



Technical Report— *Initiative 502 and Cannabis-Related Convictions*

This Technical Report details one of several outcome analyses related to WSIPP’s long-term evaluation of non-medical cannabis (NMC) legalization in Washington. For a full description of findings from all analyses we conducted in 2023, please refer to [Initiative 502 and Cannabis-Related Public Health and Safety Outcomes: Third Required Report](#).¹ For more background information about Initiative 502 and related cannabis policy, please refer to our previously published report, [A 10-Year Review of Non-Medical Cannabis Policy, Revenues, and Expenditures](#).²

In November 2012, Washington State voters passed Initiative 502 (I-502), which legalized limited possession, private use, and retail sales of cannabis for adults.³ The law also directed the Washington State Institute for Public Policy (WSIPP) to conduct a benefit-cost evaluation of the implementation of I-502 that should consider (among other things) *criminal justice impacts*.

In this technical report, we describe how rates of cannabis possession misdemeanor convictions have changed since I-502 went into effect. We examine if trends in conviction rates have evolved differently across sex, age, and racial groups. In addition, we summarize changes in conviction rates by county.

An abridged description of this analysis can be found in our main report.⁴ This main report also summarizes key findings from related work focusing on reported substance use, substance use disorder, and traffic collision outcomes.

In [Section I](#), we describe how I-502 relates to the criminal justice system and review relevant literature. In [Section II](#), we describe our data and the outcomes we measure. In [Section III](#), we illustrate how cannabis possession convictions have evolved since the enactment of I-502. In [Section IV](#), we summarize how cannabis possession convictions have changed across counties in Washington. In [Section V](#), we detail the limitations of our analysis and discuss our findings.

Suggested citation: Rashid, A., & Wanner, P. (2023). *Technical report—Initiative 502 and cannabis-related convictions* (Document Number 23-09-3203). Olympia: Washington State Institute for Public Policy.

¹ Rashid, A. (2023). [Initiative I-502 and cannabis-related public health and safety outcomes: Third required report](#). (Doc. No. 23-09-3201). Olympia: Washington State Institute for Public Policy.

² Ingraham, B., & Rashid, A. (2023). [A 10-year review of non-medical cannabis policy, revenues, and expenditures](#) (Doc. No. 23-06-3201). Olympia: Washington State Institute for Public Policy.

³ [Initiative Measure No. 502](#).

⁴ [Rashid \(2023\)](#).

I. Background

Effective December 2012, I-502 legalized the possession, use, and commercial sales of non-medical cannabis (NMC) for people ages 21 and older. Prior to NMC legalization in Washington State, possession of up to 40 grams of cannabis was a misdemeanor.⁵ Upon the passage of I-502, possession of up to 1 ounce of cannabis (about 28 grams) for personal use was legalized for individuals ages 21 and older. However, the possession of 1 ounce to 40 grams of cannabis remains a misdemeanor.⁶ Any cannabis possession for individuals under the age of 21 also remains illegal.

Proponents of I-502 argued for its potential to reduce crime and correctional populations, especially for overrepresented minority populations. Specifically, arrests and convictions for cannabis possession, manufacturing, and sales were expected to drop after I-502 was enacted.⁷ Accordingly, several studies have found large declines in cannabis-related arrests after legalizing limited adult cannabis possession.⁸ Using data from Washington, one study found that cannabis possession arrest rates for those ages 21 and older dropped close to zero after the enactment of I-502, with no significant changes in arrest rates following the advent of retail operations in July 2014. Washington-based studies have also found that arrest rates for those under 21 also dropped upon the passage of I-502 but not as substantially as among legal-aged adults. Declines in arrests for underage populations suggest that legalization may have reduced the policing of cannabis possession for minors. This is supported by interviews indicating that policing cannabis consumption by youth has become less of a priority since legalization in Washington.⁹ While most studies have found that general declines in cannabis arrests are shared among almost all racial groups, relative racial disparities have persisted.¹⁰ In particular, the relative racial disparity in cannabis possession arrests persists between Black and White individuals.

⁵ Prior to I-502 limited possession was legal for qualifying medical cannabis patients. [Initiative Measure No. 692](#).

⁶ Adults ages 21 plus can possess small quantities of cannabis product in Washington State: 1 ounce (about 28 grams) of usable cannabis; 16 ounces of cannabis-infused product in solid form, such as edibles; 72 ounces of liquid cannabis-infused products, such as tinctures; or 7 grams of cannabis concentrates. Those entered in the state's voluntary patient database may possess 48 ounces of marijuana-infused product in solid form, 3 ounces of useable marijuana, 216 ounces of marijuana-infused product in liquid form, or 21 grams of marijuana concentrates.

⁷ [Marijuana Decriminalization and Legalization in the 21st Century](#).

⁸ Gunadi, C., & Shi, Y. (2022). Association of recreational cannabis legalization with cannabis possession arrest rates in the US. *JAMA network open*, 5(12); Stohr, M.K., Willits, D.W., Makin, D.A., Hemmens, C., Lovrich, N.P., Stanton Sr, D.L., & Meize, M. (2020). Effects of marijuana legalization on law enforcement and crime. *Final report. National Institute of Justice, Office of Justice Programs, US Department of Justice*; Firth, C.L., Maher, J.E., Dilley, J.A., Darnell, A., & Lovrich, N.P. (2019). Did marijuana legalization in Washington State reduce racial disparities in adult marijuana arrests? *Substance Use & Misuse*, 54(9), 1582-1587; and Plunk, A.D., Peglow, S.L., Harrell, P.T., & Grucza, R.A. (2019). Youth and adult arrests for cannabis possession after decriminalization and legalization of cannabis. *JAMA Pediatrics*, 173(8), 763-769.

⁹ Stohr et al. (2020).

¹⁰ Willits, D.W., Solensten, B., Meize, M., Stohr, M.K., Makin, D.A., Hemmens, C., . . . Lovrich, N. P. (2022). Racial disparities in the wake of cannabis legalization: documenting persistence and change. *Race and Justice*.

The evidence regarding the relationship between NMC legalization and other crimes is less conclusive. While we anticipate that NMC legalization should have an immediate and drastic impact on cannabis possession offenses, the potential impact of I-502 on other crimes is less clear. Overall, studies reveal little evidence that NMC legalization is related to other crimes. Recent studies focused on outcomes in Washington found that, compared to outcomes in other states, NMC legalization did not predict significant changes in violent or property crime arrest rates.¹¹ However, one study using data from Colorado found that the presence of an NMC retailer predicts higher rates of violent and public disorder crimes in the surrounding area.¹² With regards to the relationship between legalization and other drug-related crimes, a study found that NMC legalization in Washington coincided with a decrease in possession violations for heroin or cocaine.¹³ However, the mechanism for this association is unclear. Furthermore, another Washington-based study found no overall changes in non-cannabis drug possession conviction rates.¹⁴ Ultimately, the empirical literature on cannabis legalization and crime is relatively sparse, given limited data availability and the inability to make viable cross-state comparisons in outcomes.

