counseling. Among respondents who had used both non-prescribed and prescribed buprenorphine, three-quarters started with non-prescribed. Nearly all respondents who had used non-prescribed buprenorphine had used it to prevent withdrawal symptoms; slightly fewer than half had ever used non-prescribed buprenorphine to get high. Three out of five respondents who reported having taken prescribed buprenorphine also reported giving, selling, or trading their prescribed buprenorphine to someone else at least once. Respondents described a number of reasons for using non-prescribed buprenorphine instead of obtaining a prescription, principally to prevent withdrawal symptoms during period when accessing or continuing formal treatment was difficult. Respondents also described mostly positive impacts of taking non-prescribed buprenorphine: principally health effects like avoiding withdrawal and other more dangerous drug use, but also sometimes other improved employment and social outcomes. In summary, use of non-prescribed buprenorphine among people who use opioid drugs in Vermont is common, is often used as a stopgap measure by people who experience barriers to or disruptions in treatment, and is perceived by users as being a safer alternative to other opioid drugs that is effective at preventing withdrawal and preventing other harmful consequences associated with opioid misuse like overdose.

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Respondents overwhelmingly favor decriminalization of buprenorphine possession. However, fewer than a third of respondents were aware that buprenorphine possession actually was decriminalized in Vermont. Awareness was higher in Chittenden County than in other Vermont Counties, likely because buprenorphine was *de facto* decriminalized in the City of Burlington for several years before Act 46 eliminated criminal penalties statewide. Among respondents who were not aware that buprenorphine was decriminalized until they were told as part of this survey, just over a third said they now would be more likely to give, sell or trade their buprenorphine to others as a result of decriminalization, and 3 in 20 said they would now be more likely to take non-prescribed buprenorphine. However, among respondents who were actually aware of buprenorphine decriminalization before taking this survey, almost none said they had either increased their use of non-prescribed buprenorphine, or increased their giving, selling, or trading of buprenorphine to others, because of decriminalization. This discrepancy between anticipated and enacted behaviors might reflect the short time period that buprenorphine has been decriminalized – participants who were aware of decriminalization may not yet have experienced a situation where decriminalization would influence their behavior. However, it may also reflect that survey participants, responding to a hypothetical question, overestimated how much their future behavior will change in response to this legal change.

Finally, 1 out of 5 participants reported they had been arrested at least once while in possession of buprenorphine, including a third of these (5 percent of all respondents) who said they were arrested because of buprenorphine possession and no other reason. 1 in 10 said they had been punished for violating parole or probation at least once because of buprenorphine possession. Respondents from self-identified race/ethnic groups other than White non-Hispanic

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were twice as likely to report having been arrested while in possession of non-prescribed buprenorphine.

Taken together, these findings suggest that non-prescribed buprenorphine use is common among people who use drugs in Vermont and is perceived by users to have health benefits, principally by providing a fallback option for preventing withdrawal during disruptions in treatment that is safer than other opioid drugs. However, it is unlikely that the new policy of buprenorphine decriminalization has had a substantial short term impact on the health of people who use drugs in Vermont. Most people who use drugs were not aware of decriminalization, and those who were had not changed their behavior in response to the policy change. However, in the long term, the policy does have the potential to reduce criminal justice involvement by people who use drugs, since a non-trivial fraction of respondents reported having been arrested or punished for violating parole or probation while in possession of buprenorphine. Since there is strong evidence that incarceration is associated with poor health outcomes (31), including overdose (32,33), reducing criminal justice contact has potential downstream health benefits. Further, since self-reported buprenorphine-associated criminal justice involvement was twice as common among respondents from race/ethnic groups other than white non-Hispanic, decriminalization has the potential to reduce race-based inequities in criminal justice involvement.

By contrast, there was scant evidence in this survey that buprenorphine decriminalization has been harmful to people who use drugs. Non-prescribed buprenorphine use was already very common. There is no evidence taking non-prescribed buprenorphine was used as a way to avoid formal treatment; in fact, non-prescribed use is associated with increased engagement in both buprenorphine treatment and other modes of treatment. Instead, people who use non-prescribed

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buprenorphine usually do so when they are unable to obtain or experience gaps in or problems with their treatment, and most describe that the decision to use non-prescribed buprenorphine helped them avoid other riskier drugs and improved their health and other aspects of their lives.

3.4.1. Limitations. This study has three important limitations.

First, this survey is not intended to be representative of people who use opioid drugs in Vermont. Approximately three-fifths of respondents were recruited at a service provider site such as a syringe services program or opioid treatment program. This is likely reflected in the service use characteristics of respondents: three quarters have tried buprenorphine treatment in their lifetime and seven in ten have tried methadone treatment. Because attempting to recruit a sample representative of all people who use opioids in Vermont was not feasible, we instead focused on achieving sufficient diversity of experiences so that key outcomes can be examined within subgroups of interest, for example, people who have never been in buprenorphine treatment. Indeed, there are differences between subgroups: for example, the quarter of participants who had no history of buprenorphine treatment were less likely to report non-prescribed buprenorphine use, less likely to have been arrested while in possession of buprenorphine, and less likely to support decriminalization. Appropriate interpretation of results requires consideration of these inter-group differences, rather than just examination of top-line prevalences.

Second, this study relied on a survey that was administered a single time. Further, we did not begin collecting data until after Act 46 had already been in effect for a year. Therefore, we cannot empirically establish whether any of the behaviors or attitudes examined in the survey changed after Act 46 was implemented. Instead, we rely on participants' recall of their own behaviors and behavior change. We also cannot be certain that any barriers to care that

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respondents identified remain prevalent today. As noted in the Introduction, Vermont has expanded buprenorphine treatment capacity significantly over the past decade, and some of the treatment access challenges described in this report may reflect an earlier era – in fact, in qualitative analyses, some participants noted that treatment access has improved.

Finally, this was a survey study and all responses are self-report. Some responses may not be accurate, for example if participants did not fully understand the question, did not accurately remember their past behaviors, or felt some responses were more desirable to the interviewer than others.

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4. Study 2: Survey of Vermont clinicians who prescribe buprenorphine

4.1 Study Overview and Goals

Our second study – a survey of Vermont clinicians who have prescribed buprenorphine for opioid use disorder in the past year – examined the following questions:

1. Do providers waivered to prescribe buprenorphine in Vermont know buprenorphine is decriminalized?
2. Do providers waivered to prescribe buprenorphine in Vermont believe buprenorphine *should* be decriminalized, and if so why?
3. Do providers who prescribe buprenorphine in Vermont believe that their patients are now, because of decriminalization, more likely to use non-prescribed buprenorphine? Or more likely to give, sell, or trade their buprenorphine to someone else?
4. Whether prescribers have changed the number of patients they prescribe to or average dosage or days supply as a result of decriminalization change?

4.2 Methods

4.2.1. Using an email distribution list maintained by Vermont Department of Health's Opioid Treatment Authority, we recruited all 683 Vermont health care providers with a waiver to prescribe buprenorphine to participate in a survey. The survey was activated and an initial recruitment email was sent on October 11, 2022. Reminder emails were sent October 18 and October 25, and the survey was closed on October 28. The recruitment email invited clinicians to complete a brief, anonymous survey about "a recent Vermont policy change affecting buprenorphine." Emails contained a hyperlink to a web survey that respondents would complete and submit on their own. Participants who clicked the hyperlink were taken to a description of the study, its associated risks and benefits, and their rights as participants. Participants were then

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asked if they wished to proceed with the survey. Participants who consented were then able to complete and submit the survey online. Participants were not provided any monetary incentive for their participation.

The recruitment, consent, survey, and data security protocols and materials were reviewed and approved by Johns Hopkins Bloomberg School of Public Health Institutional Review Board.

