

# Teach your children, well: Prescription-drug monitoring programs and parental time use

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# Introduction: The opioid crisis

- The opioid crisis
  - Between 2015 & 2017, 623K parents with opioid-abuse disorder lived with a child  $\leq 18$  (Clemens-Cope et al. 2019)
  - Between 2004-2012, 13.5% of parents misused opioids
  - The impact of the opioid crisis continues today (CDC, 2024)
- Impact on children
  - Maltreatment, foster-care admission, neo- and perinatal outcomes (Cunningham & Finlay, 2013; Ghertner, 2022; Suchman et al. 2017)
  - Also impact parenting skills and child development (Suchman et al., 2017)
  - Opioid overdoses associated with maltreatment and foster-care admissions (Bullinger & Ward, 2021, Ghertner, 2022)

# Introduction: PDMPs

- Prescription-drug monitoring programs (PDMPs): Databases of prescriptions for controlled substances
  - Now present in all US states
  - Decrease opioid abuse and prescription-opioid-mortality (Kaestner & Ziedan, 2019, 2023; Neumark and Savych, 2023)
- Mixed effects on other outcomes
  - Negative employment & earnings effects (Kaestner & Ziedan, 2023)
  - Reduced labor-force attachment and credit scores (Gupta & Mazumder, 2023)
  - Substitution towards more harmful drugs (Alpert et al., 2018; Buchmueller and Carey, 2018; Powell and Pacula, 2021; Evans et al. 2019; Evans et al., 2022; Maclean et al. 2022)

# Introduction: PDMPs and child outcomes

- Mixed effects for child outcomes, too
  - Mandated PDMPs reduces neonatal abstinence syndrome and improve infant health outcomes (Gihleb et al., 2020; Kaestner & Ziedan, 2021)
  - Reduce removals & foster-care placements due to child neglect & physical abuse (Gihleb et al., 2019)
  - Increases in substantiated child maltreatment (specifically neglect and physical abuse; Evans et al. 2022)
- Similar effects for other policies
  - More foster-care admissions due to OxyContin reformulation (Mackenzie-Liu, 2021)
  - Initially more homicides in Australia after shock to heroin supply (Moore & Schnepel, 2024)

# Introduction: Parental investments in children

- Parental investments are critical for children's cognitive development (Fiorini & Keene, 2014; Del Boca et al., 2014)
- Expansion of EITC reduced some maternal investment in children (Bastian & Lochner, 2022)
- Medical marijuana increases parental time investments among parents who don't abuse marijuana (Bansak & Kim, 2024)
- The relationship between PDMPs and parental time investment is an open question

# Introduction: This paper

- We use a robust DD approach to estimate the effect of the (staggered) adoption of PDMPs between 2003 and 2019
- We measure parental investments using time spent on various parenting activities
- We find that PDMPs increase both *active* (direct parent-child interaction) and *passive* (child is present) childcare
  - Active effects come from increases in child care *per se*, education care, and medical care
  - Our estimates  $\Rightarrow$  that PDMPs increase active care by 6 minutes/day and passive care by 12 minutes, *on average*
  - A conservative calculation  $\Rightarrow$  these translate to 45 minutes of active care and 90 minutes passive care, *among parents with substance-use disorders*

# Introduction: This paper

- We find that PDMPs cause parents to substitute towards relatively engaging forms of investment (talking to, playing with, homework)
- Among parents with disabilities or mobility limitations, we find much larger *decreases* in active care, driven by reductions in time spent helping with homework
  - May be driven by cognitive issues associated with pain
  - Heterogeneity along similar dimensions may help reconcile other conflicting findings (e.g., PDMPs *reduce* foster-care but *increase* maltreatment)
- PDMPs are independent of Pill Mill laws, but marijuana laws amplify their positive effects
  - We find that positive effects occur entirely in areas with medical marijuana laws
  - Consistent with evidence that negative effects of OxyContin reformulation concentrated in areas without MML (Evans et al., 2022)

