
The Effects of the Opioid Crisis on Employment: Evidence from Labor Market Flows

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Paper here:



Motivation

- Opioid crisis is immense, higher in areas with employment declines
- Slow employment recovery from the Great Recession
- Previous studies have looked at effects of opioids on employment levels, but none has looked at the labor market *flows* – yet these monthly flows can affect the employment rate with delay

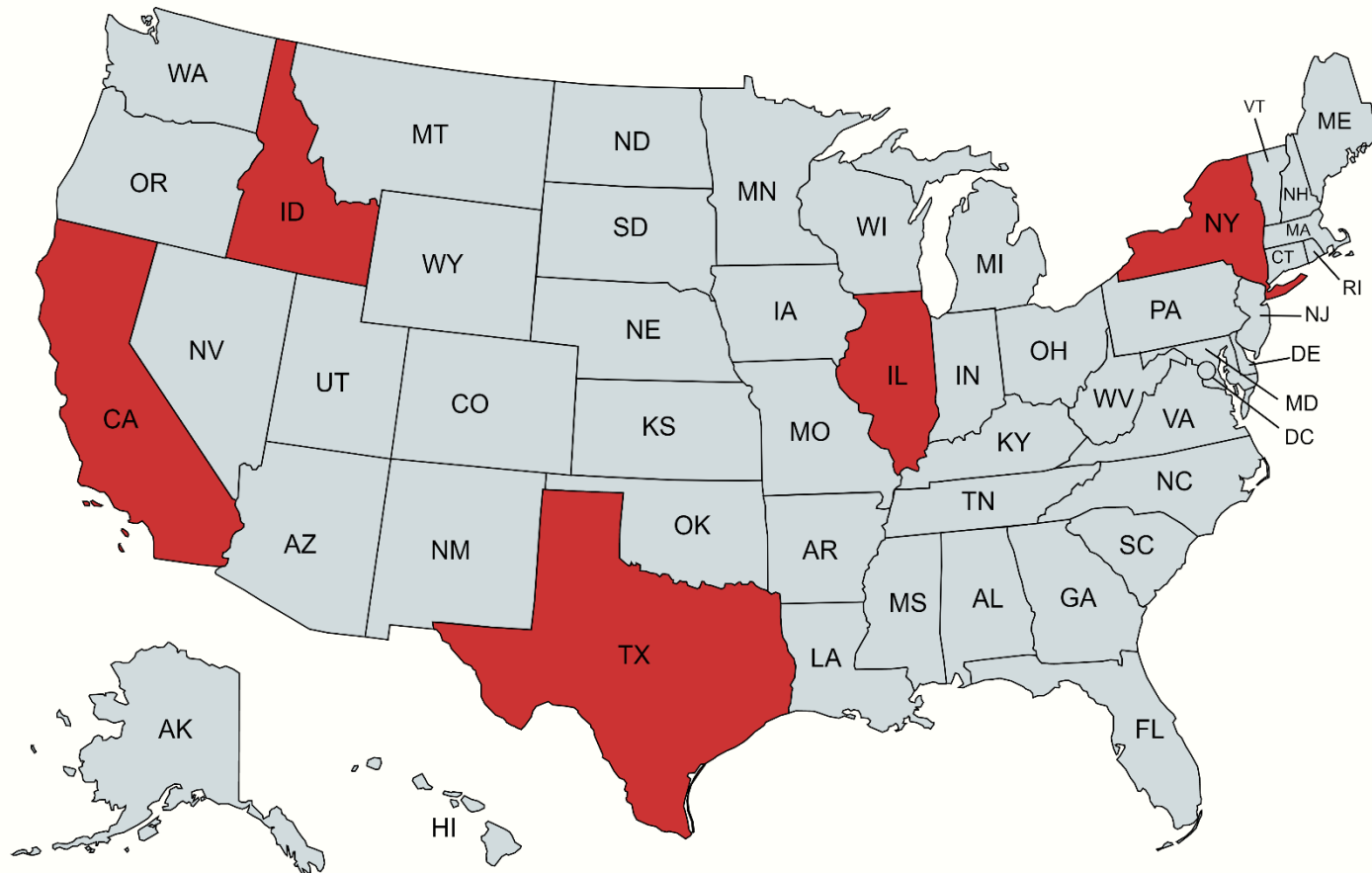
Research Q: what is the effect of the opioid crisis on employment?

