

Nebraska Center for Justice Research

Colorado's legalization of medicinal marijuana: The effects on Nebraska's law enforcement and local jail system

Jared M. Ellison, M.S.
Ryan Spohn, Ph.D.



From the Director:

With the passage of Amendment 20 in 2000 and Amendment 64 in 2012, Colorado legalized the medicinal and recreational use of marijuana. Subsequently, Nebraskan law enforcement agencies in border counties have reported increases in arrests and jail admissions for marijuana-related offenses. In response, the Nebraska Legislature passed Legislative Resolution 520 to study potential increased costs incurred by criminal justice agencies in border counties.

In order to better understand how Colorado drug policy may have affected counties along the border, we compared trends in marijuana-related criminal justice activity among county agencies following the enactment of both Amendments. Border county arrests, jail admissions, and associated costs of incarceration were compared to two other county groups, those that contain Interstate I-80 as a major transportation route, and a “control group” comprised of the remaining counties in the state of Nebraska from 2000 through 2013. This analysis approximates a “natural experiment” based on the assumption that Nebraska counties that border Colorado will experience the largest impact from the legal changes in Colorado. Because Interstate 80 is the major east/west thoroughfare in Nebraska linking Colorado to the east, we assume the counties along the I-80 corridor will experience an impact that is less than that of border counties, but higher than control counties. Finally, we assume that “control counties” that are neither border counties, nor I-80 corridor counties, will be affected the least since 2000.

The findings of this report should be interpreted with some degree of caution given that we were unable to account for many factors that could affect these figures (e.g., the presence of law enforcement, poverty levels, policy decisions, etc.). In addition, we should note that these estimates may not reflect the totality of the most recent consequences related to marijuana policy in Colorado (i.e., legalized recreational use) because the data for 2014 is not yet available. The Nebraska Center for Justice Research (NCJR) will provide an updated report on marijuana-related trends in Nebraska next year when the 2014 data become available. All of the data contained in this report are available at the county level, so NCJR can provide county specific estimates of marijuana related arrests and jail admissions upon request.

Three predictions examined in this study:

- 1. Border counties will exhibit the largest increases in marijuana-related arrests, jail admissions, and associated costs of incarceration.
- 2. I-80 corridor counties will exhibit increases in marijuana-related arrests, jail admissions, and associated costs of incarceration that fall between that of border counties and control counties.
- 3. Control counties exhibit the smallest increases in marijuana-related arrests, jail admissions, and associated costs of incarceration.

CONTENTS

4	Executive summary
6	Analysis of possession arrests
8	Analysis of sale arrests
10	Analysis of marijuana related admissions vs. all other admissions
12	Analysis of growth in percent of marijuana-related admissions
14	Analysis of jail overcrowding
16	Analysis of estimated dollars spent on incarceration of marijuana offenders
18	Appendix 1
19	Acknowledgments & comments

Executive Summary

Purpose: Examine trends in law enforcement and corrections related to the possession and sale of marijuana in Nebraska subsequent to the legalization of medicinal marijuana in Colorado.

Comparison groups of counties: We are assuming that the impact of marijuana in Colorado will be most substantial for Nebraska counties bordering Colorado. We assume that the next strongest impact will be for Nebraska counties along the I-80 corridor. The least impact of Colorado’s marijuana laws should be found in our “control counties” which neither border Colorado nor contain I-80.

Major findings for Colorado border counties (2000-2013):

- 1. Border counties have experienced an annual increase of 11.53 marijuana-related arrests. This represents an annual increase of about 7%, which is more than double the annual increase in control counties.
- 2. In 2013, border counties reported 8 times more arrests for sale of marijuana than they did in 2000.
- 3. While marijuana jail admissions have grown 300% in border counties over the 14-year period, non-marijuana related admissions have only grown by 7.8%. Annual increases in jail admissions averaged around 11% for marijuana-related admissions and only 0.54% for all other types of crimes.
- 4. Compared to the 300% increase in marijuana-related jail admissions in border counties, marijuana-related jail admissions in control counties remained flat over the 14-year period.
- 5. In 2013, marijuana-related admissions peaked at about 4% of all jail admissions—nearly tripling the levels of marijuana related admissions in 2000—and far outpacing levels of marijuana offenders in I-80 counties (1.5%) and control counties (.86%).
- 6. Despite experiencing increases in arrests and jail admissions, border county jails are not overcrowded as of 2013, averaging about 60% of their rated capacity.
- 7. Border counties have been the hardest hit by the increases of marijuana offenders in county jails—not only have they experienced the largest annual increases in average spending, the costs are distributed over a smaller group of taxpayers, resulting in more average spending per taxpayer.

Counties on the I-80 corridor (2000-2013):