# Data

- Main data source is American Time-Use Survey (Flood et al., 2023)
  - Time diaries that track daily time use in 15 minute increments
  - Report what they are doing and with whom
  - We focus on 2003-2019 and respondents with a child  $< 18$  at home
  - Descriptive statistics not interesting, but available
- Information on timing of adoption of PDMPs is from Horowitz (2020), Kaestner & Ziedan (2019, 2024) and RAND (2024)
  - There are several “definitions” of PDMPs: “Electronic PDMPs,” “Mandated PDMPs,” etc.
  - We focus on “Modern PDMPs,” which are “accessible to any authorized user” (Horowitz, 2020| Kaestner & Ziedan, 2019, 2024)
  - Modern PDMPs have been shown to reduce abuse and prescriptions (Kaestner & Ziedan, 2019, 2024; Wang, 2021)
  - Mandated PDMPs have no effect conditional on Modern PDMPs (Kaestner & Ziedan, 2019, 2024)



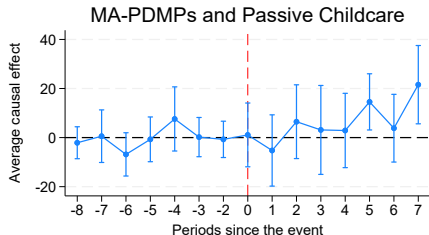
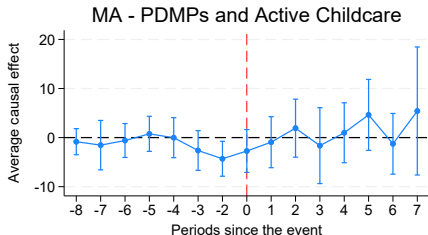
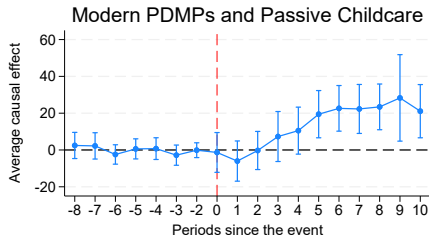
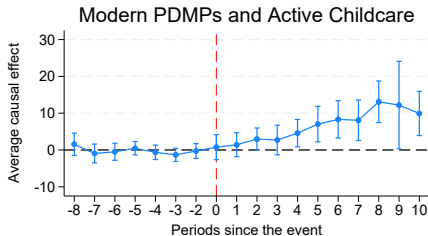
# Empirical strategy

- Parental-time use evolves according to

$$Y_{ist} = \alpha_s + \delta_t + X'_{it}\gamma + W'_{st}\theta + \beta_{it}\text{PDMP}_{st} + \varepsilon_{st}$$

- This embeds a parallel trends assumption and allows for treatment-effect heterogeneity
- $X_{it}$  contains gender, race, age, age<sup>2</sup>, education, and marital status,  $W_{st}$  contains unemployment rate and minimum wage (& other variables described below)
- OLS estimates don't identify a sensible average treatment effect (Goodman-Bacon, 2021)
  - We use 2SDD (Gardner, 2001; Gardner et al. 2024):
    1. Estimate  $Y_{ist} = \alpha_s + \delta_t + X'_{it}\gamma + W'_{st}\theta + \varepsilon_{st}$  in the sample of untreated observations
    2. Regress  $Y_{ist} - \hat{\alpha}_s + \hat{\delta}_t + X'_{it}\hat{\gamma} + W'_{st}\hat{\theta}$  on  $\text{PDMP}_{st}$  to obtain overall ATT (or leads and lags PDMP in event-study models)
  - SEs adjusted for first-stage estimation and clustered at state level

# Baseline results: Event study



Strongly consistent with parallel trends

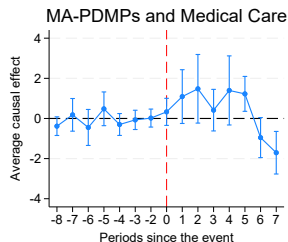
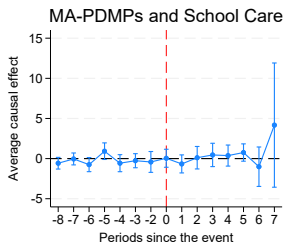
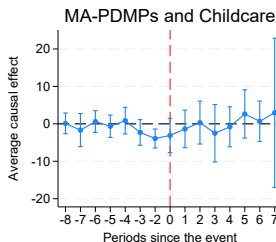
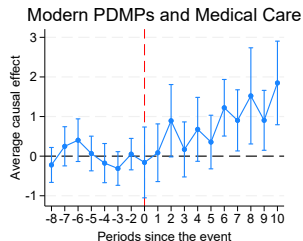
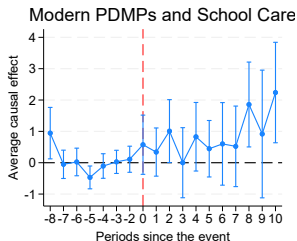
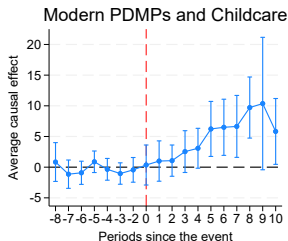
## Baseline results: Effect summaries

