

Supplementary Online Content

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This supplementary material has been provided by the authors to give readers additional information about their work.

eAppendix 1. Justification for testing change in Colorado as a single state relative to never-MML states in the analysis of the later period (2001-2002 to 2012-2013)

Federal Context. Cannabis was established as a Schedule 1 substance by the Federal Drug Enforcement Agency (DEA) in 1970, and has remained so since then. Schedule 1 substances are defined as having no currently accepted medical use and a high potential for abuse. However, despite the definition of the federal stance towards marijuana as defined by the DEA, California passed the first medical marijuana law in 1996, and between then and 2009, fifteen additional states passed medical marijuana laws.

The 2009 Ogden Memo. Given these changes, in October 2009, U.S. Attorney General Eric Holder announced new formal guidelines for federal prosecutors in states that had enacted laws authorizing the use of marijuana for medical purposes. The guidelines were contained in a memorandum from Deputy Attorney General David W. Ogden in the U.S. Department of Justice known as the “Ogden Memo”. The Ogden Memo reflected the shifting stance of the federal government over the last decade towards medical marijuana, despite the continuing Schedule 1 status of cannabis at the federal level.

The memo instructed federal prosecutors not to focus federal resources on prosecuting individuals who were clearly and unambiguously in compliance with state laws providing for the medical use of marijuana. Prior to the Ogden Memo, fears and uncertainty about federal law enforcement had limited state actions to disseminate medical marijuana. By directing federal prosecutors not to use federal resources to prosecute those complying with state medical marijuana laws, the Ogden Memo provided states with somewhat greater flexibility to adopt and implement medical marijuana laws.

The state context: caregivers and dispensaries. Many state medical marijuana laws have provisions for what are termed “caregivers”. These are adults who agree to assist with patients’ medical use of marijuana. Caregivers are permitted to possess but not use marijuana¹. Many states also have regulations governing medical marijuana dispensaries, i.e., retail outlets where medical marijuana can be sold. Whether or not a state has specific provisions for dispensaries is considered by some experts^{2,3} to be an important consideration in analyzing the unintended consequences of state medical marijuana laws for outcomes such as illicit cannabis use.

Colorado’s legal stance towards caregivers and dispensaries. Colorado passed its medical marijuana law in 2000. This law had a provision for caregivers, which the Colorado Department of Public Health and Environment (CDPHE) limited to five patients per caregiver. In 2007, a Denver District Judge ruled that the five-patient limit for caregivers violated state requirements, and overturned the rule. While in theory, that opened the door for caregivers to claim an unlimited number of patients and begin operating medical marijuana commercial operations (i.e., dispensaries), few did because of fear of federal prosecution. Attempts to reinstate the limit were unsuccessful.

Changes in Colorado in and after 2009. In July 2009 (preceding the Ogden Memo by three months), the Colorado Board of Health definitively rejected this limit on the size of patient loads for licensed medical marijuana caregivers (www.rmhidta.org). This effectively allowed caregivers to act as licensed dispensaries, or business entities, with unlimited patients⁴.

The Ogden Memo and the rejection by the Colorado Board of Health on limited patient loads for caregivers permitted rapid changes in Colorado (www.rmhidta.org), information that is well documented due to Colorado’s centralized record-keeping. Between January and December of 2009, the number of applications to use medical marijuana increased from about 500 per month to over 10,000 per month. Through the end of 2008, Colorado had no known dispensaries. By spring, 2009, Colorado had over 250 dispensaries, and by mid-2010, over 900 dispensaries. In

addition, in 2010, the Colorado legislature passed HB-1284, which confirmed the legalized status of registered medical marijuana centers (dispensaries).

Subsequent to these legal changes to the distribution system for medical marijuana, data suggest that attitudes, availability, and use increased⁵, as did cannabis-involved fatal motor vehicle crashes⁶.

Other early-MML states and the Ogden Memo. A literature search of Pubmed, Scopus, Google Scholar and Google using the words “marijuana” or “cannabis” and the state name did not indicate other early-passing states (California, Oregon, Maine, Nevada) with accurate, comprehensive documentation of analogous post-Ogden policy changes with accompanying increases in medical marijuana applications and dispensaries. The lack of such changes was recently descriptively reviewed in a publication that should be online shortly⁷. The Public Health Division of the Oregon Health Authority reported that medical marijuana card applications increased steadily since 1999, with a possible increase in the yearly rate in 2008, but without data on accompanying changes in the prevalence of cannabis-related consequences⁸, while Oregon did not permit legal medical marijuana dispensaries until 2015³.

While many qualitative sources of information (e.g., news reports and observations by those living in California) have suggested that California experienced equivalent rapid growth and proliferation of medical marijuana dispensaries since the Ogden Memo⁹, California’s lack of centralized recordkeeping of permits and dispensaries¹⁰ has limited research there to cross-sectional studies of dispensaries within cities or counties^{10,11}. This has limited knowledge about policy changes and their immediate consequences for marijuana use and distribution in California as a whole, but suggests that changes in California be viewed in light of the qualitative information.