Challenge: reverse causality, common causes

Solution: compare states with different levels of opioid crisis stemming from pre-crisis prescribing regulations

Background

Five states had triplicate prescribing regulations already in force by 1996, so provide a natural experiment to opioid availability

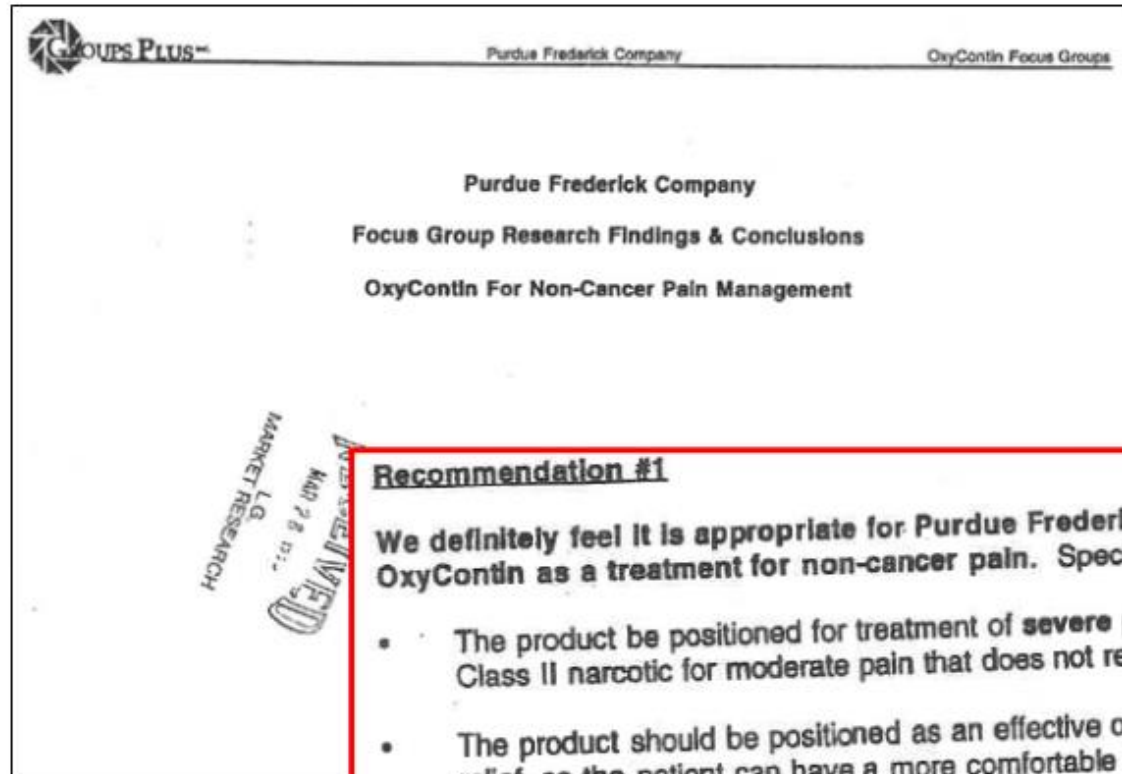


Triplicate regulations for controlled substances; copies with pharmacy; doctor; state

Purdue Pharma viewed them as obstacle to OxyContin uptake -- essentially no marketing of OxyContin to states with triplicate laws in 1996

The small number of states with such regulation requires special treatment in the statistical analysis, which we are careful to implement.