	Active Childcare		Passive Childcare	
Modern PDMPs	5.4919*** (1.2966)	6.0441*** (1.2985)	11.0353** (4.5508)	12.3093*** (3.9083)
N	92837	92837	92837	92837
Mandated PDMPs	-0.2808 (2.1232)	0.5301 (1.9310)	0.7067 (4.4048)	3.4435 (3.3911)
N	94468	94468	94468	94468
Controls		X		X

Robustness tests: TWFE Electronic PDMPs

Griesler's (2019) estimate that 13.5% of parents abuse opioids  $\Rightarrow$  effects of 45 and 90 minutes  $\diamond$  Mandated PDMP results consistent with Kaestner & Ziedan, Horowitz

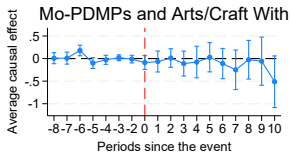
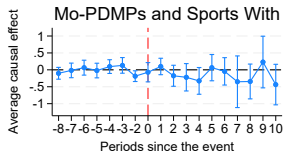
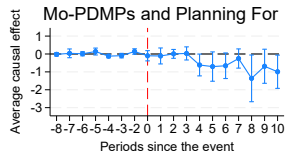
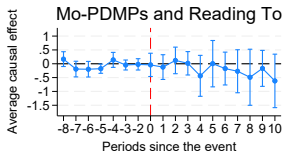
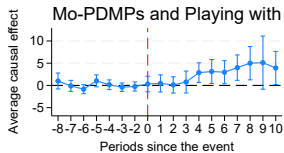
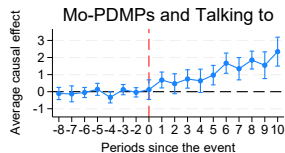
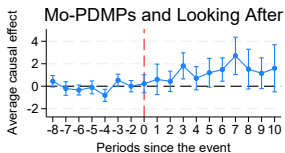
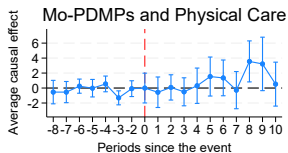
# Active care components: Event studies



# Active care components: Effect summaries

	Childcare		Schooling care		Medical care	
Modern PDMPs	3.8281*** (1.1487)	4.6257*** (1.2503)	0.9035** (0.3698)	0.7696** (0.3646)	0.7603*** (0.2476)	0.6488** (0.2756)
N	92837	92837	92837	92837	92837	92837
Mandated PDMPs	-1.2300 (1.9601)	-0.5180 (1.8191)	0.0766 (0.4464)	0.1071 (0.4351)	0.8727*** (0.2917)	0.9265*** (0.2857)
N	94468	94468	94468	94468	94468	94468
Controls		X		X		X

# Childcare components: Event studies

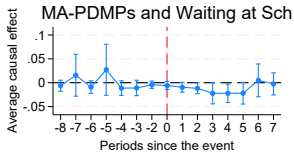
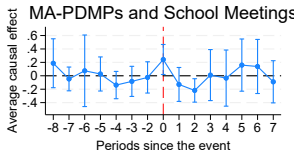
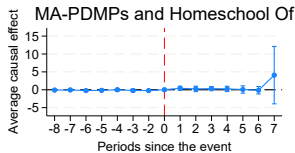
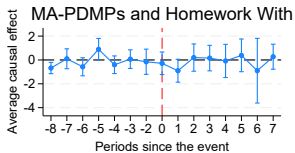
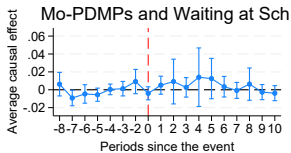
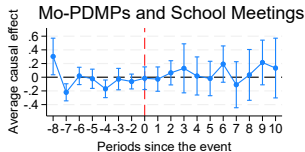
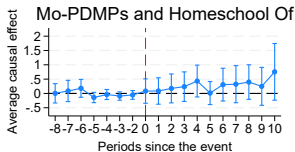
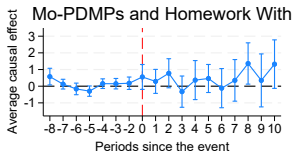