Therefore, given the documentation of the policy changes and their impact in Colorado, analyzing Colorado as a separate state during the later period is warranted.

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eAppendix 2. Interviewer statement preceding AUDADIS questions about drug use in NLAES, NESARC and NESARC-III

Now I'd like to ask you about your experiences with medicines and other kinds of drugs that you may have used ON YOUR OWN - that is, either WITHOUT a doctor's prescription (*PAUSE*); in GREATER amounts, MORE OFTEN, or LONGER than prescribed (*PAUSE*); or for a reason other than a doctor said you should use them. People use these medicines and drugs ON THEIR OWN to feel more alert, to relax or quiet their nerves, to feel better, to enjoy themselves, to get high or just to see how they work.

eTable 1. Demographic characteristics of NLAES, NESARC, and NESARC-III samples, with participants in the 11 states not common to the 3 surveys excluded

		NLAES	NESARC	NESARC-III	p-value^a
		1991-1992 N=41,764	2001-2002 N=41,184	2012-2013 N=35,549	
Characteristic		Prevalence (SE)			
Male		48.03 (0.31)	47.88 (0.32)	48.11 (0.29)	0.87
Age					
	18-29	25.02 (0.41)	21.78 (0.38)	21.62 (0.35)	<0.001
	30-39	22.95 (0.26)	20.08 (0.25)	16.70 (0.28)	
	40-49	18.52 (0.25)	20.90 (0.27)	18.11 (0.30)	
	50+	33.50 (0.37)	37.24 (0.46)	43.58 (0.46)	
Race/Ethnicity					
	White	76.53 (0.46)	70.70 (1.64)	66.19 (0.82)	<0.001
	Black	11.23 (0.37)	11.33 (0.65)	12.02 (0.67)	
	Hispanic	7.75 (0.26)	11.77 (1.29)	14.91 (0.68)	
	Other	4.48 (0.17)	6.20 (0.48)	6.88 (0.25)	
Less Than HS^b		19.39 (0.31)	15.66 (0.51)	13.10 (0.43)	<0.001
Poverty					
	<100% FPL ^c	15.56 (0.35)	13.70 (0.40)	19.36 (0.46)	<0.001
	100-200% FPL	23.34 (0.29)	19.83 (0.40)	21.56 (0.37)	
	>200% FPL	61.10 (0.41)	66.47 (0.68)	59.08 (0.71)	
Married		59.74 (0.39)	58.17 (0.52)	57.81 (0.52)	0.008
Urban		72.46 (0.66)	81.40 (1.60)	78.66 (1.56)	<0.001

SE = Standard Error
^a p-value corresponds to chi-squared test of differences in distribution of demographic characteristics across surveys.
^b HS = High school
^c FPL = Federal Poverty Level

eTable 2. Years that medical marijuana laws (MML) were enacted for the 50 US states up to 2012 and how participants in these states were coded in Models 1-3

State and Year passed MML up to 2012	Code for Model 1 ^a 1991-1992 to 2012-2013	Code for Model 2a ^b 1991-1992 to 2001-2002	Code for Model 2b ^b 1991-1992 to 2001-2002	Code for Model 3 ^c 2001-2002 to 2012-2013
California 1996	Ever-MML	Early-MML	Separate	Separate
(Alaska) ^d 1998	--	--	--	--
Oregon 1998	Ever-MML	Early-MML	Early-MML	Early-MML
Washington 1998	Ever-MML	Early-MML	Early-MML	Early-MML
Maine 1999	Ever-MML	Early-MML	Early-MML	Early-MML
Colorado 2000	Ever-MML	Early-MML	Early-MML	Early-MML
(Hawaii) ^d 2000	--	--	--	--
Nevada 2000	Ever-MML	Early-MML	Early-MML	Early-MML
Maryland 2003	Ever-MML	Non-Early-MML	Non-Early-MML	Late-MML
Montana 2004	Ever-MML	Non-Early-MML	Non-Early-MML	Late-MML
Vermont 2004	Ever-MML	Non-Early-MML	Non-Early-MML	Late-MML
(Rhode Island) ^d 2006	--	--	--	--
New Mexico 2007	Ever-MML	Non-Early-MML	Non-Early-MML	Late-MML
Michigan 2008	Ever-MML	Non-Early-MML	Non-Early-MML	Late-MML
Arizona 2010	Ever-MML	Non-Early-MML	Non-Early-MML	Late-MML
New Jersey 2010	Ever-MML	Non-Early-MML	Non-Early-MML	Late-MML
(Delaware) ^d 2011	--	--	--	--
Connecticut 2012	Ever-MML	Non-Early-MML	Non-Early-MML	Late-MML
Massachusetts 2012	Ever-MML	Non-Early-MML	Non-Early-MML	Late-MML
Alabama	Never-MML	Non-Early-MML	Non-Early-MML	Never-MML
Arkansas	Never-MML	Non-Early-MML	Non-Early-MML	Never-MML
Florida	Never-MML	Non-Early-MML	Non-Early-MML	Never-MML
Georgia	Never-MML	Non-Early-MML	Non-Early-MML	Never-MML
(Idaho) ^d	--	--	--	--
Illinois	Never-MML	Non-Early-MML	Non-Early-MML	Never-MML
Indiana	Never-MML	Non-Early-MML	Non-Early-MML	Never-MML
Iowa	Never-MML	Non-Early-MML	Non-Early-MML	Never-MML
Kansas	Never-MML	Non-Early-MML	Non-Early-MML	Never-MML
Kentucky	Never-MML	Non-Early-MML	Non-Early-MML	Never-MML
Louisiana	Never-MML	Non-Early-MML	Non-Early-MML	Never-MML
Minnesota	Never-MML	Non-Early-MML	Non-Early-MML	Never-MML
Mississippi	Never-MML	Non-Early-MML	Non-Early-MML	Never-MML
Missouri	Never-MML	Non-Early-MML	Non-Early-MML	Never-MML
(Nebraska) ^d	--	--	--	--
(New Hampshire) ^d	Never-MML	Non-Early-MML	Non-Early-MML	Never-MML
New York	Never-MML	Non-Early-MML	Non-Early-MML	Never-MML
North Carolina	Never-MML	Non-Early-MML	Non-Early-MML	Never-MML
(North Dakota) ^d	Never-MML	Non-Early-MML	Non-Early-MML	Never-MML
Ohio Never	Never-MML	Non-Early-MML	Non-Early-MML	Never-MML
Oklahoma	Never-MML	Non-Early-MML	Non-Early-MML	Never-MML
Pennsylvania	Never-MML	Non-Early-MML	Non-Early-MML	Never-MML