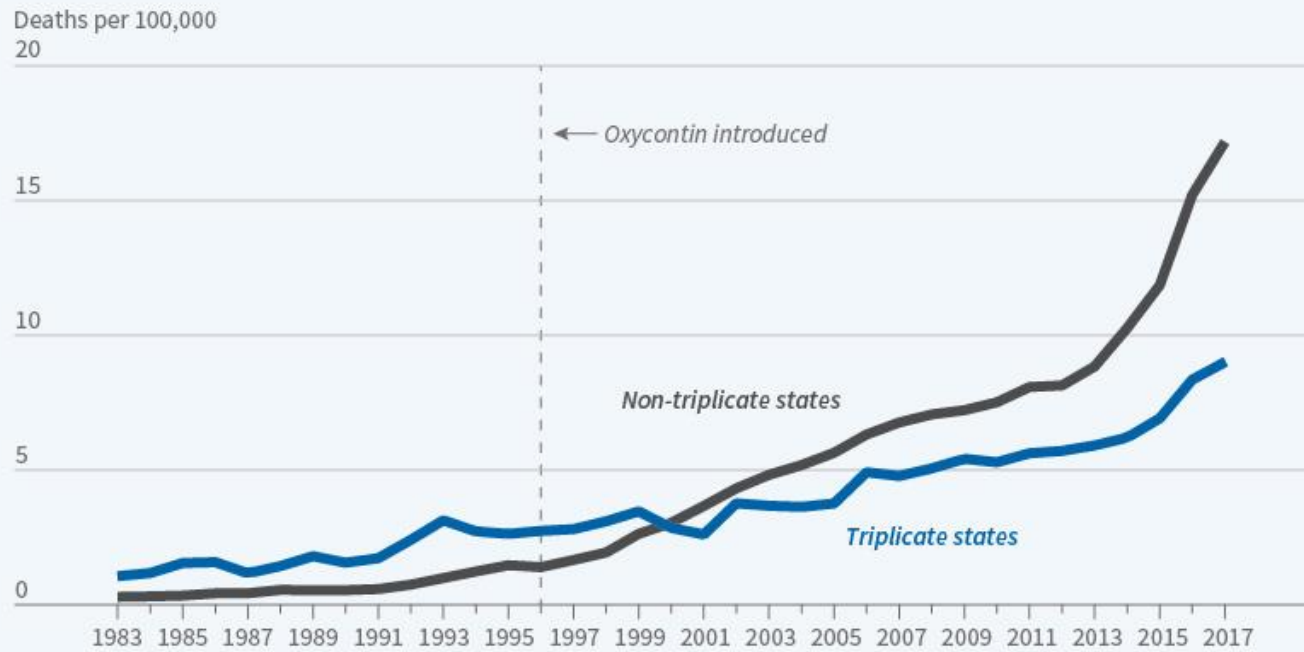
Figure A1: Example of Purdue Pharma Focus Group Recommendations



From paper: Alpert, Abby, William N. Evans, Ethan MJ Lieber, and David Powell. "Origins of the opioid crisis and its enduring impacts." *The Quarterly Journal of Economics* 137, no. 2 (2022): 1139-1179.