Of 683 survey recipients, 205 initiated the survey. Of these, 88 were excluded because they a) did not consent to complete the survey, b) consented but then did not complete the survey, or c) completed the survey but stated they had not prescribed buprenorphine in a year or more. The final analytic sample consisted of 117 respondents (17% of waivered prescribers in Vermont.

4.2.2. Measures. The survey had 4 main outcomes:

4.2.2.1. Awareness of decriminalization. Respondents were asked whether they believe Vermont has criminal penalties for possessing small amounts of buprenorphine.

4.2.2.2 Support for decriminalization. Respondents were asked whether they believe Vermont *should* have criminal penalties for possessing small amounts of buprenorphine.

4.2.2.3. Beliefs about impact of decriminalization. Providers were told buprenorphine possession is now decriminalized in Vermont. They were then asked if, as a result of this change, they believe their patients are now more likely either to use non-prescribed buprenorphine, or to give, sell, or trade their buprenorphine prescription to someone else.

4.2.2.4. Self-reported change in prescribing practices. Prescribers were asked if, as a result of buprenorphine decriminalization, they have increased, reduced, or not changed: the

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number of patients they prescribe to; the average dosage they prescribe; or the average days-supply they prescribe.

4.2.2.5 Contextual variables. The survey also assessed several contextual factors that were not primary outcomes of interest but were used to describe the sample of participants in the survey and examine characteristics associated with each of the primary outcomes. Domains assessed include years of prescribing buprenorphine, most recent date prescribed buprenorphine, practice specialty, and provider age and gender.

4.2.3 Analytic Approach. For each of the four primary multiple-choice outcomes listed above – awareness of decriminalization, support for decriminalization, beliefs about impact, and changes in prescribing practices – we computed the sample prevalence of that outcome. We also assessed whether any contextual variables were associated with participant responses on each main outcome variable by conducting stratified analysis of the prevalence of each outcome for each contextual variable. Statistically significant differences in the prevalence of each outcome between strata were estimated using chi-squared tests. Notable results are highlighted in text; complete results are shown in tables.

Quantitative analyses were conducted in R 4.1.3.

4.3. Results

4.3.1. Awareness of decriminalization. 72 (62%) of prescribers correctly stated that Vermont does not have criminal penalties for buprenorphine possession. Years with a waiver was significantly associated with awareness of decriminalization: providers who had been waivered longer were more likely to correctly state buprenorphine is decriminalized in Vermont.

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4.3.2. Support for decriminalization. 107 (91%) of prescribers stated that they believe Vermont should *not* have criminal penalties for possessing small amounts of buprenorphine. Support for decriminalization did not differ significantly between any provider groups assessed.

4.3.3. Beliefs about impact of decriminalization. 54 (46%) of prescribers stated they believe that, because buprenorphine is decriminalized, their patients are more likely to use buprenorphine that is not prescribed to them. Prescribers who had more recently prescribed buprenorphine were significantly less likely to believe that decriminalization has resulted in increased non-prescribed use of buprenorphine.

56 (48%) of prescribers stated that, because buprenorphine is decriminalized, their patients are more likely to give, sell, or trade the buprenorphine that is prescribed to them to someone else. Prescribers who had more recently prescribed buprenorphine were also significantly less likely to believe that decriminalization has resulted in increased diversion of buprenorphine. In addition, providers identifying as men or other genders were significantly more likely than women providers to believe that decriminalization had increased diversion of buprenorphine. There were also significant differences by provider specialty – providers who were neither specialty substance use treatment providers no primary care physicians were most likely to say they believed decriminalization increased diversion.

4.3.4 Self-reported change in prescribing practices. Because of decriminalization, 5 providers (4%) said they now prescribe to fewer patients, 2 (2%) now said they prescribe a smaller average days-supply, and 2 (2%) said they now prescribe a lower average dose. These prevalences did not differ significantly between any provider groups assessed.

4.4. Summary, Limitations, and Implications

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In this survey of healthcare providers who have prescribed buprenorphine in the past year, 9 in 10 supported decriminalizing buprenorphine possession, with support highest among the most experienced providers who had most recently prescribed buprenorphine. Only 6 in 10 were aware buprenorphine possession was actually decriminalized. However, this lack of awareness likely has little public health impact, since essentially no providers say they have changed their prescribing practices since buprenorphine was decriminalized. These high levels of support for decriminalization and low levels of practice change are notable, since close to half of all providers did think that decriminalization would result in more non-prescribed buprenorphine use and more patients giving, selling, or trading their buprenorphine prescription to others. This suggests providers' do not perceive these behaviors to be especially harmful, or at least that any harms from these behaviors do not outweigh the benefits of decriminalization.

4.4.1. Limitations. The principal limitation of this survey is representativeness. While we surveyed every provider with a waiver to prescribe buprenorphine in Vermont, fewer than 1 in 5 ultimately completed the survey and had results included in the analysis. Prescribers who did not complete the survey may have different attitudes and practices than those who do.

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5. Summary and Conclusions

This evaluation of buprenorphine decriminalization in Vermont combines evidence from two sources: surveys of people who use opioid drugs or are in treatment for opioid use disorder and surveys of providers who prescribe buprenorphine. We reach the following conclusions about use non-prescribed buprenorphine in Vermont and the impact of eliminating criminal penalties for possessing small amounts of buprenorphine:

1. A history of non-prescribed buprenorphine use is common among people who use opioid drugs and people in treatment for opioid use disorder. Non-prescribed buprenorphine use is most common among people who also have been engaged in buprenorphine treatment and other forms of non-methadone substance use treatment. Most people who have used non-prescribed buprenorphine have done so to prevent withdrawal symptoms, many more than the proportion who have done so to get high. Respondents to our survey described using non-prescribed buprenorphine when doing so was easier than obtaining prescribed buprenorphine, often when they experienced problems obtaining a prescription or as a stopgap measure when they experienced disruptions in a treatment program. Respondents mostly described positive effects of using non-prescribed buprenorphine – mainly preventing withdrawal and other general health benefits, but also avoiding other drug use and better ability to maintain employment – but also occasional negative impacts, including precipitated withdrawal.
2. A history of prescribed buprenorphine use is also common among people who use opioid drugs and people in treatment for opioid use disorder. Most people who have had a buprenorphine prescription have at one point given, sold, or traded their buprenorphine to

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someone else. Further, most people who had used both prescribed and non-prescribed buprenorphine stated they started with non-prescribed buprenorphine.

3. To date, it is unlikely removing criminal penalties has had any substantial direct impact – positive or negative – on the health of people who use drugs in Vermont. This is because most people who use opioid drugs or are in treatment for opioid use disorder are not aware buprenorphine is decriminalized. In our survey, those who were aware almost uniformly told us they have not changed their behavior in response to the policy change, although a sizable minority those who were made aware during the course of this study said they thought they would be more likely to take give, sell, or trade their buprenorphine prescription to others as a result of the law in the future.
4. People who use opioid drugs or are in treatment for opioid use disorder overwhelmingly support decriminalizing buprenorphine possession, with support highest among people engaged in buprenorphine treatment. The most common reasons given for supporting decriminalization were that taking buprenorphine improves peoples' safety as compared to taking other opioid drugs, that people should not be punished or stigmatized for making a safer choice, and that decriminalization increases access to buprenorphine. Among the handful who oppose decriminalization, the most commonly cited reason was their belief that criminal penalties encourage people to obtain a prescription instead of using non-prescribed medication. (In fact, as noted above, people who have used non-prescribed buprenorphine are actually more likely to have obtained buprenorphine treatment, and non-prescribed use typically precedes prescribed use.)
5. In our survey, one in five respondents said they had been arrested at some point while in possession of buprenorphine, although only a third of those said their arrest was because

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of buprenorphine possession and no other reason. One in ten had been punished for violating parole or probation terms because of buprenorphine possession. These experiences were more common among respondents identifying as race/ethnic groups other than White non-Hispanic. Therefore, while decriminalization may not have had an immediate impact the health or behavior of people who use drugs, it does hold potential to reduce contact with the criminal justice system, particularly for race/ethnic minority groups.

