

Subtracting 420 from 922: Marijuana Legalization and the Gun Control Act After Bruen

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ABSTRACT

Numerous states have legalized marijuana for medical and recreational use. Nonetheless, federal law prohibits users of marijuana, which remains illegal federally, from possessing firearms. I interrogate this legal tension from two angles. First, this paper brings empirical evidence to the conversation: Does legalizing marijuana lead to more gun deaths?

It doesn't. This article analyzes the effect of recreational and medical marijuana legalization on gun homicides, suicides, and deaths as well as on gun prevalence, gun purchasing, and federal gun prosecutions. I combine administrative data from the National Vital Statistics System, National Instant Criminal Background Check System, and United States Sentencing Commission for the period from 2010 through 2020. To estimate a causal effect, I employ a difference-in-differences method with staggered treatment timing from Callaway and Sant'Anna (2021) to compare states that have legalized marijuana to those that have not yet legalized marijuana but will during the study period. There is no evidence of a statistically significant treatment effect of either recreational or medical marijuana legalization on firearms deaths, homicides, or suicides. Additionally, there is no evidence that legalization causes greater firearms sales, or that the federal gun prohibition for marijuana users deters gun killings post-legalization.

Secondly, this regulation has received new scrutiny after the Supreme Court's recent ruling in NYSRPA v. Bruen, under which firearms regulations must be justified by consistency with "this Nation's historical tradition of firearm regulation." Courts have come to conflicting answers on whether the prohibition on gun ownership by

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marijuana users accords with the Second Amendment under Bruen. I, therefore, survey three potential legal paths for resolving the conflict between state legalization of marijuana and federal gun laws. First, legislators might directly amend the Gun Control Act to allow for gun possession by some or all marijuana users. Second, legislators might reform marijuana's status within the Controlled Substances Act more broadly. Finally, an uncertain future for the controlled-substance-user prohibition exists in the courts post-Bruen. The Bruen decision's unworkable tests do not clearly support either upholding or striking down this ban. If anything, the interpretation of the federal ban on gun possession by marijuana users under Bruen highlights the impracticability of its test. Amongst these solutions, I argue that broader Controlled Substances Act reform is the likeliest to provide consistency while not harming public safety.

INTRODUCTION

Insanity, robbery, and axe murder—according to the 1936 cult hit, *Reefer Madness*, these are but several of the purported risks of marijuana.¹ Public perceptions of marijuana and marijuana laws in the U.S. have liberalized considerably since then, with many states legalizing the substance for medical or recreational use. Under federal law, though, marijuana remains illegal. This conflict poses issues for gun owners who use state-legal marijuana: They're committing a federal crime. The Gun Control Act of 1968 introduced this prohibition, barring any person who is “an unlawful user of or addicted to any controlled substance” from possessing a firearm.² Exactly what drugs are unlawful substances is defined by the Controlled Substances Act.³ Thus, this prohibition includes any user of marijuana, including medical and recreational consumption that might be legal under state law.⁴ Breaches of this prohibition are rarely prosecuted, but it nonetheless creates a chilling effect.⁵ These marijuana users are denied the ability to purchase a firearm, via the National Instant Background Check System (NICS).⁶ The Bureau of Alcohol, Tobacco, Firearms, and

¹ REEFER MADNESS (New Line Cinema 1936).

² Gun Control Act, Pub. L. No. 118–19, 18 U.S.C. § 922(g)(3) (1968).

³ See generally Controlled Substances Act, 21 U.S.C. § 802 (1970).

⁴ 21 U.S.C. § 812.

⁵ In 2020, only 230 offenses under the entire 18 U.S.C. § 922(g)(3) prohibition (i.e., illegal users or addicts of any controlled substance) were prosecuted. U.S.S.C. Individual Offender Files, FY 2020.

⁶ See generally Dru Stevenson, *The Complex Interplay Between the Controlled Substances Act and the Gun Control Act*, 18 OHIO ST. J. CRIM. L. 211 (2020).

Explosives has been consistently firm on this stance.⁷ Local law enforcement agencies have been, too, with some even warning medical marijuana card users to turn in their guns.⁸ Despite the perceived unfairness of being barred from exercising a constitutional right due to the use of a substance legal in one's state, courts have consistently upheld this bar.⁹

Then came Bruen. Handed down in June 2022, the Supreme Court's judgment in *New York State Rifle & Pistol Association, Inc. v. Bruen* upended the Second Amendment standard for firearms regulations.¹⁰ Bruen no longer allows courts to engage in means-end testing of gun regulations; instead, once any gun regulation implicates conduct covered by the Second Amendment's plain text, the government must identify an analogue in the nation's "historical tradition" of firearms regulation.¹¹ If it cannot, the regulation must fall. Bruen has been critiqued, both for its own reasoning and its implications.¹² In the decision's aftermath, lower courts have assessed the federal prohibitions on certain classes of people possessing guns, and to varying results.¹³ One consistent trend that has emerged is a clear historical precedent of regulating the possession of guns by dangerous people.¹⁴ Whether marijuana users are included in that category is a question over which the courts have disagreed.¹⁵ Thus, there is newfound attention to the conflict between state marijuana laws and federal gun laws in Bruen's wake.

This paper's core empirical argument is that legal recreational and medical marijuana does not pose a danger via firearm deaths.¹⁶ To show this fact, I exploit the staggered legalization of marijuana across different states and address three

⁷ *Id.* at 213; Letter from U.S. Dep't. of Just. Bureau of Alcohol, Tobacco, Firearms, And Explosives, to All Federal Firearms Licensees (Sept. 21, 2011).

⁸ *Honolulu Police Stop Requiring Pot Patients to Give Up Guns*, ASSOCIATED PRESS (Dec. 8, 2017), <https://apnews.com/article/bcb0921baf1b43d592d9343fbae5ceed> [<https://perma.cc/V8CE-ZQLA>]; Mark Scoloro, *Feds: Quit Using Medical Pot or Give Up Your Guns*, ASSOCIATED PRESS (Jan. 14, 2018), <https://eu.detroitnews.com/story/news/nation/2018/01/14/pot-guns/109472598/> [<https://perma.cc/HER6-9HEX>]; Carla K. Johnson, *Illinois Medical Pot Users Erroneously Told to Give Up Guns*, ASSOCIATED PRESS (Dec. 4, 2015), <https://apnews.com/article/7dbdf8fe7bb6418081c439d8ec119e19> [<https://perma.cc/DQ5H-SQLP>].

⁹ *See generally* Stevenson, *supra* note 6, at 232 (collecting cases).

¹⁰ *N.Y. State Rifle & Pistol Ass'n v. Bruen*, 597 U.S. 1, 130–31 (2022).

¹¹ *Id.* at 2174.

¹² *See infra* Section III.B.3.

¹³ *See infra* Section III.B.2.

¹⁴ *See infra* Section III.B.2; *Kanter v. Barr*, 919 F.3d 437, 469 (7th Cir. 2019) (Barrett, J., dissenting).

¹⁵ *Compare* *United States v. Daniels*, No. 22-60596 (5th Cir. 2019), *United States v. Harrison*, 654 F. Supp. 3d 1191 (W.D. Okla. 2023), *and* *United States v. Connelly*, No. EP-22-CR-229(2)-KC, 2023 WL 2806324 (W.D. Tex. Apr. 6, 2023), *with* *United States v. Daniels*, No. 1:22-cr-58-LG-BWR-1, 2022 WL 3717326 (S.D. Miss. Aug. 29, 2022), *rev'd*, 77 F.4th 337 (5th Cir. 2023) *and* *United States v. Sanchez*, 646 F. Supp. 3d 825 (W.D. Tex. 2022); *see generally infra* Section III.B.2.

¹⁶ Throughout the paper, the terms "legal marijuana" and "legal marijuana users" refer to marijuana legalized at the state level; the drug remains illegal federally. *See* 21 U.S.C. § 812.

firearms-related questions: First, does the legalization of marijuana cause an increase in firearm deaths? Second, does the legalization of marijuana cause an increase in firearm homicides? Finally, does the legalization of marijuana cause an increase in firearm suicides? I find that there is no evidence of a causal effect of marijuana legalization on firearm deaths, homicides, or suicides.¹⁷ Of course, proponents of the controlled substance user prohibition might argue that this lack of an effect showcases the need for such a prohibition—that is, § 922(g)(3) acts as a deterrent. Without such a federal prohibition, legalization would have deleterious effects on gun owners. Hence, this paper analyzes two additional questions to probe whether such a deterrent effect occurs. First, if marijuana users are truly taking the federal firearms prohibition into account, those who begin to use newly legal marijuana might be less likely to purchase guns. They might also dispose of existing guns. Hence, I use firearm background check data and a proxy for firearm prevalence to determine whether marijuana legalization has any effect on levels of gun purchasing and ownership. I find little evidence that it does.¹⁸ Second, if the federal government robustly enforces the prohibition on possession of firearms by controlled substance users, we might expect to see a deterrent effect via increased prosecution. I look at whether federal gun prosecutions increase following marijuana legalization. I find no such effect.¹⁹ Marijuana legalization does not cause worsening firearm outcomes, and § 922(g)(3) does not appear to be the prophylactic that makes that so.

Of course, an absence of evidence is not evidence of absence. This paper's results do not necessarily support the affirmative argument that marijuana legalization increases public safety—though others have found some evidence that it does.²⁰ But I find no support for the claim that the sky will fall if marijuana is legalized, at least with regard to guns. Of course, there is good evidence that increases in the number of guns in circulation can lead to more death and crime.²¹

¹⁷ See *infra* Section II.C.1.

¹⁸ See *infra* Section II.C.1.

¹⁹ See *infra* Section II.C.1.

²⁰ See *infra* Section II.A.

²¹ E.g., Andrew Anglemeyer et al., *The Accessibility of Firearms and Risk for Suicide and Homicide Victimization Among Household Members: A Systematic Review and Meta-analysis*, 160 ANN. INTERN. MED. 101 (2014); Rosanna Smart, *Effects of Concealed Carry Laws on Violent Crime*, RAND RSCH. REV. (2023), <https://www.rand.org/research/gun-policy/analysis/concealed-carry/violent-crime.html> [<https://perma.cc/GV4G-NT4Q>]; Alexander D. McCourt et al., *Purchaser Licensing, Point-of-sale Background Check Laws, and Firearm Homicide and Suicide in 4 U.S. States, 1985–2017*, 110 AM. J. OF PUB. HEALTH 1546 (2020); Cassandra K. Crifasi et al., *Association Between Firearm Laws and Homicide in Large, Urban U.S. Counties*, 95 J. URB. HEALTH 383 (2018); Michael Siegel et al., *The Impact of State Firearm Laws on Homicide and Suicide Deaths in the USA, 1991–2016: A Panel Study*, 34 J. GEN. INTERNAL MED. 2021 (2019); Michael Siegel et al., *Easiness of Legal Access to Concealed Firearm Permits and Homicide Rates in the United States*, 107 AM. J. OF PUB. HEALTH 1923 (2017). Citations are drawn from JORGE CAMACHO ET AL., *Preempting Progress: States Take Aim at Progressive Prosecutors*, in LOCAL SOLUTIONS SUPPORT CENTER WHITE PAPER (2023). See generally ROSANNA SMART ET AL., *THE SCIENCE OF GUN POLICY: A CRITICAL*

Marijuana users, though, are likely not the population that would cause any marginal increase in negative outcomes. Hence, should legislators wish to allow legal marijuana users to possess guns, they have several options. First, they could amend the Gun Control Act to exempt these legal marijuana users from § 922(g)(3)'s bar. Second, they could reschedule marijuana under the Controlled Substances Act or remove the drug from the Act entirely. Finally, they could leave the issue to the courts. I argue that the second of these—removal of marijuana from the Controlled Substances Act—provides the most consistency and clarity.

Part I describes this paper's empirical arguments. I begin with a review of the criminological and public health literature on marijuana, crime, and violence—a literature that largely finds little danger of violence from legal marijuana use. Then, I present the datasets and identification strategy upon which the analysis relies, followed by the empirical findings and robustness checks. Part II comprises this paper's legal arguments. First, I present the potential legislative pathways to resolving the conflict between state drug laws and federal gun laws. Then, I summarize the developments so far in applying Bruen to the federal firearms prohibitions contained in 18 U.S.C. § 922(g) and § 922(n). Finally, I combine my empirical results with Bruen's new standard to argue that the consideration of § 922(g)(3) further highlights the internal inconsistency of and challenges of applying Bruen.

I. LEGALIZATION'S EMPIRICAL EFFECTS

A. *Legal Marijuana and Crime: What We Know So Far*

Extant literature on the connections between marijuana, crime, and violence might be categorized into two perspectives: the micro-scale and the macro-scale. At the micro-scale, researchers have been concerned with how marijuana use affects the individual and what connections might exist to violent or antisocial behavior. At the macro-scale, research has addressed whether legalization, and more widespread use of marijuana, has impacted crime and violence in communities, such as municipalities, counties, and states. The theoretical basis underpinning these perspectives is that crime from drug use can occur either as a function of individual pathology—violence induced by drug intoxication or crime needed to procure drugs—or from the systemic use of violence and other crime in the illicit market for drugs.²² Both strands of research have largely found a lack of clear, causal evidence for the proposition that marijuana use or legalization would increase crime. I now summarize both strands of research in turn.

SYNTHESIS OF THE RESEARCH EVIDENCE ON THE EFFECTS OF GUN POLICIES IN THE UNITED STATES, (3rd ed. 2023).

²² See Paul J. Goldstein, *The Drugs/Violence Nexus: A Tripartite Conceptual Framework*, 15 J. DRUG ISSUES 493 (1985).

One of the key challenges in assessing the individual long-term effects of marijuana use is the high prevalence of other comorbidities and co-use with other drugs—in brief, who uses marijuana is not random.²³ Marijuana's immediate effects are generally depressive; these effects generally then include a reduction in violent activity, except in some rare cases of more acute psychiatric distress which might result from the exacerbation of underlying conditions.²⁴ There is a well-founded association between marijuana use and psychosis.²⁵ The exact causal nature of this connection, though, is unclear.²⁶ Additionally, a number of long-term studies have found an association between marijuana use, particularly in adolescents, and later illegal behavior. For example, adolescent marijuana abuse (as opposed to simple consumption) is correlated with an increased later risk of intimate partner violence perpetration.²⁷ Adolescent marijuana use is also associated with greater violent crime frequency more generally.²⁸

However, this association is influenced by the co-use of other drugs and the criminalization of drug use itself. One longitudinal study of youth found no association between marijuana use and later criminal charges once drug-related criminal charges were removed from the data.²⁹ Additionally, the association between marijuana use and later criminal activity is by far weakest for marijuana as compared to other drugs.³⁰ Thus, most researchers have termed the relationship

²³ See Marcus A. Bachhuber et al., *Does Medical Cannabis Use Increase or Decrease the Use of Opioid Analgesics and Other Prescription Drugs?*, 12 J. ADDICTION MED. 259 (2018).

²⁴ Sharon M. Boles & Karen Miotto, *Substance Abuse and Violence: A Review of the Literature*, 8 AGGRESSION AND VIOLENT BEHAV. 155, 165 (2003).

²⁵ Louise Arseneault et al., *Causal Association Between Cannabis and Psychosis: Examination of the Evidence*, 184 BR. J. PSYCHIATRY 110 (2004); Cécile Henquet et al., *Prospective Cohort Study of Cannabis Use, Predisposition for Psychosis, and Psychotic Symptoms in Young People*, 330 BR. MED. J. 11 (2005); Ofir Livne et al., *Association of Cannabis Use-related Predictor Variables and Self-Reported Psychotic Disorders: US Adults, 2001–2002 and 2012–2013*, 179 AM. J. PSYCHIATRY 36 (2022).

²⁶ Suzanne H. Gage et al., *Association Between Cannabis and Psychosis: Epidemiologic Evidence*, 79 BIOL. PSYCHIATRY 549 (2016); Holly Elser et al., *State Cannabis Legalization and Psychosis-Related Health Care Utilization*, 6 JAMA NETW. OPEN e2252689 (2023).

²⁷ Bryan Cafferky et al., *Substance Use and Intimate Partner Violence: A Meta-analytic Review*, 8 PSYCH. OF VIOLENCE 110, 111, 118 (2018); Jennifer Reingle Gonzalez et al., *The Relationship Between Marijuana Use and Intimate Partner Violence in a Nationally Representative, Longitudinal Sample*, 27 J. INTERPERSONAL VIOLENCE 1562, 1563 (2012).

²⁸ Maureen D. Reynolds et al., *Marijuana but Not Alcohol Use During Adolescence Mediates the Association Between Transmissible Risk for Substance Use Disorder and Number of Lifetime Violent Offenses*, 39 J. CRIM. JUST. 218, 222 (2011); Rosalie Liccardo Pacula & Beau Kilmer, *Marijuana and Crime: Is There a Connection Beyond Prohibition?* (NBER, Working Paper No. 10046, 2003).

²⁹ Willy Pedersen & Torbjørn Skardhamar, *Cannabis and Crime: Findings from a Longitudinal Study*, 105 ADDICTION 109 (2010). *But see* Anne Line Bretteville-Jensen & Ingeborg Rossow, *Questionable Conclusions on Cannabis and Crime*, 106 ADDICTION 449 (2011).