While studies regarding the impact of I-502 on arrest rates are important, these studies do not holistically capture the extent to which legalization has impacted criminal justice outcomes; further research on convictions is required to capture the implications of legalization fully. Therefore, our study extends the literature by examining how rates of cannabis possession *convictions* have changed since the enactment of I-502 and the advent of NMC retail operations. We explore changes in conviction rates across sex and age. Furthermore, we examine conviction rates separately by racial groups to better understand how legalization has impacted racial disparities. We are unable to examine the neighborhood impacts of NMC retail operations because we do not observe where the crimes have occurred.

¹¹ Stohr et al. (2020) and Lu, R., Willits, D., Stohr, M.K., Makin, D., Snyder, J., Lovrich, N., . . . Hemmens, C. (2021). The cannabis effect on crime: Time-series analysis of crime in Colorado and Washington State. *Justice Quarterly*, 38(4), 565-595.

¹² Hughes, L.A., Schaible, L.M., & Jimmerson, K. (2020). Marijuana dispensaries and neighborhood crime and disorder in Denver, Colorado. *Justice Quarterly*, 37(3), 461-485.

¹³ Wu, G., & Cullenbine, R.R. (2022). Recreational marijuana legalization and drug-related offenses in Washington State: an interrupted time series analysis with a combination of synthetic controls. *Journal of Experimental Criminology*, 1-26.

¹⁴ Darnell, A.J. & Bitney, K. (2017). *I-502 evaluation and benefit-cost analysis: Second required report*. (Doc. No.17-09-3201). Olympia: Washington State Institute for Public Policy.

II. Data

Data on criminal justice outcomes come from WSIPP's Criminal History Database (CHD), covering 2005 through 2019.¹⁵ This section briefly describes the data, sample, and outcome measures we used in this study.

Criminal History Database (CHD)

WSIPP's Criminal History Database (CHD) combines data from several Washington State agencies: court data from the Administrative Office of the Courts and incarceration in state prisons and community supervision data from the Department of Corrections. The detailed case-level information provided by the CHD allows researchers to create criminal history and recidivism measures for all justice-involved youth and adults with criminal charges in Washington State.¹⁶

Cannabis Possession Misdemeanor

For our analyses, we look at monthly statewide counts of convicted cannabis possession misdemeanor cases for individuals ages 12 to 85 between January 1, 2005, and December 31, 2019.¹⁷ We focus on this crime because misdemeanor possession is the *only* cannabis-specific offense consistently identified separately from other schedule one drug-related offenses in the data.¹⁸ We cannot separately identify cannabis felony possession offenses or cannabis delivery offenses from other schedule one drug-related offenses. Over our sample period, about 3,300,000 criminal cases occurred.¹⁹ In roughly 1,800,000 cases, an individual was convicted, with about 3.6% of these convictions associated with a cannabis possession misdemeanor.

[Exhibit 1](#) depicts the statewide monthly rate of cannabis possession misdemeanor convictions per 100,000 population between 2005 and 2019. The first vertical line denotes the month I-502 went into effect, December 2012, and the second vertical line denotes the advent of licensed NMC retail operations in July 2014. The overall trend in cannabis possession conviction rates started declining in 2008. Several factors could contribute to declining rates in the years prior to I-502. For example, before legalization, Tacoma and Seattle publicly deprioritized cannabis arrests, and the provision of a legal supply for medicinal cannabis expanded.²⁰ Furthermore, there may have been declines in the willingness to arrest or prosecute cannabis-related offenses in anticipation of the passage of I-502. Although cannabis possession conviction rates were already declining in the years prior, we still observed a large decrease in monthly conviction rates in the immediate aftermath of I-502. There was no discernable change in trend after retail operations started in 2014. Prior to legalization, the average rate of cannabis possession convictions was roughly 12.3 (per 100,000 population), and it dropped to roughly 2.1 after legalization. In the next section, we explore this decline in more detail by looking at differences in cannabis possession conviction rate trends across sex, age, and racial groups.

¹⁵ Drug sentencing rules in Washington State changed in 2004; therefore, we omit data that pre-dates 2005. Due to the large impacts the COVID-19 pandemic and the [State v. Blake decision](#) have on criminal justice outcomes and drug-related charges, we end our study in 2019.

¹⁶ WSIPP updates the CHD quarterly, and our analyses used information from the CHD as of February 2023.

¹⁷ Cases with missing offense dates or demographic information (i.e., sex, race, and age) were excluded from our analysis. We count all cases with at least one cannabis possession misdemeanor that resulted in a conviction.

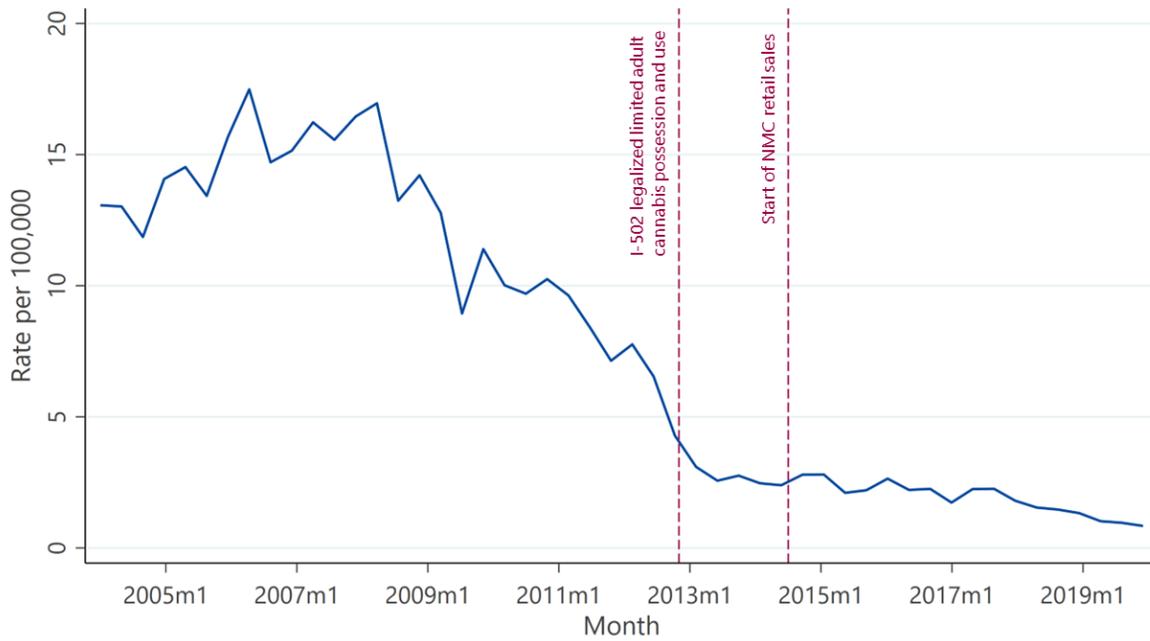
¹⁸ We flag all offenses with a description related to "possession of marijuana, 40 grams or less."