6. Most people who use opioids or are in treatment for opioid use disorder say there was a time when they wanted treatment but could not or did not obtain it. Reasons for not obtaining treatment varied, but among the most common were not being ready to stop using, not having transportation, and not being able to find a program with an opening.
7. Of the healthcare providers we surveyed who have prescribed buprenorphine in the past year, approximately three in five were aware that Vermont eliminated criminal penalties for buprenorphine possession.
8. Buprenorphine prescribers overwhelmingly supported decriminalization, with support highest among the most experienced providers and those who have most recently prescribed buprenorphine.
9. This support persists even though a majority of providers thought their patients are now more likely to use non-prescribed buprenorphine and more likely to give, sell, or trade their buprenorphine prescription to others. (In fact, in our survey of people who use opioid drugs in Vermont, we found that almost no respondents reported changing their behavior after buprenorphine was decriminalized.)

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10. Further, essentially no providers said they had changed the number of patients they prescribe to, the average dose they prescribe, or the average days-supply they prescribe because of decriminalization.

Taken together, these findings suggest that buprenorphine decriminalization is a popular policy among two of the most important constituencies affected by the law: people who use opioid drugs and the providers who serve them. In the short term, it is unlikely Act 46 has substantially impacted the health of people who use drugs in Vermont because most people we surveyed were not aware buprenorphine is decriminalized and those who were aware have not changed their behaviors in any way because of the law. If Act 46 were to increase the use of non-prescribed buprenorphine among people who use opioid drugs, the evidence compiled here suggests this could have health benefits for people who use drugs. Respondents to our survey usually used non-prescribed buprenorphine to prevent withdrawal symptoms, often when accessing prescribed buprenorphine was difficult or when thy had trouble accessing treatment. When they did use non-prescribed buprenorphine, respondents mostly described that it had positive effects on their lives, principally preventing withdrawal and helping them avoid other drugs. There is also no evidence that Act 46 will have the inadvertent effect of changing prescriber behavior, since prescribers mostly support the policy and say they have not changed their prescribing behavior since it was passed. Finally, in the long term Act 46 may help reduce overall contact with the criminal justice system and reducing race-based disparities in justice involvement.

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References

1. Wakeman SE, Larochelle MR, Ameli O, Chaisson CE, McPheeters JT, Crown WH, et al. Comparative Effectiveness of Different Treatment Pathways for Opioid Use Disorder. JAMA Netw Open. 2020 Feb 5;3(2):e1920622–e1920622.

2. Martin E, Maher H, McKeon G, Patterson S, Blake J, Chen KY. Long-acting injectable buprenorphine for opioid use disorder: A systematic review of impact of use on social determinants of health. J Subst Abuse Treat [Internet]. 2022 Aug 1 [cited 2022 Aug 5];139. Available from: https://www.journalofsubstanceabusetreatment.com/article/S0740-5472(22)00058-7/fulltext

3. McNamara KF, Biondi BE, Hernández-Ramírez RU, Taweh N, Grimshaw AA, Springer SA. A Systematic Review and Meta-Analysis of Studies Evaluating the Effect of Medication Treatment for Opioid Use Disorder on Infectious Disease Outcomes. Open Forum Infect Dis. 2021 Aug 1;8(8):ofab289.

4. Practice Guidelines for the Administration of Buprenorphine for Treating Opioid Use Disorder [Internet]. Federal Register. 2021 [cited 2022 Aug 5]. Available from: https://www.federalregister.gov/documents/2021/04/28/2021-08961/practice-guidelines-for-the-administration-of-buprenorphine-for-treating-opioid-use-disorder

5. Beetham T, Saloner B, Wakeman SE, Gaye M, Barnett ML. Access to Office-Based Buprenorphine Treatment in Areas With High Rates of Opioid-Related Mortality. Ann Intern Med. 2019 Jul 2;171(1):1–9.

6. Meiselbach MK, Drake C, Saloner B, Zhu JM, Stein BD, Polsky D. Medicaid Managed Care: Access To Primary Care Providers Who Prescribe Buprenorphine. Health Aff (Millwood). 2022 Jun;41(6):901–10.

7. Stein BD, Sorbero M, Dick AW, Pacula RL, Burns RM, Gordon AJ. Physician Capacity to Treat Opioid Use Disorder With Buprenorphine-Assisted Treatment. JAMA. 2016 Sep 20;316(11):1211–2.

8. U.S. Drug Enforcement Administration, Diversion Control Division. National forensic laboratory information system: NFLIS-drug 2020 annual report [Internet]. Springfield, VA; 2021 [cited 2022 Aug 4]. Available from: https://www.nflis.deadiversion.usdoj.gov/publicationsRedesign.xhtml

9. Genberg BL, Gillespie M, Schuster CR, Johanson CE, Astemborski J, Kirk GD, et al. Prevalence and correlates of street-obtained buprenorphine use among current and former injectors in Baltimore, Maryland. Addict Behav. 2013 Dec 1;38(12):2868–73.

10. Vlahov D, O’Driscoll P, Mehta SH, Ompad DC, Gern R, Galai N, et al. Risk factors for methadone outside treatment programs: implications for HIV treatment among injection drug users. Addiction. 2007;102(5):771–7.

Do not distribute

11. Monte AA, Mandell T, Wilford BB, Tennyson J, Boyer EW. Diversion of Buprenorphine/Naloxone Coformulated Tablets in a Region with High Prescribing Prevalence. J Addict Dis. 2009 Jul 31;28(3):226–31.

12. Bazazi AR, Yokell M, Fu JJ, Rich JD, Zaller ND. Illicit Use of Buprenorphine/Naloxone Among Injecting and Noninjecting Opioid Users. J Addict Med. 2011 Sep;5(3):175–80.

13. Johanson CE, Arfken CL, di Menza S, Schuster CR. Diversion and abuse of buprenorphine: Findings from national surveys of treatment patients and physicians. Drug Alcohol Depend. 2012 Jan 1;120(1):190–5.

14. Johnson B, Richert T. Non-prescribed use of methadone and buprenorphine prior to opioid substitution treatment: lifetime prevalence, motives, and drug sources among people with opioid dependence in five Swedish cities. Harm Reduct J. 2019 May 2;16(1):31.

15. Mauro PM, Gutkind S, Annunziato EM, Samples H. Use of Medication for Opioid Use Disorder Among US Adolescents and Adults With Need for Opioid Treatment, 2019. JAMA Netw Open. 2022 Mar 23;5(3):e223821.

16. Lofwall MR, Havens JR. Inability to access buprenorphine treatment as a risk factor for using diverted buprenorphine. Drug Alcohol Depend. 2012 Dec 1;126(3):379–83.

17. Fox AD, Chamberlain A, Sohler NL, Frost T, Cunningham CO. Illicit buprenorphine use, interest in and access to buprenorphine treatment among syringe exchange participants. J Subst Abuse Treat. 2015 Jan 1;48(1):112–6.

18. Carlson RG, Daniulaityte R, Silverstein SM, Nahhas RW, Martins SS. Unintentional drug overdose: Is more frequent use of non-prescribed buprenorphine associated with lower risk of overdose? Int J Drug Policy. 2020 May 1;79:102722.

19. Del Pozo B, Krasner LS, George SF. Decriminalization of diverted buprenorphine in Burlington, Vermont and Philadelphia: An intervention to reduce opioid overdose deaths. J Law Med Ethics. 2020;48(2):373–5.

20. del Pozo B. CommunityStat: A Public Health Intervention to Reduce Opioid Overdose Deaths in Burlington, Vermont, 2017–2020. Contemp Drug Probl. 2022 Mar 1;49(1):3–19.