³⁰ Trevor Bennett et al., *The Statistical Association Between Drug Misuse and Crime: A Meta-analysis*, 13 AGGRESSION AND VIOLENT BEHAVIOR 107 (2008).

between individual marijuana use and crime as “co-morbidity, not cause and effect.”³¹

Macro-scale research on the effects of marijuana legalization has generally found mixed, though overwhelmingly non-deleterious, effects of medical and recreational marijuana legalization on drug use and crime outcomes. The strand of research dealing with medical legalization is a bit more robust, as the first modern-era legalization of marijuana for medical use took place in California in 1996, a great deal earlier than comparable recreational legalization.³² Generally, medical marijuana legalization has increased adult use of marijuana, as several studies detail. Medical legalization has led to an increased number of arrests and admissions to marijuana treatment programs amongst adult males.³³ Survey data from the National Survey of Drug Use and Health has shown similar results.³⁴ These results have been found in both individual quasi-experimental difference-in-differences studies³⁵ as well as in systematic reviews of quasi-experimental studies.³⁶ Adolescent use, though, has not increased as a result of medical legalization.³⁷

Drug policy research has also examined whether medical marijuana legalization might affect the use of other drugs. Medical legalization led to some decrease in heroin use, mainly from the substitution of marijuana for heroin, but no similar decrease in cocaine use.³⁸ There is conflicting evidence over whether medical marijuana legalization reduces opioid deaths or might conversely have no effect or even increase them.³⁹ Medical marijuana legalization has also caused some decrease in adult cigarette smoking.⁴⁰

³¹ James H. Derzon & Marl W. Lipsey, *A Synthesis of the Relationship of Marijuana Use with Delinquent and Problem Behaviors*, 20 SCH. PSYCH. INT’L 57 (1999); Matthew D. Phillips, *Assessing the Impact of Drug Use and Drug Selling on Violent Offending in a Panel of Delinquent Youth*, 42 J. DRUG ISSUES 298 (2012).

³² CAL. HEALTH & SAFETY CODE § 11362.5 (West 1996).

³³ Yu-Wei Luke Chu, *The Effects of Medical Marijuana Laws on Illegal Marijuana Use*, 38 J. HEALTH ECON. 43, 59 (2014).

³⁴ Anna Choi et al., *Smoke Gets in Your Eyes: Medical Marijuana Laws and Tobacco Cigarette Use*, 5 AM. J. HEALTH ECON. 303 (2019).

³⁵ Hefei Wen et al., *The Effect of Medical Marijuana Laws on Adolescent and Adult Use of Marijuana, Alcohol, and Other Substances*, 42 J. HEALTH ECON. 64 (2015).

³⁶ Rosanna Smart & Rosalie Liccardo Pacula, *Early Evidence of the Impact of Cannabis Legalization on Cannabis Use, Cannabis Use Disorder, and the Use of Other Substances: Findings from State Policy Evaluations*, 45 AM. J. DRUG AND ALCOHOL ABUSE 644 (2019).

³⁷ *Id.*; D. Mark Anderson et al., *Medical Marijuana Laws and Teen Marijuana Use*, 17 AM. LAW AND ECON. REV. 495 (2015); Wen et al., *supra* note 35; Aaron L. Sarvet et al., *Medical Marijuana Laws and Adolescent Marijuana Use in the United States: A Systematic Review and Meta-Analysis*, 113 ADDICTION 1003 (2018).

³⁸ Yu-Wei Luke Chu, *Do Medical Marijuana Laws Increase Hard-Drug Use?*, 58 J. LAW & ECON. 481 (2015).

³⁹ Compare Marcus A. Bachhuber et al. *Medical Cannabis Laws and Opioid Analgesic Overdose Mortality in the United States, 1999–2010*, 174 JAMA INTERNAL MEDICINE 1668 (2014)

Research examining the impact of medical marijuana on crime has tended to focus on one of two theorized mechanisms. The first of these is that medical marijuana, by creating a legal market for marijuana sales, would undercut the illicit market. Thus, a reduction in associated violent and property crime would follow.⁴¹ Indeed, numerous works find no crime-exacerbating effect of medical legalization as well as modest reductions in violent and certain property crimes.⁴² This theory is bolstered by evidence showing that similar reductions are not achieved when marijuana is simply decriminalized—by failing to create an alternative legal market, policymakers do not undercut the criminogenic illicit market.⁴³ Additionally, violent crime reduction effects are greatest in states that are on the Mexican border as compared to inland states that have also legalized medical use.⁴⁴ This result further suggests that undercutting illicit cross-border drug trafficking might be the source of medical legalization's salutary effects on crime. Medical legalization has also been associated with increased seizures on the illicit market by the U.S. Postal Inspection Service, indicating that medical legalization might also be associated with increased enforcement activity against the illicit market.⁴⁵ This research is not unequivocal, though. Some work has found null effects or heterogeneous effects—for example, one such study found dramatic reductions in violent and property crime from medical marijuana legalization, but only in California.⁴⁶

A second theory has focused on the location of marijuana dispensaries as potentially impactful on crime in the surrounding areas. The density of medical marijuana dispensaries has no association with violent or property crimes in the

(showing a decrease in opioid deaths) with Neil K. Mathur & Christopher J. Ruhm, *Marijuana Legalization and Opioid Deaths*, 88 J. HEALTH ECON. 1 (2023) (showing an increase in opioid deaths).

⁴⁰ Choi et al., *supra* note 34.

⁴¹ Scott Callahan et al., *Smoke and Fears: The Effects of Marijuana Prohibition on Crime* (Dep't of Econ., Appalachian State U., Working Papers No. 2–12, 2021); Jack Hirshleifer, *Anarchy and Its Breakdown*, 103 J. POL. ECON. 26 (1995); Herschel I. Grossman & Minseong Kim, *Swords or Plowshares? A Theory of the Security of Claims to Property*, 103 J. POL. ECON. 1275 (1995).

⁴² Robert G. Morris et al., *The Effect of Medical Marijuana Laws on Crime: Evidence from State Panel Data, 1990–2006*, 9 PLOS ONE e92816 (2014); Arthur Huber III et al., *Cannabis Control and Crime: Medicinal Use, Depenalization and the War on Drugs*, 16 B.E. J. ECON. ANALYSIS & POL'Y 20150167 (2016); Edward M. Shepard & Paul R. Blackley, *Medical Marijuana and Crime: Further Evidence From the Western States*, 46 J. DRUG ISSUES 122 (2016); Callahan et al., *supra* note 41.

⁴³ Huber et al., *supra* note 42.

⁴⁴ Evelina Gavrilova et al., *Is Legal Pot Crippling Mexican Drug Trafficking Organizations? The Effect of Medical Marijuana Laws on U.S. Crime*, 129 THE ECON. J. 375 (2019).

⁴⁵ John Worrall, et al., *Marijuana Legalization and U.S. Postal Inspection Service Seizures: An Exploration of Black Market Activity*, 47 AM. J. CRIM. JUST. 617 (2022).

⁴⁶ Yu-Wei Luke Chu & Wilbur Townsend, *Joint Culpability: The Effects of Medical Marijuana Laws on Crime*, 159 J. ECON. BEHAV. & ORG. 502 (2019).

local area;⁴⁷ moreover, individual medical marijuana dispensaries do not appear to be associated with any rise in crime.⁴⁸ Other work has found that areas surrounding medical marijuana dispensaries have reduced crime rates,⁴⁹ and that crime increases in areas with recently closed dispensaries.⁵⁰ Some researchers have hypothesized this reduction is caused by increased foot traffic to dispensaries deterring crime or by the security practices of the dispensaries, such as security cameras.⁵¹ Other research, though, has found a positive association in spatiotemporal regression between dispensaries and all crime types, save for auto theft and murder.⁵² The hypothesized mechanism is that dispensaries are attractive targets for robberies and organized crime, leading to an increase in robberies and potentially robbery-related homicides.⁵³

Attempts to synthesize these results have generally found that medical marijuana laws do not cause an increase in crime. At the state level, medical legalization did not impact state crime rates.⁵⁴ A systematic review of studies on this question found no evidence to assert that medical marijuana legalization led to more crime.⁵⁵ Some evidence suggests beneficial effects of medical legalization on crime; regardless of those effects, there is no evidence of an increased danger posed by medical legalization, nor that medical marijuana users are dangerous persons.

⁴⁷ Nancy J. Kepple & Bridget Freisthler, *Exploring the Ecological Association Between Crime and Medical Marijuana Dispensaries*, 73 J. STUD. ON ALCOHOL AND DRUGS 523 (2012).

⁴⁸ William J. Zakrzewski Jr. et al., *Cannabis in the Capital: Exploring the Spatial Association Between Medical Marijuana Dispensaries and Crime*, 43 J. CRIME AND JUST. 1 (2020).

⁴⁹ Jeffrey Brinkman & David Mok-Lamme, *Not in My Backyard? Not So Fast. The Effect of Marijuana Legalization on Neighborhood Crime*, 78 REG'L SCI. AND URB. ECON. 1 (2019) (finding crime reductions in immediately adjacent areas, though no further spillovers); Priscillia Hunt et al., *High on Crime? Exploring the Effects of Marijuana Dispensary Laws on Crime in California Counties* (IZA Discussion Paper No. 11567, 2018) (finding no effect on violent crime but a reduction in property crime).

⁵⁰ Tom Y. Chang & Mireille Jacobson, *Going to Pot? The Impact of Dispensary Closures on Crime*, 100 J. URB. ECON. 120 (2017).

⁵¹ *Id.* (positing foot traffic as a deterrent to crime near dispensaries); Bridget Freisthler et al., *Evaluating Medical Marijuana Dispensary Policies: Spatial Methods for the Study of Environmentally-Based Interventions*, 51 AM. J. CMTY. PSYCH. 278 (2013) (suggesting, albeit using weak correlative methods, that security policies adopted by dispensaries might be associated with nearby crime reductions).

⁵² Lorine A. Hughes et al., *Marijuana Dispensaries and Neighborhood Crime and Disorder in Denver, Colorado*, 37 JUST. Q. 461 (2020).

⁵³ Christopher Contreras, *A Block-Level Analysis of Medical Marijuana Dispensaries and Crime in the City of Los Angeles*, 34 JUST. Q. 1069 (2017).

⁵⁴ Shana L. Maier et al., *The Implications of Marijuana Decriminalization and Legalization on Crime in the United States*, 44 CONTEMP. DRUG PROBS. 125 (2017).

⁵⁵ Michael French et al., *Societal Costs and Outcomes of Medical and Recreational Marijuana Policies in the United States: A Systematic Review*, 79 MED. CARE RSCH. AND REV. 743 (2022).

Of course, this landscape then changed with the introduction of recreational legalization, beginning with Colorado and Washington state in 2012.⁵⁶ Subsequent research has generally found increased marijuana use after recreational legalization and some short-term shocks to crime rates but found little evidence for recreational legalization causing increased crime over the long run. The legalization of marijuana for recreational use has increased overall marijuana use in the population.⁵⁷ Additionally, several meta-analyses and systematic reviews have found a small increase in marijuana use by adolescents and young adults after recreational legalization.⁵⁸ However, other work has found slight decreases in certain states and null effects elsewhere.⁵⁹ Importantly, this research looks at the creation of a legal market for recreational marijuana; other research has found no impact from mere decriminalization on youth marijuana use.⁶⁰ These results also include heterogeneity between states—recreational legalization was associated with an increase in youth marijuana use prevalence, though not frequency, in California, as well as a rise in use in Washington, though not in Colorado.⁶¹ Other evidence shows potential spillover effects, where use in neighboring states can increase as a result of recreational legalization—though this effect might also reflect changed law enforcement behavior in neighboring states.⁶² Finally, these results could also mask heterogeneity between types of users. Heavy users might

⁵⁶ COLO. CONST. amend. 64; WASH. INITIATIVE 502.

⁵⁷ Andrea H. Weinberger et al., *A Difference-in-difference Approach to Examining the Impact of Cannabis Legalization on Disparities in the Use of Cigarettes and Cannabis in the United States, 2004–2017*, 117 ADDICTION 1768 (2022).

⁵⁸ Maria Melchior et al., *Does Liberalisation of Cannabis Policy Influence Levels of Use in Adolescents and Young Adults? A Systematic Review and Meta-Analysis*, 9 BMJ OPEN e025880 (2019); Megan A. O’Grady et al., *Is Legalization of Recreational Cannabis Associated with Levels of Use and Cannabis Use Disorder Among Youth in the United States? A Rapid Systematic Review*, 33 EUROPEAN CHILD & ADOLESCENT PSYCHIATRY 701 (2022).

⁵⁹ Greg Midgette & Peter Reuter, *Has Cannabis Use Among Youth Increased After Changes in Its Legal Status? A Commentary on Use of Monitoring the Future for Analyses of Changes in State Cannabis Laws*, 21 PREVENTION SCI. 137 (2020).

⁶⁰ Richard A. Grucza et al., *Cannabis Decriminalization: A Study of Recent Policy Change in Five U.S. States*, 59 INT. J. DRUG POL’Y 67 (2018).

⁶¹ Mallie J. Paschall et al., *Recreational Marijuana Legalization and Use Among California Adolescents: Findings from a Statewide Survey*, 82 J. STUD. ON ALCOHOL AND DRUGS 103 (2021) (finding a rise in both 30-day and lifetime use prevalence amongst adolescents in California); Magdalena Cerdá et al., *Association of State Recreational Marijuana Laws with Adolescent Marijuana Use*, 171 JAMA PEDIATRICS 142 (2017) (finding a rise in youth marijuana use in Washington but not Colorado following recreational legalization).

⁶² Zhuang Hao & Benjamin Cowan, *The Cross-Border Spillover Effects of Recreational Marijuana Legalization*, 58 ECON. INQUIRY 642 (2020).

use marijuana more often as a result of recreational legalization;⁶³ new usage increased amongst adults but not youth after recreational legalization.⁶⁴

Just as with medical legalization, recreational legalization has also impacted other substance use. E-cigarette use amongst young adults increased following recreational legalization.⁶⁵ Recreational legalization was associated with decreased cigarette use amongst both youth and adults.⁶⁶ The effects of legalization on alcohol usage amongst both youth and adults were mixed and inconclusive from existing research.⁶⁷ Finally, with regard to opioid use and overdoses, the presence of both medical and recreational dispensaries was associated with a reduction in opioid overdoses.⁶⁸ Recreational legalization in particular reduced opioid mortality in the range of 20 to 35 percent, according to one study, with effects concentrated amongst white people and women.⁶⁹

The evidence on recreational legalization's effects on crime has generally shown either minor reductions in crime or, more commonly, no significant effect on crime rates. The legalization of recreational marijuana reduced the rate of possession arrests for heroin and cocaine.⁷⁰ Analyses of recreational legalization in Washington and Colorado found no long-term increases in either violent or property crime rates.⁷¹ A 50-state panel-data study also found no association between the legal status of marijuana with rates of property and violent crime.⁷² Another study focusing on Washington state found that legalization led to a decline

⁶³ Rosalie L. Pacula et al., *Assessing the Effects of Medical Marijuana Laws on Marijuana Use: The Devil is in the Details*, 34 J. POL'Y ANALYSIS AND MGMT. 7 (2015).

⁶⁴ Barrett Wallace Montgomery et al., *Estimating the Effects of Legalizing Recreational Cannabis on Newly Incident Cannabis Use*, 17 PLoS ONE 0271720 (2022).

⁶⁵ Rebekah Levine Coley et al., *Recreational Marijuana Legalization and Adolescent Use of Marijuana, Tobacco, and Alcohol*, 69 J. ADOLESCENT HEALTH 41 (2021); Charles B. Fleming et al., *Trends in Alcohol, Cigarette, E-Cigarette, and Nonprescribed Pain Reliever Use Among Young Adults in Washington State After Legalization of Nonmedical Cannabis*, 71 J. ADOLESCENT HEALTH 47 (2022).

⁶⁶ Weinberger et al., *supra* note 57.

⁶⁷ Rosalie L. Pacula et al., *Relationships of Cannabis Policy Liberalization with Alcohol Use and Co-Use with Cannabis: A Narrative Review*, 42 ALCOHOL RSCH. 6 (2022).

⁶⁸ Greta Hsu & Balázs Kovács, *Association Between County Level Cannabis Dispensary Counts and Opioid Related Mortality Rates in the United States: Panel Data Study*, 372 BMJ 4957 (2021).

⁶⁹ Nathan W. Chan et al., *The Effects of Recreational Marijuana Legalization and Dispensing on Opioid Mortality*, 58 ECON. INQUIRY 589 (2020).

⁷⁰ Guangzhen Wu & Roarke Cullenbine, *Recreational Marijuana Legalization and Drug-Related Offenses in Washington State: An Interrupted Time Series Analysis with a Combination of Synthetic Controls*, J. EXPERIMENTAL CRIM. (2022).

⁷¹ Ruibin Lu et al., *The Cannabis Effect on Crime: Time-Series Analysis of Crime in Colorado and Washington State*, 38 JUST. Q. 565 (2021); Alexis J. Harper & Cody Jorgenson, *Crime in a Time of Cannabis: Estimating the Effect of Legalizing Marijuana on Crime Rates in Colorado and Washington Using the Synthetic Control Method*, 53 J. DRUG ISSUES 552 (2022).

⁷² Maier et al., *supra* note 54.

in the rates of rape and property crimes.⁷³ As explanations for this decrease, the authors posited that users of other substances such as alcohol might instead switch to marijuana, reducing certain types of crime; alternatively, the redirection of law enforcement attention from marijuana to other crimes or the undercutting of the illicit market might have led to a crime reduction.⁷⁴ This evidence was not unequivocal—other research found increases in overall property and violent crime, as well as in simple assault, in Oregon following recreational legalization there.⁷⁵ The majority of research, though, shows no effect of marijuana legalization on crime rates.

Just as with medical marijuana, recreational marijuana has also been hypothesized to have localized effects on areas around dispensaries, which could be attractive targets for crime. Findings on this question suggest an increase in property crime near dispensaries. One study found that property, but not violent crime, increased on streets with recreational dispensaries but observed no such effect for medical dispensaries.⁷⁶ Other work found that new dispensaries led to increased property crime in a given Census block.⁷⁷ But these findings are nuanced. Another analysis found that the density of dispensaries in a given area did not cause property or violent crime to change in that area—but property crime in adjacent areas did rise.⁷⁸

Beyond having minimal impacts on crime rates, recreational legalization has also not caused major changes otherwise to police functioning. There was some documented rise in welfare-related calls for service—but no impact on calls for

⁷³ Davide Dragone et al., *Crime and the Legalization of Recreational Marijuana*, 159 J. ECON. BEHAV. & ORG. 488 (2019).