South Carolina	Never-MML	Non-Early-MML	Non-Early-MML	Never-MML
(South Dakota) ^d	--	--	--	--
Tennessee	Never-MML	Non-Early-MML	Non-Early-MML	Never-MML
Texas	Never-MML	Non-Early-MML	Non-Early-MML	Never-MML
Utah	Never-MML	Non-Early-MML	Non-Early-MML	Never-MML
Virginia	Never-MML	Non-Early-MML	Non-Early-MML	Never-MML
(West Virginia) ^d	--	--	--	--
Wisconsin	Never-MML	Non-Early-MML	Non-Early-MML	Never-MML
(Wyoming) ^d	--	--	--	--
Missouri	Never-MML	Non-Early-MML	Non-Early-MML	Never-MML
(Nebraska) ^d	--	--	--	--
(New Hampshire) ^d	--	--	--	--
New York	Never-MML	Non-Early-MML	Non-Early-MML	Never-MML
North Carolina	Never-MML	Non-Early-MML	Non-Early-MML	Never-MML
(North Dakota) ^d	--	--	--	--
Ohio	Never-MML	Non-Early-MML	Non-Early-MML	Never-MML
Oklahoma	Never-MML	Non-Early-MML	Non-Early-MML	Never-MML
Pennsylvania	Never-MML	Non-Early-MML	Non-Early-MML	Never-MML
South Carolina	Never-MML	Non-Early-MML	Non-Early-MML	Never-MML
(South Dakota) ^d	--	--	--	--
Tennessee	Never-MML	Non-Early-MML	Non-Early-MML	Never-MML
Texas	Never-MML	Non-Early-MML	Non-Early-MML	Never-MML
Utah	Never-MML	Non-Early-MML	Non-Early-MML	Never-MML
Virginia	Never-MML	Non-Early-MML	Non-Early-MML	Never-MML
(West Virginia) ^d	--	--	--	--
Wisconsin	Never-MML	Non-Early-MML	Non-Early-MML	Never-MML
(Wyoming) ^d	--	--	--	--

^a Ever MML state passed a law between 1996 and 2012; Non-MML states did not pass a law by 2012

^b Early-MML states passed a law between 1996 and 2001; Non-early-MML states did not pass a law between 1996 and 2001, and thus include states that passed a law between 2002 and 2012

^c Late-MML states passed a law between 2002 and 2012

^d Participants in these states were not included in all three surveys (NLAES, NESARC, NESARC-III) and therefore were excluded in primary analyses

eTable 3. Predicted US prevalence of past-year illicit cannabis use and past-year *DSM-IV* cannabis use disorder: overall and by medical marijuana law (MML) status^a

