

Prescription Drug Monitoring Program: Research Update

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Overview

- Literature synthesis (Delcher)
 - June 2020 to current (~ 2.5 years)
 - Previously published June 2018 to December 2019 (~ 1.5 years)
 - PubMed Search term: “Prescription drug monitoring program”

Literature Synthesis

- Systematic Reviews involving PDMPs (n=8)
 - Picco L et al. (2021)
- PDMPs as the target of evaluation
 - Must-access laws (n=18)
 - Earlywine et al. (2020)
 - Arnold et al. (2021)
 - Getting must-access dates still hard!
 - Horwitz et al. (2021)
 - PDMP as component of opioid policies (n=16)
 - Florida is still a focal point and controversial (n=3)
 - Tatar et al. (2022)

Literature Synthesis

- **Electronic health record integration (n=9)**
 - Neprash et al. (2022)
- **Advanced methods for PDMP data (n=8)**
 - Thompson et al. (2022)

Literature Synthesis

- PDMP used to monitor clinical outcomes
 - Opioid use (n=31)
 - Overdose (n=5)
- PDMP user surveys (n=23)
 - Mandates (n=4)

Literature Synthesis

- PDMP query behaviors (n=8)
- PDMPs as the data source
 - Studies using unlinked PDMP data
 - Prescribing Trends (n=16)
 - ❑ Tserregounis et al. (2021)
 - ❑ Tserregounis et al. (2022)
 - PDMP-only predictors (n=7)
 - ❑ Tserregounis et al. (2021)
 - Directly linked to other data sources (n=7)

Other random observations

- First PDMP study from China
- Cannabis and gabapentin
- Surgical population opioid monitoring
- Delcher C, Bae J, Wang Y, Doung M, Fink DS, Young HW. Defining “Doctor Shopping” with Dispensing Data: A Scoping Review. *Pain Medicine*. (2021)

Picco et al. (2021)

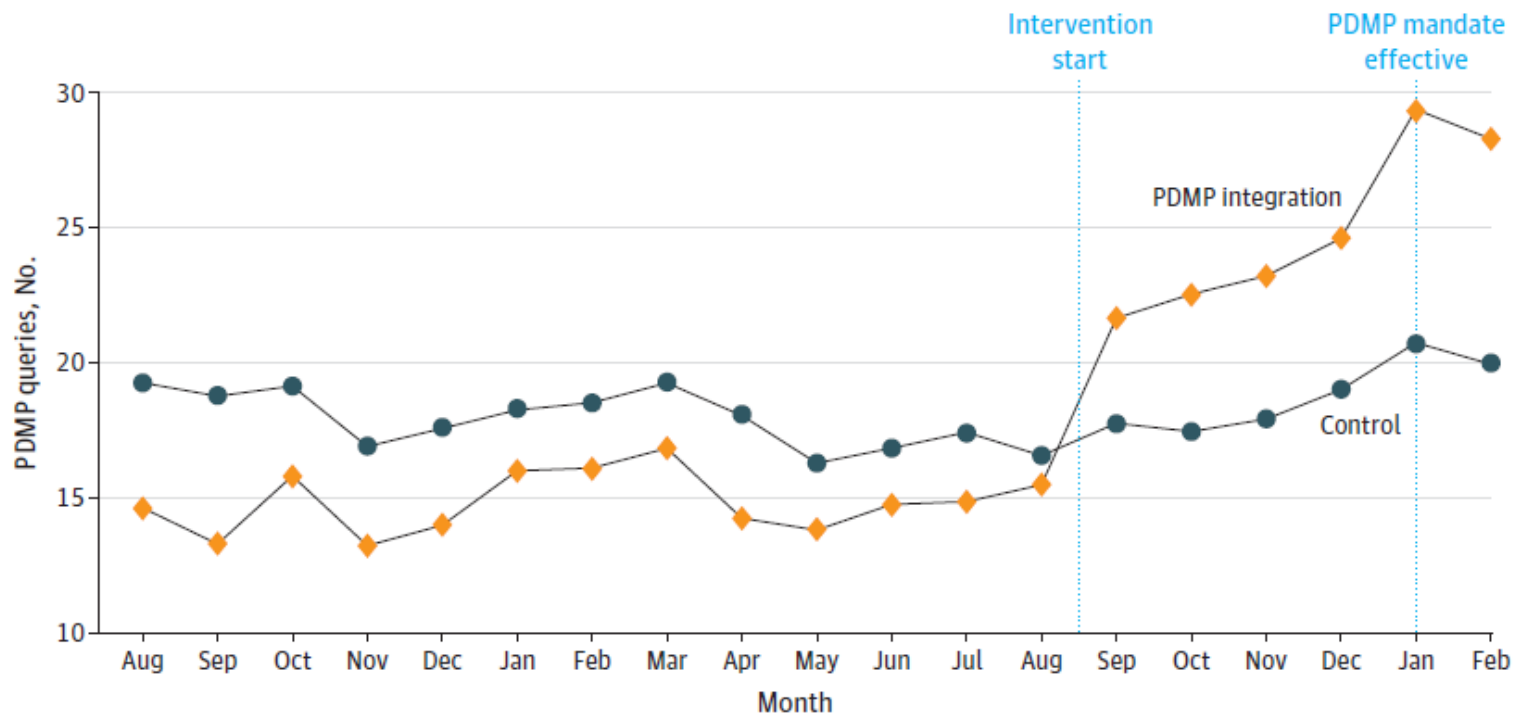
Table 3: Meta-analyses (random effect model)