⁷⁴ *Id.* at 498; D. Mark Anderson & Daniel I. Rees, *The Legalization of Recreational Marijuana: How Likely Is the Worst-Case Scenario?*, 33 J. POL'Y ANALYSIS AND MGMT. 221 (2013) (describing the effects of substitution from alcohol to marijuana on domestic violence and other crime); Jérôme Adda et al., *Crime and the Depenalization of Cannabis Possession: Evidence from a Policing Experiment*, 122 J. POL. ECON. 1130 (2014) (finding that depenalization of marijuana in a London borough led to increased police attention to non-drug crime); Gary Becker & Kevin Murphy, *Have We Lost the War on Drugs?*, WALL ST. J. (Jan. 4, 2013) (arguing that legalization could reduce crime associated with the illicit trade in marijuana) [<https://perma.cc/BL8Q-7F9D>].

⁷⁵ Guangzhen Wu et al., *Impact of Recreational Marijuana Legalization on Crime: Evidence from Oregon*, 72 J. CRIM. JUST. e101742 (2021); Guangzhen Wu & Dale W. Willits, *The Impact of Recreational Marijuana Legalization on Simple Assault in Oregon*, 37 J. INTERPERSONAL VIOLENCE 23 (2022).

⁷⁶ Nathan Connealy et al., *The Criminogenic Effect of Marijuana Dispensaries in Denver, Colorado: A Microsynthetic Control Quasi-Experiment and Cost-Benefit Analysis*, 3 JUST. EVALUATION J. 69 (2020).

⁷⁷ John Thacker et al., *Exploring the Neighborhood-Level Impact of Retail Marijuana Outlets on Crime in Washington State*, 39 J. QUANTITATIVE CRIMINOLOGY 253 (2021).

⁷⁸ Bridget Freisthler et al., *From Medical to Recreational Marijuana Sales: Marijuana Outlets and Crime in an Era of Changing Marijuana Legislation*, 38 J. PRIMARY PREVENTION 249 (2017).

index crimes—in Washington after legalization.⁷⁹ One interrupted time-series analysis found that some clearance rates improved, and none worsened, after recreational legalization.⁸⁰ These improvements, though, diminished over time.⁸¹ Indeed, a synthetic control study found no meaningful impact whatsoever of recreational legalization on clearance rates.⁸² While marijuana arrests did increase post-legalization in bordering states, this trend might have been the result of changed police enforcement in those states.⁸³ Evidence on other spillover impacts is mixed, with one study finding no noticeable impacts in bordering states.⁸⁴ Other researchers found, though, that sales in counties bordering a legalized state decreased markedly once their own state legalized recreational marijuana—indicating cross-border purchasing, particularly in transactions with large amounts of marijuana.⁸⁵

Of course, crime is not the only relevant harm that might result from marijuana legalization. One hypothesized consequence of legalization has been the potential for increased rates of psychosis and acute psychological distress due to increased THC content.⁸⁶ However, a study of healthcare claims found no rise in psychosis attributable to marijuana legalization.⁸⁷ Other studies have examined the relationship between marijuana legalization and suicide. A set of several associational studies offer weak evidence that marijuana legalization is correlated with either no change or a slight reduction in suicides.⁸⁸ A more compelling synthetic control design found a reduction in gun suicides, but not non-gun

⁷⁹ David A. Makin et al., *The Impact of Recreational Marijuana Sales on Calls for Service: An Analysis of Neighboring Cities*, 31 POLICING AND SOC'Y 858 (2021).

⁸⁰ David A. Makin et al., *Marijuana Legalization and Crime Clearance Rates: Testing Proponent Assertions in Colorado and Washington State*, 22 POLICE Q. 32 (2019).

⁸¹ Guangzhen Wu et al., *Effects of Recreational Marijuana Legalization on Clearance Rates for Violent Crimes: Evidence from Oregon*, 100 INT'L J. OF DRUG POL'Y (2022).

⁸² Cody Jorgenson & Alexis J. Harper, *Examining the Effects of Legalizing Marijuana in Colorado and Washington on Clearance Rates: A Quasi-Experimental Design*, 18 J. EXPERIMENTAL CRIMINOLOGY 365 (2022).

⁸³ Hao & Cowan, *supra* note 62.

⁸⁴ Erin J. Farley & Stan Orchowsky, *Measuring the Criminal Justice System Impacts of Marijuana Legalization and Decriminalization Using State Data*, JRSA REP. (2019).

⁸⁵ Benjamin Hansen et al., *The Grass Is Greener on The Other Side: How Extensive Is The Interstate Trafficking of Recreational Marijuana?*, 18–19 (Nat'l Bureau of Econ. Rsch., Working Paper No. 23762, 2018).

⁸⁶ Marco Leyton, *Cannabis Legalization: Did We Make a Mistake? Update 2019*, 44 J. PSYCHIATRY NEUROSCI. 291 (2019).

⁸⁷ Elser et al., *supra* note 26.

⁸⁸ D. Mark Anderson et al., *Medical Marijuana Laws and Suicides by Gender and Age*, 104 AM. J. PUB. HEALTH 2369 (2014); Richard A. Grucza et al., *A Reexamination of Medical Marijuana Policies in Relation to Suicide Risk*, 152 DRUG AND ALCOHOL DEPENDENCE 68 (2015); Samantha Marinello & Lisa M. Powell, *The Impact of Recreational Cannabis Markets on Motor Vehicle Accident, Suicide, and Opioid Overdose Fatalities*, 320 SOCIAL SCI. & MED. 1 (2023).

suicides, from California's medical marijuana legalization;⁸⁹ another synthetic control study found an increase in suicides amongst young people, though, following Colorado and Washington's recreational legalizations.⁹⁰

There are two important takeaways from this extensive literature. First, marijuana legalization does generally increase marijuana use so, in the remaining analysis, we can treat legalization as a reasonable proxy for increased marijuana use. Second, legalization does not cause the sky to fall. While some studies find minor increases in crime, others find no effect. Other research finds no effects on negative outcomes such as police functioning, psychosis, or suicide. This conclusion should not obfuscate the fact there can be negative consequences of increased marijuana use and marijuana legalization. Rather, the limited size of these consequences and the limited certainty with which we can make claims about them should be borne in mind.

B. *Methods and Data*

1. Data Sources

All variables span the calendar years 2010 through 2020. The main independent variable in this study is when a state legalized medical or recreational marijuana use (or more precisely, whether the medical or recreational use of marijuana was legal in a given state during a given month). I only include the full legalization of marijuana for either use; I do not include depenalization or the legalization of low- or no-THC containing cannabidiol oil.⁹¹ By making treatment a binary variable, I necessarily overlook variations in precise details of implementing a legal marijuana regime.⁹² There are two plausible specifications for the date of legalization: the date at which legalization took effect and the date at which the legalizing law or referendum was approved.⁹³ The former of these is perhaps the most obvious treatment timing: In the months before this date, marijuana was illegal for recreational or medical use, and in months afterward, it

⁸⁹ Bradley J. Bartos et al., *Medical Marijuana Laws and Suicide*, 24 ARCHIVES OF SUICIDE RSCH. 204 (2019).

⁹⁰ Mitchell L. Doucette et al., *Effect of Washington State and Colorado's Cannabis Legalization on Deaths by Suicides*, 148 PREVENTIVE MED. 1 (2021).

⁹¹ Some states, such as Georgia or Texas, allow the use of cannabidiol, or CBD, oil that contains low amounts of THC for either certain medical or recreational use. *E.g.*, GA. CODE ANN. § 16-12-190 (2022) and TEX. HEALTH & SAFETY CODE CH. 443 (2019).

⁹² *See generally* Rosalie L. Pacula et al., *Words Can Be Deceiving: A Review of Variation among Legally Effective Medical Marijuana Laws in the United States*, 7 J. DRUG POL'Y ANALYSIS 1 (2014).

⁹³ These dates are rarely simultaneous. For example, Massachusetts voters approved the legal recreational use of marijuana on November 8, 2016, which took effect on December 15, 2016, just over a month later. *E.g.*, Marijuana Policy Project, *Massachusetts*, MPP (Sept. 15, 2021), [mpp.org/states/massachusetts/ \[https://perma.cc/LY2Y-N9E2\]](https://perma.cc/LY2Y-N9E2).

was legal. When there is a large gap, however, between these dates, there might be anticipatory effects of legalization.⁹⁴ For example, marijuana use might increase before the actual effective date of legalization as people anticipate prohibitions are unlikely to be enforced in this “lame duck” period. Hence, I use both dates as potential specifications for the treatment date, referring to the “passage” date when the law or referendum was approved and the “implementation” date for when that legalization became effective in law.⁹⁵

The first set of dependent variables of interest are the rate of gun homicides, gun suicides, and gun deaths. All data are at the state-month level. Previous works on marijuana legalization’s effects on crime have used county-level Uniform Crime Reporting (UCR) data collected by the FBI.⁹⁶ The UCR data collection does include gun homicides, particularly in the Supplementary Homicide Report (SHR).⁹⁷ UCR data, though, has several problems that hinder its usability for analyses across jurisdictions.⁹⁸ Crimes are voluntarily reported by individual agencies, which might cross county borders, and the imputation strategy used for missing data is unreliable.⁹⁹ Indeed, the need to impute vast amounts of UCR data has hindered previous analyses of the impact of marijuana legalization on crime figures.¹⁰⁰ I choose to instead use statistics from the Centers for Disease Control and Prevention (CDC) collected in the National Vital Statistics System (NVSS). Localities are obligated to submit data from death certificates to the CDC via NVSS, resulting in a coverage rate north of 99%.¹⁰¹ NVSS records both the manner

⁹⁴ E.g., Shane D. Johnson & Kate J. Bowers, *Opportunity is in the Eye of the Beholder: The Role of Publicity in Crime Prevention*, 2 CRIMINOLOGY & PUB. POL’Y 497 (2003) (describing anticipatory effects of a crime reduction program after its announcement but prior to implementation); Abby Alpert, *The Anticipatory Effects of Medicare Part D on Drug Utilization*, 49 J. OF HEALTH ECON. 28 (2016) (showing anticipatory effects after Part D’s announcement and prior to implementation).

⁹⁵ See Appendix 1: Marijuana Legalization Dates for a full list of dates.

⁹⁶ E.g., Wu et al., *supra* note 75; Lu et al., *supra* note 71; Wu et al., *supra* note 81.

⁹⁷ Jacob Kaplan, *UNIFORM CRIME REPORTING (UCR) PROGRAM DATA: A PRACTITIONER’S GUIDE*, Chapter 6 (2021), <https://ucrbook.com/shr.html> [<https://perma.cc/URJ2-FYXQ>].

⁹⁸ *Id.* at Chapter 10 [<https://perma.cc/5Z45-5EN6>]; Michael G. Maltz & Joseph Targonski, *A Note on the Use of County-Level UCR Data*, 18 J. OF QUANTITATIVE CRIMINOLOGY 297 (2002).

⁹⁹ See Kaplan, *supra* note 97, for more on issues with UCR imputation. For agencies that report few months of data or no data at all, the FBI replaces their crime figures with an average of similar agencies who did report all 12 months. For agencies with several months of data, the FBI extrapolates from this figure to the whole year. When crimes are particularly rare—such as gun crimes—this imputation could have wildly different impacts depending on whether an agency reported gun crimes in the months it did report. For example, if an agency had three gun homicides but happened to report only three months of data containing two homicides, the FBI would impute eight (two in three months, extrapolated to the whole year)—a difference of 167% [<https://perma.cc/URJ2-FYXQ>].

¹⁰⁰ Callahan et al., *supra* note 41.

¹⁰¹ Wendy Regoeczi et al., *The Nation’s Two Measures of Homicide*, BUREAU OF JUSTICE STATISTICS PROGRAM REPORT NCJ 247060 (July 2014).

and mechanism of death, allowing assessment of marijuana legalization's impact on gun homicides, gun suicides, and other gun deaths, the latter two of which the SHR would not record.¹⁰² Any potential impact on accidental and self-inflicted gun deaths would be critical to assessing the overall public safety impacts of legalization.¹⁰³

Of course, using NVSS data is not without drawbacks. The taxonomy of the SHR and the NVSS differ slightly; the NVSS counts all intentional and negligent killings as homicides, whereas the SHR separates murder and non-negligent manslaughters from negligent homicides.¹⁰⁴ Additionally, the NVSS data suppress the data for a particular state in a given month or year if there are less than 10 deaths recorded in the applicable category and timeframe.¹⁰⁵ I deal with this data missingness problem in two steps. First, the NVSS also makes available yearly counts of death and homicide data. So, in cases where a yearly total is ten or greater, and therefore not suppressed, I can impute how many homicides must have occurred in the suppressed months. For example, in 2014, Connecticut recorded 182 gun deaths, but November's count was suppressed. The remaining months' counts totaled 177 gun deaths, so the imputed count for November was five gun deaths. If more than one month was suppressed, I distributed the deaths, suicides, or homicides that were unaccounted for by the non-suppressed months evenly across the suppressed months. (E.g., if two months were suppressed and six homicides unaccounted for, then each month was assigned three imputed homicides.) In the event that a state has fewer than ten homicides or deaths for the entire year, I drop that year's observations for that state; this situation only arises with firearm homicides, and not with firearm deaths or suicides. I then calculate the homicide, suicide, or death rate per 100,000 people for each state-month observation as the dependent variable of analysis.

The next dependent variables I analyze are gun purchasing and prevalence. Data on gun purchases are difficult to capture directly. Instead, the data source that is commonly (and imperfectly) used is the FBI's National Instant Criminal Background Check System (NICS).¹⁰⁶ This system is used by federally-licensed

¹⁰² *Id.*

¹⁰³ E.g., Matthew Miller & David Hemenway, *The Relationship Between Firearms and Suicide: A Review of the Literature*, 4 *AGGRESSION AND VIOLENT BEHAV.* 59 (1999); Douglas J. Wiebe, *Homicide and Suicide Risks Associated with Firearms in the Home: A National Case-control Study*, 41 *ANNALS OF EMERGENCY MED.* 771 (2003); Sonja A. Swanson et al., *Handgun Divestment and Risk of Suicide*, 34 *EPIDEMIOLOGY* 99 (2023) (detailing the link between firearms availability and suicide).

¹⁰⁴ *Id.*

¹⁰⁵ For example, a state recording eight gun homicides in April would be recorded as NA. See CDC WONDER, <https://wonder.cdc.gov/> [<https://perma.cc/3RGG-QSE8>] (Last visited March 28, 2024).

¹⁰⁶ As collated by BuzzFeed News, <https://raw.githubusercontent.com/BuzzFeedNews/nics-firearm-background-checks/master/data/nics-firearm-background-checks.csv> [<https://perma.cc/WQ54-BKL8>].

firearm dealers to check that those attempting to purchase firearms are legally eligible to do so; the system is used by both the FBI and directly by some state law enforcement agencies, depending on the state's arrangement.¹⁰⁷ Since licensed dealers must use this system prior to making a sale, the amount of checks run in a given state is a useful proxy for the volume of sales. Of course, this figure is imperfect. Sales not taking place through licensed dealers—for example, at a gun show—are not captured.¹⁰⁸ Similarly, the number of firearms is not recorded—someone might buy two guns or five guns, but if they are purchased simultaneously, only one NICS check occurs. Nonetheless, this source is one of the best available data sources on firearm purchases. I employ a common proxy method, wherein I multiply the number of background checks for pistol and long gun sales by 1.1 and the number of multi-gun sales by 2, then sum them together to estimate the number of sales.¹⁰⁹ I then convert this measurement to a rate per 100,000 people. As a measure of firearms prevalence, rather than new firearms acquisitions, I use the fraction of suicides involving firearms. This method proxies gun ownership more accurately than the fraction of homicides involving a firearm, firearm accident rates, and measures of interest in firearms.¹¹⁰ I calculate this metric from the NVSS-drawn firearms suicide data and divide each month's suicides-by-firearms by the total number of suicides in the state in that month. State-month observations were dropped where no suicides of any kind occurred in a given month in a given state, therefore resulting in an FSS value of 0/0.

Finally, I also analyze the impact of marijuana legalization on federal gun possession prosecutions. This approach necessarily omits state-level prosecutions, of course. Given the vast disparities in both quality and quantity of state-level prosecution data, though, the use of federal United States Sentencing Commission

¹⁰⁷ Federal Bureau of Investigation, *Firearms Checks: NICS*, <https://www.fbi.gov/how-we-can-help-you/more-fbi-services-and-information/nics> [<https://perma.cc/DS78-DSGZ>].

¹⁰⁸ These sales include all sales by non-federal firearms licensees, as these sales are exempt from the background check requirement. 18 U.S.C. § 922(a)(5) prohibits unlicensed sales to residents of another state but allows them within states; 18 U.S.C. § 922(d) prohibits unlicensed sales to those whom the seller reasonably believes to be prohibited from firearms possession but does not require a background check for such sales. See generally Ariana N. Gobaud et al., *Gun Shows and Universal Background Check Laws Across State Lines*, 165 PREVENTIVE MED. 1 (2022) (describing these requirements and the tendency of these less-regulated sales to cluster near states with stricter gun laws).

¹⁰⁹ Everytown for Gun Safety, *Estimated Number of Guns Sold by State Between 2019–2020* (May 2020), <https://everytownresearch.org/documents/2020/05/guns-sales-by-state-2019-2020.pdf> [<https://perma.cc/GK3D-XFSH>]; Daniel Nass & Champe Barton, *How Many Guns Did Americans Buy Last Month?*, THE TRACE (Aug. 3, 2020; updated Jan. 6, 2023) <https://www.thetrace.org/2020/08/gun-sales-estimates/> [<https://perma.cc/3J2N-2UZ2>].