		1991-1992 ^b (NLAES) n=41,764	2001-2002 ^c (NESARC) n=41,184	2012-2013 ^d (NESARC-III) n=35,549	NLAES vs. NESARC	NESARC vs. NESARC-III
		% (SE)			% difference (SE)	% difference (SE)
Cannabis use^e						
	Overall	4.89 (0.35)	3.58 (0.14)	7.55 (0.39)	- 1.31 (0.34)	+ 3.97 (0.44)
					p<0.001	p<0.001
	Never-MML states (no MML, 1996-2012) ^f	4.54 (0.39)	3.16 (0.16)	6.70 (0.39)		
	Ever-MML states (MML passed 1996-2012) ^g	5.55 (0.36)	4.38 (0.27)	9.15 (0.54)		
	Early-MML states (MML passed 1996-2001) ^h	6.05 (0.41)	5.24 (0.48)	9.77 (0.70)		
	Late-MML states (MML passed 2002-2012) ⁱ	5.08 (0.54)	3.69 (0.31)	8.97 (0.70)		
Cannabis use disorder^j						
	Overall	1.39 (0.17)	1.43 (0.08)	2.57 (0.23)	+ 0.04 (0.18)	+ 1.14 (0.26)
					p=0.82	p<0.001
	Never-MML states (no MML, 1996-2012) ^f	1.35 (0.19)	1.31 (0.09)	2.30 (0.22)		
	Ever-MML states (MML passed 1996-2012) ^g	1.48 (0.19)	1.67 (0.16)	3.10 (0.34)		
	Early-MML states (MML passed 1996-2001) ^h	1.64 (0.22)	1.87 (0.29)	3.20 (0.42)		
	Late-MML states (MML passed 2002-2012) ⁱ	1.31 (0.31)	1.52 (0.20)	3.20 (0.47)		

^a States included were the 39 with data in all three surveys. States omitted: Alaska, Delaware, Hawaii, Idaho, Nebraska, New Hampshire, North Dakota, Rhode Island, South Dakota, West Virginia and Wyoming.

^b National Longitudinal Alcohol Epidemiology Study (NLAES); Differences in predicted prevalence:

Cannabis use: Ever- vs. Never-MML states, $p=0.003$; Early- vs. Never-MML states, $p=0.002$; Late- vs. Never-MML states, $p=0.08$; Late- vs. Early-MML states, $p=0.17$.

Cannabis use disorder: Ever- vs. Never-MML states, $p=0.45$; Early- vs. Never-MML states, $p=0.19$; Late- vs. Never-MML states, $p=0.94$; Late- vs. Early-MML states, $p=0.39$.

^c National Epidemiologic Survey On Alcohol & Related Conditions (NESARC); Differences in predicted prevalence:

Cannabis use: Ever- vs. Never-MML states, $p<0.001$; Early- vs. Never-MML states, $p<0.001$; Late- vs. Never-MML states, $p=0.12$; Late - vs. Early-MML states, $p=0.01$.

Cannabis use disorder: Ever- vs. Never-MML states, $p=0.06$; Early- vs. Never-MML states, $p=0.07$; Late- vs. Never-MML states, $p=0.32$; Late- vs. Early-MML states, $p=0.33$.

^d National Epidemiologic Survey on Alcohol and Related Conditions-III (NESARC-III); Differences in predicted prevalence:

Cannabis use: Ever- vs. Never-MML states, $p<0.001$; Early- vs. Never-MML states, $p<0.001$; Late- vs. Never-MML states, $p<0.001$; Late- vs. Early-MML states, $p=0.29$.

Cannabis use disorder: Ever- vs. Never-MML states, $p=0.006$; Early- vs. Never-MML states, $p=0.02$; Late- vs. Never-MML states, $p=0.03$; Late- vs. Early-MML states, $p=0.99$.

^e Prevalences back-transformed from marginal log-odds estimated from logistic regression interaction models (MML x survey) that included individual and state covariates. Overall prevalences estimated from a model with a 3-level MML variable (never vs. early vs. late). “Never-“ and “Ever-MML” prevalences estimated from a model with a dichotomous MML variable (never vs. ever). “Early-MML” prevalences in 1991-1992 estimated from a model with a dichotomous MML variable (early- vs. non-early). “Late-MML” prevalences at times and “Early-MML” prevalences in 2001-2002 and 2012-2013 estimated from a model with a 3-level MML variable (never vs. early vs. late).

^f Never-MML states (1996-2012): AL, AR, FL, GA, IL, IN, IA, KS, KY, LA, MN, MS, MO, NY, NC, OH, OK, PA, SC, TN, TX, UT, VA, WI

^g Ever-MML states (1996-2012): AZ, CA, CO, CT, ME, NV, OR, MD, MA, MI, MT, NJ, NM, VT, WA

^h Early-MML states (1996-2001): CA, CO, ME, NV, OR, WA

ⁱ Late-MML states (2002-2012): AZ, CT, MD, MA, MI, MT, NJ, NM, VT

^j Prevalences estimated in models analogous to those for cannabis use.

eTable 4. Testing the parallel paths assumption for Colorado and the late-MML states: differences in predicted prevalences of past-year cannabis use and *DSM-IV* cannabis use disorder during the earlier period, 1991-1992 to 2001-2002^a