21. Sharfstein JM, Krawczyk N. Testimony on H. 162 Before the House Committee on Human Services [Internet]. 2019 Apr [cited 2022 Oct 18]. Available from: https://legislature.vermont.gov/Documents/2022/WorkGroups/Senate%20Judiciary/Bills/H.225/Witness%20Documents/H.225~Brenda%20Siegel~Written%20Testimony%20from%20Joshua%20Sharfstein%20M.D%20on%20H.162%20in%202019~4-29-2021.pdf

22. AN ACT RELATING TO FOOD AND DRUGS - UNIFORM CONTROLLED SUBSTANCES ACT - OFFENSES AND PENALTIES. 2021-- S 0065 SUBSTITUTE A 2021.

Do not distribute

23. Pashmineh Azar AR, Cruz-Mullane A, Podd JC, Lam WS, Kaleem SH, Lockard LB, et al. Rise and regional disparities in buprenorphine utilization in the United States. Pharmacoepidemiol Drug Saf. 2020;29(6):708–15.

24. Brooklyn JR, Sigmon SC. Vermont Hub-and-Spoke Model of Care For Opioid Use Disorder: Development, Implementation, and Impact. J Addict Med. 2017;11(4):286–92.

25. Rawson R. Vermont Hub-and-Spoke Model of Care for Opioid Use Disorders: An Evaluation [Internet]. 2017 Dec [cited 2022 Oct 18]. Available from: https://www.healthvermont.gov/sites/default/files/documents/pdf/ADAP_Hub_and_Spoke_Evaluation_2017_1.pdf

26. Rawson RA, Rieckmann T, Cousins S, McCann M, Pearce R. Patient perceptions of treatment with medication treatment for opioid use disorder (MOUD) in the Vermont hub-and-spoke system. Prev Med. 2019 Nov 1;128:105785.

27. Darfler K, Sandoval J, Pearce Antonini V, Urada D. Preliminary results of the evaluation of the California Hub and Spoke Program. J Subst Abuse Treat. 2020 Jan 1;108:26–32.

28. Reif S, Brolin MF, Stewart MT, Fuchs TJ, Speaker E, Mazel SB. The Washington State Hub and Spoke Model to increase access to medication treatment for opioid use disorders. J Subst Abuse Treat. 2020 Jan 1;108:33–9.

29. Mm H, Bn K, Vc M. Code Saturation Versus Meaning Saturation: How Many Interviews Are Enough? Qual Health Res [Internet]. 2017 Mar [cited 2022 Nov 4];27(4). Available from: https://pubmed.ncbi.nlm.nih.gov/27670770/

30. Fereday J, Muir-Cochrane E. Demonstrating Rigor Using Thematic Analysis: A Hybrid Approach of Inductive and Deductive Coding and Theme Development. Int J Qual Methods. 2006 Mar 1;5(1):80–92.

31. Massoglia M, Pridemore WA. Incarceration and Health. Annu Rev Sociol. 2015 Aug;41:291–310.

32. Mital S, Wolff J, Carroll JJ. The relationship between incarceration history and overdose in North America: A scoping review of the evidence. Drug Alcohol Depend. 2020 Aug 1;213:108088.

33. Saloner B, Chang HY, Krawczyk N, Ferris L, Eisenberg M, Richards T, et al. Predictive Modeling of Opioid Overdose Using Linked Statewide Medical and Criminal Justice Data. JAMA Psychiatry. 2020 Nov 1;77(11):1155–62.

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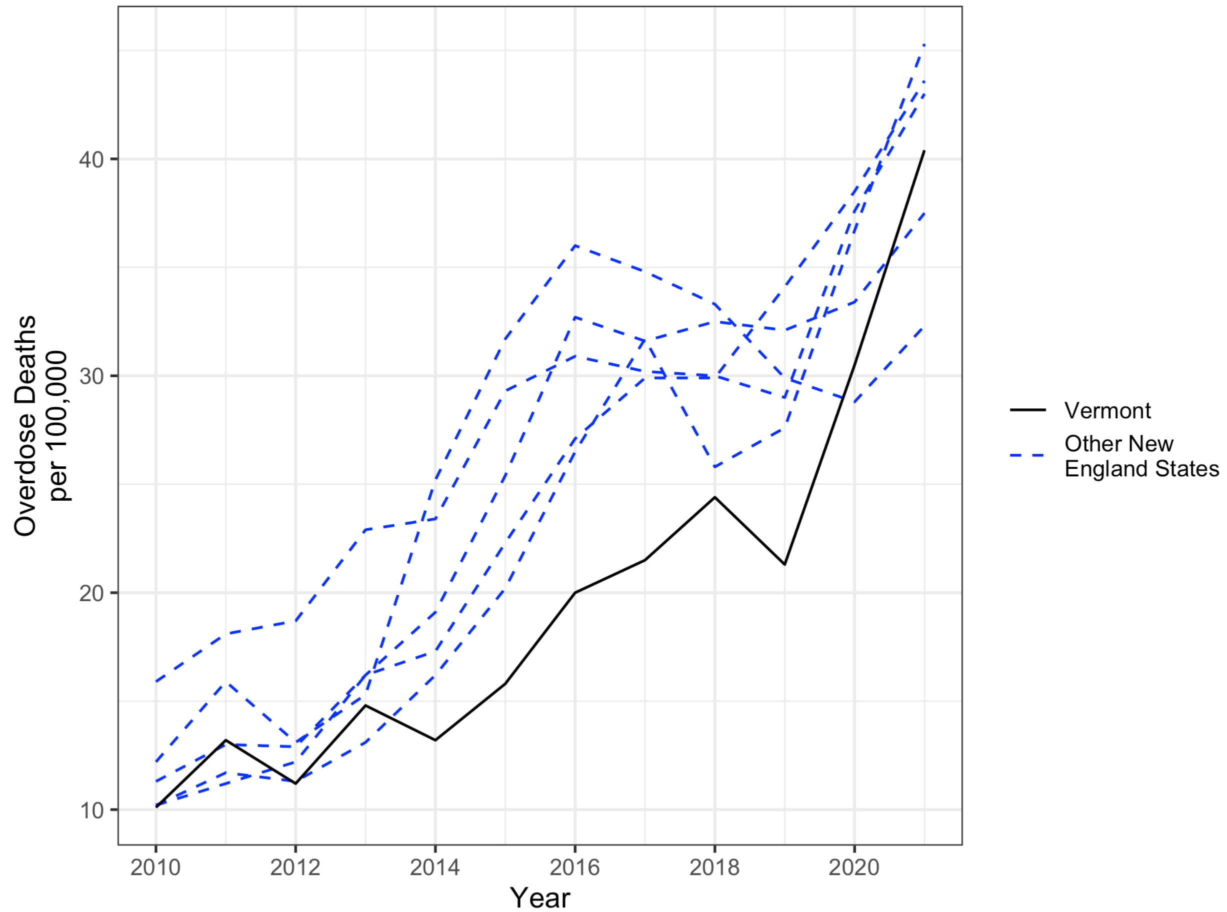
Tables and Figures

Figure 1.1. Annual drug overdose deaths per 100,000 residents, Vermont and 5 New England* States, 2010-2021**



Source: Centers for Disease Control and Prevention, National Center for Health Statistics. National Vital Statistics System, Provisional Mortality on CDC WONDER Online Database. Data are from the final Multiple Cause of Death Files, 2018-2020, and from provisional data for years 2021-2022, as compiled from data provided by the 57 vital statistics jurisdictions through the Vital Statistics Cooperative Program. Accessed at http://wonder.cdc.gov/mcd-icd10-provisional.html on Oct 31, 2022 5:52:22 PM