¹¹⁰ Philip J. Cook & Jens Ludwig, *The Social Costs of Gun Ownership*, 90 J. PUB. ECON. 379 (2006); Deborah Azrael et al., *State and Local Prevalence of Firearms Ownership Measurement, Structure, and Trends*, 20 J. Q. CRIMINOLOGY 43 (2004); Gary Kleck, *Measures of Gun Ownership Levels for Macro-Level Crime and Violence Research*, 41 J. RSCH. CRIME & DELINQUENCY 3 (2004).

data provides a much more consistent measure of prosecutions.¹¹¹ Additionally, since the criminalization of gun possession by marijuana users is under federal law,¹¹² analyzing federal prosecutions is the clearest indicator of whether the enforcement of this prohibition has changed post-legalization. I analyze two types of prosecutions—those occurring under 18 U.S.C. § 922(g)(3), which particularly prohibits possession by controlled substance users, and those occurring under any subsection of 18 U.S.C. § 922(g) or 18 U.S.C. § 922(n).¹¹³ The reason for both measures is that, were marijuana legalization to increase gun crime, this effect could manifest in more prosecutions for gun possession crimes generally. Moreover, as prosecutions under § 922(g)(3) are relatively rare, prosecutors might use other statutes, such as the felon-in-possession statute, to prosecute controlled substance users who also are barred by another statutory provision, e.g., a felony conviction.¹¹⁴ Similarly, I use the rate of each type of prosecution per 100,000 people.

2. Identification Strategy

The key identification challenge in assessing the impact of marijuana legalization on firearms outcomes is finding a suitable control group. A simple pre- and post-legalization comparison within states that did legalize marijuana fails to account for whether overall trends in gun purchasing, gun deaths, and gun prosecutions might have changed across all states. Similarly, a comparison across states post-legalization ignores underlying differences between the states with regard to base rates of firearms purchasing, deaths, and prosecutions. Hence, most research evaluating the impact of legalization has made use of some sort of difference-in-differences analysis.¹¹⁵

Of course, the comparison of states that have legalized marijuana to those that have not is imperfect, even if these states seem to have parallel trends in gun crime prior to legalization. These states might differ on any number of unobservable traits which are correlated with both their likelihood of legalizing marijuana and the various firearm outcomes. To mitigate the impact of these unobservable traits,

¹¹¹ U.S.S.C. Individual Offender Files. The issue, of course, with using U.S.S.C. data is that it reflects sentencings, not prosecutions. Hence, I do not capture any cases that were dismissed or resulted in a finding of not guilty. Moreover, since sentencings lag behind prosecutions, any effect would likely appear at about the 12-to-24-month mark. Nonetheless, the data show no such effect. See *infra* Table 3: ATTs for model specifications.

¹¹² 18 U.S.C. § 922(g)(3).

¹¹³ The prohibition against a person under indictment possessing a firearm is found in 18 U.S.C. § 922(n), though similar in form to the bars to possession found in 18 U.S.C. § 922(g).

¹¹⁴ 18 U.S.C. § 922(g)(1).

¹¹⁵ E.g., Wu et al., *supra* note 75; Lu et al., *supra* note 71; Wu et al., *supra* note 81.

one can leverage the staggered timing in states' legalization of marijuana using a difference-in-differences analysis with staggered treatment timing.¹¹⁶

Recent econometric research has shown that these traditional staggered difference-in-differences techniques—which return essentially an average of two-by-two comparisons amongst the units in the study—may not return accurate estimates of treatment effects and might put negative weights on some effects.¹¹⁷ Hence, the method I choose to use is that of Callaway and Sant'Anna.¹¹⁸ This method strictly compares states that have yet to legalize marijuana (not yet treated) to those that already have (treated).¹¹⁹ It returns the average treatment effect on the treated states as a weighted average of these comparisons and aggregates this effect at the group-time level (i.e., in all states that legalized marijuana at a certain time).¹²⁰ This estimator has been used in a variety of papers in criminology and the economics of crime.¹²¹ The overall average treatment effect on the treated (ATT), calculated as an event study, is then a weighted average of ATTs over each length of exposure to the treatment between each group of states that have legalized marijuana at a given month m and those states which have not yet done so.

As with any difference-in-differences method, there are a number of key assumptions that must be met, broadly falling under the parallel trends assumption and the stable unit treatment value assumption (SUTVA). To placebo-test the parallel trends assumption, I look at the pre-treatment results in the event study

¹¹⁶ See generally Andrew C. Baker et al., *How Much Should We Trust Staggered Difference-in-Differences Estimates?*, 144 J. FIN. ECON. 370 (summarizing developments in staggered difference-in-differences methods).

¹¹⁷ See generally Andrew Goodman-Bacon, *Difference-in-differences with Variation in Treatment Timing*, 225 J. ECONOMETRICS 254 (2021); Kosuke Imai & In-Song Kim, *On the Use of Two-Way Fixed Effects Regression Models for Causal Inference with Panel Data*, 29 POL. ANALYSIS 405 (2021); Clément de Chaisemartin & Xavier D'Haultfœuille, *Two-Way Fixed Effects Estimators with Heterogeneous Treatment Effects*, 110 AM. ECON. REV. 2964 (2020) (detailing potential issues arising from traditional difference-in-differences with staggered treatment timing methods).

¹¹⁸ Brantly Callaway & Pedro H.C. Sant'Anna, *Difference-in-differences with Multiple Time Periods*, 225 J. ECONOMETRICS 200 (2021).

¹¹⁹ There are some states that legalized marijuana for medical use prior to the study period, such as California; these states are also excluded from the analysis since their treatment occurred early on. Twenty-two states legalized medical marijuana during the study period. An additional 15 legalized it either prior to or after the study period and are not included. Medical marijuana remains illegal in 13 states.

¹²⁰ Callaway & Sant'Anna, *supra* note 118.

¹²¹ See, e.g., Anna Harvey & Taylor Mattia, *Reducing Racial Disparities in Crime Victimization: Evidence from Employment Discrimination Litigation*, J. URB. ECON. (2022) (utilizing the staggered timing of litigation against police agencies for racial discrimination in employment practices); Amanda Agan et al., *Prosecutorial Reform and Local Crime Rates* (GMU Scalia L. Sch. Rsch Paper Series No. 22-011, 2021) (using staggered timing of reform prosecutor elections); Giovanni Circo et al., *Assessing Causal Effects Under Treatment Heterogeneity: An Evaluation of a CCTV Program in Detroit*, 19 J. EXPERIMENTAL CRIMINOLOGY 1033 (2022) (using staggered rollout of CCTV cameras); Zachary S. Fone et al., *The Unintended Effects of Minimum Wage Increases on Crime*, 219 J. PUB. ECON. 1 (2023) (using staggered raises in state minimum wages).

plots. The confidence intervals for the treatment effect intersect zero across every outcome at nearly every pre-treatment time, which is indirect evidence supporting the assumption of parallel trends in these outcomes between treated and not-yet-treated groups, at all times prior to treatment.¹²² Moreover, the Callaway and Sant'Anna estimator invokes a weaker parallel trends assumption than other difference-in-differences estimators, as it does not necessitate parallel trends before the treatment of the earliest group.¹²³

With regards to SUTVA, this assumption is clearly met in some ways. States are stable—no area in the United States changed the state under whose jurisdiction it sat during the study period. Treatment was also not predicated on the outcome; there is no evidence of legislators, for example, being motivated to legalize marijuana because of the rate of gun purchases or deaths in their states. In other ways, though, SUTVA might be compromised. Rubin notes that the two most common threats to SUTVA are differing versions of treatment and spillover effects.¹²⁴ In the marijuana legalization context, one could argue that differences in the details of legalization might provide meaningfully different versions of treatment. Nonetheless, these details are often minor and have to do with the regulation of retail sales—the core provisions of legalization for personal use are often strikingly similar.¹²⁵ This similarity is likely a result of policy diffusion between lawmakers and regulatory agencies, who might share professional expertise in the drafting and legislative processes.¹²⁶ The other main threat is policy spillover. In this context, perhaps some of the firearm outcomes in one state are driven not by its own marijuana policy but by the impact of marijuana legalization in a different state. There is some existing evidence of these spillovers occurring with regard to marijuana legalization, though the precise effect is mixed.¹²⁷ To probe for these spillovers and empirically test the SUTVA, I also run

¹²² See *infra* Figure 1, Figure 2, and Figure 3.

¹²³ Michelle Marcus & Pedro H. C. Sant'Anna, *The Role of Parallel Trends in Event Study Settings: An Application to Environmental Economics*, 8 J. ASS'N ENV'T AND RES. ECONOMISTS 235, 244 (2021).

¹²⁴ Donald B. Rubin, *Formal Modes of Statistical Inference for Causal Effects*, 25 J. STAT. PLAN. AND INFERENCE 279, 282 (1990).

¹²⁵ For example, the number of plants for home cultivation might vary from state to state, but is usually quite similar, being six in Massachusetts, six in California, six in Alaska, and five in Illinois. See MASS. GEN. LAWS CH. 94G, § 7(a)(2); CAL. HEALTH & SAFETY CODE § 11358(c) (2022); ALASKA STAT. § 17.38.020(2) (2018); 410 ILL. COMP. STAT. 705 § 10-5(b)(1) (2019).

¹²⁶ Cf. Daniel J. Mallinson & A. Lee Hannah, *Policy and Political Learning: The Development of Medical Marijuana Policies in the States*, 50 PUBLIUS: THE J. OF FEDERALISM 344 (2020) (describing an analogous policy diffusion with regards to medical marijuana policy development).

¹²⁷ See Hao & Cowan, *supra* note 62, (finding that marijuana legalization increased marijuana possession arrests in border counties compared to non-border counties, though had no effect on distribution arrests or arrests for other drugs). But see Guangzhen Wu et al., *The Spillover Effect of Recreational Marijuana Legalization on Crime: Evidence from Neighboring States of Colorado and Washington State*, 50 J. DRUG ISSUES 392 (2020) (finding crime reduction spillover effects to neighboring states). See also Brian Knight, *State Gun Policy and Cross-State Externalities: Evidence*

a secondary analysis with a wider set of states, wherein I test if there is any significant effect of a neighboring state legalizing marijuana on the same set of firearms outcomes. These results can be found in “A. Appendix 2: Spillover effects test results.” I do not find evidence of spillover impacts on any of the dependent variables of interest.

3. Summary Statistics

Table 1 below provides summary statistics for each of the dependent variables of interest. These observations are limited to those states that form the data for recreational and medical legalization (i.e., the treated and not-yet-treated state-month observations).¹²⁸ All data are at the state-month level, and all rates are per 100,000 people. The summary statistics are largely similar, except for the homicide rate, between the recreational and medical legalization states included in the dataset.

Table 1: Summary statistics

Variable	Mean (recreational)	SD (recreational)	Mean (medical)	SD (medical)
Firearms homicide rate	0.261	0.154	0.344	0.231
Firearms suicide rate	0.662	0.405	0.604	0.310
Firearms death rate	0.961	0.480	0.972	0.439
Firearms sales rate	435.365	276.988	456.356	275.189
Firearms suicides share (FSS)	0.463	0.157	0.482	0.16
922(g)(3) prosecution rate	0.005	0.024	0.009	0.037
922(g) and (n) prosecution rate	0.154	0.155	0.166	0.169

from *Crime Gun Tracing*, 5 AM. ECON. J.: ECON. POL’Y 200 (2013) (describing similar spillovers in the effects of firearms laws).

¹²⁸ The states included for recreational legalization are Alaska, Arizona, California, Colorado, Connecticut, Illinois, Maine, Massachusetts, Michigan, Montana, Nevada, New Jersey, New Mexico, New York, Oregon, Vermont, Virginia, and Washington. The states included for medical legalization are Arizona, Arkansas, Connecticut, Delaware, Florida, Illinois, Louisiana, Maryland, Massachusetts, Minnesota, Missouri, New Hampshire, New Jersey, New York, North Dakota, Ohio, Oklahoma, Pennsylvania, South Dakota, Utah, Virginia, and West Virginia.

C. Empirical Results

1. Core Specifications

The following sets of empirical results include several different specifications of core elements of the model.

1.

Table 2 below summarizes these models. Thus, fitting a model for each potential combination of specifications, I estimate 28 total models (7 by 2 by 2).

Table 2: Model Specifications

Model element	Specifications
Outcome variable — data source	<ol style="list-style-type: none"> 1. Firearm homicides — NVSS (imputed) 2. Firearm suicides — NVSS (imputed) 3. Firearm deaths — NVSS (imputed) 4. Firearm purchases — NICS 5. FSS — NVSS (imputed) 6. Federal firearms prosecutions under 922(g)(3) — U.S.S.C. 7. Federal firearm prosecutions under 922(g), all subsections, and 9—U.S.S.C.
Marijuana legalization type	<ol style="list-style-type: none"> 1. Medical 2. Recreational
Effective date of legalization	<ol style="list-style-type: none"> 1. Ratification of law/referendum 2. Effective date of law/referendum

Table 3 below shows the results of each of these models. The leftmost column is the dependent variable; the second and third columns show the type of legalization and effective date of legalization used in determining treatment. The ATT for each model is aggregated using an event-study aggregation; standard errors are bootstrapped and clustered at the state level.¹²⁹

¹²⁹ All analyses were done using the “did” package in R. Brantly Callaway & Pedro Sant’Anna, *did: Difference in Differences*, R PACKAGE VERSION 2.1.2 (2021), <https://bcallaway11.github.io/did/> [<https://perma.cc/R353-DY73>].

Table 3: ATTs for model specifications

Outcome variable	Legalization type	Effective date	ATT	SE	95% CI	N
Firearm homicides	Recreational	Pass	0.004	0.04	[-0.07, 0.08]	2244
		Implement	0.07	0.03	[0.01, 0.12]	2244
	Medical	Pass	-0.06	0.05	[-0.16, 0.04]	2700
		Implement	-0.06	0.04	[-0.14, 0.02]	2700
Firearm suicides	Recreational	Pass	-0.06	0.10	[-0.25, 0.13]	2376
		Implement	-0.01	0.09	[-0.19, 0.18]	2376
	Medical	Pass	-0.01	0.04	[-0.08, 0.07]	2904
		Implement	0.05	0.03	[-0.01, 0.10]	2904
Firearm deaths	Recreational	Pass	-0.06	0.10	[-0.25, 0.14]	2376
		Implement	0.08	0.09	[-0.10, 0.26]	2376
	Medical	Pass	-0.08	0.10	[-0.27, -0.11]	2904
		Implement	-0.23	0.08	[-0.38, -0.07]	2904
Firearm purchases	Recreational	Pass	-32.19	64.9	[-159.30, 94.92]	2376
		Implement	-105.40	55.21	[-213.62, 2.81]	2376
	Medical	Pass	-19.58	19.61	[-58.01, 18.84]	2904
		Implement	17.20	75.06	[-129.92, 164.31]	2904
FSS	Recreational	Pass	-0.02	0.04	[-0.09, 0.05]	2370
		Implement	0.004	0.04	[-0.07, 0.08]	2370
	Medical	Pass	0.06	0.03	[0.01, 0.12]	2893
		Implement	0.12	0.03	[0.06, 0.17]***	2893
Firearm prosecutions under 922(g)(3)	Recreational	Pass	0.001	0.005	[-0.01, 0.01]	2376
		Implement	0.003	0.005	[-0.01, 0.01]	2376
	Medical	Pass	-0.01	0.004	[-0.02, 0.01]	2904
		Implement	-0.04	0.01	[-0.06, -0.01]	2904
Firearm prosecutions under 922(g) and 922(n)	Recreational	Pass	-0.01	0.04	[-0.10, 0.07]	2376
		Implement	-0.01	0.04	[-0.10, 0.08]	2376
	Medical	Pass	-0.02	0.04	[-0.10, -0.06]	2904
		Implement	-0.18	0.03	[-0.25, -0.12] ***	2904

Note: *** = $p < 0.0017$. Bootstrapped SEs clustered at state level.

The vast majority of these specifications show null effects at the $p < 0.05$ level. Due to the number of hypotheses tested by these models (28), even those effects with p -values below 0.05 are likely not significant; hence, I apply a strict Bonferroni correction to keep the family-wise p -value at 0.05. The significant effects at $p < 0.0017$ are the reductions in §§ 922(g) and (n) prosecutions induced by the implementation of medical marijuana legalization and a slight rise in firearms prevalence following medical marijuana implementation.¹³⁰ Given the high number of tests, the Bonferroni correction is fairly aggressive. Even using a less-strict Holm-Bonferroni correction in the alternative, no other effects are significant. Indeed, the overall effect sizes for the significant effects are themselves quite small.

Figures 1–3 below show the aggregated ATT at each length of exposure for each of the death outcomes. The general lack of significant effects prior to treatment is suggestive that the parallel trends assumption holds amongst these states pre-treatment. There is a noticeable downward trend in the one outcome with a significant effect with the Bonferroni correction applied, namely gun deaths after the implementation of medical legalization. Nonetheless, the wide confidence intervals and potential slight downward trend prior to treatment in this plot should give caution to giving it too much weight.

¹³⁰ The reduction in firearms deaths induced by the implementation of medical marijuana legalization has a p -value just greater than 0.0017.