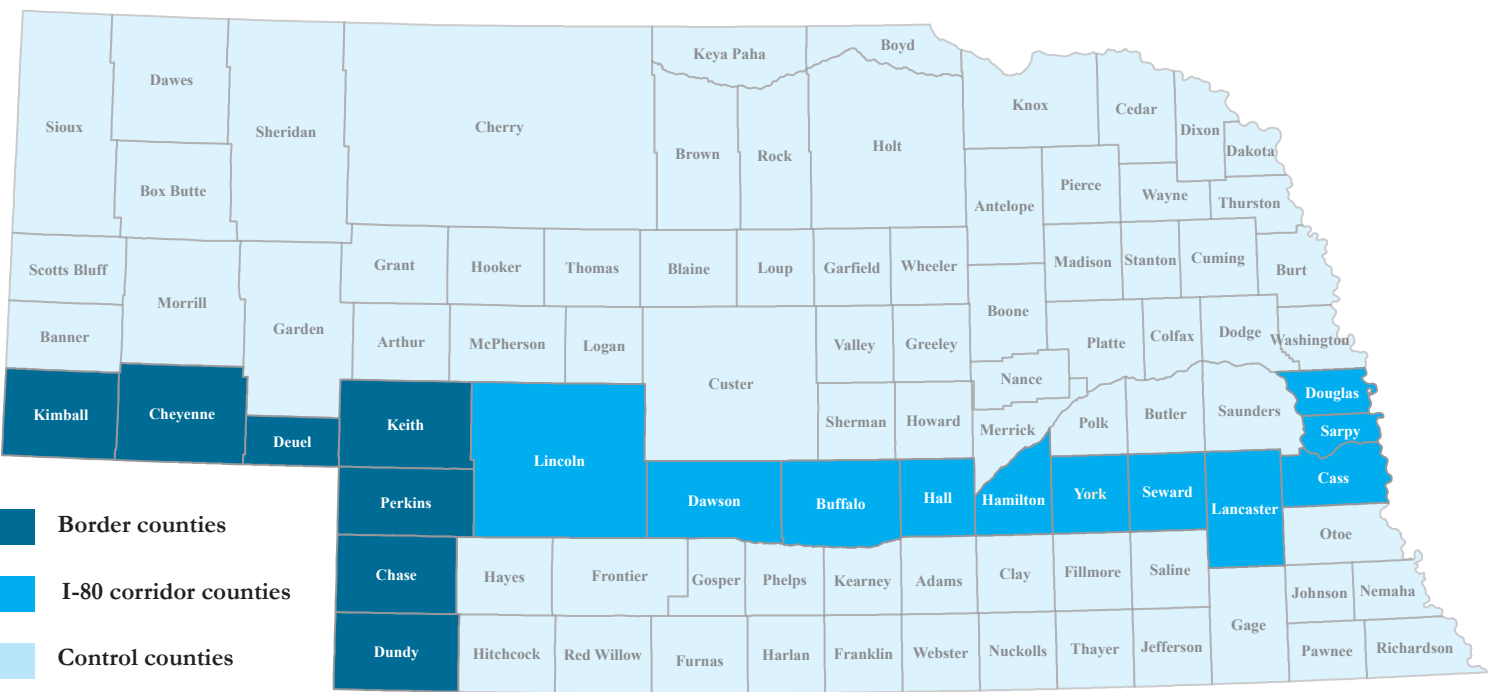
- 1. Contrary to our expectations, arrests for marijuana possession decreased slightly in I-80 counties over this period, about 0.21% annually.
- 2. Arrests for sale of marijuana have increased 1.24% annually, suggesting that increased drug traffic along the I-80 corridor resulted in about a 19% increase when comparing sales in 2000 to sales in 2013.
- 3. Similar to border counties, jail admissions for marijuana and non-marijuana offenses have both grown, yet the relative increase for marijuana offenses was more substantial (1.10% annually for marijuana offenders and only .09% annually for non-marijuana offenders).
- 4. In general, marijuana-related admissions have tended to account for a greater proportion of overall admissions each year, hitting an overall peak (1.52%) in 2013.
- 5. Despite having spent less per year to house marijuana offenders, I-80 counties rank second of our county groups both in terms of annual and overall cost per taxpayer.

Control counties (2000-2013):

- 1. Arrests for possession grew by an annual rate of about 3%, for a total of nearly 47% when comparing the number of 2000 arrests to 2013 arrests.
- 2. Marijuana arrests for sale actually decreased in control counties over this period.
- 3. Control counties were the only group to experience falling rates of marijuana jail admissions but increasing rates of non-marijuana related admissions.
- 4. Despite having spent more dollars per year to incarcerate marijuana offenders, control counties remained well below the other two groups in terms of average costs per taxpayer.

Overall conclusions:

- 1. Border counties and I-80 corridor counties have arguably been the hardest hit by Colorado’s decision to legalize marijuana (i.e., both medicinally and most recently recreationally).
- 2. There is an obvious and noticeable trend upward in marijuana related criminal justice activities since 2000 in border counties and I-80 counties, while smaller increases or even average decreases have taken place in control counties.
- 3. The 14 years of available data provide strong support for the argument that border counties have experienced larger relative increases than other Nebraska counties.
- 4. Importantly, data is not yet available regarding the impact of Colorado’s legalization of recreational use of marijuana (i.e., data from January 2014-present). These data will be available in the current year and will be included in a report submitted to the Legislature in December, 2015.



*See appendix 1 for county group listings, pg. 18.

ANALYSIS OF POSSESSION ARRESTS



Average increase/
decrease in arrests for
possession per year:

Border	11.53
I-80	-12.84
Control	36.00

Average percent increase/
decrease in arrests for
possession per year:

Border	6.63%
I-80	-0.21%
Control	2.76%

Percent increase/
decrease in arrests for
possession 2000 to 2013:

Border	145.63%
I-80	-2.91%
Control	46.47%

Main Findings:

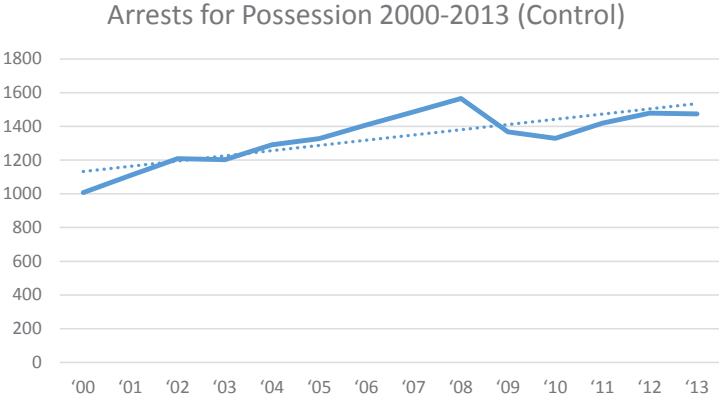
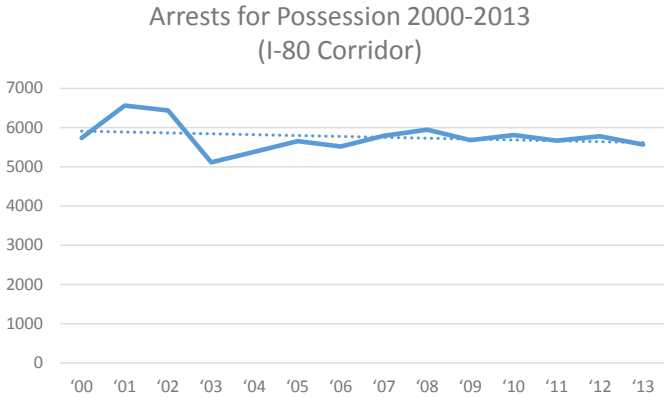
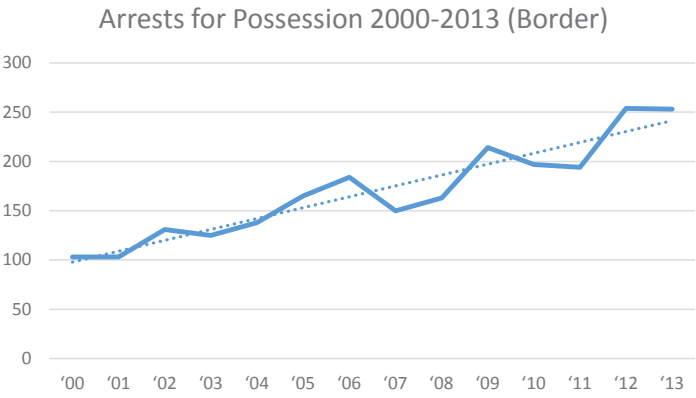
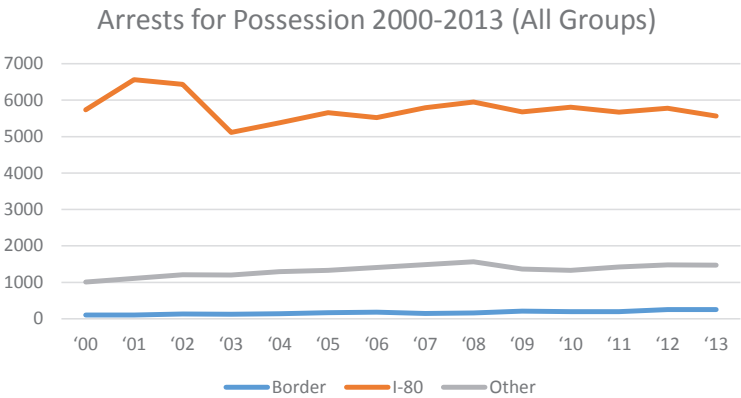
- Border counties and control counties have experienced a gradual increase in arrests for possession, while I-80 corridor counties have experienced a moderate decline
- Counties that border Colorado have experienced an annual growth rate of nearly 7% per year (11.53 additional arrests per year), more than doubling the growth rate of control counties
- Overall, border counties have experienced a substantial 145% increase in arrests for possession when comparing arrests in 2000 (103 arrests) to arrests in 2013 (253 arrests)