*Massachusetts, Connecticut, New Hampshire, Rhode Island, and Maine

**Overdose rates for 2021 are provisional estimates

2.1. Prevalence of beliefs about, and lifetime experiences with, non-prescribed buprenorphine in a sample of 474 Vermont residents who misused opioids or received medication treatment for opioid use disorder in the past 90 days

Outcome	Respondents	Endorsed	Prevalence
Used non-prescribed buprenorphine[1]	474	360	76%
To prevent withdrawal[1]	360	341	95%
To get high[1]	359	151	42%
Used prescribed buprenorphine[1]	474	343	72%
Gave, sold, or traded prescription[1]	343	202	59%
Started with non-prescribed buprenorphine[1]	298	221	74%
Decriminalization – Support	474	379	80%
Decriminalization – Oppose	474	79	17%
Decriminalization – Unsure	474	16	3%
Unaware buprenorphine is decriminalized	474	312	66%
Anticipate more non-prescribed use	312	48	15%
Anticipate more diverting of prescription	312	112	36%
Aware buprenorphine is decriminalized	474	134	28%
Have increased non-prescribed use	132	5	4%
Have increased diversion of prescription	70	3	4%
Arrested while possessing buprenorphine	474	84	18%
While possessing non-prescribed buprenorphine	84	44	52%
While possessing prescribed buprenorphine	84	42	50%
Arrested for buprenorphine possession alone	84	25	30%
For non-prescribed buprenorphine	25	16	64%
For prescribed buprenorphine	25	10	40%
Parole or probation violation for buprenorphine	474	53	11%
For non-prescribed buprenorphine	53	41	77%
For prescribed buprenorphine	53	12	23%
Wanted treatment but did not obtain it	474	315	66%
Because no insurance or couldn't pay	315	115	37%
Because insurance did not cover	315	68	22%
Because no transportation	315	208	66%
Because can't find type of treatment desired	315	141	45%
Because can't find time	315	135	43%
Because not ready to stop using	315	224	71%
Because no program openings	315	181	57%
Because didn't know where to go	315	101	32%
Because feared community stigma	315	145	46%
Because could affect work	315	149	47%
Because couldn't find childcare	315	57	18%

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Outcome	Respondents	Endorsed	Prevalence
Because didn't think it was necessary	315	113	36%

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2.2. Prevalence of beliefs about, and lifetime experiences with, non-prescribed buprenorphine by respondent demographic characteristics

	Full Sample		Used non-prescribed buprenorphine		Aware buprenorphine is decriminalized		Support decriminalization		Arrested while possessing buprenorphine		Wanted treatment but did not obtain it	
	Total	% Total	n	%	n	%	n	%	n	%	n	%
Age												
[18,35]	185	39%	131	71%	47	25%	143	77%	39	21%	124	67%
(35,45]	175	37%	149	85%	51	29%	141	81%	36	21%	123	70%
(45,80]	114	24%	80	70%	36	32%	95	83%	9	8%	68	60%
Gender												
Female	238	50%	169	71%	68	29%	182	76%	33	14%	154	65%
Male and Other Genders	236	50%	191	81%	66	28%	197	83%	51	22%	161	68%
Orientation												
Straight	413	87%	312	76%	115	28%	331	80%	70	17%	273	66%
All Other Orientations	61	13%	48	79%	19	31%	48	79%	14	23%	42	69%
Race/Ethnicity												
White Alone	394	83%	305	77%	108	27%	313	79%	58	15%	265	67%
All Other Race/Ethnic Groups	80	17%	55	69%	26	33%	66	83%	26	33%	50	63%
County												
Chittenden	133	28%	102	77%	53	40%	120	90%	23	17%	93	70%
Windham	66	14%	43	65%	22	33%	52	79%	10	15%	38	58%
Orleans	69	15%	50	72%	22	32%	45	65%	6	9%	41	59%
Caledonia	45	9%	36	80%	8	18%	35	78%	4	9%	26	58%
Rutland	45	9%	41	91%	5	11%	36	80%	14	31%	35	78%
Other Counties	116	24%	88	76%	24	21%	91	78%	27	23%	82	71%

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2.3. Prevalence of beliefs about, and lifetime experiences with, non-prescribed buprenorphine by respondent lifetime treatment characteristics

	Full Sample		Used non-prescribed buprenorphine		Aware buprenorphine is decriminalized		Support decriminalization		Arrested while possessing buprenorphine		Wanted treatment but did not obtain it	
	Total	% Total	n	%	n	%	n	%	n	%	n	%
Buprenorphine												
No	131	28%	77	59%	35	27%	94	72%	5	4%	68	52%
Yes	343	72%	283	83%	99	29%	285	83%	79	23%	247	72%
Methadone												
No	146	31%	113	77%	42	29%	118	81%	27	18%	89	61%
Yes	328	69%	247	75%	92	28%	261	80%	57	17%	226	69%
Naltrexone												
No	409	86%	300	73%	115	28%	322	79%	68	17%	263	64%
Yes	65	14%	60	92%	19	29%	57	88%	16	25%	52	80%
Detox												
No	281	59%	205	73%	79	28%	229	81%	37	13%	172	61%
Yes	193	41%	155	80%	55	28%	150	78%	47	24%	143	74%
Counseling												
No	68	14%	39	57%	19	28%	45	66%	4	6%	30	44%
Yes	406	86%	321	79%	115	28%	334	82%	80	20%	285	70%
Residential												
No	151	32%	100	66%	42	28%	105	70%	10	7%	86	57%
Yes	323	68%	260	80%	92	28%	274	85%	74	23%	229	71%

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2.4. Prevalence of beliefs about, and lifetime experiences with, non-prescribed buprenorphine by respondent past-90-day drug use and overdose experiences

	Full Sample		Used non-prescribed buprenorphine		Aware buprenorphine is decriminalized		Support decriminalization		Arrested while possessing buprenorphine		Wanted treatment but did not obtain it	
	Total	% Total	n	%	n	%	n	%	n	%	n	%
Overdose												
No	419	88%	321	77%	113	27%	334	80%	68	16%	272	65%
Yes	55	12%	39	71%	21	38%	45	82%	16	29%	43	78%
Fentanyl												
No	172	36%	127	74%	43	25%	128	74%	30	17%	106	62%
Yes	302	64%	233	77%	91	30%	251	83%	54	18%	209	69%
Heroin												
No	219	46%	168	77%	58	26%	166	76%	36	16%	140	64%
Yes	255	54%	192	75%	76	30%	213	84%	48	19%	175	69%
Painkillers												
No	335	71%	260	78%	94	28%	267	80%	61	18%	218	65%
Yes	139	29%	100	72%	40	29%	112	81%	23	17%	97	70%
Cocaine												
No	173	36%	128	74%	41	24%	133	77%	29	17%	107	62%
Yes	301	64%	232	77%	93	31%	246	82%	55	18%	208	69%
Benzodiazepines												
No	369	78%	276	75%	101	27%	293	79%	60	16%	238	64%
Yes	105	22%	84	80%	33	31%	86	82%	24	23%	77	73%
Methamphetamines												
No	347	73%	248	71%	94	27%	270	78%	59	17%	225	65%
Yes	127	27%	112	88%	40	31%	109	86%	25	20%	90	71%
Alcohol												

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	Full Sample		Used non-prescribed buprenorphine		Aware buprenorphine is decriminalized		Support decriminalization		Arrested while possessing buprenorphine		Wanted treatment but did not obtain it	
No	245	52%	187	76%	68	28%	198	81%	44	18%	155	63%
Yes	229	48%	173	76%	66	29%	181	79%	40	17%	160	70%
Nicotine												
No	30	6%	18	60%	6	20%	26	87%	3	10%	15	50%
Yes	444	94%	342	77%	128	29%	353	80%	81	18%	300	68%
THC												
No	139	29%	100	72%	43	31%	119	86%	19	14%	92	66%
Yes	335	71%	260	78%	91	27%	260	78%	65	19%	223	67%