Figure 1: Dynamic Effects Plots for Gun Homicide Rate Outcome

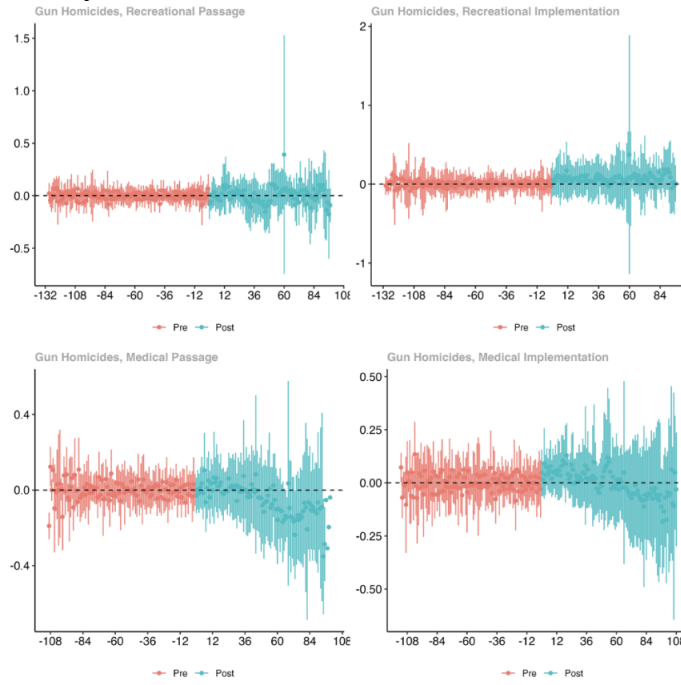


Figure 2: Dynamic Effects Plots for Gun Suicide Rate Outcome

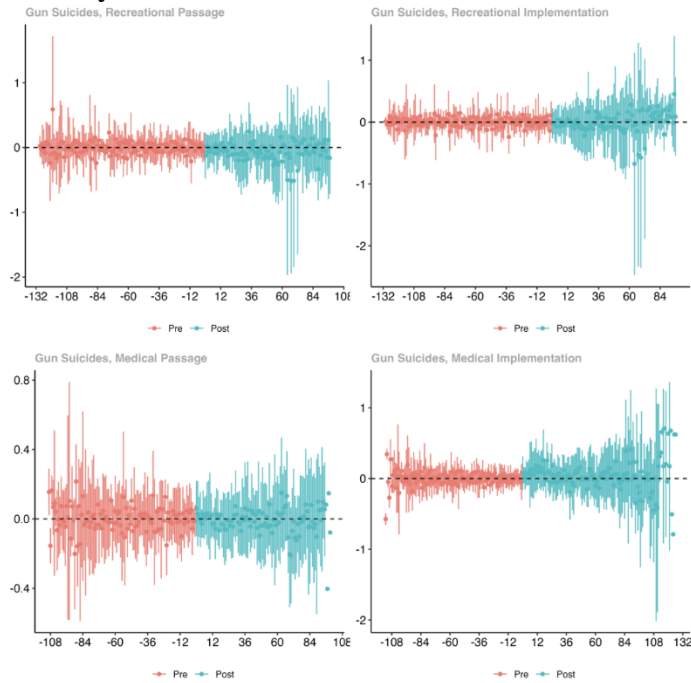
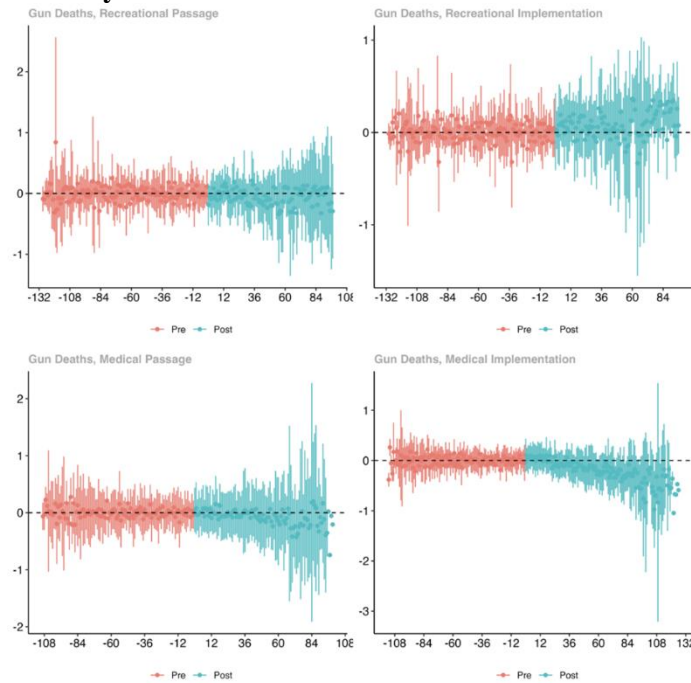


Figure 3: Dynamic Effects Plots for Gun Deaths Rate Outcome

2. Discussion and Limitations

In all, perhaps the clearest conclusion that can be drawn from these results is the lack of a clear upward effect. Marijuana was legalized, and at least with regard to firearm outcomes, the sky did not fall. Gun homicides and deaths appear relatively unaffected by the passage and implementation of legal marijuana, though with perhaps a very modest decrease in gun deaths in one specification of the firearms deaths model. Gun sales and gun prevalence were unaffected; gun prosecutions were unaffected by recreational legalization and declined slightly post-medical legalization. These null effects vary widely in their precision; still, the non-significance of these results in and of itself is important evidence to add to the discussion around marijuana legalization.¹³¹

The lack of any effect of legalization on gun prosecutions under § 922(g)(3) accords with the generally minimal prosecution of this statute. Of course, even when marijuana is legalized, the federal prohibition on both its use and gun possession remains in place. The federal prohibition on marijuana possession, though, is largely toothless in places where marijuana is legal. The Rohrabacher-Farr Amendment prevents the federal government from using funds to enforce

¹³¹ See Alberto Abadie, *Statistical Nonsignificance in Empirical Economics*, 2 AER: INSIGHTS 193 (2020).

federal marijuana laws against state-legal medical marijuana regimes.¹³² In 2022, President Biden federally pardoned all simple marijuana possession by citizens and lawful permanent residents.¹³³ Moreover, the vast majority of marijuana prosecutions and sentencings occur at the state level.¹³⁴ Federal criminalization of marijuana possession and use (as opposed to trafficking) is largely vestigial, save for its applications to firearms law. Hence, the continuing federal ban is unlikely to prevent violence from marijuana's legalization. Similarly, prosecutions for any offense under § 922(g)(3) are rare, and these prosecutions do not increase after either recreational or medical marijuana legalization. There is similarly no evidence that federal gun prosecutions in general increase post-legalization. Indeed, there are some slight decreases after medical legalization. Hence, 18 U.S.C. § 922(g)(3) is likely not a bulwark against legal marijuana users suddenly becoming violent.

These null results cannot account for potential countervailing effects of marijuana legalization on gun use via different mechanisms. These include identifying substitution effects that might result from marijuana uptake by alcohol and other drug users, as well as effects from increased marijuana use, increasing THC potency, or any reduction in the illegal marijuana trade. For example, marijuana legalization might have led to an increase in gun homicides via the direct intoxication pathway due to increased use but also a countervailing decrease in gun homicides by undercutting the illicit market and the need for extralegal violence there. This example, of course, is purely conjecture; the point is that the identification strategy in this paper is not able to isolate countervailing effects of this type. The policy relevance of this limitation is complicated. On the one hand, legalization is a bundled treatment—it's unlikely that a state can implement legalization that undercuts the illegal market, for instance, while also reducing use. On the other hand, there are ancillary measures that could address known risks. Increased substance abuse treatment, for example, could be used to offset risks of increased use post-legalization. A more granular analysis of the mechanism would aid in selecting and implementing these adjuncts to legalization.

Relatedly, this analysis does not account for treatment heterogeneity.¹³⁵ I measure treatment, with regard to legalization, without reference to the specific contours of legal production, sale, and possession, nor prior decriminalization.

¹³² Consolidated Appropriations Act, H.R. 133, 116th Cong. (2019–2020).

¹³³ President Joseph R. Biden, *A Proclamation on Granting Pardon for the Offense of Simple Possession of Marijuana*, THE WHITE HOUSE (Oct. 6, 2022), <https://www.whitehouse.gov/briefing-room/presidential-actions/2022/10/06/granting-pardon-for-the-offense-of-simple-possession-of-marijuana/> [https://perma.cc/GD6X-GAEF].

¹³⁴ See Christopher J. Mumola & Jennifer C. Karberg, *Drug Use and Dependence, State and Federal Prisoners, 2004*, BUREAU OF J. STAT. NCJ 213530 (2007); Zhen Zeng & Todd D. Minton, *Jail Inmates in 2019*, BUREAU OF J. STAT. NCJ 2556078 (2021). See generally Douglas A. Berman & Alex Fraga, *How State Reforms Have Mellowed Federal Enforcement of Marijuana Prohibition*, 49 FORDHAM URB. L.J. 675 (2022).

¹³⁵ See generally Pacula et al., *supra* note 92.

Many states, prior to full legalization, had statutes that decriminalized possession of small amounts of marijuana but still attached a civil penalty to it.¹³⁶ This decriminalization might have different empirical effects than legalization, as it does not create a licit market to supplant the illicit one.¹³⁷ Hence, the effects of moving from decriminalization to legalization might be different from moving from full illegality to legalization. I also do not differentiate whether medical and recreational legalization occurred together or at different times—having an extant legal market at the time of recreational legalization could lead to different effects than legalizing both uses simultaneously. Such an analysis might be useful for policymakers looking for the safest way to implement legalization in their own states. If policymakers indeed wish to allow for gun possession by marijuana users, there are several legislative changes that might enable this. In the next part, I survey these options. I also discuss how changing gun rights jurisprudence might apply to marijuana users' possession of guns.

II. SUBTRACTING 420 FROM 922(G)(3)

In this part, I evaluate three potential paths by which state-legal marijuana use and federally illegal gun possession might be reconciled. The first two of these are legislative. If legislators wished to narrow the scope of the controlled-substance user prohibition in § 922(g)(3), they have two potential approaches. First, legislators might alter the provisions of the Gun Control Act directly to exempt certain controlled substance users—for example, users of state-legal medical marijuana. Second, they might alter the status of marijuana under the Controlled Substances Act, which § 922(g)(3) incorporates by reference, either by removing or rescheduling marijuana. These legislative solutions would provide uniformity and clarity in reconciling marijuana's decriminalization and legalization with federal gun laws; changing marijuana's federal status would have much broader implications, too. Legislators need not come to this policy choice; there are numerous risks with any increase in gun ownership and possession.¹³⁸ The third path to reconciling these laws would be via the courts. In the aftermath of *Bruen*, there is increased judicial appetite to apply an exacting historical test to gun regulations, and indeed, some courts have struck down § 922(g)(3). This path might be the most immediate, but it also forebodes an unwieldy patchwork of judicial decision-making. Further, the heady mixture of historical analysis and

¹³⁶ *E.g.*, David Abel, *Voters Approve Marijuana Law Change*, BOSTON GLOBE (Nov. 5, 2008) http://archive.boston.com/news/local/articles/2008/11/05/voters_approve_marijuana_law_change/ [<https://perma.cc/3H6J-7KZQ>] (Massachusetts); Carla Herreria Russo, *New Mexico Decriminalizes Possession of Marijuana*, HUFFINGTON POST (April 4, 2019), https://www.huffingtonpost.co.uk/entry/new-mexico-decriminalizes-marijuana_n_5ca6689ee4b0dca032fea51d [<https://perma.cc/R7U5-RMUH>] (New Mexico).

¹³⁷ *E.g.*, Huber et al., *supra* note 42.

¹³⁸ *See* Anglemyer, et al., *supra* note 21.

empirical work about marijuana's dangerousness further highlights the unworkability of Bruen's new standard.

A. *Legislative solutions: To control guns or to control substances?*

1. Reforming the Gun Control Act

The first of these legislative solutions would be for Congress to amend § 922(g) and § 922(d) to exempt legal marijuana users from the prohibition on receiving or possessing a firearm. Congress might opt to exempt medical users, recreational users, or both. There is already some movement towards this solution. One recently introduced bill, the Second Amendment Protection Act, would remove these prohibitions for users of legal medical marijuana.¹³⁹ Another, the Gun Rights and Marijuana Act (GRAM Act), would remove the prohibition of any marijuana use that's legal at the state or tribal level.¹⁴⁰ This type of legislative change has two key characteristics: It is narrow, and it would rely substantially on state law to determine the applicability of federal gun laws. This solution is narrow in that it would address the conflict between marijuana's federal status and state statuses only insofar as that conflict affects gun rights. It would not affect many of the other areas where this conflict can cause issues, such as clearances and screening for federal employment, potential immigration consequences, or access to financial and insurance services for the marijuana industry.¹⁴¹ This narrowness might aid any such bill's passage as it avoids complex debates over other areas of federal and state law. On the other hand, for advocates aiming at passing comprehensive reform, addressing a narrow issue may be less than compelling. Furthermore, focusing on federal marijuana reform in the context of gun rights may lose support if other gun provisions—such as those in the Second Amendment Protection Act—are also included.

This approach also rests upon crucial questions of state law and of who ought to benefit from these protections. First, should this protection apply only to

¹³⁹ Second Amendment Protection Act, H.R. 363, 118th Congress (2023–2024). The bill contains numerous other firearms-related provisions as well.

¹⁴⁰ H.R. 2830, 118th Cong. (2023–2024). This bill is substantially narrower than the Second Amendment Protection Act, focusing just on marijuana use.

¹⁴¹ See Ernesto Londoño, *Needing Younger Workers, Federal Official Relax Rules on Past Drug Use*, NEW YORK TIMES (April 30, 2023), <https://www.nytimes.com/2023/04/30/us/marijuana-drugs-federal-jobs.html> [https://perma.cc/X27K-X4EC] (describing the conflict between federal marijuana laws and previous state-legal use for federal job applicants); Sam Kamin, *Marijuana Law Reform in 2020 and Beyond: Where We Are and Where We're Going*, 43 SEATTLE U. L. REV. 883, 892–894 (2020); Erwin Chemerinsky et al., *Cooperative Federalism and Marijuana Regulation*, 62 UCLA L. REV. 74 (2015) (describing problems for marijuana businesses in accessing financial services due to federal prohibition).

medical marijuana users or to users of recreational marijuana, too?¹⁴² Second, what level of compliance with state law is needed for users to avail themselves of the exemption to § 922(g)(3)? The Second Amendment Protection Act would exempt “using marijuana for a medical purpose in accordance with State law,” while the GRAM Act would exempt those who are residents of a state or tribe that legalized marijuana and whose use is “in the State or on those lands, as the case may be, does not violate the laws of the State or Indian tribe.”¹⁴³ While the latter’s residency condition might discourage those who live in non-legal states from travelling to use marijuana and carrying firearms while doing so, it would also lead to inconsistencies in treatment for similar patterns of use. A Wyoming resident who drives to Colorado for treatment and takes medical marijuana would be banned from possessing a gun, but a Colorado resident who does the same thing would not.

These exemptions from § 922(g)(3) raise questions about what counts as use in accordance with state law. States often impose restrictions around public use, for example.¹⁴⁴ Other states allow only the use of low-cannabidiol oil.¹⁴⁵ Would smoking a joint in public or taking THC oil with a too-high concentration in an otherwise legal state render one ineligible to possess a gun under these statutes? Conduct that is legal in one legalized state—public smoking, for example—would render one ineligible to possess a gun in another legalized state. Of course, federal criminal gun laws already interact with and interpret varying state drug laws.¹⁴⁶ For example, under the mandatory-minimum provisions of the Armed Career Criminal Act for those with certain prior convictions who illegally possess a gun, some state drug offenses qualify as “serious drug offenses,” attracting a mandatory minimum, and some do not.¹⁴⁷ In other words, it is not a novel concept that the same or substantially similar conduct in different states can expose one to different federal criminal consequences, based upon the drafting of the states’ statutes. Nonetheless, asking law enforcement, federal prosecutors and defense attorneys, and judges to interpret state marijuana legalization statutes to determine one’s eligibility to possess a firearm would add complexity to a legislative solution to § 922(g)(3),

¹⁴² Compare H.R. 363, *supra* note 139 (protecting only medical users) with H.R. 2830, *supra* note 140 (protecting all legal users).

¹⁴³ *Id.*

¹⁴⁴ *E.g.*, State of Colorado, *Laws about marijuana use*, COLORADO CANNABIS, <https://cannabis.colorado.gov/legal-marijuana-use/laws-about-marijuana-use> [<https://perma.cc/JT25-M52N>] (Last visited March 28, 2024).

¹⁴⁵ See GA. CODE ANN. § 16-12-190 AND TEX. HEALTH & SAFETY CODE CH. 443, *supra* note 91.

¹⁴⁶ *Shular v. United States*, 589 U.S. 154 (2020) (use of the categorical approach to determine whether state drug offenses are “serious drug offenses” for the purpose of 18 U.S.C. § 924(e)(1)’s mandatory minimum provisions).

¹⁴⁷ Compare *United States v. Smith*, 983 F.3d 1213 (11th Cir. 2020) (Florida cocaine distribution conviction is a serious drug offense) with *United States v. Hope*, 28 F.4th 487 (4th Cir. 2022) (South Carolina conviction for possession of marijuana with intent to distribute is not a serious drug offense).

compared to the alternative—reforming marijuana’s status under the federal Controlled Substances Act.

2. Reforming the Controlled Substances Act

In the alternative, Congress could simply reschedule or remove marijuana from the Controlled Substances Act. The Marijuana Opportunity Reinvestment and Expungement Act, passed by the House in 2020 and reintroduced and passed again in subsequent sessions of Congress, would do exactly the latter.¹⁴⁸ Thus, marijuana would no longer be a federally illegal drug; the cross-reference to the Controlled Substances Act in the Gun Control Act would no longer be a bar to gun possession for legal users. Of course, such an act would have much broader implications for both marijuana regulation and drug scheduling writ large.¹⁴⁹ Re-scheduling marijuana from its current status in Schedule 1 (where it is illegal for all uses) would avoid the problems with the Second Amendment Protection and GRAM Acts; namely, it would not link the legality of gun possession by marijuana users to their state’s legalization status. Re-scheduling, though, would create substantial difficulties in shaping regulations to match differing state laws for both medical and recreational use.¹⁵⁰ Hence, from the perspective of legislative economy, removing marijuana from the Controlled Substances Act would be preferable.¹⁵¹

This solution is preferable to specific marijuana user carve-outs to § 922(g)(3) for two reasons: clarity and nationwide applicability. First, removing marijuana from the Controlled Substances Act provides the most clarity to individual marijuana users about their gun rights. With this change, marijuana would not be a federally controlled substance, so its use alone would not lead to any criminal liability under § 922(g)(3). Full stop. Such clarity is preferable to having to interpret whether one’s use is legal enough under state law to benefit from a piecemeal exemption to § 922(g)(3). Removing marijuana from the Controlled Substances Act has the additional advantage of solving the conflicts posed by both 18 U.S.C. § 922(g)(3) and 18 U.S.C. § 922(d)(3). The latter prohibition bars the transfer of firearms to illegal users of controlled substances. These two prohibitions go hand-in-hand; a carve-out for § 922(g)(3), like the GRAM Act, would create a murky situation where state-legal marijuana users could possess but not obtain a firearm. Of course, nothing about this solution would prevent states from passing laws that prohibit marijuana users from gun possession. Very few, if any, states have separately enacted legislation to prohibit marijuana users from gun

¹⁴⁸ Marijuana Opportunity Reinvestment and Expungement Act, H.R. 3617, 117th Cong. (2021–2022).