Notes:

An arrest is counted each time a person is taken into custody or issued a citation or summons. While an individual may be charged with multiple crimes at the time of arrest, only one arrest is counted. An arrest is counted for the most serious charge at the time of arrest

The dotted line in each chart represents the best-fitting linear trend for the data points

Possession Arrests	'00	'01	'02	'03	'04	'05	'06	'07	'08	'09	'10	'11	'12	'13
Border	103	103	131	125	138	165	184	150	163	214	197	194	254	253
I-80	5732	6560	6434	5116	5382	5654	5518	5792	5946	5680	5810	5668	5776	5565
Control	1007	1109	1209	1203	1292	1328	1408	1487	1566	1368	1330	1419	1479	1475



ANALYSIS OF SALE ARRESTS



Average increase/
decrease in arrests
for sale per year:

Border	1.31
I-80	3.31
Control	-1.77

Average percent increase/
decrease in arrests
for sale per year:

Border	17.45%
I-80	1.24%
Control	-1.75%

Percent increase/
decrease in arrests
for sale 2000 to 2013:

Border	850.00%
I-80	18.86%
Control	-21.90%



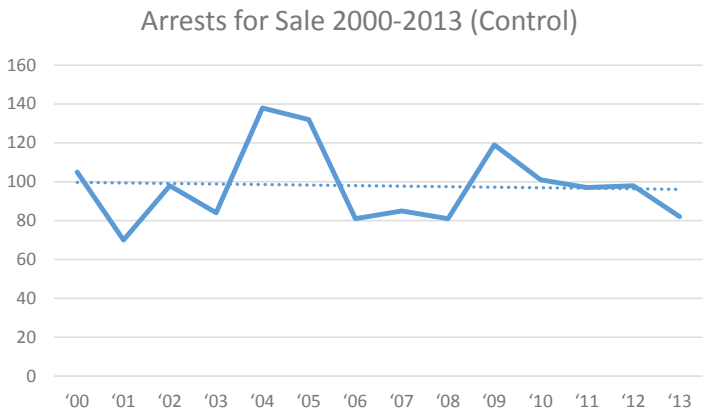
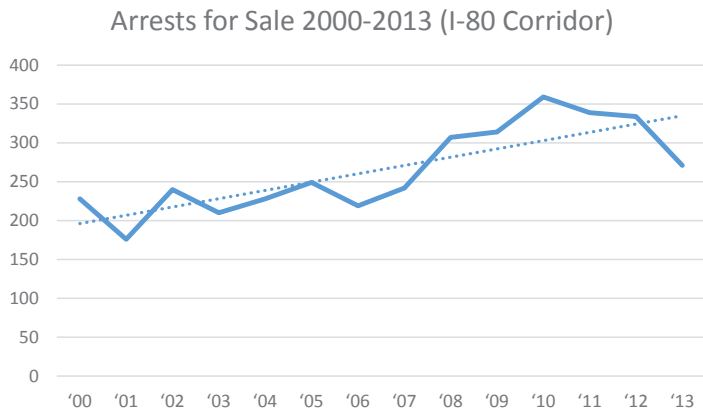
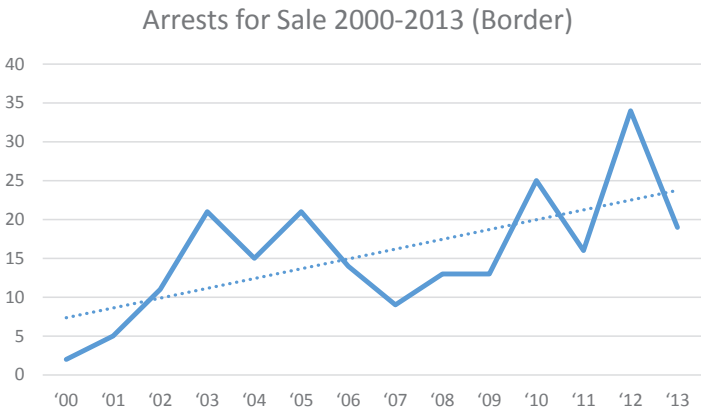
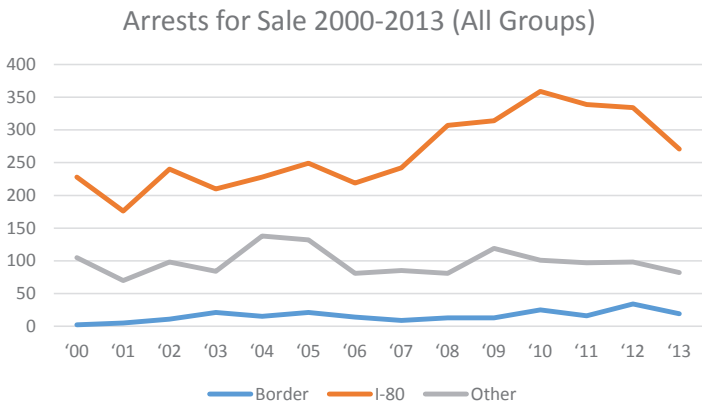
Main Findings:

- Counties that border Colorado and counties along the I-80 corridor have experienced an increase in arrests for sale of marijuana since 2000, while control counties have experienced an overall decline
- Annual percent growth is much larger for border counties (17.5%) than for I-80 corridor counties (1.2%)
- Comparing the year 2000 to 2013, border counties experienced a massive increase in arrests for sale of marijuana (850%)

Notes:

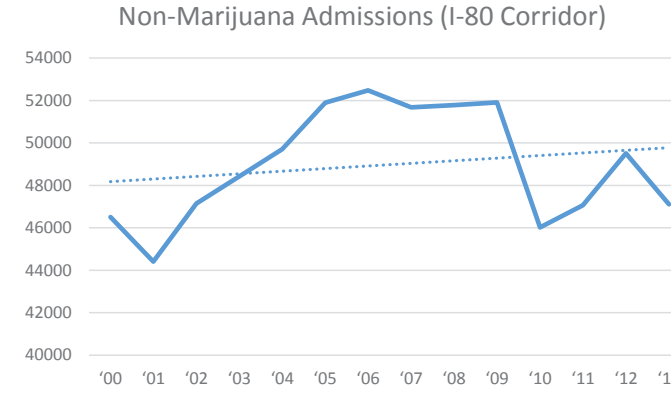
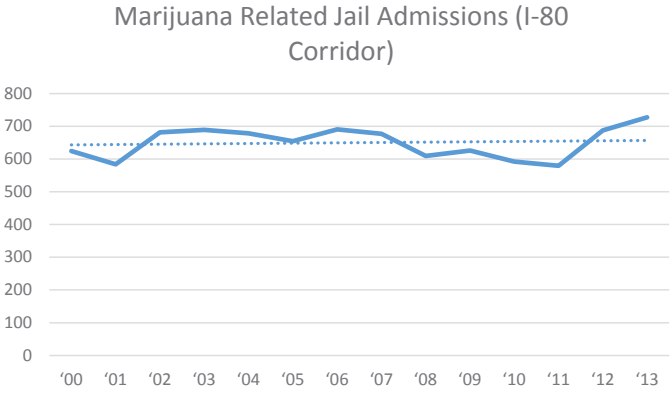
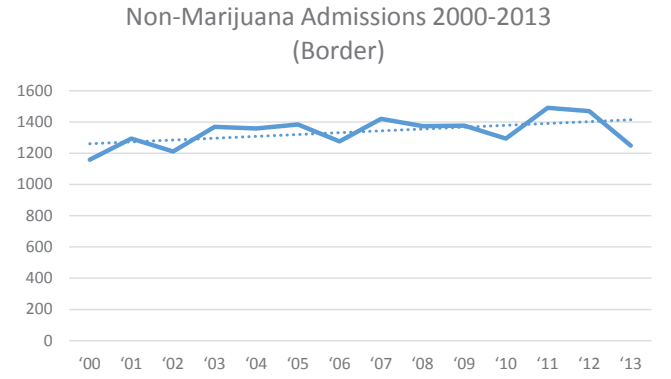
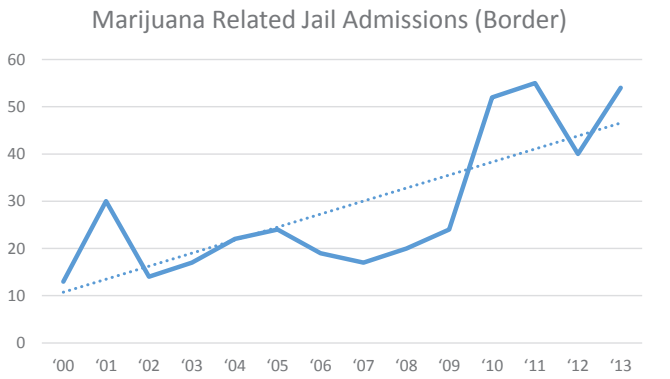
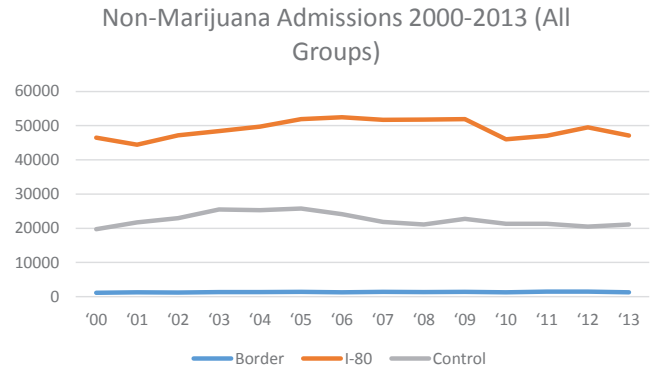
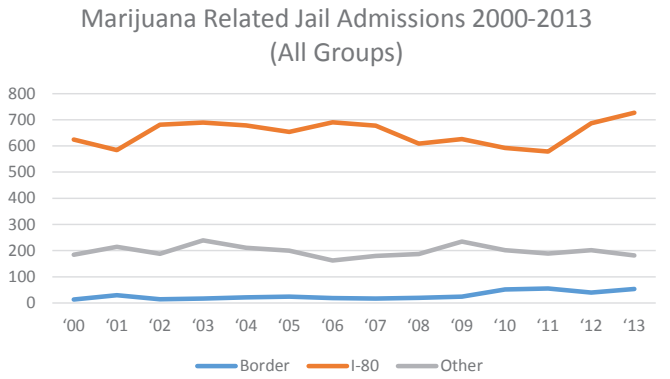
An arrest is counted each time a person is taken into custody or issued a citation or summons. While an individual may be charged with multiple crimes at the time of arrest, only one arrest is counted. An arrest is counted for the most serious charge at the time of arrest