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2.5. Prevalence of beliefs about, and lifetime experiences with, non-prescribed buprenorphine by respondent past-12-month criminal justice experiences

	Full Sample		Used non-prescribed buprenorphine		Aware buprenorphine is decriminalized		Support decriminalization		Arrested while possessing buprenorphine		Wanted treatment but did not obtain it	
	Total	% Total	n	%	n	%	n	%	n	%	n	%
Arrested												
No	370	78%	274	74%	109	29%	289	78%	57	15%	241	65%
Yes	104	22%	86	83%	25	24%	90	87%	27	26%	74	71%
In jail												
No	396	84%	296	75%	114	29%	312	79%	56	14%	257	65%
Yes	78	16%	64	82%	20	26%	67	86%	28	36%	58	74%
On parole or probation												
No	362	76%	265	73%	104	29%	282	78%	44	12%	230	64%
Yes	112	24%	95	85%	30	27%	97	87%	40	36%	85	76%

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Table 2.6 Demographic, treatment, substance use, and criminal justice characteristics of respondents (n=369) included in qualitative analysis of key themes

	Count	% Total
Age		
[18,35]	145	39%
(35,45]	134	36%
(45,80]	94	25%
Gender		
Female	181	49%
Male and Other Genders	192	51%
Orientation		
Straight	324	87%
All Other Orientations	49	13%
Race/Ethnicity		
White Alone	316	85%
All Other Race/Ethnic Groups	57	15%
County		
Chittenden	122	33%
Windham	61	16%
Orleans	35	9%
Caledonia	40	11%
Rutland	37	10%
Other Counties	78	21%
Buprenorphine		
No	99	27%
Yes	274	73%
Methadone		
No	119	32%

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	Count	% Total
Yes	254	68%
Naltrexone		
No	318	85%
Yes	55	15%
Detox		
No	207	55%
Yes	166	45%
Counseling		
No	49	13%
Yes	324	87%
Residential		
No	102	27%
Yes	271	73%
Overdose		
No	326	87%
Yes	47	13%
Fentanyl		
No	130	35%
Yes	243	65%
Heroin		
No	167	45%
Yes	206	55%
Painkillers		
No	257	69%
Yes	116	31%
Cocaine		
No	133	36%
Yes	240	64%

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	Count	% Total
Benzodiazepines		
No	292	78%
Yes	81	22%
Methamphetamines		
No	272	73%
Yes	101	27%
Alcohol		
No	193	52%
Yes	180	48%
Nicotine		
No	15	4%
Yes	358	96%
THC		
No	111	30%
Yes	262	70%
Arrested		
No	286	77%
Yes	87	23%
In jail		
No	306	82%
Yes	67	18%
On parole or probation		
No	283	76%
Yes	90	24%

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Table 2.7. Opinions on buprenorphine decriminalization, reasons for taking non-prescribed buprenorphine, effects of taking non-prescribed buprenorphine, and consequences of not obtaining substance use treatment – key themes abstracted from free response questions in a survey of 369 Vermont adults who misused opioid drugs or received treatment for opioid use disorder in the past 90 days.

Opinions on Decriminalization	**Count**	**Percent**
Supports Decriminalization		
Improves Safety	149	40.38%
Reduces punishment or stigma	117	31.71%
Increases access	96	26.02%
Mutual aid	27	7.32%
Opposes Decriminalization		
Stop diversion	25	6.78%
Encourage people to get prescriptions	25	6.78%
Concern for Children	7	1.90%
Conflicted (e.g., decriminalize small amounts, criminalize large amounts)	18	4.88%
Reasons for Taking Non-prescribed Buprenorphine		
Mitigate withdrawal	103	27.91%
Couldn't get prescription	57	15.45%
Stopgap	55	14.91%
Easier to obtain	56	15.18%
All I could get to get high	26	7.05%
Uncomfortable with healthcare	10	2.71%
Effects of Taking Non-prescribed Buprenorphine		
Positive Effects		
Eliminates withdrawal	128	34.69%
Didn't use other drugs	57	15.45%
Employment benefits	41	11.11%
Friends and family benefits	28	7.59%
Improved quality of life	71	19.24%
Negative Effects		

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Precipitated Withdrawal or Illness	24	6.5%
Arrested or punished	2	0.54%
Effects of Missing Treatment		
Used drugs	112	30.35%
Used non-prescribed buprenorphine	40	10.84%
Arrested or punished	16	4.34%
Ambivalence	16	4.34%
Overdosed	10	2.71%
Used non-prescribed methadone	5	1.36%

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Table 2.8. Summary of major themes and subthemes of buprenorphine decriminalization from the perspective of people who use drugs in Vermont, in the context of Vermont's buprenorphine decriminalization.

Theme	Illustrative quote
Supports Decriminalization	
Improves Safety	*The likelihood of overdose on buprenorphine is less likely than the overdose on heroin…And it could possibly save a lot of lives, even if it is not necessarily prescribed by a doctor, because I had a period of time where I couldn't get into a doctor, so I was buying it on the street until I could.* *Well, because it's a lot safer for people to take Suboxone than it is for people to be out shooting heroin. So if they can get their hands on Suboxone instead of some heroin and know that it's safe for them to do that, that might end up saving people's lives.*
Reduces punishment or stigma	*Well, I just think that a lot of the system in the past has been so judgmental on people that are addicts that they just put 'em in jail and let 'em fend for themselves instead of just trying to help them and make it [legal], give them resources and tools to be able to safely use, actively use to be able to get better.* *I feel like I know from my own experience that when I was trying to get sober, the first time…I got pulled over and I had some of [buprenorphine in] my possessions, so I actually got a charge over it, but I was trying to do the right thing, you know what I mean? I was trying to better myself by taking the buprenorphine instead of, you know, doing the heroin or the other stuff. So I feel if somebody's got a little bit they're probably trying to better theirselves, so I don't feel like they should be criminalized for it.*
Increases access	*I don't think that there should be criminal penalty for that because I think it's much better than the alternative…A lot of people have a hard time getting into treatment. I'll tell you some places, some clinics have waitlists, or some people can't go to a clinic because they work and the clinic's not open during their time. And some, you know, with bupe, it's hard to get into a doctor so their choice is continue to buy heroin or buy the bupe and maybe it would deter them from buying bupe with knowing that they're committing a crime and it's a prescription.* *Some people don't have time. Some people have, you know, two jobs, three jobs, they have children… They're doing everything by themselves. A single mother, single father, they can't jump through all the hoops that the clinic or the doctor's offices are asking people to jump through…If there are only chances*

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Theme	Illustrative quote
	to buy it (buprenorphine) off of the street, you know, and they're staying clean that way, then I don't think that they should be punished for it.
Mutual aid	*In the world of addiction...there's a whole community of us are all suffering from the same disease. And so we see this, these maintenance drugs out there a lot, and they're very often passed between people and I think they help a lot of people, and I can perhaps get other people off the street narcotics and onto the safe, safer drugs that the government has.* *I myself have been on bupe and it has been very difficult to get sometimes and it's easier to get on the streets...You know, it makes it easier to get, you know, you don't have to go call a doctor, you just go to a friend and, you know, it's a lot easier. It's cause you know, everybody can have it that way cause either everybody will have a doctor or everybody will have it. So if you don't have it and you're sick, you can just go to a friend and get it.*
Opposes Decriminalization	
Stop diversion	*I mean, you, if you get caught with any other controlled substance, then there's penalties if it's not prescribed to you. So I don't see why there's a difference with buprenorphine. I mean, I know that it helps, you know, potentially it could help save people's lives, but I mean, there's also, uh, you know, um, Narcan for the same exact reasons. I mean, I, believe that Narcan should be, you know, legal, but I don't see how really Suboxone or buprenorphine is really going to save that many people's lives. I think it's more or less people use it when they don't have dope. That's, that's the only time that I, I've ever heard of people actually having it.* *If people are prescribed the medicine for help, they shouldn't be selling it to get money off of it. They should be actually taking it for their wellbeing.*
Encourage people to get prescription	*I would say that I feel like there should be penalties because like in order to get on those medications, you have to go through a MAT [Medically Assisted Treatment] provider and you have to do counseling and all that other stuff, which is supposed to help benefit you in your recovery.* *I think the person that's doing that [getting non-prescribed buprenorphine] should be directed to the correct way of doing things by going to a doctor. And if there's no ways of penalizing someone from, you know, stopping, just buying a little bit here and there on the streets, you know, then why bother getting help? So, uh, they can just go and get it from someone down the street.*