## Childcare components: Effect summaries

	Physical care	Looking after	Talking to	Playing with
Modern PDMPs	0.8960 (0.5850)	1.2050*** (0.3372)	1.0746*** (0.1893)	2.2968*** (0.8090)
N	92837	92837	92837	92837
	Reading to	Planning for	Sports with	Arts/Crafts
Modern PDMPs	-0.1559 (0.2021)	-0.4238*** (0.1190)	-0.1447 (0.1207)	-0.1223 (0.1186)
N	92837	92837	92837	92837

Mandated results omitted ◇ Suggests substitution towards relatively “engaging” activities

# Education care components: Event studies





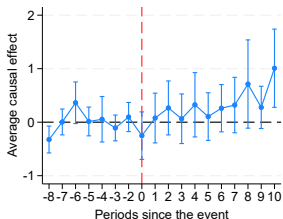
# Education care components: Effect summaries

	Homework	Homeschooling	Meetings for school	Waiting at school
Modern PDMPs	0.4475 (0.3576)	0.2286 (0.1973)	0.0713 (0.0856)	0.0046 (0.0040)
N	92837	92837	92837	92837
Mandated PDMPs	-0.1684 (0.3913)	0.3186 (0.2171)	-0.0535 (0.0802)	-0.0154** (0.0068)
N	94468	94468	94468	94468

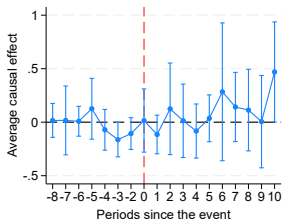
Increases (from event study) in homework and decreases in waiting at school also suggest substitution towards more engaging activities