Clinical decision	Prevalence	Lower CI (95%)	Upper CI (95%)	Cochran's Q	I ²	Tau ₂	No. of studies	Total sample size
Decreased prescribing*	53%	0.39	0.68	817.28	98.7	0.06	12	2877
Increased prescribing*	19%	0.05	0.34	230.17	98.3	0.03	5	840
Prescribe alternative medication	37%	0.13	0.61	1333.07	99.6	0.09	6	2605

*Source categories are not mutually exclusive

Neprash et al. (2022)

Figure 2. Clinician-Level Monthly Queries to the Prescription Drug Monitoring Program (PDMP), by Study Group



Tatar et al. (2022)

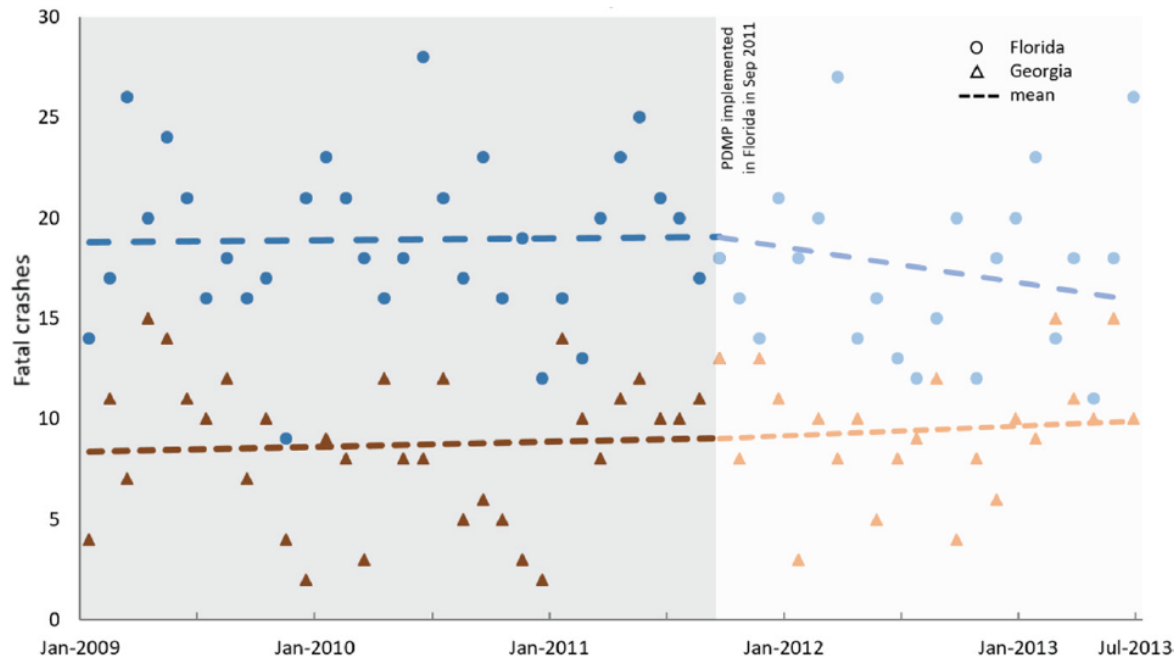
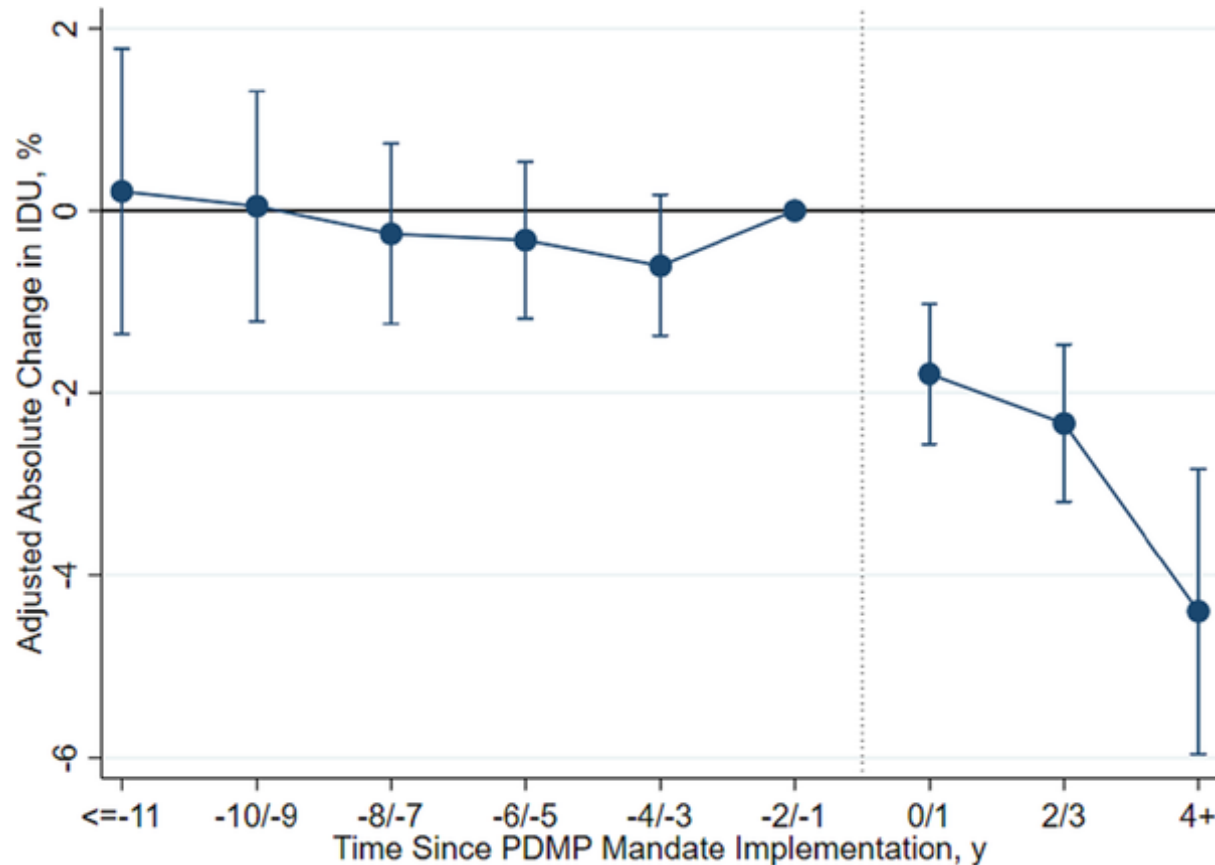


Figure 1 Average prescription drug-related vehicle crashes in Florida and Georgia before and after Prescription Drug Monitoring Program (PDMP) implementation in Florida.

Tatar M, Jalali MS, Tak HJ, Chen LW, Araz OM, Wilson FA. Impact of Florida's prescription drug monitoring program on drug-related fatal vehicle crashes: a difference-in-differences approach. *Inj Prev.* 2022;28(2):105-109. doi:10.1136/injuryprev-2020-0441132.

Earlywine et al. (2020)

Fig 1. Event study estimates for the association of PDMP mandate implementation with adolescent IDU relative to comparison states.