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Theme	Illustrative quote
Concern for children	*I go to a clinic and I take methadone, and I know for a fact that people sell this in the street to make money. I also know that people don't take care of where they're using it, how they're using it, and it puts people at risk...puts children at risk. I have had a few friends that have had their children get in contact with it and get sick from it. I understand people have drug problems, but there's no reason to, and unless you're prescribed it, you shouldn't have it.*
Conflicted	
Intention to "stay clean", using small amounts should be decriminalized, but large amounts and intent to divert should be criminalized	*Because a small amount, somebody is trying to come off of the drugs. In a larger amount, somebody is more or less trying to sell the drugs. And if, you know, if somebody has a small amount, you know, up to, you know, I typically, I'd say up to 24 milligrams cause that's what it typically takes sometimes for somebody to feel well throughout the day on Suboxone. So any, anything over 24 milligrams, then yeah, they should be punished for that. But anything under that? No, I don't believe so.* *Well, just because people abuse it and they sell it and they don't do what they're supposed to do with it. So that makes me think that a law, but then people, even though they're not prescribed it, they still use it to, you know, try to be clean on their own. So in that instance, I would say it would be okay to not have a law, I mean, to have that law and effect and not get in trouble.*
Possession should be illegal but criminal punishment should be rehabilitation or other supportive treatment	*Cause I know I really think people should not self prescribe and they should go to a doctor. I mean, I have eight antidepressants and if I get caught walking around with it, you know, but if I decide well I'm gonna take someone else's antidepressant, you know, it's illegal to have. I think it should be totally un criminal. It should be a fine or some, some something to it. Like maybe your punishment's gonna be gotta go to drug rehab. You know, something like that. Kinda no jail but some something to force you to kind of, or work to go through rehab. Cause you're already on the first step if you're taking to buprenorphine, you're trying to stay away from the heroin.*

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Table 2.9. Summary of major themes and subthemes of lived experiences using non-prescribed buprenorphine from people who use drugs in Vermont, in the context of Vermont's buprenorphine decriminalization (Act 46), 2022

Theme	Illustrative quote
Reasons for taking non-prescribed buprenorphine	
Mitigate withdrawal	*I was detoxing from opiates from heroin and, you know, what are you supposed to do, go to your doctor and tell them that you're withdrawing? I have done that in the past as well, and they're not very supportive, or at least they weren't supportive then. I ended up buying it on the street because I was actually on a very lengthy waiting list to get into the clinics in Burlington, which has also changed recently.* *I was still at the clinic and I missed my day to go get my refill cause I was only going every two weeks. I completely forgot and I missed the day. So the next day I woke up and I was in withdrawal. And the withdrawal is what led me to take some that was not prescribed to me. Cause the withdrawals are brutal. They're very brutal.*
Couldn't get prescription	*I didn't really have the chance yet to get it from a health provider and I didn't want to go back to heroin at the time. So I just got it from someone who I knew already had a prescription and didn't mind helping me out.* *I tried to get clean, like get into a treatment facility, like just a detox. There was a waiting list to get a bed for months and there was a waiting list to get into the clinics like couple years. So that's what stopped me from going to the program first. So I needed to get clean so I had started it on my own until I could get into a real facility. Not like it was today. Today you get right in. Before you had to wait and wait and wait and hope and pray.*
Stopgap	*I was desperate because I had been in rehab. I went to rehab for 34 days and I told them that if I left without being on something, I knew I would use because my head was not right. Even though I was there for 34 days and they still had me go, they gave me a number. So I leave rehab and I immediately called the hub and they said they could not get me in to see the doctor for two days. I immediately freaked out and my mind went, oh my God. Oh my God. Immediately to wanting to use, you know, even though I wasn't sick anymore, but I still wanted to use, so I was scared. So my friend got me two eight milligram Suboxone strips and she gave those to me and I took those for those two days until I get into the doctor. And then they put me on 16 milligrams when I got to the doctor, but I was desperate. I didn't wanna use. And I knew if I got the Suboxone I wouldn't use, so yep… It was a struggle.*

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	I had tried to set up through a healthcare provider. When I initially got outta prison I was supposed to have an appointment set up and for whatever reason, they didn't have that appointment when I got out so it ended up taking them a few days to get me my Suboxone. So I just went to the street and bought it. *I left the emergency room and I was headed to rehab, and the rehab had called and canceled my intake spot because they had a staff member quit, so there wasn't enough staffing for me, so I was left on the streets with no medication for a week or so.*
Easier to obtain	*I wanna say it was just some issues with getting into a doc, a provider, or the clinic, cause it's not always a quick process. But now, like I said before though, now it's lot different. Like, cause as you said, the laws have changed and the providers seem like they can take on more patients than they used to be able to.* *The guy who was actually getting it [and giving it to me] was getting it (buprenorphine) from a health provider. The health providers, it's like a hassle. They got criteria you have to do and stuff like that.*
All I could get to get high	*I was just getting high off it. I wasn't taking it to benefit myself, like I wasn't taking it the way you're supposed to. Like the people I was hanging out with that, there was a point in time where a lot of people were actually heavily abusing it so I just happened to be in the wrong place at the wrong time.* *I did get somewhat of a high from it, but I also felt safer using that than trying to use opiates or heroin or something like that.*
Uncomfortable with healthcare	*I take other mental health meds and if I were to go get on the program, then I wouldn't be able to get on my other meds along with the fact that it's just, it's stigmatized. So, you know, once you get on a program in Vermont, you're just like branded no matter what… You're not treated the same.* *Going to somebody, you don't know, and pouring your heart out, or telling, explain[ing] to someone that you do this, that, and that you need help. It's hard to admit you need help or hard to ask for help sometimes. And you also think that you can take care of the problem on your own so that would be why I would've taken it (non-prescribed buprenorphine).*
Positive effects of taking non-prescribed buprenorphine	
Eliminates withdrawal	*It was very helpful because it would stop me from having withdrawals...It allowed me to be able to do the things that I would normally want to do. Like go out and look for a job, or have energy to get out of bed, or to do the responsible things, or even try to work on getting on [buprenorphine] legally and not buying it from the street.* *It affected [me] in the sense that I can't really do anything when in that sort of withdrawal. It's hard to get up, it's hard to be a parent, it's hard to get anything done you're supposed to. So, if you can take some and*