¹⁹ Criminal cases are limited to cases where an individual is charged with a criminal offense; cases with traffic and non-traffic infractions are excluded.

²⁰ [Substitute Senate Bill 5798, Chapter 384, Laws of 2010](#) and [Engrossed Second Substitute Senate Bill 5073, Chapter 181, Laws of 2011](#).

Exhibit 1

Population Rate (per 100,000) of Cannabis Possession Misdemeanor Convictions in Washington State—Ages 12-85



Note:

Data come from WSIPP's Criminal History Database, 2005-2019.

Exhibit 2 describes the demographic and criminal history characteristics separately for 1) all cases over the sample period and 2) all cases with a cannabis possession misdemeanor offense. Relative to the entire population of criminal justice-involved individuals (ages 12-85), those charged with a cannabis possession misdemeanor are more likely to be male (82% vs. 74%) and less likely to be older than 21 (54% vs. 77%). The racial makeup of persons convicted of cannabis possession is comparable to the entire population of individuals involved in the criminal justice system.

Exhibit 2

Criminal Case Counts by Characteristics and Criminal History, 2005-2019

Case characteristics	All criminal cases		Cannabis possession misdemeanor cases	
	Number of cases	Percent of cases	Number of cases	Percent of cases
Total	3,335,668	-	146,111	-
At least one conviction	1,810,479	54	65,257	45
<i>Age group</i>				
12-17	353,300	11	29,896	20
18-20	398,690	12	36,898	25
21 and older	2,583,678	77	79,317	54
<i>Race/ethnicity</i>				
Black	422,107	13	13,956	10
Hispanic	267,107	8	13,242	9
Indigenous	109,593	3	3,572	2
White	2,418,196	72	111,936	77
Asian	118,665	4	3,405	2
<i>Sex</i>				
Male	2,471,207	74	119,781	82
Female	864,461	26	26,330	18
<i>Criminal history</i>				
Any previous charge	2,546,879	76	99,013	68
Any previous conviction	2,317,986	69	88,558	61
Previous charge, drug-related misdemeanor	993,996	30	49,691	34
Previous conviction, drug-related misdemeanor	710,617	21	35,725	24
Previous charge, drug-related felony	726,463	22	21,138	14
Previous conviction, drug-related felony	482,263	14	14,070	10

Note:

Data come from WSIPP's Criminal History Database, 2005-2019.

III. Cannabis Possession

In this section, we describe our research design and primary results, which depict how misdemeanor cannabis possession conviction rates changed in the years after the enactment of I-502 and the advent of licensed NMC retail operations.

All analyses separately examine outcomes for males and females. In addition, we examine outcomes across age and racial groups.

Research Design

We use an interrupted time series (ITS) method to compare how I-502 impacted misdemeanor cannabis possession. This methodology is commonly used to assess statewide policy impacts in the absence of a viable comparison group (i.e., no information from other states to serve as a comparison). In this case, we compare average monthly rates of misdemeanor cannabis possession convictions before and after I-502 went into effect in December 2012. We also assess if average outcomes further changed after the first licensed NMC retailer went into operation in July 2014. Our models control for seasonality, annual law enforcement employment rates, and monthly unemployment rates.²¹ Despite accounting for relevant factors, our analyses ultimately do not allow us to infer how much of the estimated changes in outcomes are *caused* by I-502. This is because we cannot account for other relevant policies or circumstances that both occur around the same time as I-502 and separately impact cannabis possession conviction outcomes.

Results

Overall Cannabis Possession Misdemeanors

I-502 legalized adult cannabis possession of up to one ounce. Therefore, we would expect conviction rates to fall significantly in the years after legalization. Note, we would not expect cannabis misdemeanor conviction rates to drop to zero because possession of 1 ounce to 40 grams is still a misdemeanor, and any underage possession up to 40 grams is still a misdemeanor.

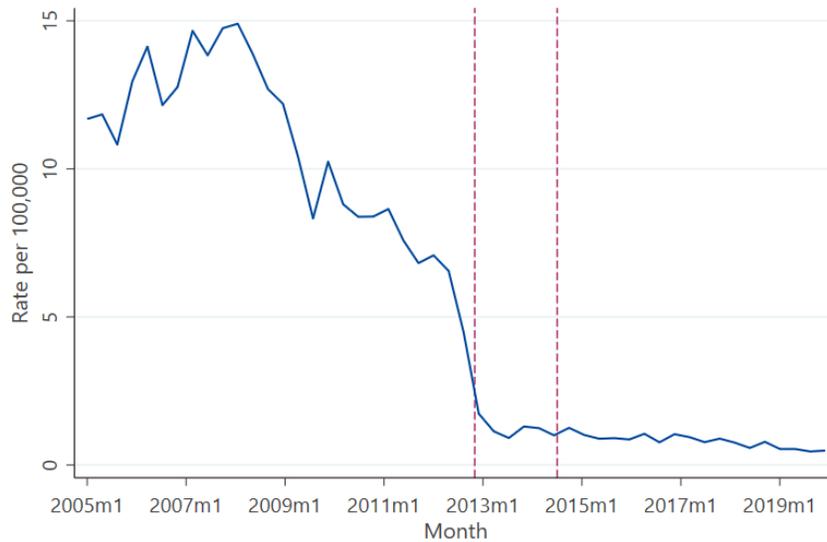
[Exhibits 3](#) and [4](#) depict male and female cannabis misdemeanor conviction rates (per 100,000 population) between 2005-2019. The first dashed line indicates the date I-502 went into effect (December 2012), and the second vertical line indicates the date the first NMC retailer went into operation (July 2014). Prior to the enactment of I-502, the average male cannabis misdemeanor conviction rate was roughly 10.7. The results from our ITS analysis, summarized in [Exhibit 5](#), indicate that immediately after legalization, rates significantly dropped by 6.3 (59%). In the subsequent years, conviction rates continued to fall, with an average conviction rate of about 0.5 per 100,000 in 2019.