Earlywine JJ, Hadland SE, Raifman J. State-level prescription drug monitoring program mandates and adolescent injection drug use in the United States, 1995-2017: A difference-in-differences analysis. PLOS MEDICINE. 2020;17(9). doi:10.1371/journal.pmed.1003272

Arnold et al. (2021)

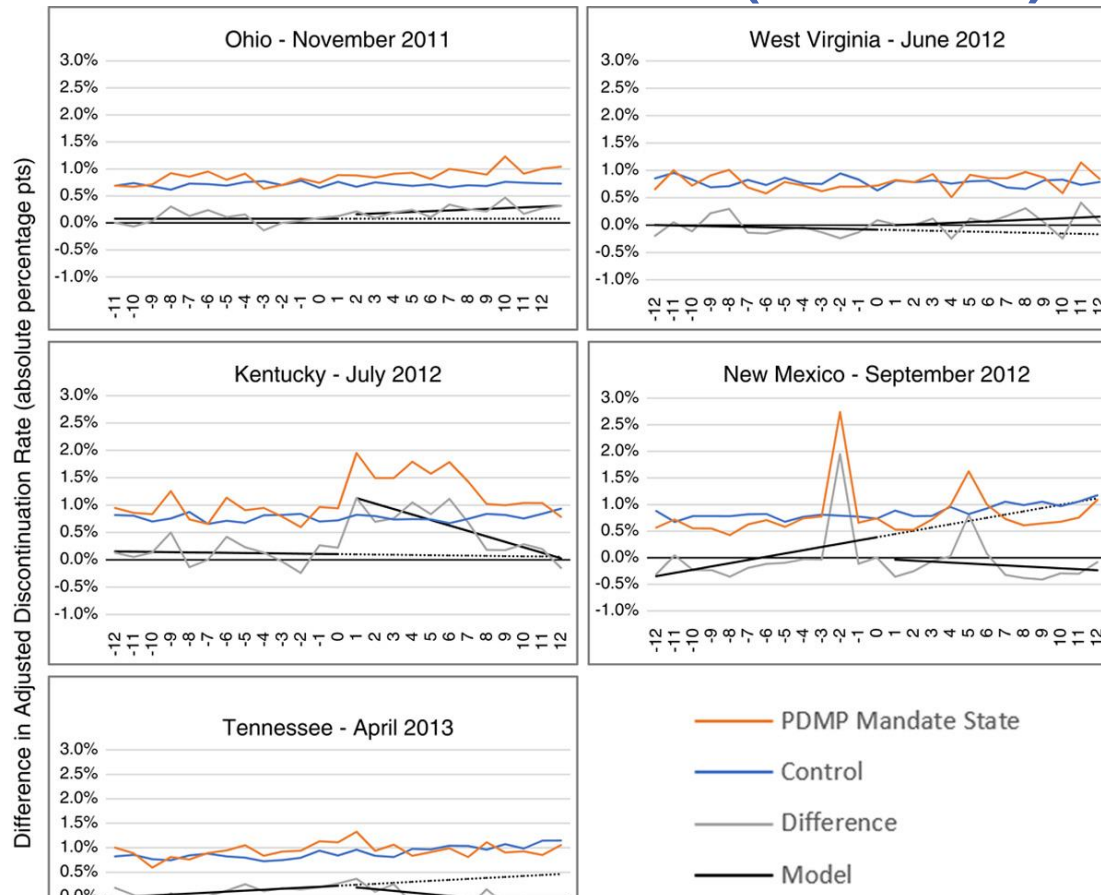
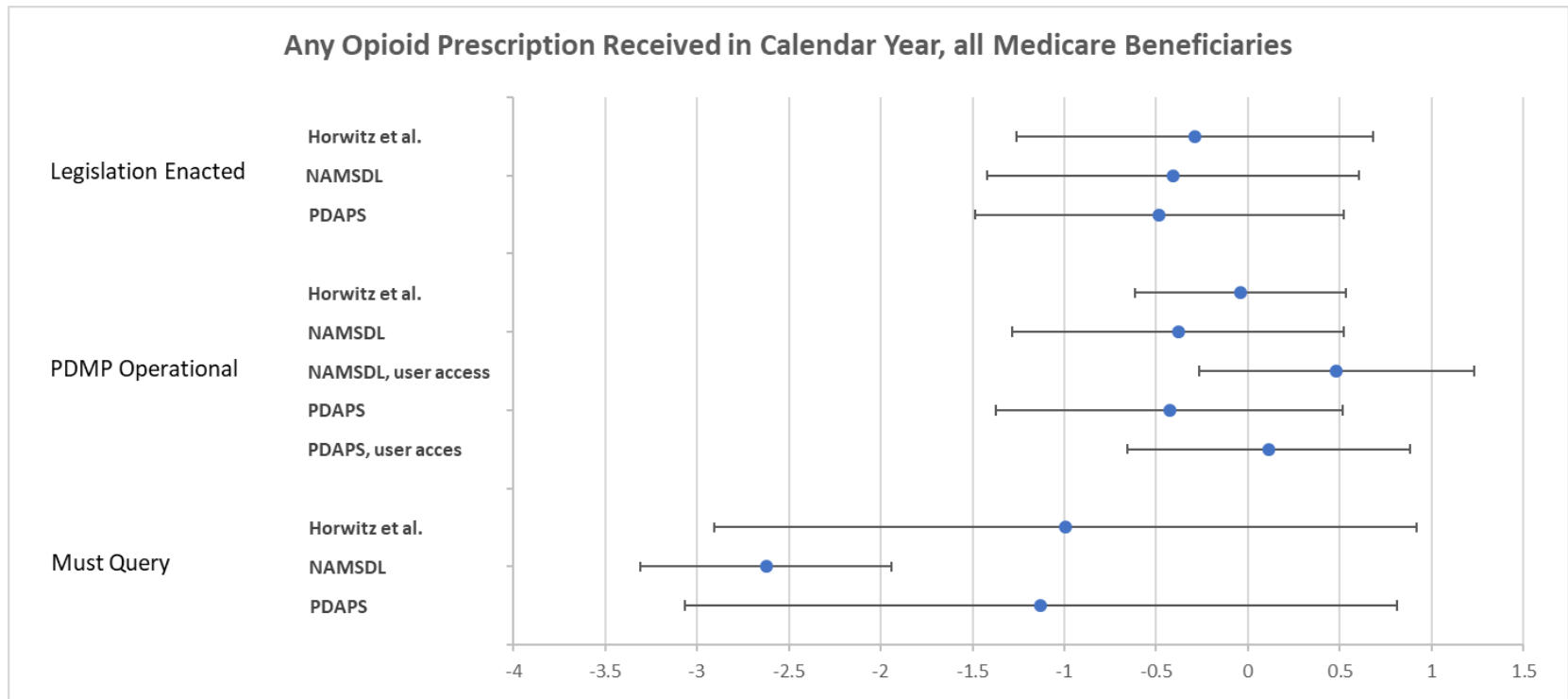