¹⁴⁹ See generally Alex Kreit, *Federal Marijuana Reform and the Controlled Substances Act*, 101 B.U.L. REV. 1231 (2021).

¹⁵⁰ *Id.* See also Grace Wallack & John Hudak, *Marijuana Rescheduling: A Partial Prescription for Policy Change*, 14 OHIO ST. J. CRIM. L. 207 (2016).

¹⁵¹ Kreit, *supra* note 149.

possession; indeed, some states have resisted federal law and issued executive orders aiming to preserve gun rights for legal marijuana users.¹⁵² Nonetheless, with Controlled Substances Act reform, these states could pass laws in either direction while under federal gun control law, all marijuana use would be treated equally. This nationwide applicability is the second benefit of removing marijuana from the Controlled Substances Act. Such consistency removes the need to interpret a complex patchwork of state laws to understand where and when § 922(g)(3) applies to marijuana use. Of course, passing the MORE Act is politically uncertain. In 2022, the bill passed by a margin of 220-204 in the House of Representatives, including three Republican supporters.¹⁵³ Control of the House has changed, though, and whether a re-introduced MORE Act would pass is unclear. Republican support might be more forthcoming for a limited bill focusing on just the § 922(g)(3) issue. Indeed, both the Second Amendment Protection Act and the GRAM Act were introduced by Republican members.¹⁵⁴

In either event—a more limited bill or broader federal marijuana reform—a legislative approach brings predictability and consistency. In the next section, I turn to another possibility: Courts, post-Bruen, might chip away at § 922(g)(3)'s applicability for marijuana users.

B. *Bruen* and 922(g)(3)

1. Bruen's Demand: Sola Historia

Prior to the Supreme Court's 2022 ruling in *Bruen*, lower courts have consistently upheld the prohibition on all marijuana users' possession of guns.¹⁵⁵ Under *District of Columbia v. Heller* and *McDonald v. City of Chicago*, the prevailing test for a gun control regulation involved a two-step inquiry.¹⁵⁶ At the first step, the court would assess whether a regulation implicated conduct falling within the "normal and ordinary meaning" of the ambit of the Second Amendment.¹⁵⁷ If the regulated conduct did not fall within that meaning, the

¹⁵² See Ciara O'Rourke, *No, States Haven't Legislated Marijuana Users Lose Their Guns*, POLITIFACT (July 9, 2019) <https://www.politifact.com/factchecks/2019/jul/09/viral-image/states-havent-legislated-marijuana-users-lose-guns> [<https://perma.cc/8A6S-VT4E>]; Zachary Dodge, *Medical Marijuana Patients in Oklahoma To Be Allowed To Own, Purchase Firearms*, KOAM (April 23, 2019) <https://www.koamnewsnow.com/news/medical-marijuana-patients-in-okla-to-be-allowed-to-own-purchase-firearms/1071427057/> [<https://perma.cc/8Q2U-ZDUU>].

¹⁵³ Marijuana Opportunity Reinvestment and Expungement Act, *supra* note 148.

¹⁵⁴ Representative Alex Mooney of West Virginia and Representative Brian Mast of Florida, respectively.

¹⁵⁵ Stevenson, *supra* note 6, at 232 (collecting cases).

¹⁵⁶ *Id.* at 9.

¹⁵⁷ *District of Columbia v. Heller*, 554 U.S. 570, 576–77. However, courts have split over whether this step imposed a burden on the government to justify the regulation as implicating conduct outside the Second Amendment's scope or if this step instead placed the burden on those challenging

Second Amendment review could cease.¹⁵⁸ If the regulation did cover Second Amendment-protected conduct, then the court would assess whether the regulation could be justified, including by reference to historical regulations.¹⁵⁹ *McDonald* then held that the Fourteenth Amendment incorporated *Heller*'s Second Amendment Guarantee; the right to self-defense was “fundamental to our scheme of ordered liberty” and “deeply rooted in this Nation’s history and tradition.”¹⁶⁰

This reasoning as applied to § 922(g)(3) is perhaps best exemplified by the Seventh Circuit’s ruling in *United States v. Yancey*.¹⁶¹ In *Yancey*, the court considered whether the *Heller* standard allowed for the government to prosecute the defendant—a frequent user of marijuana (which was illegal for recreational use in Wisconsin at the time)—for possessing a gun. The court held that it could. First, the court held that the prohibition was analogous to the ban on felons, insofar as drug users were unvirtuous and dangerous.¹⁶² Next, it also analogized between drug users and the mentally ill, claiming both suffered from a lack of control—leading to its third point, namely that drug use was connected with violence.¹⁶³ Of note, though, the evidence upon which the court relied to link drug use and violence is overwhelmingly associational. For example, one study upon which the court relied showed that chronic drug users had more frequently been violent than non-chronic drug users.¹⁶⁴ This ruling was deeply rooted in *Heller*'s means-end test;¹⁶⁵ nonetheless, it has been cited frequently by courts justifying this prohibition in light of *Bruen*, too.

The Ninth Circuit’s ruling in *Wilson v. Lynch* dealt more particularly with the case of a legal medical marijuana user prohibited from gun possession.¹⁶⁶ *Wilson* held a medical marijuana card and was thus denied upon attempting to purchase a gun. *Wilson* challenged the constitutionality of 18 U.S.C. § 922(d)(3), a similar

the regulation to show that such conduct was covered. *See* *N.Y. State Rifle & Pistol Ass’n v. Bruen*, 597 U.S. 1, 130–31 (2022) (citing *Kanter v. Barr*, 919 F.3d 437, 441 (7th Cir. 2019) (placing the burden on the government) and *United States v. Boyd*, 999 F.3d 171, 185 (3d Cir. 2021) (requiring the challenging claimant to show the conduct is within the Second Amendment’s scope)).

¹⁵⁸ Of course, any case might have involved challenges to the regulation upon other grounds which would not necessarily be resolved by *Heller*'s inquiry.

¹⁵⁹ *Heller*, 554 U.S. 570 at 626 (noting that *Heller*'s standard would not implicate long-standing restrictions on firearms possession by felons or the mentally ill).

¹⁶⁰ *McDonald v. City of Chicago*, 561 U.S. 742, 760 (2010) (citing *Duncan v. Louisiana*, 391 U.S. 145, 149 and *Washington v. Glucksberg*, 521 U.S. 702, 721 (1997)).

¹⁶¹ *Yancey*, 621 F.3d 681 (7th Cir. 2010).

¹⁶² *Id.* at 684.

¹⁶³ *Id.* at 684–86.

¹⁶⁴ *Id.* at 686; H. Virginia McCoy, et al., *Perpetrators, Victims, and Observers of Violence: Chronic and Non-Chronic Drug Users*, 16 J. INTERPERSONAL VIOLENCE 890, 906 (2001).

¹⁶⁵ *Yancey*, 621 F.3d at 687 (“In sum, we find that Congress acted within constitutional bounds by prohibiting illegal drug users from firearm possession because it is substantially related to the important governmental interest in preventing violent crime.”).

¹⁶⁶ *Wilson v. Lynch*, 835 F.3d 1083 (9th Cir. 2016).

statute that prohibits transferring or selling a gun to the same people prohibited from possession under § 922(g)(3).¹⁶⁷ The court first found that the regulation, under *Heller*, did indeed implicate Wilson’s Second Amendment rights.¹⁶⁸ Moving to the next step and applying intermediate scrutiny, the court held that the link between marijuana use and violence was sufficient to sustain the ban.¹⁶⁹ The panel wrote that, despite the differences between illegal and medical marijuana use, “those hypotheses are not sufficient to overcome Congress’s reasonable conclusion that the use of such drugs raises the risk of irrational or unpredictable behavior with which gun use should not be associated.”¹⁷⁰ Thus, under the two-step means-end test of *Heller*, even legal marijuana users could be banned from possessing guns.

Bruen retained the *Heller* test’s first step.¹⁷¹ What the *Bruen* majority purported to address was the transmogrification of the test’s second part—whether the regulation was justified— into simple means-end balancing. Justice Thomas noted that courts had typically first inquired as to whether the regulation implicated the “core” of the Second Amendment right.¹⁷² If it did, they applied strict scrutiny.¹⁷³ If it did not, then the courts would apply an intermediate scrutiny test; for example, in *Kachalsky*, the Second Circuit had held that New York’s regulation was “substantially related to the achievement of an important governmental interest.”¹⁷⁴ For the *Bruen* court, this means-end step was “one step too many.”¹⁷⁵ *Bruen*’s remedy was to direct lower courts to a sole source: history. If the regulated conduct falls within the Second Amendment’s plain-text meaning, then the government must identify a historical analog.¹⁷⁶ The Court recognized that this historical reasoning-by-analogy would be a comparatively easier task when similar historical problems existed in much the same form for earlier legislatures to address; when new technological or societal issues gave rise to the challenged

¹⁶⁷ *Id.* at 1091. This case highlighted a particular litigation difficulty in challenging § 922(g)(3)’s ban. The plaintiff was a Nevada medical marijuana cardholder; however, she did not allege that she in fact used medical marijuana. Thus, the panel held that though she had been prohibited from buying a firearm, she lacked standing to challenge § 922(g)(3) directly.

¹⁶⁸ *Id.* at 1092.

¹⁶⁹ *Id.* at 1095–96.

¹⁷⁰ *Id.* at 1099.

¹⁷¹ *N.Y. State Rifle & Pistol Ass’n v. Bruen*, 597 U.S. 1, 17 (2022) (“In keeping with *Heller*, we hold that when the Second Amendment’s plain text covers an individual’s conduct, the Constitution presumptively protects that conduct.”).

¹⁷² *Id.* at 2126 (citing *Kanter v. Barr*, 919 F.3d 437, 441 (7th Cir. 2019)).

¹⁷³ *Id.* (citing *Kolbe v. Hogan*, 849 F.3d 114, 133 (4th Cir. 2017)).

¹⁷⁴ *Id.* (citing *Kachalsky v. County of Westchester*, 701 F.3d 81, 96 (2d Cir. 2012)). See generally Eric Ruben & Joseph Blocher, *From Theory to Doctrine: An Empirical Analysis of the Right to Keep and Bear Arms After Heller*, 67 *DUKE L. J.* 1433 (2018).

¹⁷⁵ *Bruen*, 597 U.S. at 19–20.

¹⁷⁶ *Id.* at 2133.

regulation, this analogical expedition would be considerably harder.¹⁷⁷ Nonetheless, in any event, the government must still bear the “burden to identify an American tradition” that justifies the regulation under *Bruen*.¹⁷⁸

In *Bruen*, the Court held that New York State’s requirement that the petitioners show “proper cause” to obtain a permit to carry a concealed weapon in public ran afoul of the Second Amendment.¹⁷⁹ This requirement, previously upheld by the Second Circuit in *Kachalsky v. Cacace*,¹⁸⁰ required that the applicant display “a special need for self-protection distinguishable from that of the general community.”¹⁸¹ *Bruen* itself was not a case about the type of person-based restrictions that exist under the Gun Control Act at 18 U.S.C. § 922—no one denied both petitioners were “law-abiding, adult citizens,” with no legal barrier to gun possession under federal law.¹⁸² Where *Bruen* implicates the prohibitions on gun possession by certain classes of people is in its introduction of a new test for whether firearms restrictions comply with the Second Amendment’s guarantee.

2. Applying *Bruen* to Person-Based Prohibitions

The *Bruen* decision has sparked a raft of litigation over whether the person-based prohibitions found in 18 U.S.C. § 922 are compatible with the Second Amendment.¹⁸³ The most widely prosecuted of these prohibitions is the felon-in-possession statute;¹⁸⁴ for example, in fiscal year 2020, out of 6,755 sentencing for various offenses under 18 U.S.C. § 922(g), 5,629, or 83 percent, were under 18 U.S.C. § 922(g)(1).¹⁸⁵ At the appellate level, the Eighth Circuit has upheld the statute, ruling that, “Congress acted within the historical tradition when it enacted

¹⁷⁷ *Id.* at 2134.

¹⁷⁸ *Id.* at 2156.

¹⁷⁹ *Id.* at 2122.

¹⁸⁰ *Id.* at 2124; *see Kachalsky v. County of Westchester*, 701 F.3d 81 (2d Cir. 2012).

¹⁸¹ *Id.* at 2123 (citing *Klenosky v. New York City Police Dept.*, 428 N.Y.S.2d 256, 257 (N.Y. App. Div. 1st Dept. 1980)).

¹⁸² *Id.* at 2134.

¹⁸³ Courts have also addressed how *Bruen* might be applied to various other federal gun crimes, such as possession of a gun with a defaced serial number. I choose to focus my summary here on those prohibitions which are most similar to the drug user prohibition—that is, prohibiting any possession of a firearm based on the characteristic of the person, rather than a characteristic of the firearm itself or the place of possession. I also omit challenges to state-level gun laws, as I am specifically focused on the conflict between federal gun laws that incorporate federal drug laws and state drug laws.

¹⁸⁴ 18 U.S.C. § 922(g)(1). Under 18 U.S.C. § 921(a)(20), the category “crime punishable by imprisonment for a term exceeding one year” does not include certain antitrust crimes and also excludes state misdemeanors punishable by less than two years’ imprisonment. Nonetheless, for ease, I refer to § 922(g)(1)’s bar as the “felon” prohibition.

¹⁸⁵ U.S.S.C. Individual Offender Files, FY 2020, *supra* note 5.

§ 922(g)(1) and the prohibition on possession of firearms by felons.”¹⁸⁶ The Third Circuit, on the other hand, handed down an en banc opinion holding that § 922(g)(1) is unconstitutional as applied to some non-violent felons under Bruen.¹⁸⁷ While most all lower courts have held § 922(g)(1) to be constitutional, the trial court in *United States v. Bullock* held it to be unconstitutional as the government had not met its evidentiary burden of historical analogues.¹⁸⁸

The interpretive reasoning used to uphold § 922(g)(1) has had slight variations. Some courts have found that the plain text of the Second Amendment has always excluded felons—possession of a firearm by a felon does not fall within the amendment’s meaning.¹⁸⁹ In this interpretation, the plain-text test applies to both the conduct and the person. But to other courts, the scope of the Second Amendment’s text applies only to the conduct, and possession of a firearm, no matter by whom, is covered by the right to “keep and bear arms.”¹⁹⁰ To these courts, the first step is a “strictly textual question with only one answer: the Second Amendment’s plain text covers possession of a firearm.”¹⁹¹ These courts then turn to the historical tradition test, finding that the government has met its burden by showing analogous statutes prohibiting felons from possessing firearms. The Third Circuit in *Range*, of course, found that the government did not meet that burden for some non-violent felons.¹⁹² The district court in *Bullock* found the government had produced no such evidence in the instant case.¹⁹³ Yet other courts have somewhat avoided resolving the plain text question by arguing that Bruen’s historical tradition test is clearly met, so there is no need to resolve the plain text inquiry, as the statute would stand in either case.¹⁹⁴

¹⁸⁶ *United States v. Jackson*, 69 F.4th 495 (8th Cir. 2023).

¹⁸⁷ *Range v. Attorney General*, 69 F.4th 96 (3d Cir. 2023).

¹⁸⁸ *United States v. Bullock*, No. 3:18-CR-165-CWR-FKB, 2023 U.S. Dist. LEXIS 112397 (S.D. Miss. June 28, 2023).

¹⁸⁹ *United States v. Hill*, No. H-22-249, 2022 U.S. Dist. LEXIS 208852, at *6–7 (S.D. Texas Nov. 17, 2022).

¹⁹⁰ *E.g.*, *United States v. Charles*, 633 F. Supp. 3d 874 (W.D. Tex. 2022); *United States v. Collette*, 630 F. Supp. 3d 841, 843–45 (W.D. Tex. 2022); *United States v. Price*, 635 F. Supp. 3d 455, 463 (S.D.W. Va. 2022); *United States v. Coombes*, 629 F. Supp. 3d 1149, 1154 (N.D. Okla. 2022); *United States v. Cage*, No. 3:21-CR-68-KHJ-FKB, 2022 WL 17254319, at *4 (S.D. Miss. Nov. 28, 2022); *United States v. Gray*, No. 22-CR-00247-CNS, 2022 WL 16855696 (D. Colo. Nov. 10, 2022); *United States v. Barber*, No. 4:20-CR-384-SDJ, 2023 WL 1073667, at *10 (E.D. Tex. Jan. 27, 2023). *See generally* Jacob D. Charles, *Defeasible Second Amendment Rights: Conceptualizing Gun Laws That Dispossess Prohibited Persons*, 83 L. & CONTEMP. PROBS. 53 (2020) (arguing that prohibited persons should be understood as part of “the people” but prohibited from possession based on particular conduct).

¹⁹¹ *Charles*, 633 F. Supp. 3d at 877.

¹⁹² *Range*, 69 F.4th 96.

¹⁹³ *Bullock*, No. 3:18-CR-165-CWR-FKB, 2023 U.S. Dist. LEXIS 112397 at *.