Outcome	Never-MML states [24 states] ^b	All Early-MML states but California and Colorado [4 states] ^c	All Late-MML states [9 states] ^d	California [1 state]	Colorado [1 state]
	No MML before 2012	Passed MML 1991-2001	Passed MML 2002-2012	Passed MML 1996	Passed MML 2000
Cannabis use	Prevalence^e (SE)				
1991-2001	4.39 (0.42)	4.58 (0.63)	5.00 (0.54)	7.15 (0.71)	4.03 (0.84)
2001-2002	3.12 (0.15)	5.93 (0.81)	3.64 (0.31)	5.39 (0.59)	4.10 (0.62)
Change in prevalence	- 1.26 (0.40) ^f	+ 1.35 (1.02)	-1.36 (0.63) ^g	- 1.75 (0.72) ^h	+ 0.07 (1.02)
Difference in difference (DiD) (vs. Never-MML states)	-- (reference)	+ 2.61 (0.99)	- 0.10 (0.53)	-0.49 (0.75)	+ 1.33 (1.03)
DiD p-value	--	0.01	0.85	0.52	0.20
Cannabis use disorder	Prevalence^e (SE)				
1991-2001	1.27 (0.20)	1.07 (0.31)	1.28 (0.31)	1.95 (0.31)	1.24 (0.39)
2001-2002	1.29 (0.09)	2.61 (0.48)	1.51 (0.20)	1.57 (0.28)	1.34 (0.47)
Change in prevalence	+ 0.03 (0.19)	+ 1.54 (0.56) ⁱ	+ 0.23 (0.37)	- 0.38 (0.36)	+ 0.10 (0.61)
Difference in difference (DiD) (vs. Never-MML states)	-- (reference)	+ 1.51 (0.55)	+ 0.21 (0.32)	-0.41 (0.37)	+ 0.07 (0.60)
DiD p-value	--	0.007	0.52	0.28	0.91
SE = Standard Error; participants in states not common to all 3 surveys are excluded					
^a States included were the 39 with data in all three surveys. States omitted: Alaska, Delaware, Hawaii, Idaho, Nebraska, New Hampshire, North Dakota, Rhode Island, South Dakota, West Virginia and Wyoming. The predicted prevalences from the earlier period were estimated by a model with a 5-level MML variable (Early-MML states (ex. Colorado and California) vs. Late-MML states vs. California vs. Colorado vs. Never-MML states)					
^b Never-MML states (1996-2012): Alabama, Arkansas, Florida, Georgia, Illinois, Indiana, Iowa, Kansas, Kentucky, Louisiana, Minnesota, Mississippi, Missouri, New York, North Carolina, Ohio, Oklahoma, Pennsylvania, South Carolina, Tennessee, Texas, Utah, Virginia, Wisconsin					
^c Early-MML states (except California and Colorado) (1996-2001): Maine, Nevada, Oregon, Washington					
^d Late-MML states (2002-2012): Arizona, Connecticut, Maryland, Massachusetts, Michigan, Montana, New Jersey, New Mexico, Vermont					
^e Prevalences back-transformed from marginal log-odds estimated from logistic regression interaction models (MML X survey) that included individual (sex; age; education; race/ethnicity; marital status; urbanicity; poverty) and state covariates (% male; white; <30 years old; ≥25 years without a high school diploma).					
^f p=0.002, change in Never-MML states between 1991 and 2001					
^g p=0.03, change in all Late-MML states between 1991 and 2001					
^h p=0.02, change in California only between 1991 and 2001					
ⁱ p=0.008, change in all Early-MML states but California and Colorado between 1991 and 2001					

eTable 5. Difference-in-difference (DiD) results of sensitivity analyses for models 1-3

Model	Model 1	Model 2a	Model 2b		Model 3			
Time period	1991-2012	1991-2001			2001-2012			
Exposure Group	<i>Ever MML States [15 states]</i>	<i>All Early-MML States [6 states]</i>	<i>All Early-MML States but California [5 states]</i>	<i>CA [1 state]</i>	<i>Early-MML States [4 states]</i>	<i>Late-MML States [9 states]</i>	<i>CA [1 state]</i>	<i>CO [1 state]</i>
Reference Group	<i>Non-MML states [24 states]</i>	<i>Non-Early MML states [33 states]</i>			<i>Non-MML states [24 states]</i>			
Difference in difference (DiD)^a								
Inclusion of those who used cannabis only 1-11 times, lifetime								
Cannabis use	1.91 (0.51) ^b	0.73 (0.62)	2.52 (0.88) ^c	0.08 (0.80)	-0.46 (0.92)	1.91 (0.65) ^d	2.45 (0.98) ^e	3.89 (1.69) ^f
CUD ¹	0.72 (0.31) ^g	0.26 (0.35)	1.18 (0.48) ^h	-0.35 (0.40)	-0.94 (0.62)	0.70 (0.43)	0.96 (0.49)	1.82 (0.78) ⁱ
Inclusion of individuals in all 50 states								
Cannabis use	1.47 (0.48) ^j	0.44 (0.61)	2.53 (0.84) ^k	-0.49 (0.80)	-0.80 (0.87)	1.58 (0.63) ^l	1.85 (0.88) ^m	3.79 (1.60) ⁿ
CUD ¹	0.68 (0.30) ^o	0.22 (0.34)	1.18 (0.46) ^p	-0.43 (0.41)	-0.86 (0.58)	0.65 (0.41)	0.93 (0.48)	1.69 (0.77) ^q
Cannabis use disorder, including withdrawal as a diagnostic criterion								
CUD ¹	0.69 (0.30) ^r	0.29 (0.37)	1.24 (0.51) ^s	-0.35 (0.41)	-1.07 (0.62)	0.62 (0.42)	0.92 (0.48)	1.75 (0.79) ^t
Excluding individuals age 18-19								
Cannabis use	1.24 (0.47) ^u	0.43 (0.61)	2.17 (0.80) ^v	-0.30 (0.81)	-0.59 (0.82)	1.27 (0.63) ^w	1.70 ^x (0.84)	3.72 (1.26) ^y
CUD ¹	0.60 (0.29) ^z	0.04 (0.33)	0.78 (0.45)	-0.44 (0.40)	-0.60 (0.53)	0.56 (0.37)	0.99 (0.50)	1.78 (0.63) ^{aa}
Note: We present exact p-values only for estimates with significance p<0.05.								
¹ CUD = DSM-IV Cannabis Use Disorder								
^a Changes in predicted marginal prevalence of marijuana outcome within MML-exposed group of states over time period are compared to changes within reference group of states.								
^b p<0.001 ^c p= 0.006 ^d p=0.004 ^e p=0.02 ^f p=0.02 ^g p=0.02 ^h p=0.02 ⁱ p=0.02 ^j p=0.003 ^k p=0.004 ^l p=0.01 ^m p=0.04								
ⁿ p=0.02 ^o p=0.03 ^p p=0.01 ^q p=0.03 ^r p= 0.03 ^s p=0.02 ^t p=0.03 ^u p=0.01 ^v p=0.009 ^w p=0.05 ^x p=0.05 ^y p=0.004								
^z p=0.04 ^{aa} p=0.006								