Prior to legalization, the average conviction rate for the female population was about 1.6, and like the male population, conviction rates significantly fell after legalization. The average conviction rate for females in the years after I-502 is roughly 0.2 per 100,000. For both the male and female populations, we observe no additional significant changes in conviction rates after NMC operations started in July 2014 (second row of [Exhibit 5](#)).

²¹ We estimate an OLS regression with Newey-West standard errors with lag 12.

Exhibit 3

Population Rate (per 100,000) of Cannabis Possession Misdemeanor Convictions- Male Population

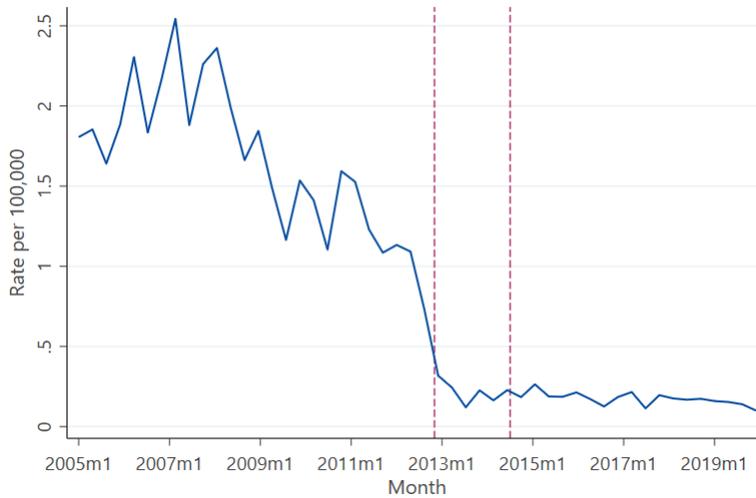


Notes:

Data come from WSIPP's Criminal History Database, 2005-2019. The first dashed line denotes the month I-520 went into effect (December 2012), and the second denotes the first month of NMC retail sales (July 2014).

Exhibit 4

Population Rate (per 100,000) of Cannabis Possession Misdemeanor Convictions- Female Population



Notes:

Data come from WSIPP's Criminal History Database, 2005-2019. The first dashed line denotes the month I-520 went into effect (December 2012), and the second denotes the first month of NMC retail sales (July 2014).

Exhibit 5

Changes in Population Rate (per 100,000) of Cannabis Possession Misdemeanor Convictions After I-502, By Sex

	Male	Female
Difference in rates immediately after I-502 (12/2012)	-6.33*** (0.60)	-1.06*** (0.20)
Difference in rates immediately after retail sales began (7/2014)	0.49 (0.98)	0.01 (0.20)
Observations	180	180
Pre-legalization mean	10.70	1.65
Pre-legalization standard error	3.07	0.52

Note:

***Significant at the 0.001-level, **significant at the 0.05-level, and *significant at the 0.10-level.

These large declines in conviction rates are what we would expect from the legalization of limited cannabis possession. However, as previously mentioned, the law does not apply uniformly to adults ages 21 and over and those under 21. Therefore, we next examine how trends in conviction rates evolved across different age groups.

Age Groups

Ages 21 and Older. Exhibits 6 and 7 depict monthly cannabis possession misdemeanor conviction rates for male and female populations ages 21 and over. Immediately after legalization, conviction rates across both populations dropped and remained at an average of less than one per 100,000. This is consistent with previous literature that finds that arrest rates drop to almost zero for older adults after the passage of I-502.

Exhibit 6

Population Rate (per 100,000) of Cannabis Possession Misdemeanor Convictions- Male Population Ages 21 and Older



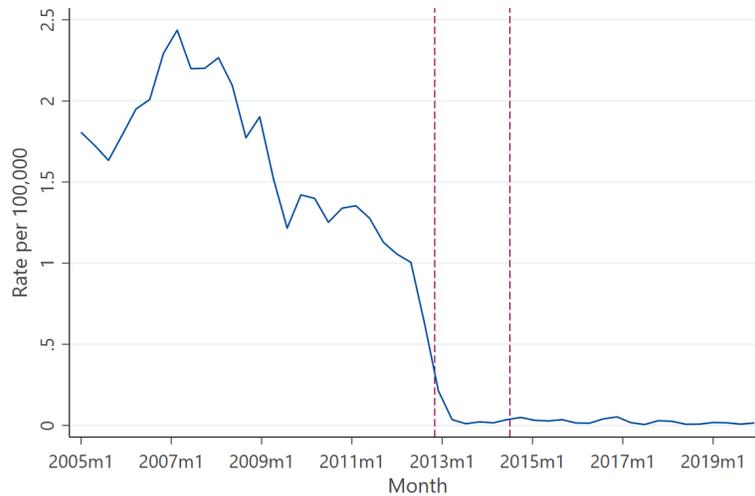
Notes:

Data come from WSIPP's Criminal History Database, 2005-2019.

The first dashed line denotes the month I-502 went into effect (December 2012), and the second denotes the first month of NMC retail sales (July 2014).

Exhibit 7

Population Rate (per 100,000) of Cannabis Possession Misdemeanor Convictions-
Female Population Ages 21 and Older



Notes:

Data come from WSIPP's Criminal History Database, 2005-2019.

The first dashed line denotes the month I-502 went into effect (December 2012), and the second denotes the first month of NMC retail sales (July 2014).

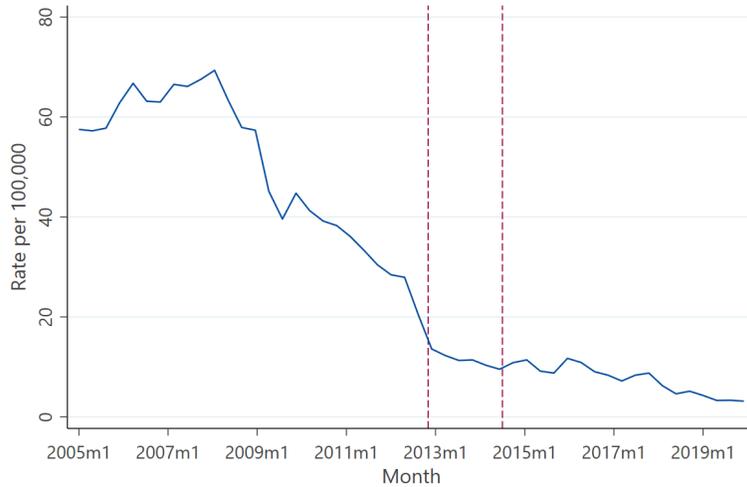
Although I-502 did not legalize cannabis possession for individuals under the age of 21, there was a general de-prioritization of cannabis crime by both police and prosecutors after I-502.²² Therefore, we may expect declines in cannabis possession misdemeanor convictions after I-502, even among populations under 21. Alternatively, licensed NMC sales may inadvertently provide an additional cannabis supply source for underage individuals, which could lead to increases in cannabis possession in the years after the advent of retail operations. This last consideration is of particular concern for school-aged youth; therefore, we examine trends separately for the population of those ages 18-20 and those ages 12-17.