¹⁹⁴ *E.g.*, *United States v. Jackson*, 69 F.4th 495 (8th Cir. 2023); *United States v. Riley*, 635 F. Supp. 3d 411, 421 (E.D. Va. 2022).

While found in 18 U.S.C. § 922(n), the federal prohibition on those under indictment possessing firearms is of identical form to § 922(g)'s bans.¹⁹⁵ No court to address this issue, including those that have upheld this ban as constitutional, has found that the plain text of the Second Amendment excludes those under indictment—what one court termed a “broad and eclectic category.”¹⁹⁶ Yet courts have split over the historical tradition test, with some courts ruling the statute unconstitutional and others finding that historical precedents do sustain the ban under Bruen.¹⁹⁷ Courts have also upheld under Bruen the prohibition on gun possession by those convicted of misdemeanor crimes of domestic violence.¹⁹⁸ These defendants fall squarely in the category of dangerous people which the historical tradition of firearms regulation includes.¹⁹⁹ Courts have split, though, on whether Bruen allows the prohibition on possessing firearms while subject to a domestic violence restraining order.²⁰⁰ These cases have often turned on how close the historical analog is to the modern restriction—a court upholding the prohibition conceded that there are no exact historical prohibitions of domestic abusers from owning firearms, but upheld these prohibitions under the broader tradition of excluding dangerous persons from firearms possession.²⁰¹

At least two courts have upheld the constitutionality of 18 U.S.C. § 922(g)(5)'s bar on firearms possession by undocumented immigrants, pointing to the historical tradition of regulating non-citizens' possession of firearms.²⁰² One court has upheld 18 U.S.C. § 922(g)(4)'s ban on firearm possession by those

¹⁹⁵ 18 U.S.C. § 922(n).

¹⁹⁶ *United States v. Rowson*, 652 F. Supp. 3d 436, 459 (S.D. N.Y. 2023).

¹⁹⁷ *Compare* *United States v. Quiroz*, 629 F. Supp. 3d 511, 515 (W.D. Tex. 2022); *United States v. Holden*, 638 F. Supp. 3d 931 (N.D. Ind. 2022), *rev'd*, 70 F.4th 1015 (7th Cir. 2023); *United States v. Stambaugh*, 641 F. Supp. 3d 1185 (W.D. Okla. 2022); *United States v. Hicks*, 649 F. Supp. 3d 357 (W.D. Tex. 2023) (striking down § 922(n)'s prohibition) *with* *Rowson*, 652 F. Supp. 3d 436 at 459; *United States v. Kelly*, No. 3:22-CR-00037, 2022 WL 17336578 (M.D. Tenn. Nov. 16, 2022); *United States v. Kays*, 624 F. Supp. 3d 1262 (W.D. Okla. 2022) (upholding § 922(n)).

¹⁹⁸ 18 U.S.C. § 922(g)(9).

¹⁹⁹ *United States v. Bernard*, No. 22-CR-03 CJW-MAR, 2022 WL 17416681 (N.D. Iowa Dec. 5, 2022); *United States v. Anderson*, No. 2:21CR00013, 2022 U.S. Dist. LEXIS 189057 (W.D. Va. Oct. 17, 2022); *United States v. Nutter*, 624 F. Supp. 3d 636 (S.D. W. Va. 2022); *United States v. Jackson*, 622 F. Supp. 3d 1063 (W.D. Okla. 2022).

²⁰⁰ 18 U.S.C. § 922(g)(8). *Compare* *Kays*, 624 F. Supp. 3d 1262 (upholding prohibition) *with* *United States v. Rahimi*, 59 F.4th 163 (5th Cir. 2023); *United States v. Perez-Gallan*, 640 F. Supp. 3d 697 (W.D. Tex. 2022) (striking down prohibition). The Supreme Court granted certiorari in *Rahimi* on June 30, 2023.

²⁰¹ *See* *Kays*, 624 F. Supp. 3d 1262 at 1267. *See generally* Joseph Blocher, *Domestic Violence and the Home-Centric Second Amendment*, 27 DUKE J. GENDER L. & POL'Y 45, 55–56 (2020).

²⁰² *United States v. Carbajal-Flores*, No. 20-CR-00613, 2022 U.S. Dist. LEXIS 22754 (N.D. Ill. Dec. 19, 2022); *United States v. DaSilva*, No. 3:21-CR-267, 2022 U.S. Dist. LEXIS 213106 (M.D. Penn. Nov. 23, 2022).

adjudicated mentally defective or committed to a mental institution.²⁰³ As far as can be ascertained from federal court records, there have not been any Bruen-based challenges to 18 U.S.C. § 922(g)(2), (6), or (7), which prohibit firearms possession by fugitives from justice, those dishonorably discharged from the military, and those who have renounced U.S. citizenship.²⁰⁴ Violations of these subsections are incredibly rarely prosecuted—five, eleven, three, and zero people were sentenced for violations of these statutes, respectively, in fiscal year 2020.²⁰⁵

This review, of course, leaves the operative prohibition with which this paper is concerned: 18 U.S.C. § 922(g)(3). All but two lower courts have upheld the drug user ban post-Bruen. Those courts that have upheld the ban have also held, with one exception, that the plain text of the Second Amendment does cover possession of a gun, even by a drug user.²⁰⁶ However, in the historical inquiry portion, all of these courts have found that the government has met its burden.²⁰⁷ Some of these cases concern users of heroin and crack cocaine;²⁰⁸ at least seven cases, though, dealt with marijuana users.²⁰⁹ These cases generally grounded their historical analysis in the Seventh Circuit’s *Yancey* ruling, finding that the historical tradition of preventing dangerous people from possessing firearms was a sufficient analogue for the modern ban on possession by drug users.²¹⁰ Importantly, all of the cases involving marijuana users involved conduct that was illegal at the state level, too.

²⁰³ *United States v. Gould*, No. 2:22-CR-00095, 2023 U.S. Dist. LEXIS 78941 (S.D. W. Va. May 5, 2023).

²⁰⁴ 18 U.S.C. § 922(g)(2); 18 U.S.C. § 922(g)(6); and 18 U.S.C. § 922(g)(7). Search conducted Feb. 25, 2023.

²⁰⁵ U.S.S.C. Individual Offender Files, FY 2020, *supra* note 5.

²⁰⁶ Compare *United States v. Lewis*, 650 F. Supp. 3d 1235, 1238 (W.D. Okla. 2023) (“ . . . Messrs. Lewis and Kelley don’t walk around with dark clouds over their heads for Second Amendment purposes just because the government deems them unvirtuous and not law abiding.”) with *United States v. Sanchez*, 646 F. Supp. 3d 825, 829 (W.D. Tex. 2022) (“ . . . [T]his Court finds that Defendant’s conduct as a user of unlawful drugs under Section 922(g)(3) is not covered by the plain text of the Second Amendment.”).

²⁰⁷ Nonetheless, the *Sanchez* court also undertakes the second part of *Bruen*’s historical inquiry: “Still, should the Court be required to adopt the view that Defendant’s conduct is covered by the Second Amendment’s plain text, it would yield the same result.” *Sanchez*, *supra* note 206, at 829.

²⁰⁸ E.g., *United States v. Seiwert*, No. 20 CR 443, 2022 WL 4534605 (N.D. Ill. Sep. 28, 2022); *United States v. Beaty*, No. 6:22-cr-95-PGB-DCI, 2023 WL 4662247 (M.D. Fla. Jul. 20, 2023).

²⁰⁹ *Sanchez*, 646 F. Supp. 3d 825 at 829; *Lewis*, 650 F. Supp. 3d 1235 at 1238; *United States v. Daniels*, 610 F. Supp. 3d 892 (S.D. Miss. 2022); *United States v. Posey*, 655 F. Supp. 3d 762 (N.D. Ind. 2023); *United States v. Black*, 649 F. Supp. 3d 246 (W.D. La. 2023); *United States v. Harper*, 634 F. Supp. 3d 594 (N.D. Iowa 2022); *United States v. Lewis*, No. CR 22-0222-WS, 2023 WL 460463 (S.D. Ala. July 18, 2023).

²¹⁰ See, e.g., *Daniels*, 610 F. Supp. 3d at 897 (“The Court need not repeat the Seventh Circuit’s historical analysis in *Yancey*; it suffices to show that analogous statutes which purport to disarm persons considered a risk to society—whether felons or alcoholics—were known to the American legal tradition.”)

Marijuana was illegal for recreational use in each state, and none of the defendants had medical marijuana prescriptions.²¹¹

Three criminal rulings—one from the Fifth Circuit and two from district courts—post-Bruen have found § 922(g)(3) to be unconstitutional. In *United States v. Daniels*, the Fifth Circuit vacated a defendant’s § 922(g)(3) conviction, holding the statute to be unconstitutional as applied in light of Bruen.²¹² The court held that Daniels’ possession of the firearm fell within the Second Amendment’s clear text, and then assessed three potential historical analogs for the regulation: the prohibition of gun ownership by the intoxicated, the mentally ill, and the dangerous.²¹³ As applied to Daniels, a regular user of marijuana but one who was not intoxicated at the time of being stopped by police, § 922(g)(3) was too dissimilar to historical prohibitions on the possession of guns by intoxicated people—which often related to specific days or militia training.²¹⁴ Similarly, habitual use of marijuana was not sufficiently similar to mental illness: “there is no tradition that supports disarming a sober citizen who is not currently under an impairing influence.”²¹⁵ Finally, while some founding-era regulations allowed for disarming the dangerous, habitual marijuana users are not similar enough to those classes of dangerous people.²¹⁶ The court’s analysis in *Daniels* is highly specific to habitual marijuana users who are not acutely intoxicated at the time of possessing a firearm. While no other circuit courts have ruled on this question, the Third Circuit, though, has shown an interest, ordering updated briefing on how its *Range* decision (striking down § 922(g)(1) in an as-applied challenge) might affect the constitutionality of § 922(g)(3) in a criminal proceeding.²¹⁷

At the district court level, in *United States v. Harrison*, the court held that the ban on possession of a firearm by marijuana users could not be located in the nation’s historical tradition of firearms regulation.²¹⁸ In *United States v. Connelly*, the court held that § 922(g)(3) was unconstitutional under Bruen insofar as it barred gun possession by any marijuana user.²¹⁹ Both courts found that such

²¹¹ See *supra* note 191 (collecting cases)—recreational marijuana was illegal at the time of prosecution in Mississippi, Oklahoma, Texas, Indiana, Louisiana, and Iowa. Moreover, many of these defendants had additional factors that judges considered in weighing their dangerousness, including one defendant who shot a police officer during his arrest and a defendant charged with possession with intent to supply cocaine. See *Lewis, supra* note 206 and *Posey, supra* note 209.

²¹² *United States v. Daniels*, 77 F.4th 337 (5th Cir. 2023).

²¹³ *Id.* at 343.

²¹⁴ *Id.* at 345–46.

²¹⁵ *Id.* at 349.

²¹⁶ *Id.* at 350.

²¹⁷ *United States v. Harris*, No. 21-3031 (3d Cir. Jun. 13, 2023) (judicial order).

²¹⁸ *United States v. Harrison*, 654 F. Supp. 3d 1191 (W.D. Okla. 2023).

²¹⁹ *United States v. Connelly*, No. EP-22-CR-229(2)-KC, 2023 WL 2806324 (W.D. Tex. Apr. 6, 2023).

possession was clearly within the plain text of the Second Amendment.²²⁰ The Harrison court accepted that the nation’s historical tradition of firearm regulation allowed for restricting dangerous people from possessing firearms but emphasized that this designation of dangerousness must be based on actual conduct.²²¹ The court held that marijuana use, particularly when legal at the state level, does not qualify: “The use of marijuana—which can be bought legally (under state law) at more than 2,000 ordinary store fronts in Oklahoma—is not in and of itself a violent, forceful, or threatening act.”²²² The court further rejected the United States’ contention that individuals who were unvirtuous but not dangerous fell within the historical tradition of firearms regulation.²²³ Finally, the court turned down the government’s argument that marijuana users were “untrustworthy” and could be denied firearms, in the historical tradition that native Americans, loyalists, and Catholics were.²²⁴ The Connelly court further rejected laws prohibiting firearms possession while intoxicated as historical analogs, finding that § 922(g)(3)’s ban on all users swept more broadly than an acute intoxication provision.²²⁵ It also found that Connelly’s private drug use did not accord with historical definitions of unvirtuous, non-law-abiding, or dangerous people.²²⁶ Importantly, Connelly extended to all marijuana use, not just that legal under state law as in Harrison. Moreover, Connelly also struck down the bar on transferring firearms to marijuana users under § 922(d)(3) along the same rationale as it offered for § 922(g)(3).²²⁷

No criminal ruling has dealt with the applicability of § 922(g)(3) to the specific category of medical marijuana users (which Harrison was not), but the statute’s constitutionality in this regard has been upheld by the district court in *Fried v. Garland*.²²⁸ Unlike in *Wilson*, the *Fried* court found that the plaintiffs—medical marijuana users—did have standing;²²⁹ it also assumed that their desire to possess a firearm fell within the Second Amendment’s plain text, instead resolving the suit with the historical tradition test.²³⁰ The government cited two traditions of

²²⁰ *Id.* at *8–9; *Harrison*, 654 F. Supp. 3d at 1198.

²²¹ *Harrison*, 654 F. Supp. 3d at 1210 (citing *Kanter*, 919 F.3d at 454) (Barrett, J., dissenting) and *Folajtar v. Attorney General*, 980 F.3d 897, 923–24 (3d Cir. 2020) (Bibas, J., dissenting)).

²²² *Harrison*, 654 F. Supp. 3d at 1213.

²²³ *Id.* at 1215 (citing *Folajtar*, 980 F.3d at 913).

²²⁴ *Id.* at 1220 (“These colonial laws were justified on the fear that the covered groups were likely to wage active war against the colonies or interfere with the colonists’ war efforts. This is a radically different justification than the justification for § 922(g)(3).”).

²²⁵ *United States v. Connelly*, No. EP-22-CR-229(2)-KC, 2023 WL 2806324 (W.D. Tex. Apr. 6, 2023), at *10–18

²²⁶ *Id.* at *18–25.

²²⁷ *Id.* at *31.

²²⁸ *Fried v. Garland*, 640 F. Supp. 3d 1252 (N.D. Fla. 2022).

²²⁹ *Id.* at 1258.

²³⁰ *Id.* at 1260.

regulation—of those involved in crime and those who were dangerous—which the court accepted as both including medical marijuana users.²³¹ The Fried court cited to both Yancey’s and Daniels’s analyses that medical marijuana users fit the category of “presumptively risky people” whose firearms rights could be curtailed.²³² Additionally, other courts have upheld the applicability of 18 U.S.C. § 922(a)(6), criminalizing false statements in the firearms purchasing process, as it applies to users of marijuana.²³³ In sum, § 922(g)(3)’s constitutionality as it regards marijuana users is hazy — various district courts have ruled divergently, as applied to medical marijuana users, legal marijuana users, and all marijuana users.

3. Implications for Bruen

This paper integrates evidence from two sources: empirical evidence on marijuana legalization’s impact on firearm outcomes and courts’ historical interpretation of gun regulations under Bruen. These two sources are in many ways inapposite, which highlights Bruen’s internal contradictions. On the one hand, Bruen disclaims a role for empirical evidence and means-end balancing, but on the other, empirical evidence still sneaks into the task of interpreting history.²³⁴ Under Bruen, courts have begun to chip away at § 922(g)(3)’s applicability to both legal and illegal marijuana users. While this is one path to reconciling marijuana legalization with § 922(g)(3), it is a suboptimal one. First, it will lead to the inconsistent and asynchronous development of law across circuits and districts. Second, it relies upon the uneasy and contradictory relationship of history and empirical evidence that courts must immerse themselves in under Bruen.

Bruen has been subject to no shortage of doctrinal and historical criticism. At the most basic level are criticisms that Bruen itself engages in bad history and bad originalism. Bruen, while purporting to be *sola historia*, indeed brings in numerous other considerations, such as means-end testing and “headcounts” of existing regulations, to preserve New York’s shall-issue licensing scheme while eliminating its proper cause requirement.²³⁵ Its claimed reliance on originalism is belied by the un-originalist nature of the “text-and-history” test in actuality—rendering the decision “originalish.”²³⁶ That is, many at the founding indeed endorsed the means-

²³¹ *Id.* at 1260–63.

²³² *Id.* at 1263.

²³³ *E.g.*, *United States v. Hulitt*, No. 2:22 CR 88, 2023 U.S. Dist. LEXIS 109239 (N.D. Ind. May 18, 2023); *United States v. Jones*, No. 2:22-CR-066-PPS-JPK, 2023 U.S. Dist. LEXIS 107086 (N.D. Ind. June 21, 2023).

²³⁴ *See* Joseph Blocher & Eric Ruben, *Originalism-By-Analogy and Second Amendment Adjudication*, 133 *YALE L.J.* 99 (2023).

²³⁵ Adam M. Samaha, *Is Bruen Constitutional? On the Methodology that Saved Most Gun Licensing*, 98 *N.Y.U. L. REV.* 1928 (2023).

²³⁶ A.W. Geisel, *Bruen is Originalish* (Jan. 23, 2023) (unpublished manuscript) (on file with Social Science Research Network).

end conception of rights that the Bruen majority rejects.²³⁷ Moreover, many of the factual historical claims undergirding the Bruen ruling are themselves false.²³⁸ Additional critiques have focused on the impracticability of its requirements for lower courts. Criticism of Bruen's plain-text step has included that it is "badly underspecified" and indeed leaves lower courts with little additional guidance on how they decide what conduct falls within the Second Amendment's original meaning.²³⁹ Indeed, this problem will particularly recur with cases interpreting person-based restrictions in light of Bruen: must the regulated conduct fall within the Second Amendment's plain text, or the regulated conduct and person?²⁴⁰ Even once courts pass this step, they must then wrestle with how to find historical analogues for the contested regulation, and just how strictly analogous laws must match the present one.²⁴¹ In some cases, this test asks judges to make an "argument from silence," inferring that conduct must be permissible solely because of an absence of evidence (which, of course, does not necessarily constitute evidence of absence).²⁴² In sum, this step asks judges untrained in history to weigh competing historical claims, often cherry-picking which ones support their desired outcome.²⁴³ This burden led one exasperated district judge to consider the appointment of an expert historian, writing that he could not be expected "to play historian."²⁴⁴ These critiques might broadly be characterized as criticizing Bruen by its own lights; that is, they argue that a ruling claiming to be originalist, historical, and straightforward is none of those things.