Sale Arrests	'00	'01	'02	'03	'04	'05	'06	'07	'08	'09	'10	'11	'12	'13
Border	2	5	11	21	15	21	14	9	13	13	25	16	34	19
I-80	228	176	240	210	228	249	219	242	307	314	359	339	334	271
Control	105	70	98	84	138	132	81	85	81	119	101	97	98	82



ANALYSIS OF MARIJUANA RELATED ADMISSIONS VS. ALL OTHER ADMISSIONS

Jail Admissions	'00	'01	'02	'03	'04	'05	'06	'07	'08	'09	'10	'11	'12	'13
Marijuana Related Admissions														
Border	13	30	14	17	22	24	19	17	20	24	52	55	40	54
I-80	624	584	681	689	678	654	690	677	609	626	592	579	687	727
Control	184	215	188	239	211	200	162	180	187	235	202	189	202	182
Non-Marijuana Related Admissions														
Border	1158	1293	1211	1369	1358	1384	1275	1419	1373	1376	1293	1491	1470	1249
I-80	46508	44413	47143	48419	49701	51897	52475	51680	51782	51914	46018	47059	49506	47103
Control	19741	21737	22956	25513	25286	25754	24146	21841	21107	22751	21313	21303	20467	21068



	Marijuana Related	Non-Marijuana Related
Border	3.15	7
I-80	7.92	13
Control	-0.15	102.08

Average increase/decrease in marijuana jail admissions per year

	Marijuana Related	Non-Marijuana Related
Border	10.71%	0.54%
I-80	1.10%	0.09%
Control	-0.08%	0.47%

Average percent increase/decrease in marijuana jail admissions per year

	Marijuana Related	Non-Marijuana Related
Border	315.38%	7.86%
I-80	16.51%	1.28%
Control	-1.09%	6.72%

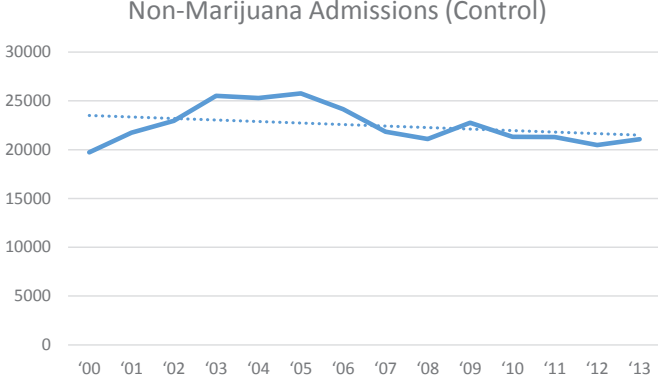
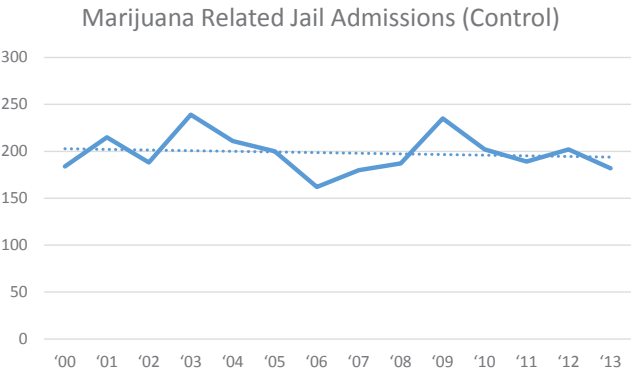
Percent increase/decrease in marijuana jail admissions 2000 to 2013

Main Findings:

- Annual jail admissions for marijuana offenders grew in both border counties and those along the I-80 corridor, while the control counties experienced reductions in annual marijuana-related admissions
- Over the 14 year period, control counties were the only county jails to experience decreased marijuana admissions but increased non-marijuana admissions
- Annual increases in marijuana admissions in border and I-80 corridor county jails were significant (about 11% and 1%, respectively), but annual increases in non-marijuana admissions were essentially flat (0.54% at the border and only .09% along the I-80 corridor)
- Comparing the year 2000 to 2013, border county jail admissions increased from 13 in 2000 to 54 in 2013 (nearly 320%), while non-marijuana admissions increased a total of only 7.8% over this time period
- Total admissions grew in both border counties and I-80 counties (132 and 698 admissions, respectively), but marijuana admissions were responsible for 31% of the total increase in border counties (41 of 132) and only 15% of growth in I-80 counties (103 of 698)

Notes:

Non-marijuana admissions are admissions for which the most serious charge was unrelated to marijuana sale and/or possession (i.e., all other offenses)





ANALYSIS OF GROWTH IN PERCENT OF MARIJUANA-RELATED ADMISSIONS

Average percent of jail admissions marijuana admissions:

Border	2.08%
I-80	1.31%
Control	0.88%

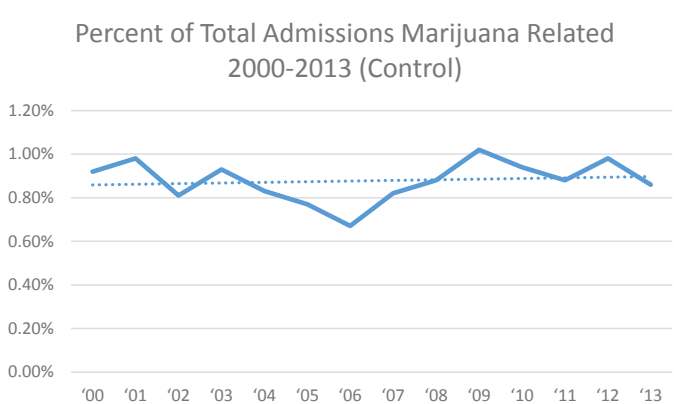
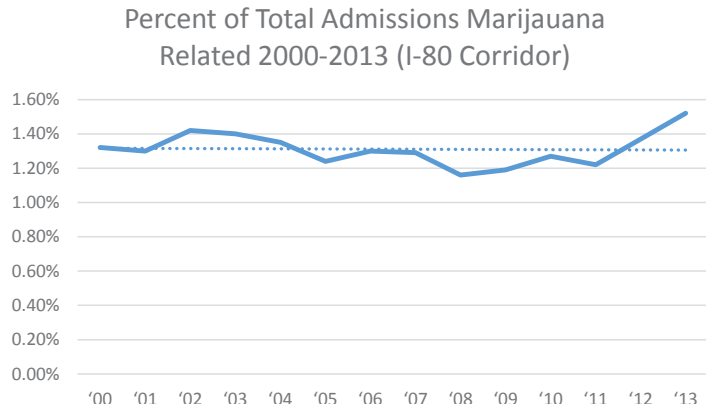
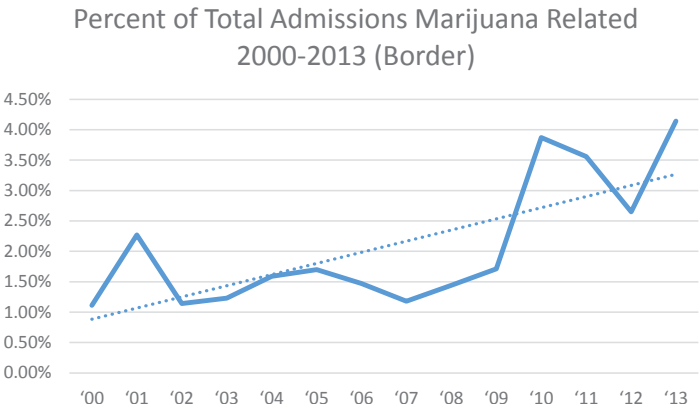
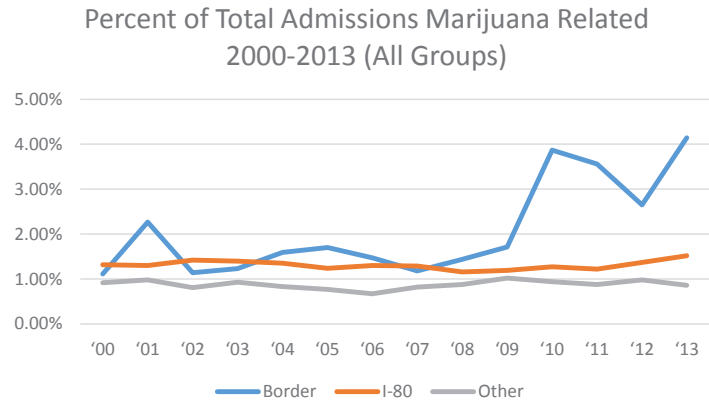
Percent Marijuana Admissions	'00	'01	'02	'03	'04	'05	'06	'07	'08	'09	'10	'11	'12	'13
Border	1.11%	2.27%	1.14%	1.23%	1.59%	1.70%	1.47%	1.18%	1.44%	1.71%	3.87%	3.56%	2.65%	4.14%
I-80	1.32%	1.30%	1.42%	1.40%	1.35%	1.24%	1.30%	1.29%	1.16%	1.19%	1.27%	1.22%	1.37%	1.52%
Control	0.92%	0.98%	0.81%	0.93%	0.83%	0.77%	0.67%	0.82%	0.88%	1.02%	0.94%	0.88%	0.98%	0.86%

Main Findings:

- County jails located on the Colorado/Nebraska border average the highest percentage of marijuana related admissions (2.1%), followed closely by those on the I-80 corridor (1.3%)
- After remaining relatively stable from 2000-2009, the percentage of jail admissions in border counties that were marijuana related grew substantially from 2010-2013, peaking in the year 2013
- The percent of overall admissions that were marijuana related remained relatively stable in control counties and I-80 corridor counties

Notes:

Marijuana admissions are admissions for which the most serious charge was marijuana related (i.e., sale and/or possession)



ANALYSIS OF JAIL OVERCROWDING

Average increase/
decrease of overcrowding
per jail per year:

Average percent increase/
decrease of overcrowding
per jail per year:

Percent increase/
decrease of overcrowding
2000 to 2013:

Border	-0.03
I-80	-0.01
Control	-0.01

Border	-3.49
I-80	-0.83
Control	-0.81

Border	-39.20%
I-80	-11.01%
Control	-10.79%

Main Findings:

- Despite growth trends in both marijuana-related arrests and marijuana-related jail admissions, Nebraska county jails actually became less crowded during the 14 year period from 2000 to 2013
- Border county jails were most crowded in 2000 and 2001, but also became increasingly crowded in recent years (2011 through 2013)

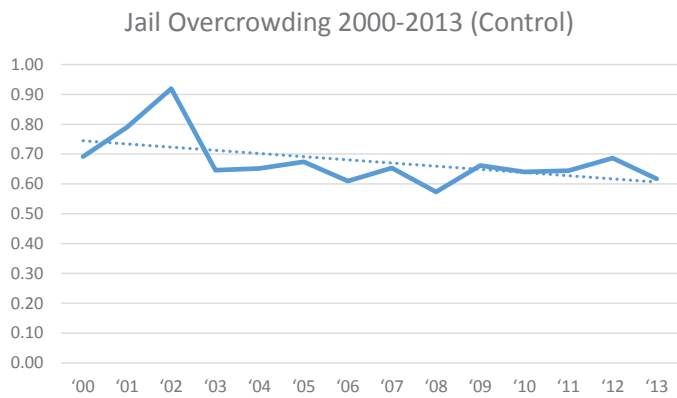
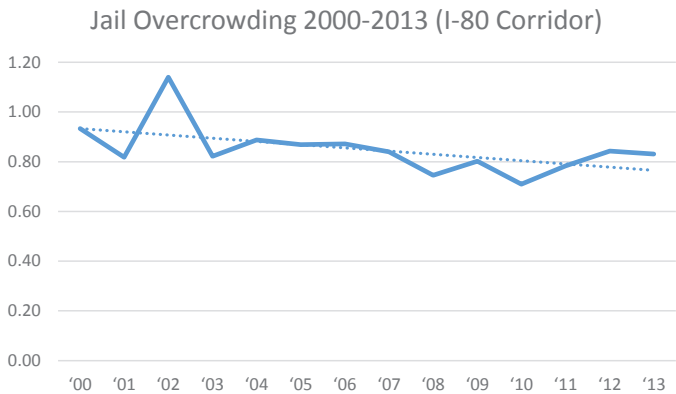
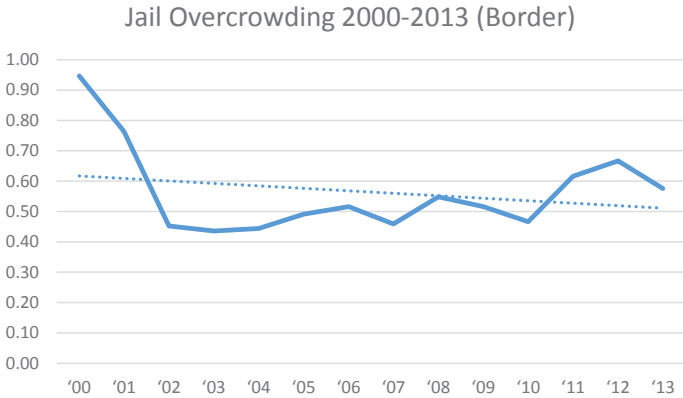
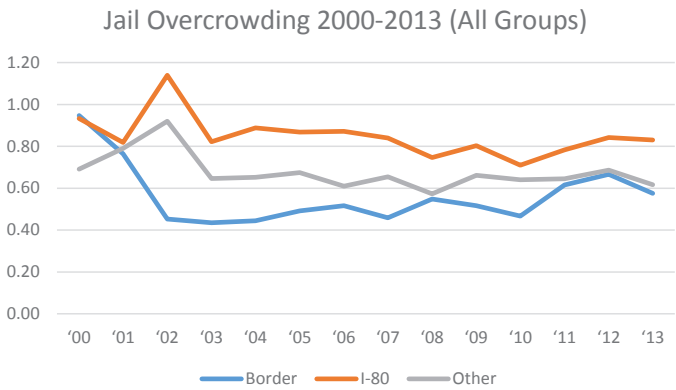
Notes:

The measure of jail crowding was calculated using the most consistently used measure of facility crowding (i.e., facility average daily population divided by design capacity)

Given the way the measure is calculated, a jail at .50 is 50% full (only half of available beds are full), a jail at 1.0 is 100% full, and a jail at 1.5 would be at 150% capacity (i.e., average daily population is 50% greater than available bed space)

All measures of capacity were obtained from the National Jail and Adult Detention Directory (2002, 2005, 2010)

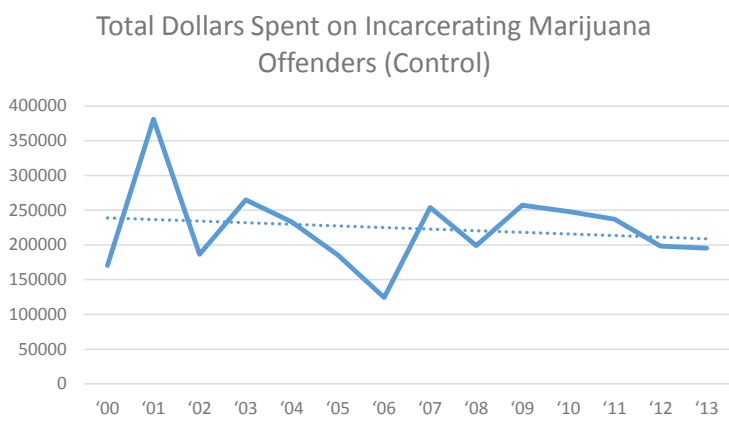
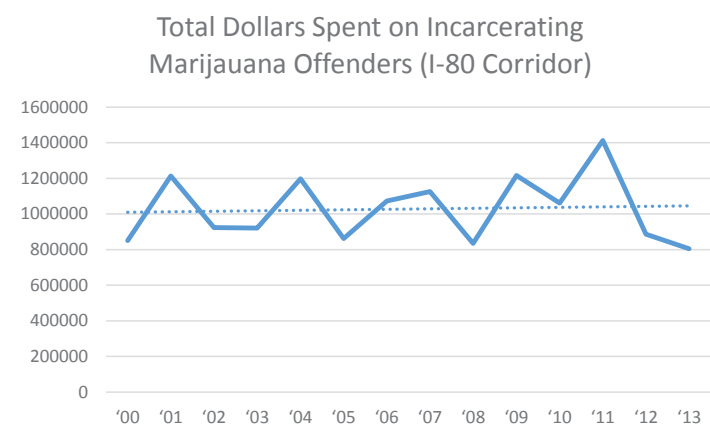
Jail Overcrowding	'00	'01	'02	'03	'04	'05	'06	'07	'08	'09	'10	'11	'12	'13
Border	0.95	0.76	0.45	0.44	0.44	0.49	0.52	0.46	0.55	0.52	0.47	0.62	0.67	0.58
I-80	0.93	0.82	1.14	0.82	0.89	0.87	0.87	0.84	0.75	0.80	0.71	0.78	0.84	0.83
Control	0.69	0.79	0.92	0.65	0.65	0.67	0.61	0.65	0.57	0.66	0.64	0.64	0.69	0.62



ANALYSIS OF ESTIMATED DOLLARS SPENT ON INCARCERATION OF MARIJUANA OFFENDERS



Annual Dollars Spent	'00	'01	'02	'03	'04	'05	'06	'07	'08	'09	'10	'11	'12	'13
Border	\$9,219	\$10,135	\$5,281	\$21,297	\$20,801	\$17,823	\$46,465	\$14,533	\$44,911	\$8,037	\$43,942	\$64,083	\$44,005	\$105,944
I-80	\$850,575	\$1,212,483	\$923,577	\$920,176	\$1,196,630	\$86,2483	\$1,073,058	\$1,125,520	\$834,328	\$1,215,831	\$1,061,171	\$1,411,957	\$885,704	\$804,809
Control	\$170,348	\$380,945	\$186,642	\$264,815	\$233,167	\$185,358	\$124,292	\$254,045	\$198,910	\$257,374	\$248,090	\$237,150	\$198,154	\$195,205



Average increase/decrease in dollars spent per year:

	+/- Dollars per year	Total Expense 2000-2013	Annual cost per taxpayer	Total cost per taxpayer
Border	\$7,440	\$456,475	\$1.25	\$17.85
I-80	\$-3,520	\$14,378,302	\$1.16	\$16.18
Control	\$1,912	\$3,134,497	\$.49	\$6.89

Average percent increase/decrease in dollars spent per year:

Border	19.05%
I-80	-0.39%
Control	0.98%

Percent increase/decrease in dollars spent 2000 to 2013:

Border	1049.23%
I-80	-5.38%
Control	14.59%

Main Findings:

- I-80 corridor counties spent less money on the incarceration of marijuana offenders, while border counties and the control counties spent more (2000-2014)
- Taxpayers in border and I-80 corridor counties have spent more than control counties to incarcerate marijuana offenders (both annually and in total)
- Over the 14-year period, counties on the Colorado-Nebraska border experienced the most substantial increases in total dollars spent on marijuana offenders (approximately 20% per year or \$7,440 annually)
- Comparing the year 2000 to 2013, border counties experienced an astounding 1049% increase in money spent on the incarceration of marijuana offenders in county jails
- Despite admitting more marijuana offenders from 2000-2013, I-80 counties reduced the average length of stay for marijuana offenders (from 13.84 days to 11.24 days), while border counties more than doubled the average number of days that marijuana offenders served (from 7.2 days to 19.92 days), resulting in lower costs for I-80 counties but higher costs for border counties during the 14 year time period

Notes:

Estimated costs calculated by multiplying the total number of marijuana admissions (per year) by the average length of stay for marijuana offenders (in days) by the estimated cost per day to house an offender

Costs per day to house an offender were obtained by dividing the estimated yearly cost to house an offender in Nebraska--\$35,950 (Vera Institute of Justice, 2012)—by the number of days in a year (\$35,950/365 = \$98.49/day)

Although some county jails report lower costs per day (e.g., Taft County, CA reported a daily cost of \$61.00), other daily cost estimates are much higher (e.g., Los Angeles County, CA reported a daily cost of \$113.00 and Lane County, OR reported \$129.44); We adopted an estimate that is somewhere in the middle of other jail-specific estimates and one that is closest to the estimated costs involved with incarceration in Nebraska

Costs per taxpayer are calculated by diving the estimated annual and total costs to incarcerate marijuana offenders by the number of citizens over the age of 18 (an estimate of the number of taxpayers)

If county jail administrators supply the Nebraska Center for Justice Research with county specific estimates of costs/day and overall jail budgets, we can provide each county with both a specific estimate of marijuana related costs, as well as the overall impact on county budgets

Border counties (n=7):

- | | | |
|------------|-----------|-----------|
| • Chase | • Dundy | • Perkins |
| • Cheyenne | • Keith | |
| • Deuel | • Kimball | |

I-80 corridor counties (n=11):

- | | | |
|-----------|-------------|----------|
| • Buffalo | • Hall | • Sarpy |
| • Cass | • Hamilton | • Seward |
| • Dawson | • Lancaster | • York |
| • Douglas | • Lincoln | |

Control counties (n=75):

- | | | |
|-------------|-------------|----------------|
| • Adams | • Gage | • Nuckolls |
| • Antelope | • Garden | • Otoe |
| • Arthur | • Garfield | • Pawnee |
| • Banner | • Gosper | • Phelps |
| • Blaine | • Grant | • Pierce |
| • Boone | • Greeley | • Platte |
| • Box Butte | • Harlan | • Polk |
| • Boyd | • Hayes | • Red Willow |
| • Brown | • Hitchcock | • Richardson |
| • Burt | • Holt | • Rock |
| • Butler | • Hooker | • Saline |
| • Cedar | • Howard | • Saunders |
| • Cherry | • Jefferson | • Scotts Bluff |
| • Clay | • Johnson | • Sheridan |
| • Colfax | • Kearney | • Sherman |
| • Cuming | • Keya Paha | • Sioux |
| • Custer | • Knox | • Stanton |
| • Dakota | • Logan | • Thomas |
| • Dawes | • Loup | • Thurston |
| • Dixon | • Madison | • Valley |
| • Dodge | • McPherson | • Washington |
| • Fillmore | • Merrick | • Wayne |
| • Franklin | • Morrill | • Webster |
| • Frontier | • Nance | • Wheeler |
| • Furnas | • Nemaha | |

Acknowledgments

The NCJR research team would like to thank the IT Division at the Nebraska Commission on Law Enforcement and Criminal Justice for providing data and technical assistance for this report.

Comments

1. Although the numerical differences have not necessarily been large (e.g., sales arrests in border counties increased from 2 in 2000 to 19 in 2013), the percent increases in border counties—doubling previous levels of both possession and sale of marijuana since 2000—are quite substantial. It is also important to remember that, given the small budgets and limited taxpayer base characterizing the rural communities of Western Nebraska, a difference of even five offenders a year can be arguably more impactful than 100 offenders a year in other county groups. Thus, border counties have not only experienced larger relative increases in marijuana related arrests and jail admissions from 2000 to 2013, but also the estimated costs per taxpayer in border counties have been more substantial.
2. Our analyses show no evidence that jails have become more crowded during our period of study. In fact, across all three county groups, jails have actually become less crowded since 2000. We will closely examine jail crowding in our follow-up report which will include the first year of data following Colorado’s legalization of recreational marijuana. This follow-up is scheduled to be completed in December.
3. County jails along the I-80 corridor are, on average, the most crowded jails in the state.
4. Despite being distributed over a larger population, costs per taxpayer of incarcerating marijuana offenders, both annual and in total, is similar in I-80 counties to that of border counties.
5. The decrease of arrests for sale in control counties is unsurprising given that these counties are neither close in proximity to Colorado (border counties), nor contain the most likely marijuana transportation route (I-80 counties).
6. NCJR also examined Nebraska State Patrol (NSP) arrests separately, but very few differences were noted. Arrests for possession followed a similar pattern regardless of the arresting agency. Although there were some differences in patterns of sale arrests, all followed a general upward trend. NCJR can provide these additional analyses upon request.
7. Although the trends may, in part, reflect differences in the prevalence of county level law enforcement (i.e., rate of officers per 1000 population is 2.08 at the border, 1.63 along the I-80 corridor, and 1.55 in control counties), or poverty levels (i.e., percent in poverty is approximately 10.5% at the border and along I-80, but more than 12% in control counties), we were unable to control for these factors given the limited sample size and data restrictions. As additional data becomes available, NCJR will expand on the current analysis by controlling for factors, other than changes in Colorado’s laws, which are likely to impact Nebraska’s criminal justice activity related to marijuana possession and sales.



For more information on the content of
this report please feel free to contact:

Dr. Ryan Spohn, Director
Nebraska Center for Justice Research
University of Nebraska at Omaha
6001 Dodge Street
Omaha, NE 68182-0310
Phone (402) 554-3794