Ages 18-20. Exhibits 8 and 9 depict conviction rates for males and females ages 18-20. Among both populations, conviction rates started declining in 2008; however, a significant additional drop in the average level of conviction rates is still observed after the enactment of I-502. Among the male population, the average conviction rate went from roughly 50 to 8 (an 84% reduction). Among the female population, the average conviction rate went from 6.6 to 1.2 (an 82% reduction) after NMC legalization. For both populations, there are no significant additional changes in conviction rates after the advent of retail operations.

²² Stohr et al. (2020).

Exhibit 8

Population Rate (per 100,000) of Cannabis Possession Misdemeanor Convictions-
Male Population Ages 18-20



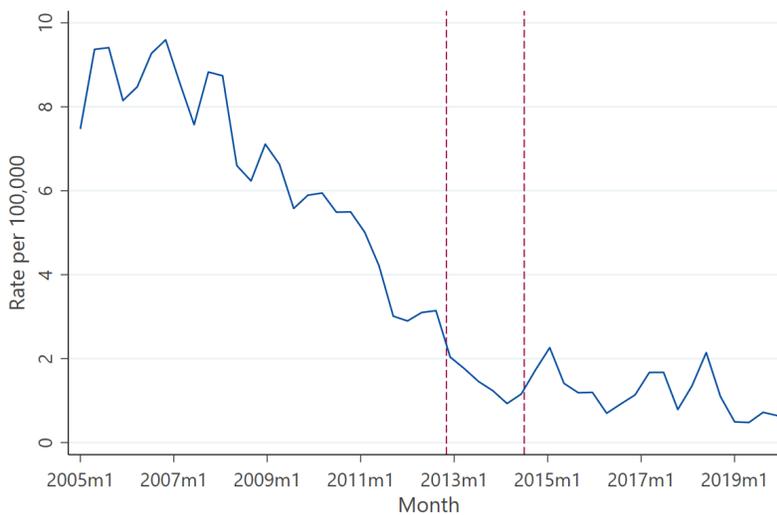
Notes:

Data come from WSIPP's Criminal History Database, 2005-2019.

The first dashed line denotes the month I-520 went into effect (December 2012), and the second denotes the first month of NMC retail sales (July 2014).

Exhibit 9

Population Rate (per 100,000) of Cannabis Possession Misdemeanor Convictions-
Female Population Ages 18-20



Notes:

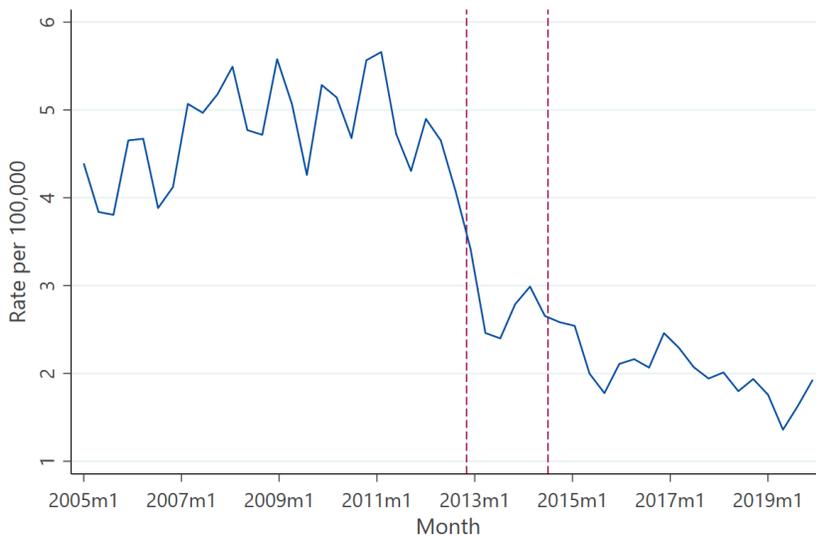
Data come from WSIPP's Criminal History Database, 2005-2019.

The first dashed line denotes the month I-520 went into effect (December 2012), and the second denotes the first month of NMC retail sales (July 2014).

Ages 12-17. Exhibits 10 and 11 depict conviction rates for males and females ages 12-17. Compared to other age groups, overall average conviction rates are lower for the population of school-aged minors. Notably, the female cannabis misdemeanor conviction rate averaged less than one per 100,000 before legalization and was already declining. Ultimately, we cannot confidently infer how much of the decline in female conviction rates after I-502 can be attributed to NMC legalization versus the pre-existing downward trend. Among males ages 12-17, we see a more pronounced decrease in the average conviction rate immediately after the enactment of I-502. For this male population, the average conviction rate roughly halved from about 4 to 2 (per 100,000). Notably, we do not detect significant increases in conviction rates in the years after the advent of retail operations.

Exhibit 10

Population Rate (per 100,000) of Cannabis Possession Misdemeanor Convictions- Male Population Ages 12-17



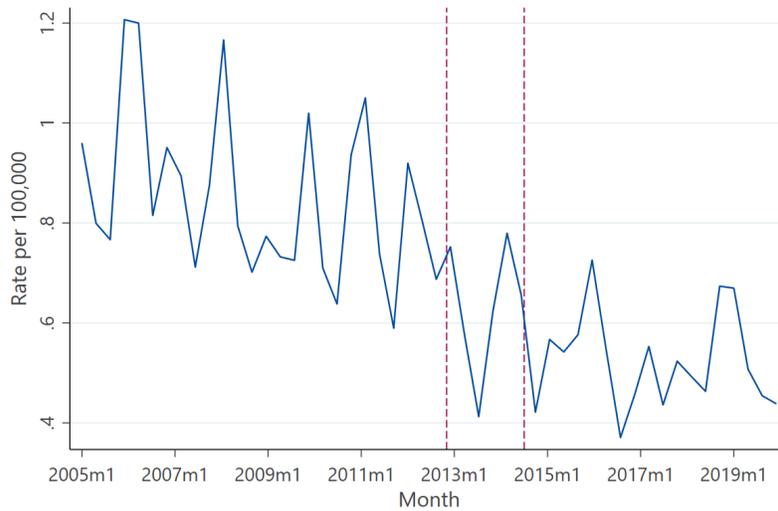
Notes:

Data come from WSIPP's Criminal History Database, 2005-2019.