Another class of critique is more external to Bruen's own reasoning and focuses on the Court's abandonment of the means-end test and its likely

²³⁷ Eric Segall, *The Year Originalism Became a Four-Letter Word*, DORF ON LAW (December 12, 2022), <http://www.dorfonlaw.org/2022/12/the-year-originalism-became-four-letter.html> [<https://perma.cc/A4RG-C22J>].

²³⁸ Saul Cornell, *History and Tradition or Fantasy and Fiction: Which Version of the Past Will the Supreme Court Choose in NYSRPA v. Bruen?*, 49 HASTINGS CONST. L.Q. 145 (2022).

²³⁹ Jacob D. Charles, *The Dead Hand of a Silent Past: Bruen, Gun Rights, and the Shackles of History*, 73 DUKE L.J. 67 (2023).

²⁴⁰ See *id.* at 89.

²⁴¹ See Samaha, *supra* note 236, at 5 ("This is the part where the majority opinion announces—nearly uselessly but soon-to-be famously—that proper analogical use of history is 'neither a regulatory straitjacket nor a regulatory blank check.'").

²⁴² Charles, *supra* note 239, at 89.

²⁴³ Michael L. Smith, *Historical Tradition: A Vague, Overconfident, and Malleable Approach to Constitutional Law*, 88 BROOKLYN L. REV. 797 (2023); Saul Cornell, *Cherry-picked History and Ideology-driven Outcomes: Bruen's Originalist Distortions*, SCOTUSBLOG (June 27, 2022), <https://www.scotusblog.com/2022/06/cherry-picked-history-and-ideology-driven-outcomes-bruens-originalist-distortions> [<https://perma.cc/6J8E-GGZF>]. But see William Baude & Stephen E. Sachs, *Originalism and the Law of the Past*, 37 L. AND HIST. REV., 809, 816 (2019) (arguing that this approach is not a deficiency of using history but of law's approach to other fields, too: "Law treats history in the same casually omnivorous way it treats everything else.").

²⁴⁴ *United States v. Bullock*, No. 3:18-CR-00165-CWR-FKB, 2022 WL 16649175, at *3 (S.D. Miss. Oct. 27, 2022) (judicial order).

consequences. Bruen disclaims any focus consideration of the practical effects of gun regulation, particularly on public safety, except insofar as connected to historical tradition.²⁴⁵ Courts cannot consider the effects of gun legislation on public safety, such as the clear evidence that putting guns in the hands of domestic abusers will lead to more women dying.²⁴⁶ These are powerful critiques, given the mass of evidence that gun restrictions help mitigate all manner of public health dangers.²⁴⁷

Yet Bruen's standard has a more complicated relationship with empirical evidence. In this sense, the standard is both under-inclusive and over-inclusive. Bruen purports to foreclose consideration of empirical evidence on the dangers actually averted by particular gun laws. Hence, it both prohibits gun restrictions that are empirically grounded and allows for gun restrictions that are not.²⁴⁸ For example, historical analogs of dangerous people whom the government has cited to support current restrictions variously included Native Americans, loyalists to the British Crown, and Catholics.²⁴⁹ Indeed, it is true that the government's historical regulation of people seen as dangerous has swept more widely than those who are criminals.²⁵⁰ At the same time, legal marijuana users are likely not empirically dangerous people. Bruen incentivizes the government and advocates to rely on scattershot history, rather than empirical evidence, in justifying firearms restrictions. The shakiness of this reliance on history is compounded by the fact that no long-standing analog exists in the regulation of marijuana users per se. Drug users were first barred from gun possession by the Gun Control Act of 1968.²⁵¹ Marijuana was first regulated at the federal level by the Marihuana Tax Act of 1937²⁵² and then outlawed by the Controlled Substances Act of 1970.²⁵³

²⁴⁵ Smith, *supra* note 244, at 799–800.

²⁴⁶ Erwin Chemerinsky, *Phony Constitutional “Originalism” Is Likely To Kill Women After Second Amendment Decision*, SALON (Feb. 7, 2023), salon.com/2023/02/07/phony-constitutional-originalism-is-likely-to-women-after-second-amendment-decision/ [<https://perma.cc/45RQ-VLCE>]; Garrett Epps, *It's Clarence Thomas's Court—and Lower Courts Are Saluting Him*, WASHINGTON MONTHLY (Feb. 14, 2023), <https://washingtonmonthly.com/2023/02/14/its-clarence-thomass-court-now-and-right-wing-lower-courts-are-saluting-him/> [<https://perma.cc/3GSJ-DZP3>].

²⁴⁷ See *supra* note 21.

²⁴⁸ *E.g.*, United States v. Jackson, 69 F.4th 495, 505 (8th Cir. 2023) (“To be sure, the historical understanding that legislatures have discretion to prohibit possession of firearms by a category of persons such as felons who pose an unacceptable risk of dangerousness may allow greater regulation than would an approach that employs means-end scrutiny with respect to each individual person who is regulated.”).

²⁴⁹ See United States v. Harrison, 654 F. Supp. 3d 1191, 1216-20 (W.D. Okla. 2023).

²⁵⁰ See generally Joseph Blocher & Caitlan Carberry, *Historical Gun Laws Targeting “Dangerous” Groups and Outsiders*, in NEW HISTORIES OF GUN RIGHTS AND REGULATION: ESSAYS ON THE PLACE OF GUNS IN AMERICAN LAW AND SOCIETY (2020).

²⁵¹ Gun Control Act, Pub. L. No. 90–618, 18 U.S.C. § 922(g)(3) (1968).

²⁵² Marihuana Tax Act, Pub. L. No. 75–238 (1937).

²⁵³ Controlled Substances Act, Pub. L. No. 91–513 (1970).

Hence, the historical interpretation that has resulted has often relied upon imperfect analogical reasoning and has come to divergent results.²⁵⁴

Yet this reliance on historical interpretation implicates some degree of *sub rosa* means-end balancing in determining which drug users could be prohibited from gun possession under § 922(g)(3). First, courts have dealt with different classes of marijuana users—medical, recreational, and all users. From a means-end perspective, these groups are not necessarily identical. There are mechanisms that might make marijuana use, when illegal at the state level, comparatively riskier. For example, the threat of legal enforcement and lack of ability to rely on the state to help resolve business disputes might lead to the use of violence in the illicit market. Similarly, a means-end test would be useful in determining how § 922(g)(3) might apply to users of other controlled drugs. Other drugs have much different ties with violence than marijuana does, and their acute effects might be more likely to induce violence.²⁵⁵

Second, these other drugs remain illegal.²⁵⁶ Since these markets are illicit, the need for associated violence is likely greater.²⁵⁷ Bruen's historical test adds an extra proxy step. By determining if these groups (illegal marijuana users and other drug users) fall within the analog of dangerous or unvirtuous people, courts are essentially doing a weakened means-end test for dangerousness and calling it history.

Resolving the conflict between federal gun control law and state marijuana law through the courts will lead to uncertain, vague, and disjointed change. A patchwork of court rulings emanating from Bruen will leave complex splits between districts and eventually between circuits. Marijuana users and those who sell firearms will have little credible information as to where and when marijuana use might disqualify them from gun ownership and where it might not. For this

²⁵⁴ See Charles, *supra* note 240; Andrew Koppelman, *The Use and Abuse of Tradition: A Comment on DeGirolami's Traditionalism Rising*, 23 J. CONTEMP. LEGAL ISSUES 1, 4 (2023).

²⁵⁵ E.g., Rebecca McKetin, et al., *Mental Health Outcomes Associated with the Use of Amphetamines: A Systematic Review and Meta-analysis*, 16 ECLINICALMEDICINE 81 (2019) (amphetamines); J. Cobb Scott et al., *Neurocognitive Effects of Methamphetamine: A Critical Review and Meta-analysis*, 17 NEUROPSYCHOLOGY REV. 275 (2007) (methamphetamine); Ainslie J. Butler et al., *Health Outcomes Associated with Crack-cocaine Use: Systematic Review and Meta-analyses*, 180 DRUG AND ALCOHOL DEPENDENCE 401 (2017) (crack cocaine); Cory A. Crane et al., *The Association Between Phencyclidine Use and Partner Violence: An Initial Examination*, 32 J. ADDICTIVE DISEASES 150 (2013) (PCP).

²⁵⁶ One state, Oregon, has decriminalized possession of small amounts of other drugs, but no state has created a legal market for them as with marijuana. See Sam Levin, *Oregon Becomes First U.S. State To Decriminalize Possession of Hard Drugs*, THE GUARDIAN (Nov. 4, 2020) <https://www.theguardian.com/us-news/2020/nov/03/oregon-drugs-decriminalize-arizona-new-jersey-marijuana> [<https://perma.cc/GX4R-LXDG>].

²⁵⁷ See generally Dan Werb et al., *Effect of Drug Law Enforcement on Drug Market Violence: A Systematic Review*, 22 INTL. J. DRUG POL'Y 87 (2011); Peter Reuter, *Systemic Violence in Drug Markets*, 52 CRIME, LAW, AND SOCIAL CHANGE 275 (2009).

reason and Bruen's many other shortcomings, unified federal reform of either § 922(g)(3) or the entire Controlled Substances Act is preferable.

CONCLUSION

There is little evidence that marijuana legalization causes gun crimes and deaths. Twenty-one states have chosen to legalize recreational marijuana, and 37 have made it legal for medical use. A review of the literature on marijuana usage shows only associational evidence between marijuana and later crime, and little evidence of marijuana legalization causing violence.²⁵⁸ This paper's original empirical results find no effect of recreational or medical marijuana legalization on firearms deaths or homicides.²⁵⁹ Moreover, this lack of effect is not due to any prophylactic benefit from § 922(g)(3). Indeed, federal gun possession prosecutions, in general, fell after medical marijuana legalization. Gun sales were unaffected.

As Bruen continues to upend gun control laws, the tension between the Controlled Substances Act and Gun Control Act will take center stage. Lower-court rulings in the wake of Bruen have shown a new skepticism towards the compatibility of a swath of person-based prohibitions on gun ownership — including § 922(g)(3) — with the Second Amendment.²⁶⁰ These rulings have created disparate case law on § 922(g)(3)'s constitutionality; a legislative solution would likely bring increased predictability and coherence. Congress might accomplish this by either reforming § 922(g)(3) directly or removing marijuana from the Controlled Substances Act. The latter is a cleaner, more sweeping, and altogether better option. Of course, increasing access to guns in any way brings considerable risks to public safety. Yet, as this paper's empirical results show, the specific risk to public safety from this particular policy change is likely low.

²⁵⁸ See *supra* Section II.A.

²⁵⁹ See *supra* Section II.C.1.

²⁶⁰ See *supra* Section III.B.2.

APPENDICES

A. Appendix 1: Marijuana Legalization Dates

State	Recreational Passage	Recreational Implementation	Medical Passage	Medical Implementation
Alabama	NA	NA	NA	NA
Alaska	11-2014	11-2014	11-1998	11-1998
Arizona	11-2020	12-2020	11-2010	11-2010
Arkansas	NA	NA	11-2016	7-2017
California	11-2016	01-2018	11-1996	11-1996
Colorado	11-2012	12-2012	11-2000	6-2001
Connecticut	7-2021	07-2021	06-2012	10-2012
Delaware	NA	NA	05-2011	07-2011
Florida	NA	NA	11-2016	1-2017
Georgia	NA	NA	NA	NA
Hawaii	NA	NA	06-2000	12-2000
Idaho	NA	NA	NA	NA
Illinois	06-2019	01-2020	08-2013	01-2014
Indiana	NA	NA	NA	NA
Iowa	NA	NA	NA	NA
Kansas	NA	NA	NA	NA
Kentucky	NA	NA	NA	NA
Louisiana	NA	NA	06-2015	05-2016
Maine	11-2016	11-2016	11-1999	12-1999
Maryland	NA	NA	04-2014	06-2014
Massachusetts	11-2016	12-2016	11-2012	01-2013
Michigan	11-2018	12-2018	11-2008	12-2008
Minnesota	NA	NA	05-2014	07-2015
Mississippi	NA	NA	02-2022	02-2022
Missouri	NA	NA	11-2018	12-2018

Montana	11-2020	01-2021	11-2004	11-2004
Nebraska	NA	NA	NA	NA
Nevada	11-2016	01-2017	06-2001	10-2001
New Hampshire	NA	NA	07-2013	07-2013
New Jersey	11-2020	11-2020	01-2010	06-2010
New Mexico	04-2021	07-2021	04-2007	07-2007
New York	04-2021	04-2021	07-2014	07-2014
North Carolina	NA	NA	NA	NA
North Dakota	NA	NA	11-2016	04-2017
Ohio	NA	NA	06-2016	09-2016
Oklahoma	NA	NA	06-2018	06-2018
Oregon	11-2014	10-2015	11-1998	12-1998
Pennsylvania	NA	NA	04-2016	04-2016
Rhode Island	NA	NA	01-2006	01-2006
South Carolina	NA	NA	NA	NA
South Dakota	NA	NA	11-2020	07-2021
Tennessee	NA	NA	NA	NA
Texas	NA	NA	NA	NA
Utah	NA	NA	11-2018	12-2018
Vermont	01-2018	07-2018	05-2004	07-2004
Virginia	04-2021	07-2021	03-2019	03-2019
Washington	11-2012	12-2012	11-1998	11-1998
West Virginia	NA	NA	04-2017	07-2019
Wisconsin	NA	NA	NA	NA
Wyoming	NA	NA	NA	NA
Note: State legalization after the close of the study period may not be properly reflected.				

A. Appendix 2: Spillover effects test results

To test whether there is a spillover effect when a neighboring state legalizes marijuana, I use the same estimator and identification strategy from my main specifications.²⁶¹ I estimate the effect on the same dependent variables but set the treatment date as when the first geographically adjacent state legalizes marijuana in a relevant way (i.e., passes or implements medical or recreational legalization). Thus, I compare states that have an adjacent legalized state against those yet to have an adjacent state (but which eventually will during the study period).²⁶² I count states as adjacent if one can transit between them via road or land without passing through a third state; thus, states that share only a water border with each other but have a bridge (e.g., Delaware and New Jersey) are adjacent but those that have only a water border (e.g., Michigan and Illinois) are not. This classification is to account for marijuana trafficking between a legalized and non-legalized state via road; I assume any such trafficking by boat is de minimis. This modelling approach omits the impact of the scale of legalization (i.e., how many adjacent states have legalized marijuana) by treating “bordering a legalized state” as a binary variable. Table A2 below displays the ATTs for these models. Applying a Bonferroni correction, I find no significant spillover effects. These results suggest little evidence of a spillover effect on deaths or homicides.

Table A2: ATTs for spillover tests

Outcome variable	Legalization type	Effective date	ATT	SE	N
Firearms homicides	Recreational	Pass	0.004	0.03	4248
		Implement	-0.04	0.03	4248
	Medical	Pass	0.005	0.02	5412
		Implement	-0.03	0.04	5412
Firearms suicides	Recreational	Pass	-0.02	0.09	4620
		Implement	0.09	0.04	4620
	Medical	Pass	-0.01	0.04	5808
		Implement	-0.06	0.03	5808

²⁶¹ Callaway & Sant’Anna, *supra* note 118.

²⁶² The states included in the spillover test for recreational legalization were Arizona, California, Colorado, Connecticut, Delaware, Idaho, Indiana, Iowa, Kansas, Kentucky, Maryland, Massachusetts, Missouri, Nebraska, Nevada, New Hampshire, New Jersey, New Mexico, New York, North Carolina, North Dakota, Ohio, Oklahoma, Oregon, Pennsylvania, Rhode Island, South Dakota, Tennessee, Texas, Utah, Vermont, Washington, West Virginia, Wisconsin, and Wyoming. The states included for medical legalization were Alabama, Arizona, Arkansas, California, Colorado, Connecticut, Delaware, Georgia, Idaho, Illinois, Indiana, Iowa, Kansas, Kentucky, Louisiana, Maine, Maryland, Massachusetts, Michigan, Minnesota, Mississippi, Missouri, Montana, Nebraska, Nevada, New Hampshire, New Jersey, New Mexico, New York, North Carolina, North Dakota, Ohio, Oklahoma, Pennsylvania, Rhode Island, South Dakota, Tennessee, Texas, Utah, Vermont, Virginia, West Virginia, Wisconsin, and Wyoming.

Firearms deaths	Recreational	Pass	-0.05	0.10	4620
		Implement	0.08	0.06	4620
	Medical	Pass	0.02	0.05	5808
		Implement	-0.07	0.05	5808
Firearms purchases	Recreational	Pass	69.82	38.62	4620
		Implement	1.55	40.39	4620
	Medical	Pass	-2.29	16.71	5808
		Implement	16.88	22.12	5808
FSS	Recreational	Pass	-0.01	0.03	4591
		Implement	0.05	0.03	4591
	Medical	Pass	-0.01	0.02	5779
		Implement	-0.04	0.01	5779
Firearms prosecutions under 922(g)(3)	Recreational	Pass	0.004	0.01	4620
		Implement	0.01	0.01	4620
	Medical	Pass	-0.002	0.01	5808
		Implement	0.004	0.004	5808
Firearms prosecutions under 922(g) and 922(n)	Recreational	Pass	-0.02	0.04	4620
		Implement	0.05	0.03	4620
	Medical	Pass	0.01	0.04	5808
		Implement	-0.02	0.04	5808

Note: *** = $p < 0.0017$. Bootstrapped SEs clustered at state level.