Triplicate regulations had large protective effect over opioid prescribing

Opioid Overdose Deaths, 1983–2017

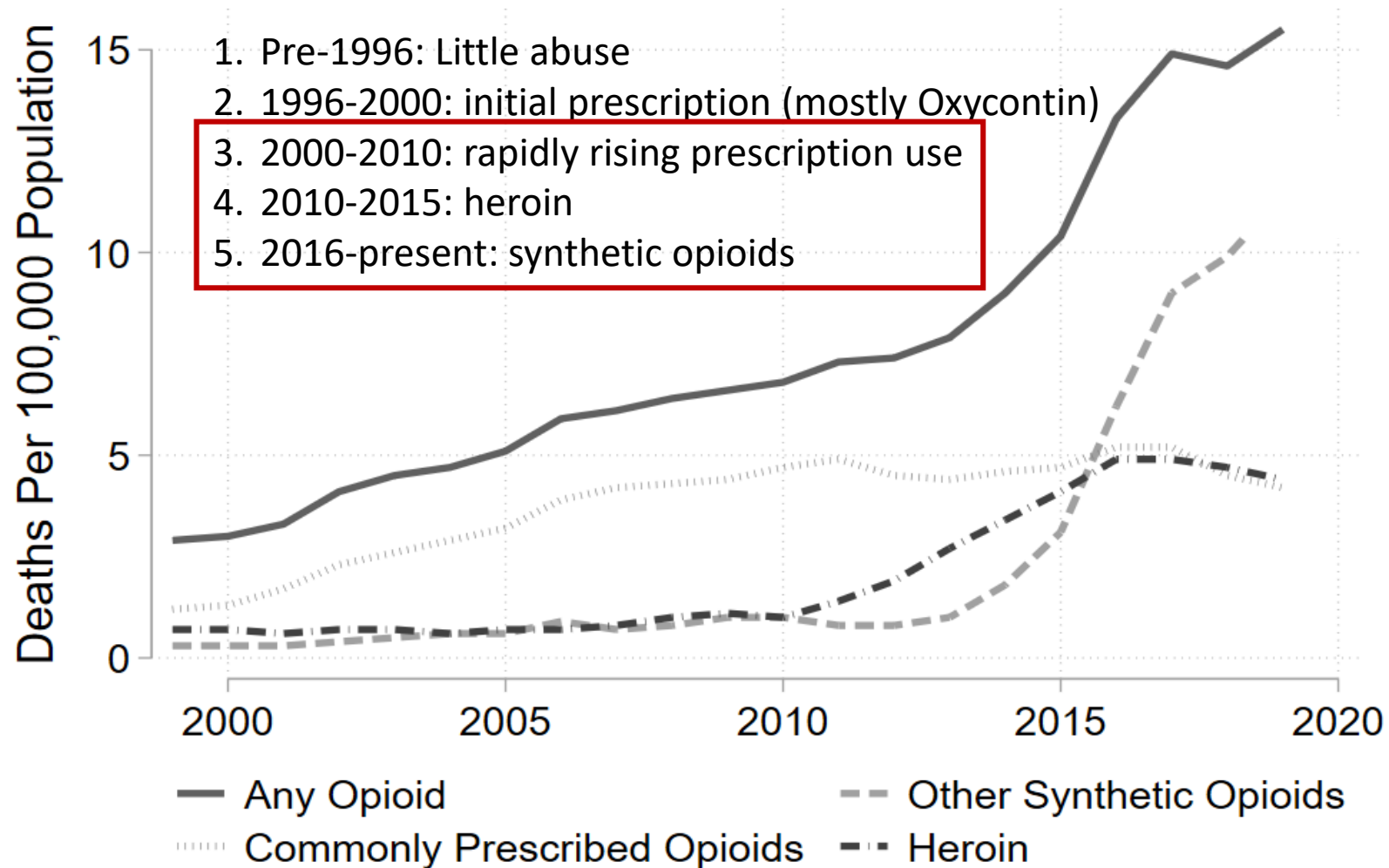


Triplicate prescription programs require doctors to write prescriptions for some controlled substances using multiple copies, with the extra copies retained by the doctor and the state drug monitoring agency
Source: Researchers' calculations using data from the National Vital Statistics System

Triplicate states had 50% less opioid prescribing; 36% fewer opioid deaths

Plot from NBER Digest by Steve Maas on the paper: Alpert, Abby, William N. Evans, Ethan MJ Lieber, and David Powell. "Origins of the opioid crisis and its enduring impacts." *The Quarterly Journal of Economics* 137, no. 2 (2022): 1139-1179.

Keep in mind, over the study timeframe, the nature of opioid abuse is substantially changing