The first dashed line denotes the month I-520 went into effect (December 2012), and the second denotes the first month of NMC retail sales (July 2014).

Exhibit 11

Population Rate (per 100,000) of Cannabis Possession Misdemeanor Convictions-
Female Population Ages 12-17



Notes:

Data come from WSIPP's Criminal History Database, 2005-2019.

The first dashed line denotes the month I-520 went into effect (December 2012), and the second denotes the first month of NMC retail sales (July 2014).

Overall, we find that conviction rates dropped to almost zero among adults of legal age immediately after I-502 went into effect. Among underaged populations, we generally find that conviction rates did substantially drop after NMC legalization but not as dramatically as for adults ages 21 and over.

Race and Ethnicity

Last, we examine potential differences across racial groups. For these analyses, we look at results for individuals over the age of 21 separately from those under the age of 21. Due to limited sample sizes, we cannot examine the population of individuals ages 12-17 separately from ages 18-20.

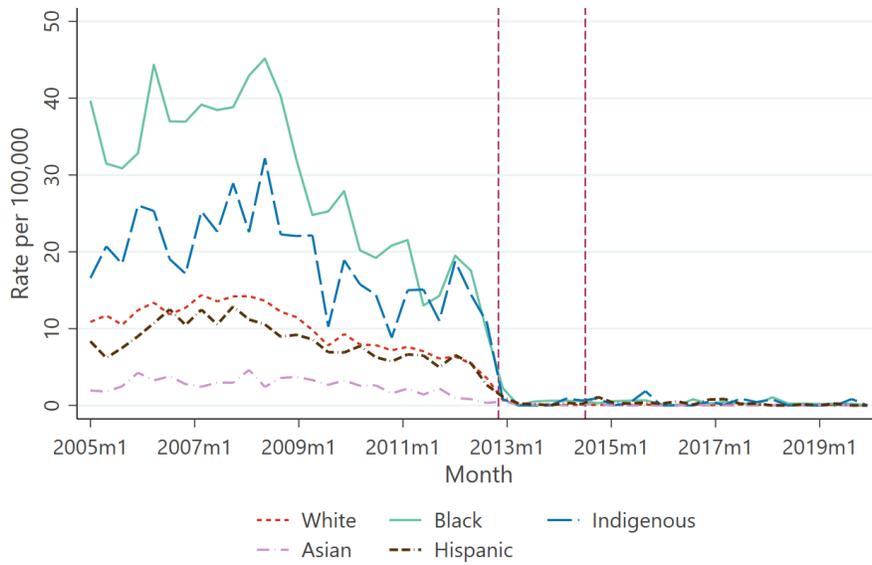
Ages 21 and Older. Exhibits 12 and 13, respectively, depict male and female cannabis possession misdemeanor conviction rates (per 100,000 population) by race and ethnicity (non-Hispanic White, non-Hispanic Black, non-Hispanic Indigenous, non-Hispanic Asian, Hispanic) for adult populations over the age of 21.²³

For the male population, in the years prior to NMC legalization, average cannabis possession misdemeanor conviction rates were highest among Black populations (29 per 100,000 population) and Indigenous populations (19 per 100,000 population). For the female population, prior to NMC legalization, average cannabis possession misdemeanor conviction rates were highest among Indigenous populations (5 per 100,000) and Black populations (4 per 100,000). However, after the enactment of I-502, conviction rates dropped dramatically to an average of less than one across all populations.

²³ 2.8% of the sample has unknown race.

Exhibit 12

Population Rate (per 100,000) of Cannabis Possession Misdemeanor Convictions-
Males Ages 21+, By Race/Ethnicity

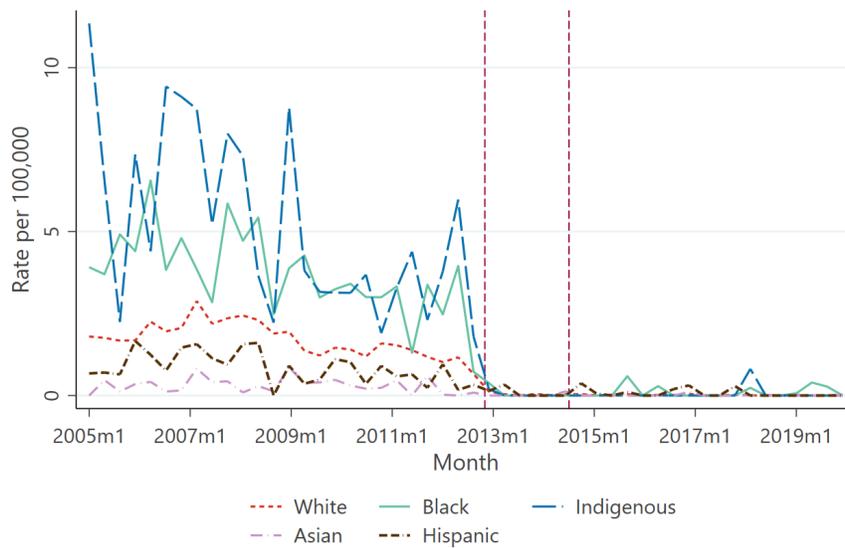


Note:

Data come from WSIPP's Criminal History Database, 2005-2019.

Exhibit 13

Population Rate (per 100,000) of Cannabis Possession Misdemeanor Convictions-
Females Ages 21+, By Race/Ethnicity



Note:

Data come from WSIPP's Criminal History Database, 2005-2019.

Exhibit 14 summarizes average conviction rates by racial group and the relative conviction disparity ratios between Black versus White and Indigenous versus White populations. Although relative racial disparities generally increase, it is important to highlight that after legalization, conviction rates are essentially zero across all populations.