# Medical care components: Event studies

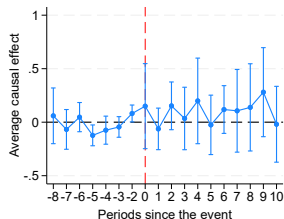
Mo-PDMPs and Provide Medicare



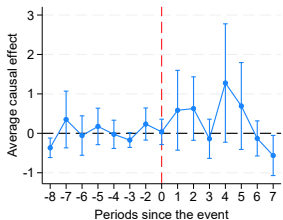
Mo-PDMPs and Obtain Medicare



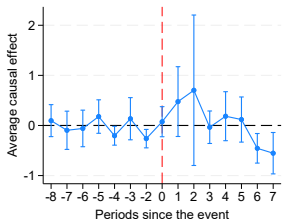
Mo-PDMPs and Wait for Medicare



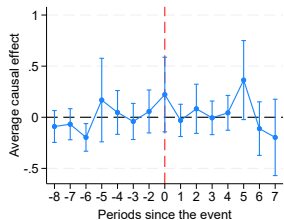
MA-PDMPs and Provide Medicare



MA-PDMPs and Obtain Medicare



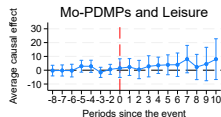
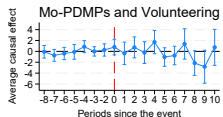
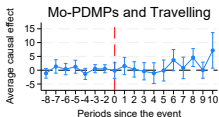
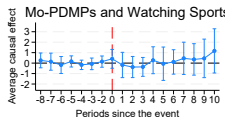
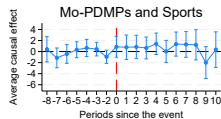
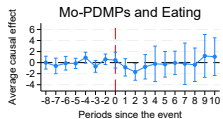
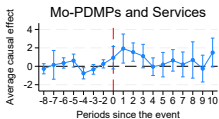
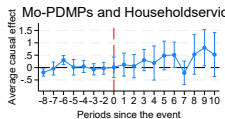
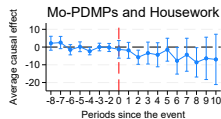
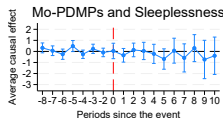
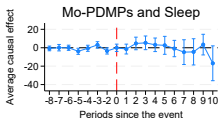
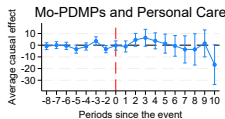
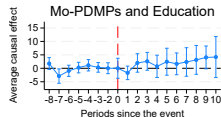
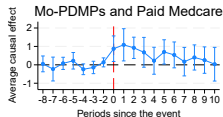
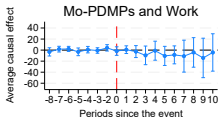
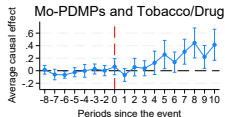
MA-PDMPs and Wait for Medicare



## Medical care components: Effect summaries

	Providing	Obtaining	Waiting for
Modern PDMPs	0.2169 (0.1730)	0.0669 (0.1179)	0.0940 (0.1112)
N	92837	92837	92837
Mandated PDMPs	0.5211** (0.2204)	0.2523 (0.2099)	0.0439 (0.0675)
N	94468	94468	94468

# Other uses of adult time: Event studies



# Other uses of adult time: Effect summaries

	Tobacco/drug use	Work	Work (2)	Paid medical care	Education	Personal care
Modern PDMPs	0.1603*** (0.0421)	-6.6015 (6.0530)	-7.3085 (6.2635)	0.6448*** (0.1985)	1.4230 (1.3287)	0.0248 (2.7248)
N	92837	92837	92837	92837	92837	92837
	Sleep	Sleeplessness	Housework	Services	Household services	Home production
Modern PDMPs	-0.0736 (3.1609)	-0.1858 (0.2678)	-4.4681** (1.8496)	0.9578** (0.4117)	0.2652 (0.1829)	-4.6288 (5.4184)
N	92837	92837	92837	92837	92837	92837
	Eating	Sports	Watching sports	Volunteering	Travel	Leisure
Modern PDMPs	-0.2674 (0.7458)	0.6931 (0.5698)	0.1417 (0.3265)	0.0076 (0.5713)	1.3522 (0.9983)	4.1491** (1.8481)
N	92837	92837	92837	92837	92837	92837

Mandatory results omitted from here forward ◇ ATUS don't decompose tobacco drug use ◇ Consistent with evidence on substitution towards other substances ◇ Paid medical care might  $\Rightarrow$  addiction treatment or alternative pain treatment (consistent with Neumark and Savych, 2023) ◇  $\downarrow$  housework &  $\uparrow$  services also consistent with substitution towards "quality time"

# Effect summaries by gender

		Women				
		Active childcare	Passive childcare	Childcare	Schooling care	Medical care
Modern PDMPs		3.2718** (1.5002)	4.8405 (4.4494)	2.2873 (1.5050)	0.0852 (0.5964)	0.8993** (0.3970)
N		53452	53452	53452	53452	53452
		Men				
		Active childcare	Passive childcare	Childcare	Schooling care	Medical care
Modern PDMPs		10.5344*** (1.8028)	21.5620*** (4.8561)	8.5386*** (1.6057)	1.5611*** (0.3348)	0.4347 (0.3230)
N		39379	39379	39379	39379	39379

Larger effects for men suggest intrahousehold substitution and that men have more leeway to adjust their time use vis-a-vis childcare

# Effect summaries by marital status

Married					
	Active childcare	Passive childcare	Childcare	Schooling care	Medical care
Modern PDMPs	7.1548*** (1.8968)	18.7067*** (4.1350)	5.0741*** (1.8475)	1.1795** (0.5767)	0.9012** (0.3640)
N	58121	58121	58121	58121	58121
Single					
	Active childcare	Passive childcare	Childcare	Schooling care	Medical care
Modern PDMPs	2.6176* (1.3607)	-2.1213 (6.6576)	2.3418* (1.3314)	0.1093 (0.3210)	0.1665 (0.4274)
N	34716	34716	34716	34716	34716

Suggests single parents more time constrained (although they still increase childcare time)