Source: NVSS
mortality files

Hypothesis and model

The hypothesis

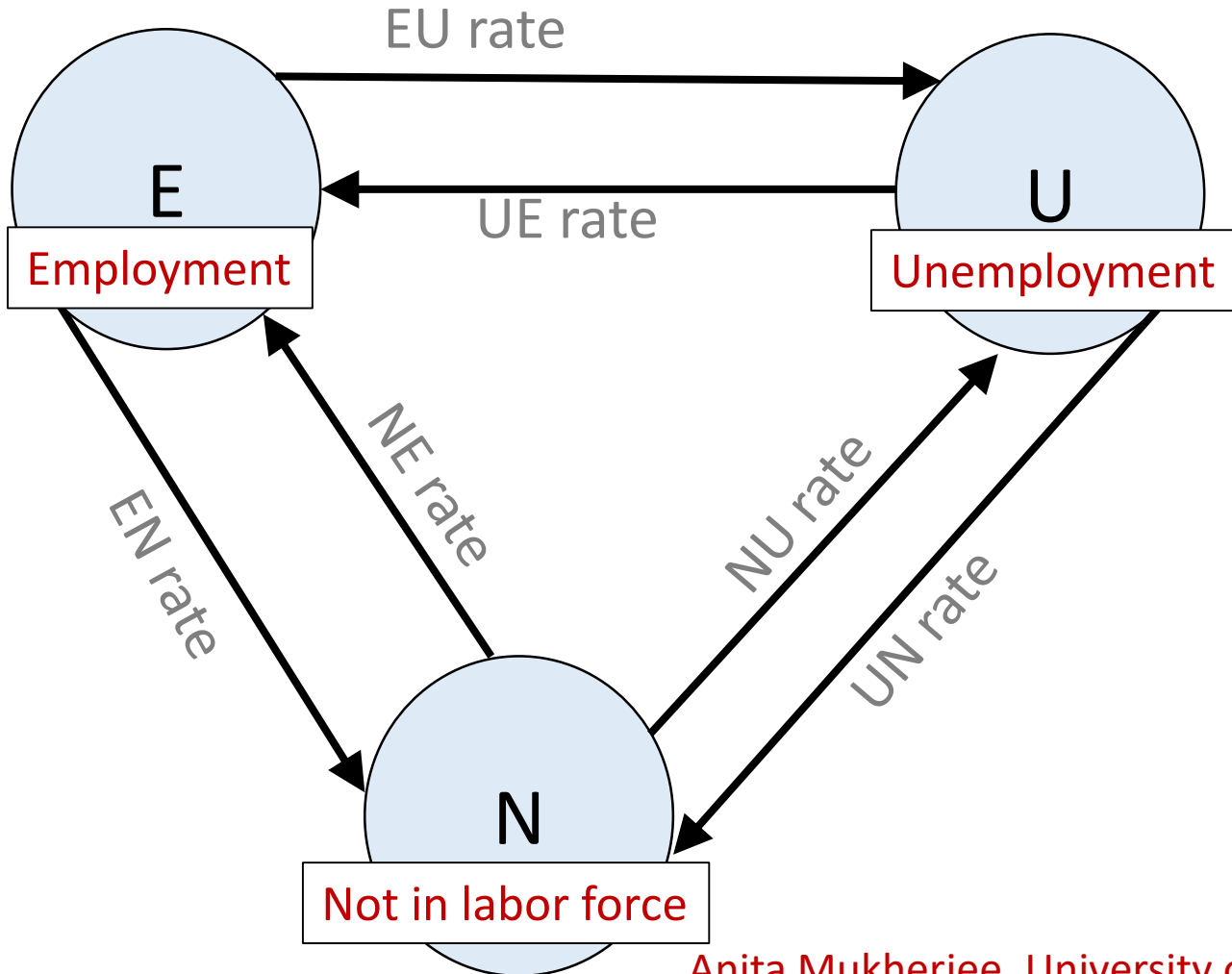
Opioid use and availability are more dangerous for those unemployed or non-employed, as there is greater danger of slipping into addiction

1. 'Deaths of despair:' long-run economic decline increases vulnerability
2. Unemployment-opioid use association
3. Pain-unemployment association
4. Rational addiction: costs of addiction lower when long-run prospects bleak



Opioids affect employment by slowing return of unemployed to employment

Labor market flows



Flows into employment: NE, UE
Flows out of employment: EU, EN

Steady state employment **level**
determined by **flows**:

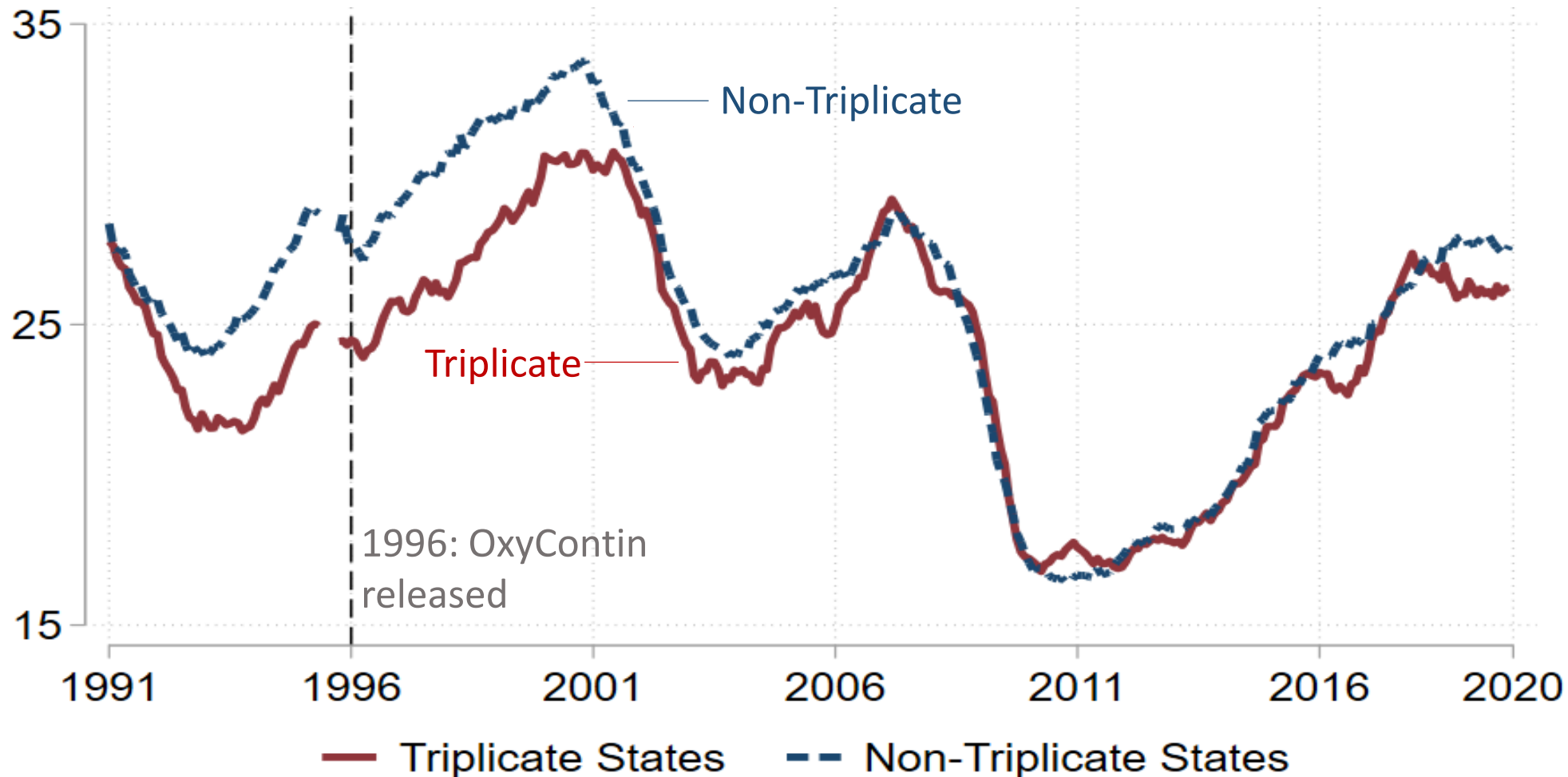
$$SS: (E_t, U_t, N_t) = (E_{t+1}, U_{t+1}, N_{t+1})$$

What would we expect opioids to do?