Exhibit 14

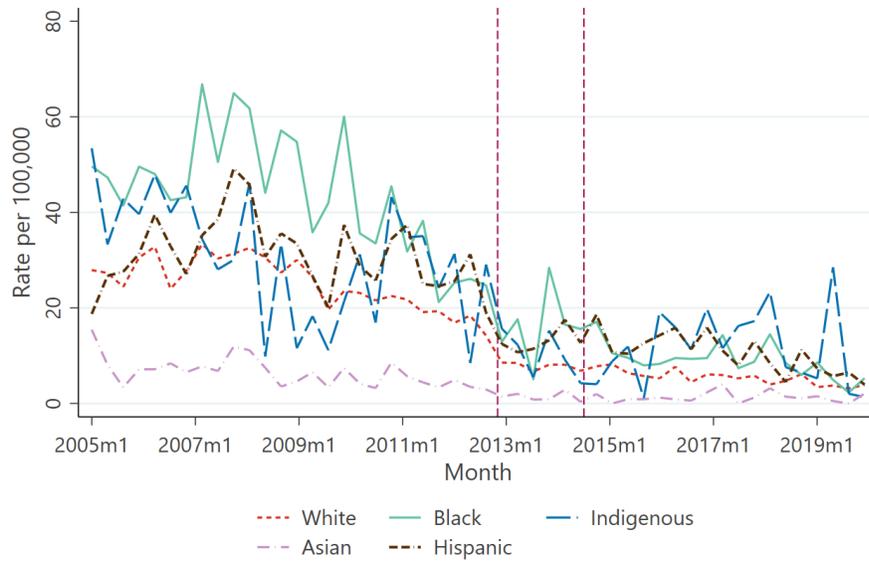
Changes in Average Population Rate (per 100,000) of Cannabis Possession Misdemeanor Convictions After I-502—Ages 21 and Older, By Sex and Race

Sex/race	Before NMC legalization (01/2005-11/2012)		After NMC legalization (12/2012-12/2019)	
	Average monthly rate (per 100,000)	Relative ratio	Average monthly rate (per 100,000)	Relative ratio
Male:				
White	10.1		0.08	
Black	29.3		0.42	
<i>Black vs. White</i>		2.9		5.3
Indigenous	19.1		0.39	
<i>Indigenous vs. White</i>		1.9		4.3
Female:				
White	1.7		0.02	
Black	3.7		0.09	
<i>Black vs. White</i>		2.2		4.5
Indigenous	5.1		0.02	
<i>Indigenous vs. White</i>		3.0		1

Ages Under 21. Exhibits 15 and 16, respectively, depict the male and female cannabis possession misdemeanor conviction rates (per 100,000 population) by race for the populations under 21 years of age. Among male populations, conviction rates were already declining in the years prior to I-502. However, our analyses indicate that after the passage of I-502, most populations experienced a significant additional decrease in average conviction rates—after legalization, average conviction rates were 76% lower among the White population, 75% among the Black population, 61% lower among the Indigenous population, 79% lower among the Asian population, and 64% lower among Hispanic populations. Notably, results from our analyses indicate that although Indigenous conviction rates were declining over time, no statistically significant additional decrease was observed immediately after I-502 was enacted. Among females in this age group, only Black and White populations experienced a significant additional decline in the average conviction rate after the passage of I-502. Note that the inability to detect statistically significant declines in conviction rates after I-502 for other racial groups may be because of imprecision due to limited sample sizes.

Exhibit 15

Population Rate (per 100,000) of Cannabis Possession Misdemeanor Convictions-
Males Ages 12-20, By Race/Ethnicity

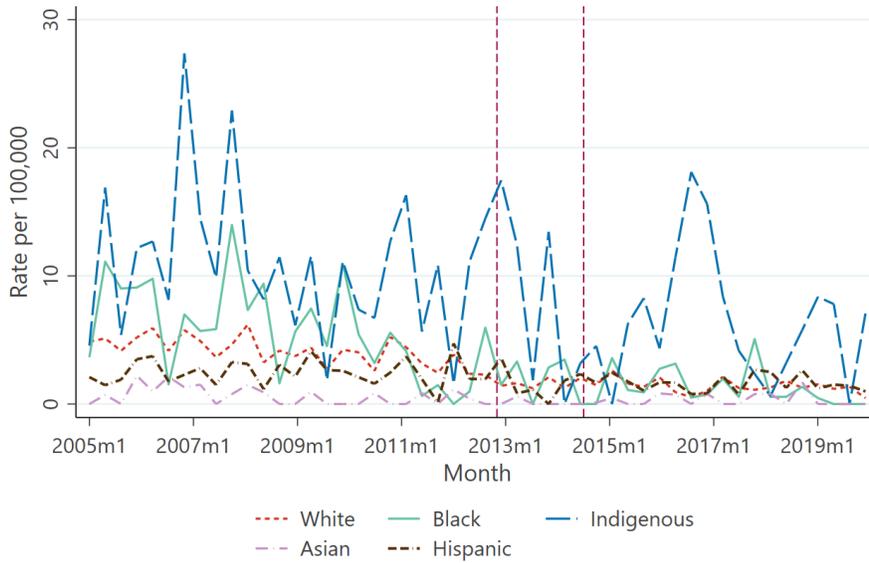


Note:

Data come from WSIPP's Criminal History Database, 2005-2019.

Exhibit 16

Population Rate (per 100,000) of Cannabis Possession Misdemeanor Convictions-
Females Ages 12-20, By Race/Ethnicity



Note:

Data come from WSIPP's Criminal History Database, 2005-2019.

For the male population ages 12 to 20, relative disparities in conviction rates between Black versus White populations and Indigenous versus White populations did not substantially increase after the passage of I-502 or the advent of retail operations (Exhibit 17). Both populations face a conviction rate roughly 1.9 times that of the White population. Among the female population, the conviction rate for the Indigenous population went from 2.7 times higher than Whites prior to NMC legalization to 4.6 times higher after. The conviction rates of White and Black female populations are equivalent after legalization.

Exhibit 17

Changes in Average Population Rate (per 100,000) of Cannabis Possession Misdemeanor Convictions After I-502—Ages 12-20, By Sex and Race

Sex/race	Before NMC legalization (01/2005-11/2012)		After NMC legalization (12/2012-12/2019)	
	Average monthly rate (per 100,000)	Relative ratio	Average monthly rate (per 100,000)	Relative ratio
Male:				
White	25.1		6.1	
Black	43.7		10.9	
<i>Black vs. White</i>		1.7		1.8
Indigenous	30.6		11.9	
<i>Indigenous vs. White</i>		1.2		1.9
Female:				
White	4.1		1.5	
Black	5.8		1.5	
<i>Black vs. White</i>		1.4		1
Indigenous	11.1		6.9	
<i>Indigenous vs. White</i>		2.7		4.6

IV. Cannabis Possession: County-Level Descriptions

In addition to the analyses from the previous section, which examine overall trends in Washington, we also summarize average cannabis possession conviction rates—before and after legalization—by county in [Exhibit 18](#). Across all counties, the average monthly conviction rates for underaged individuals are generally higher than for legal-aged adults before and after I-502 went into effect. Note that conviction rates (per 100,000 population) in counties with relatively small populations can be large in magnitude even for a small number of overall convictions. For example, in Garfield County, the average monthly conviction rate for persons ages 12-20 after retail sales start is 80.2, which translates to a monthly average less than one convicted case. As expected, for the population of individuals ages 21 and older, average conviction rates dropped to nearly zero after legalization across counties.