# Effect summaries by race

		White				
		Active childcare	Passive childcare	Childcare	Schooling care	Medical care
Modern PDMPs		5.6372*** (1.5562)	10.1478** (5.1292)	4.5583*** (1.3895)	0.4577 (0.3483)	0.6212* (0.3293)
N		76005	76005	76005	76005	76005
		Black				
		Active childcare	Passive childcare	Childcare	Schooling care	Medical care
Modern PDMPs		4.4402 (5.0634)	-2.9843 (14.4728)	2.4356 (5.0263)	0.8159 (1.0266)	1.1888* (0.6350)
N		9819	9819	9819	9819	9819

Consistent with Gihleb, Giuntella and Zhang's (2019) findings that foster-care reductions are mostly for white families



# Effect summaries by # of children

Controlling for number of children					
	Active childcare	Passive childcare	Childcare	Schooling care	Medical care
Modern PDMPs	5.4964*** (1.2309)	10.5815*** (3.5083)	4.2101*** (1.1933)	0.6651* (0.3848)	0.6212** (0.2701)
N	92837	92837	92837	92837	92837
One child					
	Active childcare	Passive childcare	Childcare	Schooling care	Medical care
Modern PDMPs	7.6280*** (2.6847)	6.8620 (4.8342)	6.8101** (2.7109)	0.4533 (0.3328)	0.3646 (0.3383)
N	38124	38124	38124	38124	38124

# Effect summaries by # of children

More than one child					
	Active childcare	Passive childcare	Childcare	Schooling care	Medical care
Modern PDMPs	4.6437* (2.6348)	16.0165*** (3.4115)	2.8334 (2.5786)	0.9699* (0.5222)	0.8404** (0.3892)
N	54713	54713	54713	54713	54713
More than two children					
	Active childcare	Passive childcare	Childcare	Schooling care	Medical care
Modern PDMPs	4.3687 (4.2024)	16.8740*** (5.1217)	1.6270 (4.0378)	0.4548 (0.9239)	2.2869*** (0.5747)
N	19324	19324	19324	19324	19324

Smaller active and larger passive effects for families with more kids suggests subject to time constraints

# Effect summaries by age of child

Youngest child $\geq 6$					
	Active childcare	Passive childcare	Childcare	Schooling care	Medical care
Modern PDMPs	8.4356*** (2.8422)	30.3170*** (4.4853)	5.3960** (2.6257)	1.3190*** (0.3950)	1.7206*** (0.5712)
N	38936	38936	38936	38936	38936
Youngest child $< 6$					
	Active childcare	Passive childcare	Childcare	Schooling care	Medical care
Modern PDMPs	3.9400*** (1.0001)	0.4534 (4.1660)	3.6231*** (1.0267)	0.4464 (0.5848)	-0.1295 (0.2780)
N	53901	53901	53901	53901	53901

Also: Time of week

# Effect summaries by disability status

		Parents with disabilities				
		Active childcare	Passive childcare	Childcare	Schooling care	Medical care
Modern PDMPs		-134.1909*** (33.7290)	109.2377*** (39.8148)	32.4439*** (10.9570)	-168.9670*** (38.8682)	2.3323 (4.6763)
N		2620	2620	2620	2620	2620
		Parents with difficulty climbing stairs				
		Active childcare	Passive childcare	Childcare	Schooling care	Medical care
Modern PDMPs		-161.0662*** (31.1485)	45.9037** (22.0591)	35.6759*** (10.4367)	-194.6546*** (39.6430)	-2.0875 (5.4720)
N		1322	1322	1322	1322	1322

Differential effect size might be because there is a greater intention to treat in these subpopulations

# Effect summaries by disability status: components

Childcare				
	Physical care	Looking after	Talking to	Playing with
Modern PDMPs	11.8789*** (3.5712)	11.2419*** (2.6013)	9.0791*** (3.2002)	3.3041 (6.8147)
N	2620	2620	2620	2620
	Reading to	Planning for	Sports with	Arts/Crafts
Modern PDMPs	-3.6906*** (1.1353)	1.0319 (1.0387)	-0.5589 (0.6597)	0.1574 (0.2507)
N	2620	2620	2620	2620