1. Reduce UE rate
2. Reduce NE rate
3. Increase NU rate
4. Increase EU rate

Results

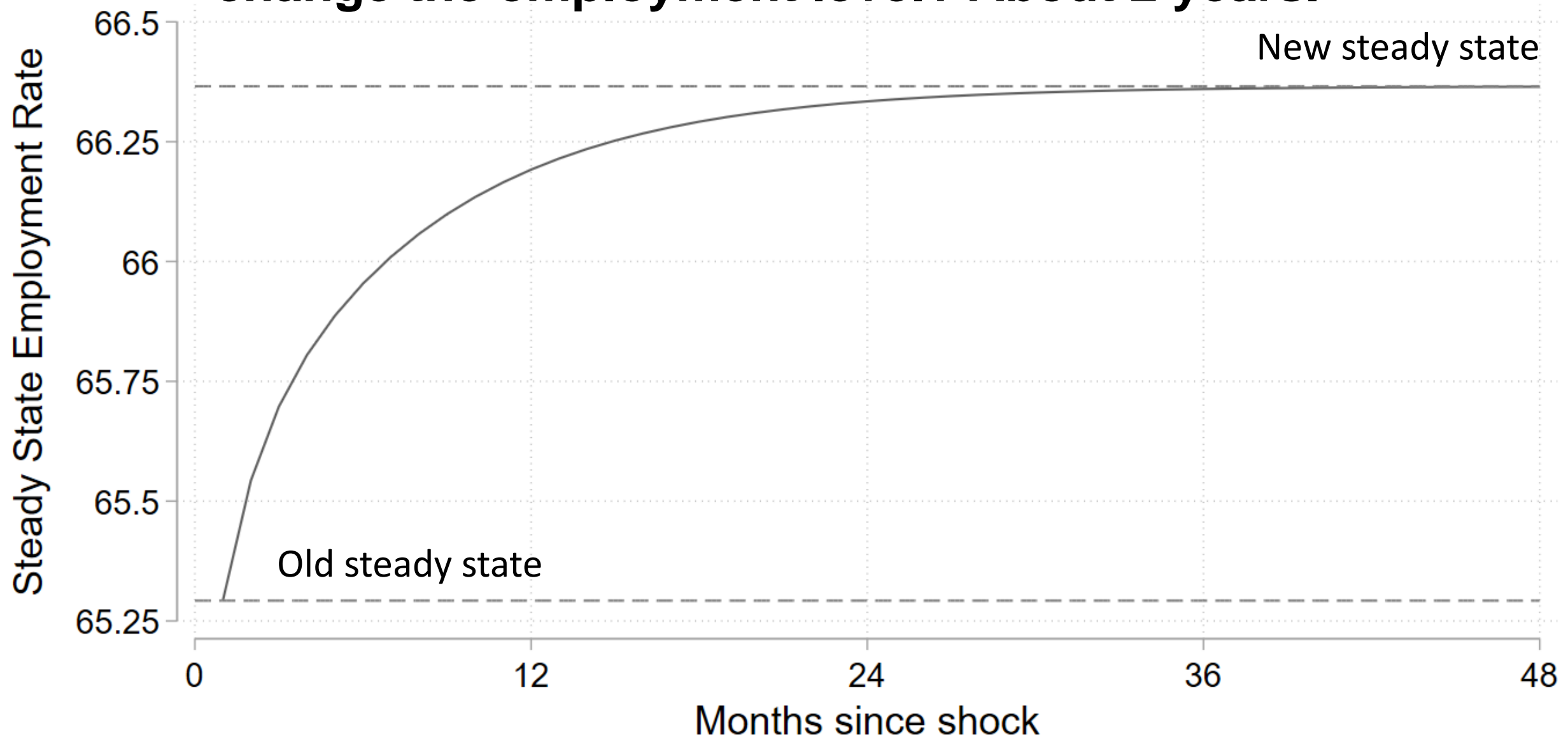
Pre-OxyContin, triplicate status had lower outflow from unemployment – this reversed in the following years



Implications for steady state employment

Period	Steady state EPOP	Effect of triplicate status on steady state ...		
		EPOP	UPOP	NPOP
1996-2019	67.78	1.11	-0.58	-0.52
1996-2000	70.80	0.41	-0.10	-0.31
2001-2010	67.99	1.16	-0.73	-0.43
2011-2019	65.87	1.89	-0.76	-1.13

How long does it take for these affected labor transitions to change the employment level? About 2 years.



Conclusions

After OxyContin's introduction, states with triplicate laws in 1996...

- Relative increase in job finding rate (UE)
- Relative decrease in job exit rate (EU)
- Especially in post-2000 when opioid abuse was most severe

Triplicate regulation increased employment rate by 1 percentage point

Important connection between opioid abuse on labor market outcomes

- Harder to transition out of unemployment
- Unemployment likely a trigger for opioid abuse

Gradual adjustment may make opioid effects difficult to detect

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