eTable 6. Difference in prevalences of past-year cannabis use, 1984 to 1990: data from Alcohol Research Group National Surveys 7 and 8 of adults 18 years and older^a, grouped as California, other early-MML^b states, and nonearly-MML states

Outcome	Non-Early MML states	California	Other Early MML states ^b
	No MML before 2012	Passed MML 1996	Passed MML 1998-2000
Past-year cannabis use	Prevalence^c		
1984 (National Alcohol Survey 7 ^d)	9.44	12.72	12.29
1990 (National Alcohol Survey 8 ^e)	8.84	10.04	11.77
Difference in prevalence	-0.60	-2.68	-0.52
Difference in Difference (DiD) (vs. Non-Early MML states)	- - (reference)	-2.08	+0.08

^a Polcin DL, Korcha R, Greenfield TK, Bond J, Kerr W. Twenty-one-year trends and correlates of pressure to change drinking. *Alcohol Clin Exp Res.* 2012 Apr;36(4):705-15, funded by P50AA005595

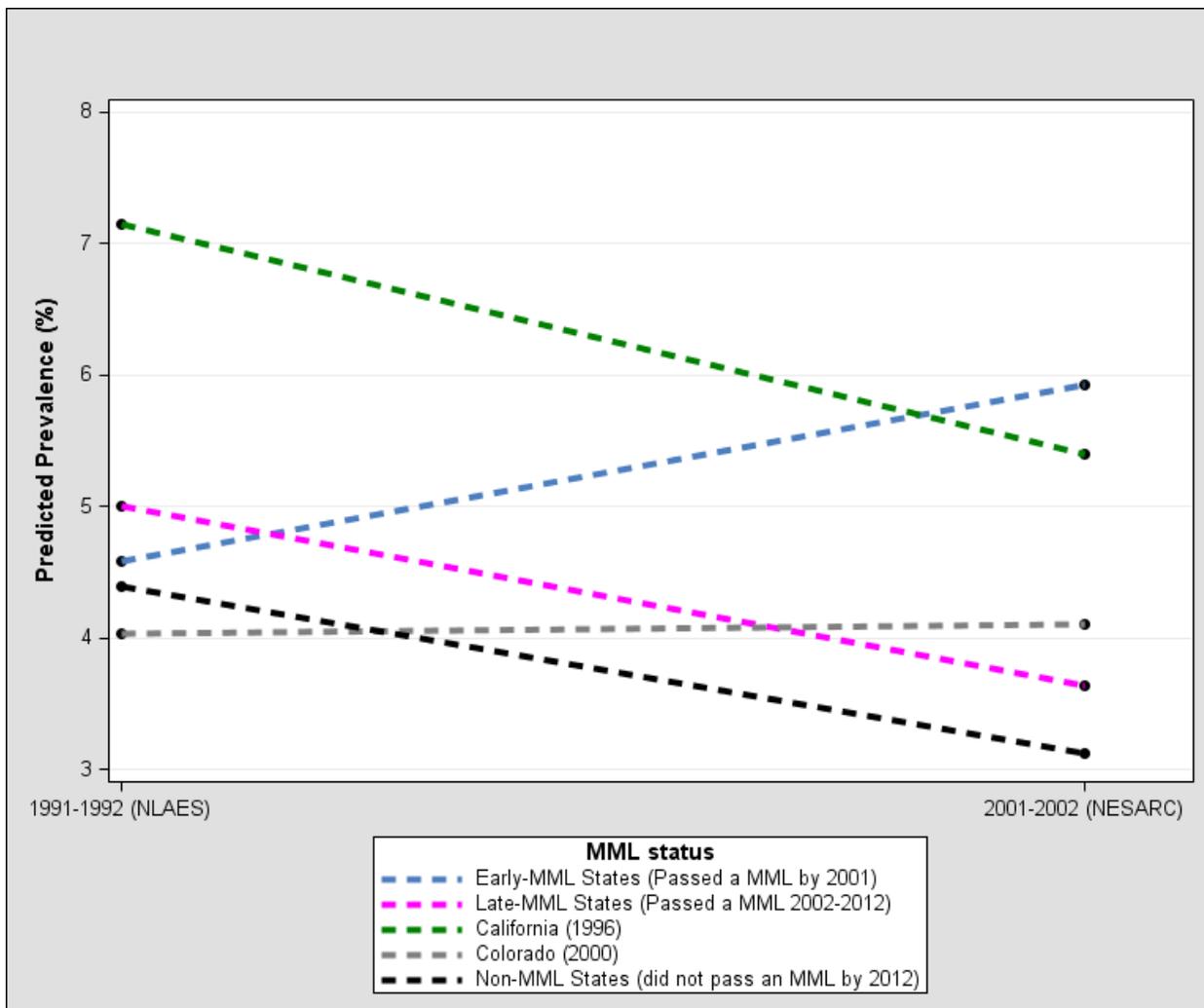
^b Other Early-MML states: Maine, Nevada, Oregon, Colorado, Washington