Mobility status

# Effect summaries by disability status: Components

		Schooling care			
		Homework	Homeschooling	Meetings for school	Waiting at school
Modern PDMPs		-169.6475*** (39.5636)	-0.4089 (1.2993)	0.5202 (0.7554)	0.0025 (0.0025)
N		2620	2620	2620	2620
		Medical care			
		Providing	Obtaining	Waiting for	
Modern PDMPs		2.2526 (1.6263)	2.4856 (2.2918)	-2.4955 (2.9618)	
N		2620	2620	2620	

Childcare *per se*  $\uparrow$ s  $\diamond$   $\downarrow$ s in reading, homework suggest a shift away from cognitive activities (maybe pain or addiction)  $\diamond$  Heterogeneity w.r.t. underlying conditions is crucial for *direction* of effect  $\diamond$  May help reconcile, e.g.,  $\downarrow$  foster-care (Gihleb et al. 2019) but  $\uparrow$  maltreatment (Evans et al., 2022)

# Effect summaries: Pill Mill laws

	Controlling for Pill Mill laws				
	Active childcare	Passive childcare	Childcare	Schooling care	Medical care
Modern PDMPs	5.1354*** (1.3686)	6.2917 (3.9558)	3.5891*** (1.2817)	0.8016** (0.3599)	0.7448*** (0.2732)
N	92837	92837	92837	92837	92837
	Interactions				
	Active childcare	Passive childcare	Childcare	Schooling care	Medical care
Modern PDMPs	4.5254*** (1.4654)	7.9723** (3.9755)	3.3460** (1.3892)	0.6964* (0.3659)	0.4830 (0.3050)
Modern PDMPs×PML	3.2013 (4.1856)	-8.8194 (7.0025)	1.2758 (4.0945)	0.5516 (0.5821)	1.3739*** (0.5098)
N	92837	92837	92837	92837	92837

Effects of PDMP are independent of PMLs

# Effect summaries: Medical marijuana

	Controlling for medical marijuana laws				
	Active childcare	Passive childcare	Childcare	Schooling care	Medical care
Modern PDMPs	5.0779*** (1.2501)	6.8076** (3.3492)	3.6916*** (1.2144)	0.7068* (0.3913)	0.6795** (0.2913)
N	92837	92837	92837	92837	92837
	Interactions				
	Active childcare	Passive childcare	Childcare	Schooling care	Medical care
Modern PDMPs	2.3217 (1.6173)	4.5246 (3.7730)	1.2060 (1.3840)	0.7467** (0.3513)	0.3691 (0.2967)
Modern PDMPs×MML	6.7675*** (1.884)	11.1883** (5.6822)	6.1199*** (1.5531)	0.0273 (0.2741)	0.6204 (0.4859)
N	92837	92837	92837	92837	92837

For most outcomes, positive effects of PDMPs only accrue in MML states ◇ Consistent with Evan et al.'s (2022) finding for OxyContin reformulation



# Effect summaries: Recreational marijuana

Controlling for recreational marijuana Laws					
	Active childcare	Passive childcare	Childcare	Schooling care	Medical care
Modern PDMPs	5.4328*** (1.2634)	3.6413 (4.8455)	3.8238*** (1.1718)	0.6986** (0.3056)	0.9105*** (0.2769)
N	92837	92837	92837	92837	92837
Interactions					
	Active childcare	Passive childcare	Childcare	Schooling care	Medical care
Modern PDMPs	4.3193*** (1.3272)	7.2018* (4.3629)	3.0865** (1.2201)	0.6732* (0.3661)	0.5596* (0.2904)
Modern PDMPs×RML	11.2230*** (1.7460)	26.0059*** (4.1746)	9.2657*** (1.5523)	1.0161* (0.5349)	0.9412*** (0.2827)
N	92837	92837	92837	92837	92837

PDMPs have an independent effect amplified by RML ◇ Medical use (and ability to write prescription) might be important for substitution away from opioids to marijuana

# Effect summaries: Treatment center admissions

Cocaine, heroin, methamphetamines, and alcohol					
	Active childcare	Passive childcare	Childcare	Schooling care	Medical care
Modern PDMPs	3.6789** (1.5969)	9.2351*** (3.5172)	2.2743 (1.4240)	0.6769 (0.4244)	0.7277** (0.3601)
N	91669	91669	91669	91669	91669
All drugs					
	Active childcare	Passive childcare	Childcare	Schooling care	Medical care
Modern PDMPs	3.7347* (2.2611)	8.8005** (4.1969)	2.3505 (2.2223)	0.6611 (0.4343)	0.7231 (0.4499)
N	91669	91669	91669	91669	91669