Exhibit 18

Average Rates of Convictions for Misdemeanor Cannabis Possession by County

County	Ages 21+			Ages 12-20			Avg. total population of county
	Pre-legalization	I-502 enacted	Retail sales	Pre-legalization	I-502 enacted	Retail sales	
	1/05-10/12	11/12-6/14	7/14-12/19	1/05-10/12	11/12-6/14	7/14-12/19	05-'19
Adams	15.1	0.0	0.7	43.9	4.7	23.3	18,670
Asotin	6.9	0.0	0.1	24.6	7.4	9.3	21,907
Benton	14.1	0.5	0.1	51.9	16.0	8.9	180,953
Chelan	12.0	0.0	0.3	43.5	15.3	17.3	73,265
Clallam	10.0	0.1	0.1	31.9	5.3	4.8	72,512
Clark	6.2	0.2	0.1	17.2	7.6	3.5	439,818
Columbia	8.1	0.0	0.0	57.7	16.3	0.0	3,983
Cowlitz	16.5	0.3	0.1	38.2	9.1	9.6	102,904
Douglas	9.8	0.4	0.4	47.6	21.2	24.1	39,127
Ferry	5.1	0.0	0.0	22.2	0.0	10.2	7,566
Franklin	10.0	0.3	0.1	38.3	17.5	10.3	81,379
Garfield	25.3	0.0	2.7	125.7	0.0	80.2	2,238
Grant	10.4	0.1	0.1	25.6	3.9	4.6	89,927
Grays Harbor	18.3	0.1	0.0	31.1	2.7	7.3	72,052
Island	6.4	0.1	0.0	20.4	2.2	3.3	80,062
Jefferson	7.1	0.0	0.2	14.9	11.4	0.4	30,201
King	2.7	0.1	0.0	7.7	0.8	0.4	2,019,361
Kitsap	6.5	0.1	0.0	13.7	3.7	1.5	254,843
Kittitas	20.0	0.3	0.2	25.5	5.0	6.4	42,261
Klickitat	13.4	0.3	0.4	40.9	1.2	20.5	20,747
Lewis	13.3	0.4	0.3	27.6	5.1	10.0	75,789
Lincoln	7.5	0.0	0.0	21.2	0.0	6.4	10,491
Mason	10.0	0.1	0.0	31.2	6.2	5.2	60,911
Okanogan	15.8	0.5	0.1	54.6	43.8	28.5	40,946
Pacific	16.4	0.9	0.1	29.2	16.0	12.8	21,214
Pend Oreille	5.1	0.0	0.0	7.9	7.3	18.5	13,034
Pierce	4.0	0.1	0.0	8.4	1.5	1.2	821,932
San Juan	3.9	0.0	0.0	27.0	0.0	0.0	15,987
Skagit	10.0	0.1	0.1	41.2	7.1	4.1	119,216
Skamania	15.8	0.6	0.2	54.3	2.2	12.0	11,235
Snohomish	6.2	0.1	0.0	17.4	2.4	1.4	738,645
Spokane	4.0	0.0	0.0	6.4	0.3	1.0	479,007
Stevens	3.8	0.0	0.0	10.5	4.5	1.8	43,650
Thurston	4.6	0.1	0.1	14.3	11.0	4.0	258,963
Wahkiakum	15.7	1.6	1.4	58.2	55.9	94.0	4,055
Walla Walla	4.5	0.1	0.0	13.8	9.1	3.7	58,985
Whatcom	7.7	0.1	0.0	14.2	3.0	1.6	206,116
Whitman	4.7	0.2	0.2	7.1	1.1	2.4	46,247
Yakima	9.2	0.1	0.2	28.1	8.1	4.3	243,011

Notes:

Retail establishments that sell cannabis were banned in both Franklin and Garfield counties.

Data come from WSIPP's Criminal History Database, 2005-2019.

In general, across both age groups, we observe larger average conviction rates in rural counties. However, on average, the decline in conviction rates after legalization was also larger in rural counties. Note that Seattle and Tacoma (two of the most populous urban cities in Washington) had publicly deprioritized cannabis prior to legalization.²⁴ Exhibit 19 depicts trends in monthly cannabis possession conviction rates by regionality. Before legalization, the average conviction rates in rural and urban counties were 24.9 and 13.2, respectively. In the years after legalization (2012-2019), they drop to 7.5 and 2.1. Interestingly, the average conviction rate for rural counties increased after the advent of retail sales in 2014 before falling again in 2019.

Exhibit 19

Population Rate (per 100,000) of Cannabis Possession Misdemeanor Convictions, by Region



Notes:

Data come from WSIPP’s Criminal History Database, 2005-2019.

²⁴ Stohr et al. (2020).

V. Conclusion

We find that after the passage of I-502, cannabis possession misdemeanor conviction rates declined substantially, with rates close to zero for legal-aged adults. Among underaged populations, especially those ages 18-20, we generally find that conviction rates substantively declined after NMC legalization, but not as dramatically as for adults ages 21 and over. Our evidence indicates that these declines were largely shared across all racial groups. We find no significant additional changes in conviction rates after the advent of licensed NMC retail operations in 2014. This study expands our understanding of the extent to which legalization has impacted the criminal justice system by examining the relationship between NMC legalization and adjudication outcomes for cannabis possession charges. More extensive and detailed data are required to rigorously examine the relationship between I-502 and other criminal offenses and/or the more local impacts of retail operations within the state.

This study is part of a larger legislative mandate to examine the relationship between I-502 and public health and safety outcomes. In addition to criminal justice outcomes, for our third required report, we have evaluated outcomes related to the following:

- [reported cannabis and other substance use,](#)
- [substance use disorder diagnoses, and](#)
- [traffic fatalities.](#)

Summaries of these analyses can be found in [Initiative 502 and Cannabis-Related Public Health and Safety Outcomes: *Third Required Report*](#).²⁵

²⁵ [Rashid \(2023\)](#).

Acknowledgments and Disclaimers

The authors would like to thank Curtis Mack and Lauren Knoth-Peterson for helping us understand the WSIPP Criminal History Database data files and for their assistance in understanding the criminal justice system in Washington. We also thank David Makin, Dale Willits, Mary Stohr, and Nicholas Lovrich for sharing insights and relevant information they acquired through related work. We thank Lauren Knoth-Peterson, Corey Witchard, and Nate Adams, who provided helpful comments on earlier drafts of this report. We thank Julia Dilley for her continued support of WSIPP's I-502 Evaluation.

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Document No. 23-09-3203



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