^c Weighted prevalences

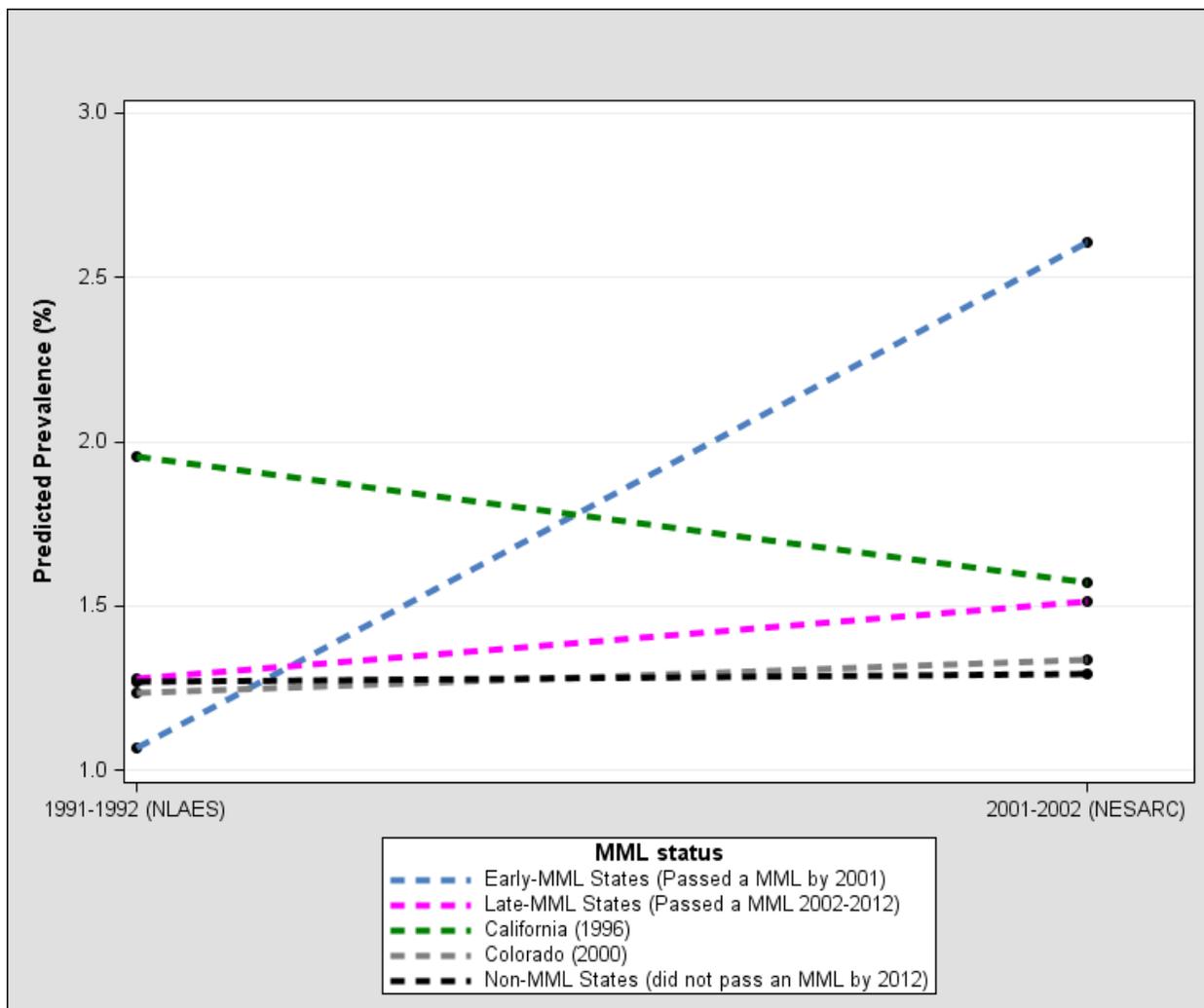
^d N = 5,221, response rate: 77%

^e N = 2,058, response rate: 70%

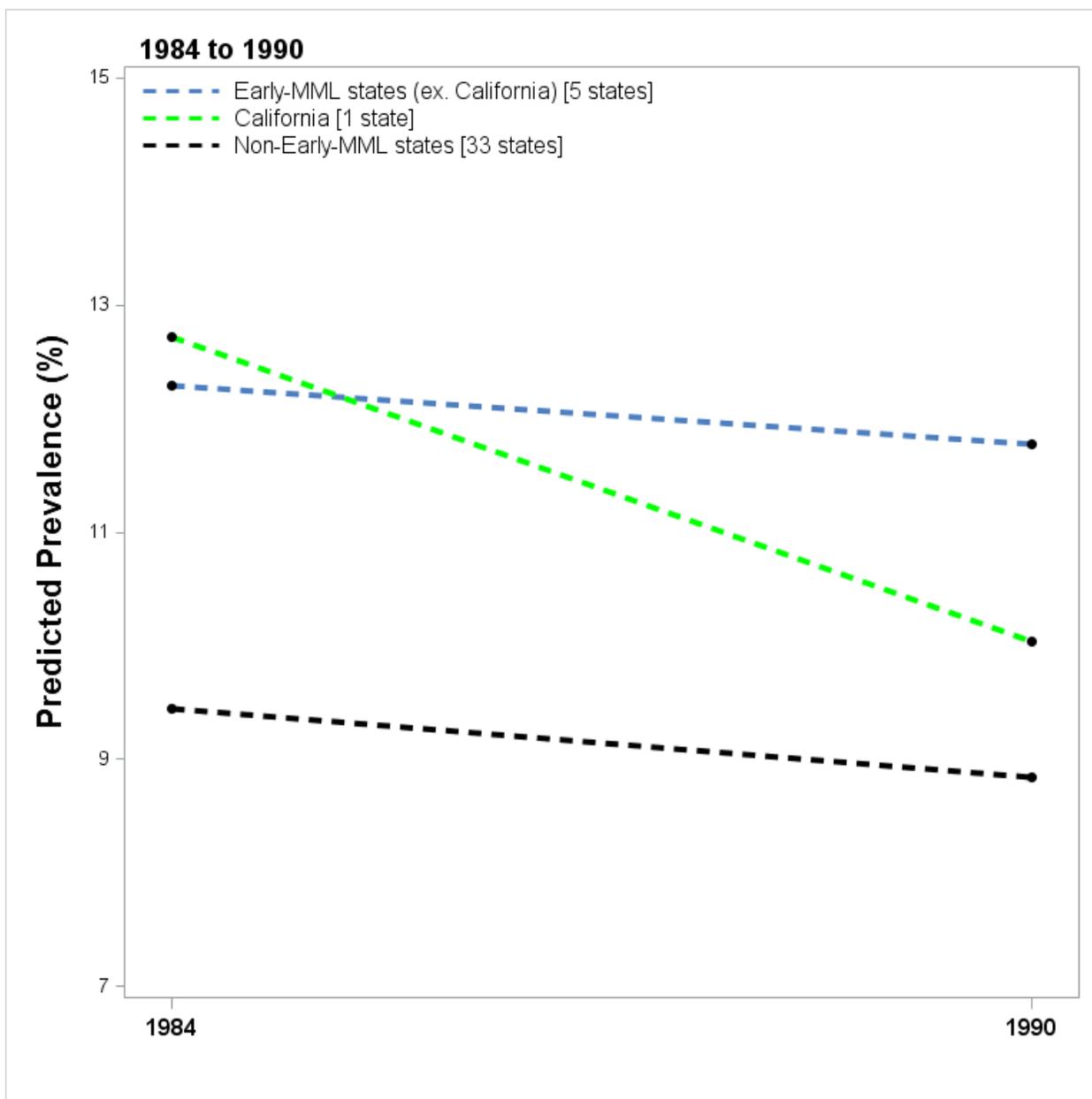
eFigure 1. Medical marijuana laws (MML) and cannabis use, past 12 months, during the earlier period (1991-1992 to 2001-2002): test of “parallel paths” assumption for late states and Colorado



eFigure 2. Medical marijuana laws (MML) and *DSM-IV* cannabis use disorder, past 12 months, during the earlier period (1991-1992 to 2001-2002): test of “parallel paths” assumption for late states and Colorado



eFigure 3. Past-year cannabis use, 1984 and 1990, from the National Alcohol Surveys of adults 18 years and older conducted by the Alcohol Research Group.



Early-MML states other than California include Colorado, Maine, Nevada, Oregon, and Washington (laws passed 1998-2000). Trend lines included for visual comparison; they do not imply that the trend was linearly changing over time