Smaller average effects might imply larger overall effects in areas with greater tendencies towards substance abuse

# Conclusion

- Unambiguous new evidence that PDMPs have positive consequences for child welfare
  - Increases in childcare, education care, and medical care
  - Substitution towards “quality time”
- Time use is an important measure of parental investment, a key determinant of cognitive development
- Heterogeneity is critical, parents with disabilities and mobility issues experience large *declines* in time use
- PDMPs interact with other substance-abuse policies
  - Marijuana laws amplify the positive effects of PDMPs
  - Positive effects occur entirely in areas with MML

**Appendix slides**

# Descriptive statistics [Back](#)

	N	Mean	Std. Dev.	Min	Max
Active Childcare	92837	60.88	100.2	0	1151
Passive Childcare	92837	289.56	275.44	0	1440
Childcare	92837	53.93	93.59	0	1140
Child's School care	92837	5.3	23.99	0	640
Child's Medical care	92837	1.65	19.48	0	1045
White	92837	0.82	0.39	0	1
Age	92837	37.09	12.23	15	85
Age of Youngest Child	92837	7.52	5.31	0	17
Female	92837	0.58	0.49	0	1
Married	92837	0.63	0.48	0	1
High School	92837	0.81	0.39	0	1
Some College	92837	0.59	0.49	0	1
College	92837	0.33	0.47	0	1

# Baseline results: TWFE estimates [Back](#)

	Active Childcare	Passive Childcare	Childcare	Schooling care	Medical care
Modern PDMPs	0.6571 (1.1600)	-4.5191 (3.2833)	0.0291 (1.1621)	0.5160** (0.2427)	0.1119 (0.2478)
N	92837	92837	92837	92837	92837
Mandated PDMPs	0.503 (1.9687)	3.5536 (3.4209)	-0.4805 (1.8710)	0.0354 (0.4237)	0.9480*** (0.2990)
N	94468	94468	94468	94468	94468

# Baseline results: Electronic PDMPs

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	Active childcare	Passive childcare	Childcare	Schooling care	Medical care
Electronic PDMPs	3.8392*** (1.1310)	4.7130* (2.7414)	3.2026*** (1.1416)	0.2386 (0.3085)	0.3979 (0.3480)
N	50148	50148	50148	50148	50148

# Effect summaries by mobility status: Components

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	Childcare			
	Physical care	Looking after	Talking to	Playing with
Modern PDMPs	0.5937 (4.9630)	13.1891*** (4.3219)	14.1533*** (4.5507)	7.6039 (4.8505)
N	1322	1322	1322	1322
	Reading to	Planning for	Sports with	Arts/Crafts
Modern PDMPs	0.2138 (1.0376)	0.9453* (0.5604)	-0.7292 (1.2423)	-0.2940 (0.3067)
N	1322	1322	1322	1322



# Effect summaries by mobility status: Components

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Schooling care				
	Homework	Homeschooling	Meetings for school	Waiting at school
Modern PDMPs	-194.6219*** (39.7219)	-0.6701 (1.6203)	0.4691** (0.2014)	0.0049 (0.0050)
N	1322	1322	1322	1322
Medical care				
	Providing	Obtaining	Waiting for	
Modern PDMPs	-0.9788 (2.4470)	0.6475 (1.8620)	-1.7562 (3.7916)	
N	1322	1322	1322	

# Effect summaries by time of week

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		Weekdays				
		Active childcare	Passive childcare	Childcare	Schooling care	Medical care
Modern PDMPs		5.6349*** (1.8022)	11.3859* (6.0744)	3.3161* (1.7721)	0.7474 (0.5051)	1.5714*** (0.3543)
N		45796	45796	45796	45796	45796
		Weekends				
		Active childcare	Passive childcare	Childcare	Schooling care	Medical care
Modern PDMPs		6.4047*** (2.0174)	9.5951** (4.6467)	5.7113*** (1.9881)	0.8782* (0.4994)	-0.1848 (0.3610)
N		47041	47041	47041	47041	47041