FIGURE 2. Comparative interrupted time-series modeling of the difference in discontinuation of Veterans Affairs–prescribed chronic opioid therapy between states with a prescriber prescription drug monitoring program (PDMP) mandate and their pooled neighbor controls. Each state is modeled separately, centered around the month of the PDMP mandate implementation (listed in the graph titles). The counterfactual line is a continuation of the model from the pre mandate period without the mandate associated terms included.

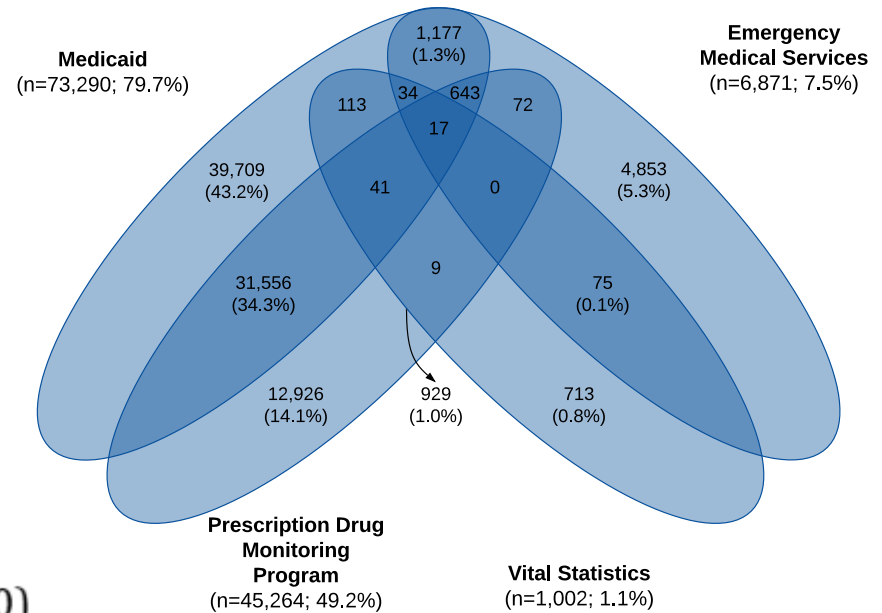
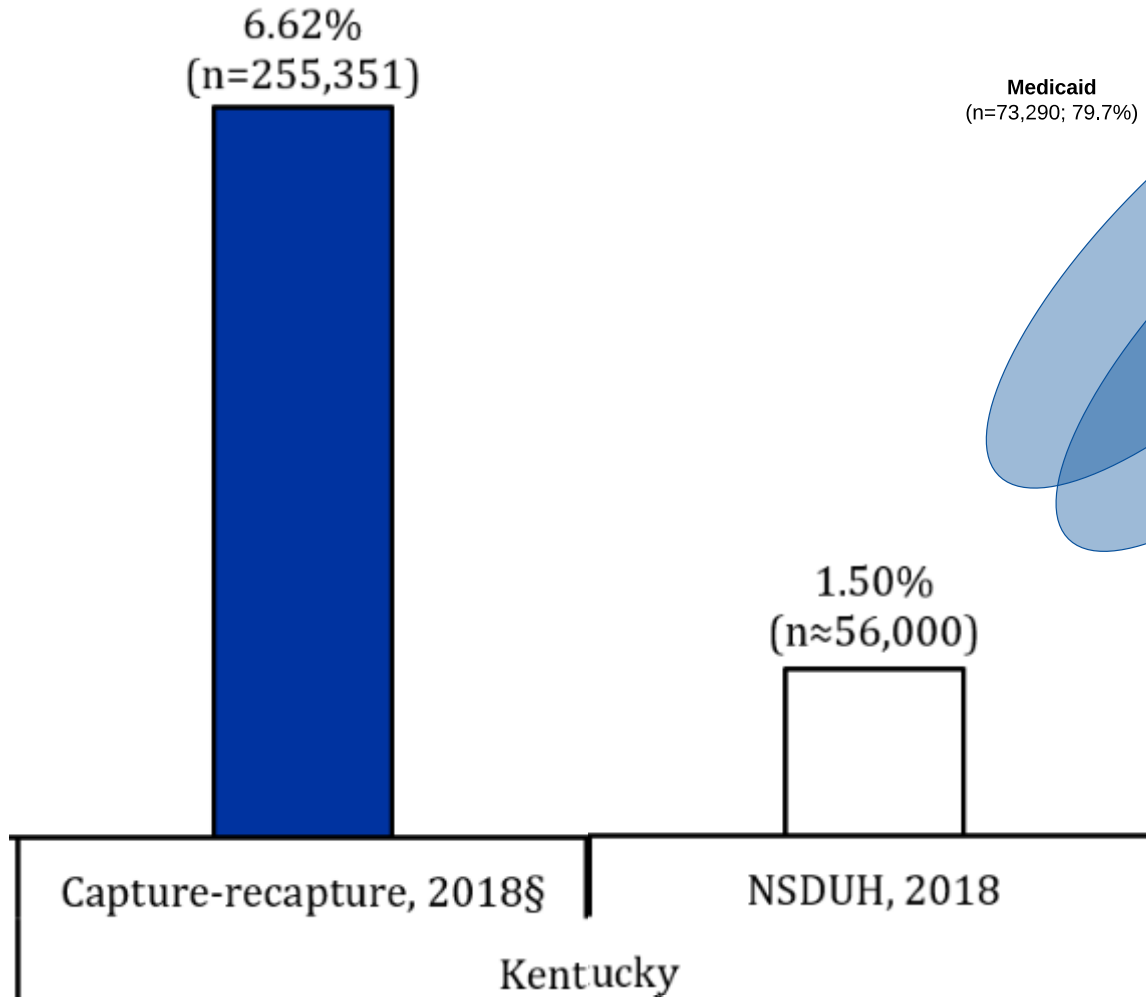
Horwitz et al. (2021)

Figure 1. Any Opioid Prescription Received in Calendar Year Among all Medicare, Percentage Point Change When PDMP is Enacted, Operational, or Requires Query



Notes: Mean percent of beneficiaries filling any prescription for opioids = 32.34 (SD 46.78).

Thompson et al. (2022)



Thank you!

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