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	feel fine, then you can do everything that you need to do. [If] I hadn't been able [to take it], I probably [would have] laid in bed all day.
Didn't use other drugs	*It really helped me. It gave me a peace of mind to know that I'm not going around heroin dealers… I'm also not using, I'm not doing intravenous...So, it gave me that other peace of mind that I'm going to be okay for a little while to get the things done that I need to get done…When I started using buprenorphine it pulled me out of the mind of the streets. Because when you work in the streets trying to find dope, it's like warfare.* *It helped keep me sober that week until they had a bed for me in rehab. So, I think it kept me alive.*
Employment benefits	*It was helpful at the time for sure. I've always worked a lot, so it helped me…I found that it was almost easier for me to get it off the streets, because I was able to go to work and I wouldn't have to go to counseling. It's hard to go to counseling and take care of kids, and do the whole life thing when you got to go to counseling like two to three times a week and then you got to go see a doctor and then you got to go do UAs out of nowhere. Not every job likes to let you go and do that.* *It was helpful...It kept me from doing heroin, that's my goal...It made it so I could go to work. I was always trying to just chase staying straight-- keeping the withdrawal symptoms away. So, when I'm doing heroin, I have to do it every couple of hours, so I can't hold down a job. But with Suboxone I can take it once a day and I can be quote unquote normal and feel alright and not have to worry about getting sick and [in] withdrawal. So, I can actually function, and I can hold down a job, I can take care of my kids.*
Friends and family benefits	*It was very helpful…It was affordable at the time...It just makes it so you don't have those withdrawals still able to work and you're still able to take care of your family and do everything that you need to do...It enables you to just be a normal everyday person and go to work and come home and just be a dad.* *I would say it was very helpful. I have responsibilities that I have to do and I can't do any of that stuff if I'm in withdrawal. It got me to a normal state of mind so I could get up, I could clean my house, I could take care of my kids. I could do everything I needed to. If I'm in withdrawal, I'm just lying in bed miserable, I can't even move.*

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Improved quality of life	*It's been like a miracle drug for me, and I've been on it for years. I don't know if I would be here if not for this drug.* *Well, one, you're not getting high… You can function without having addiction on your mind. When you're using other stuff, that's what's always on your mind is when you're going to get the next one…or you just are constantly making sure that you're not getting sick. Now with the buprenorphine, it lasts a little longer. You're not using all day long. You use [buprenorphine] one time a day and you go on about your day, you don't feel sick throughout the day. You can function. You can do your normal activities.*
Negative effects of taking non-prescribed buprenorphine	
Precipitated withdrawal or illness	*Honestly, I think the biggest problem with buprenorphine is that it makes you sick in order to take it unless you wait until you're rather very sick in order to take it. It stops a lot of people from using it. They'd rather use the methadone because it doesn't matter when you take it, you don't have to wait to get sick to keep yourself from getting sick.*
Arrested or punished	*It was harmful because I got violated for probation [and] went to jail for 30 days. It helped me but I went to jail for using a non-prescribed drug on probation, which is against my conditions.*

Table 2.10. Summary of major themes and subthemes of lived experiences and the effects of missing treatment from people who use drugs in Vermont, in the context of Vermont's buprenorphine decriminalization (Act 46), 2022

Theme	Illustrative quote
Effects of Missing Treatment	
Used drugs	*I tried to call this doctor that I knew was a big [bupe] guy and they said they weren't even taking patients…I mean, I remember crying, like trying to find a doctor that I could get [buprenorphine from]…I was trying to save my relationships, my work…And it was really, really hard and I could not find anything. I remember specifically going on a using streak that was really bad…that ended up [with] me being in a residential treatment.*
Used non-prescribed buprenorphine	*I was buying off the streets, stuff like that. I had to turn to that. And I mean, it really, honestly, I think it (buprenorphine) saved my life… I mean, I was getting into it really bad. I was running cross state lines, you know, just doing whatever I could. Started stealing, stuff like that, you know, and I'm not like that. Like, I have never been like that, like, [with] a clean record at 32 years old… So for me it was demoralizing to be in such a situation where I felt helpless. So when I found somebody to start buying the*

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	bupe off of, it kind of gave me confidence that things were going to be okay. You know, like, I'm going to make it through this. *So first of all, it's extremely expensive if you're buying it off the street. It's like $25 per 12 milligram strip and you know, 12 milligrams is about a normal dose. So it was about $25 a day when I was homeless and had no access to money. It was, it was really hard. And if I didn't get it, I was sick, I was miserable, I was suicidal. It was just, it wasn't fun.*
Arrested or punished	*At the time I was homeless and prostituting and just didn't have a way to really get to the places I needed to go. And then finally I got in some trouble. I kind of got in trouble on purpose so I could get into the system to get the help I needed…I ended up going to jail and then a rehab…And then got on maintenance.* *I think, you know, I just didn't get clean. I ended up going back to jail because obviously I didn't stop using. I think you can have all the want in the world, but if you don't have things lined up, like at that point I didn't have stable housing…So just so many things got in the way, and I had so much that it kind of just pushed me over the edge. And then at that point their only solution is jail. And you know, maybe if somebody's a criminal "just because" jail's a place for them, but [not] when they've literally reached out asking for help a million times and they get cut down.*
Overdosed	*[They didn't say], "Hey, I can get you into the methadone clinic referral, I can do something for you other than you going home and using". It's not their fault, but I would like more help. There should be more, there should be more resources… It should be quicker to get into a methadone clinic. It took me five times overdos[ing] for them to think about taking me seriously.* *I called both places before I overdosed, any overdoses, and I said, "Hey, can I get in?" And they, everything was to brick wall. And then [I] overdosed. They were like, "Oh, well we need to get you in here." It wasn't, "[We'll] do whatever we can." And they ended up figuring it out.* *I mean the last time I would say was probably right before I went to, well, a little bit before I went to prison. And, I mean I died [from overdosing] like three times [over the] course of a couple of months…And I just didn't wanna live like that, but I was so scared of how intense… at how deep my habit had become that I just was scared. There had been a couple of times I had gone to a clinic and forced into precipitated withdrawals and it was hell, I couldn't do it. I ended up going to the methadone clinic just because I fucked up so much.*
Used non-prescribed methadone	*Well, I called a few detoxes and they were all full, no beds available and like I said to the methadone clinic and everything, they were full like a year, couple years out waiting (list). So I waited. I had to wait*

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	until there was an opening for a bed, and in the meantime, I just managed the symptoms and treatment myself [by] getting the stuff off the street. Buprenorphine or methadone, whatever, and managed it myself at home until a bed opened up and I was able to get into a residential detox. *There was a heavy waiting list for beds and whatnot, and so I couldn't get in. I kept calling, but again, it led me to seek out things like… Suboxone and methadone that was not prescribed to me. It led me down, down, down those paths or [I would] just have to straight up use again to not be sick… in the process of trying to seek help.*

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3.1 Prevalence of beliefs about non-prescribed buprenorphine in a sample 117 Vermont clinicians who have prescribed buprenorphine in the past year by clinician characteristics

	Sample Distribution		Aware of Decriminalization		Support Decriminalization		Believe Decriminalization Increased Diversion		Prescribe to Fewer Patients	
	Count	% Sample	n	%	n	%	n	%	n	%
All	117	100%	72	62%	107	91%	56	48%	5	4%
Last time prescribed										
Last week	78	67%	49	63%	74	95%	29	37%	3	4%
Last month	20	17%	12	60%	18	90%	12	60%	1	5%
Last year	19	16%	11	58%	15	79%	15	79%	1	5%
Years with waiver										
Fewer than 2 years	22	19%	10	45%	21	95%	10	45%	0	0%
2-5 years	44	38%	24	55%	40	91%	25	57%	3	7%
More than 5 years	51	44%	38	75%	46	90%	21	41%	2	4%
Practice specialty										
Specialty substance use	25	21%	20	80%	24	96%	11	44%	2	8%
Other	33	28%	16	48%	29	88%	22	67%	0	0%
Primary Care	59	50%	36	61%	54	92%	23	39%	3	5%
Gender										
Female	60	51%	41	68%	57	95%	21	35%	3	5%
Male and Other Genders	57	49%	31	54%	50	88%	35	61%	2	4%
Age										
Under 45	46	39%	25	54%	42	91%	19	41%	3	7%
45 to 54	31	26%	22	71%	29	94%	18	58%	1	3%
55 or older	40	34%	25	63%	36	90%	19	48%	1	3%

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