

Economic Impacts of the Opioid Epidemic

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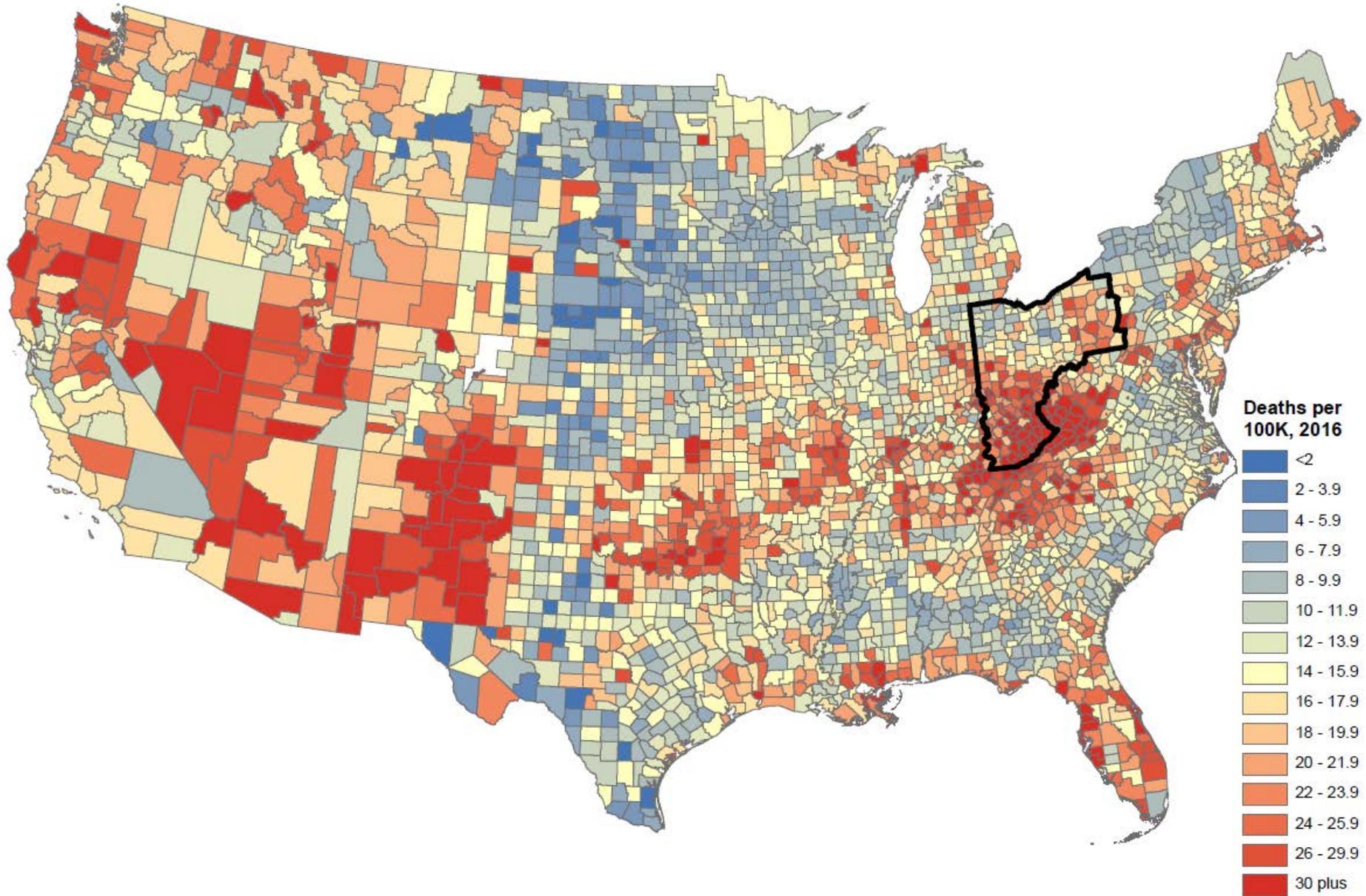
Federal Reserve Bank of Cleveland

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These are my views and not representative of the Federal Reserve Bank of Cleveland or the Federal Reserve System

Why is the Federal Reserve interested in this topic?

- “I cannot find workers that can pass a drug test.”
- Drug overdose is now leading cause of death for Americans <50. (Katz, 2017)
- Fourth Federal Reserve District is arguably the epicenter of the epidemic.



Source: Center's for Disease Control

Why is the Federal Reserve interested in this topic?

- “I cannot find workers that can pass a drug test.”
- Drug overdose is now leading cause of death for Americans <50. (Katz, 2017)
- Fourth Federal Reserve District is arguably the epicenter of the epidemic.
- Potential for significant economic implications.

Data Quality Issues Pose Challenges

- Limited Availability
- Consistency
- Timeliness
- Data quality issues make it difficult to know when things are improving.

What have we heard:

- **Approximately half of our Business Advisory Council** members told us that opioids have affected them in some way, either through workers, workers' family or communities.
- **65% of direct service providers** across our district indicated the opioid epidemic has impacted their organization (2018 Community Issues Survey).
 - Many respondents noted that this issue had the single most significant impact on the welfare of the communities they serve.
 - A plethora of comments described stresses in the foster care system.
 - Other stated that they are experiencing capacity constraints as funding is increasingly being redirected from other needs in order to address opioid-related problems.

Economic Impact

Economic Impact Study Estimates

- Florence et al (2016) estimate the total societal costs of prescription opioid abuse was **\$78.5 billion in 2013 alone**, with \$20 billion attributed to lost productivity and production; 0.5% of GDP.
- Council of Economic Advisors (2017) using different assumptions, estimate the economic cost of the epidemic to be **\$504 billion in 2015**; 2.75% of GDP
- Altarum (2017) estimate costs have **exceeded \$1 trillion from 2001 to 2017 with an additional \$500 billion by 2020**; 0.4% to 2.6% of GDP.

Things Not Considered in Economic Impact Studies

- Local public finances
- Household finances
- Child development costs
- Criminal justice system

Labor Market Implications

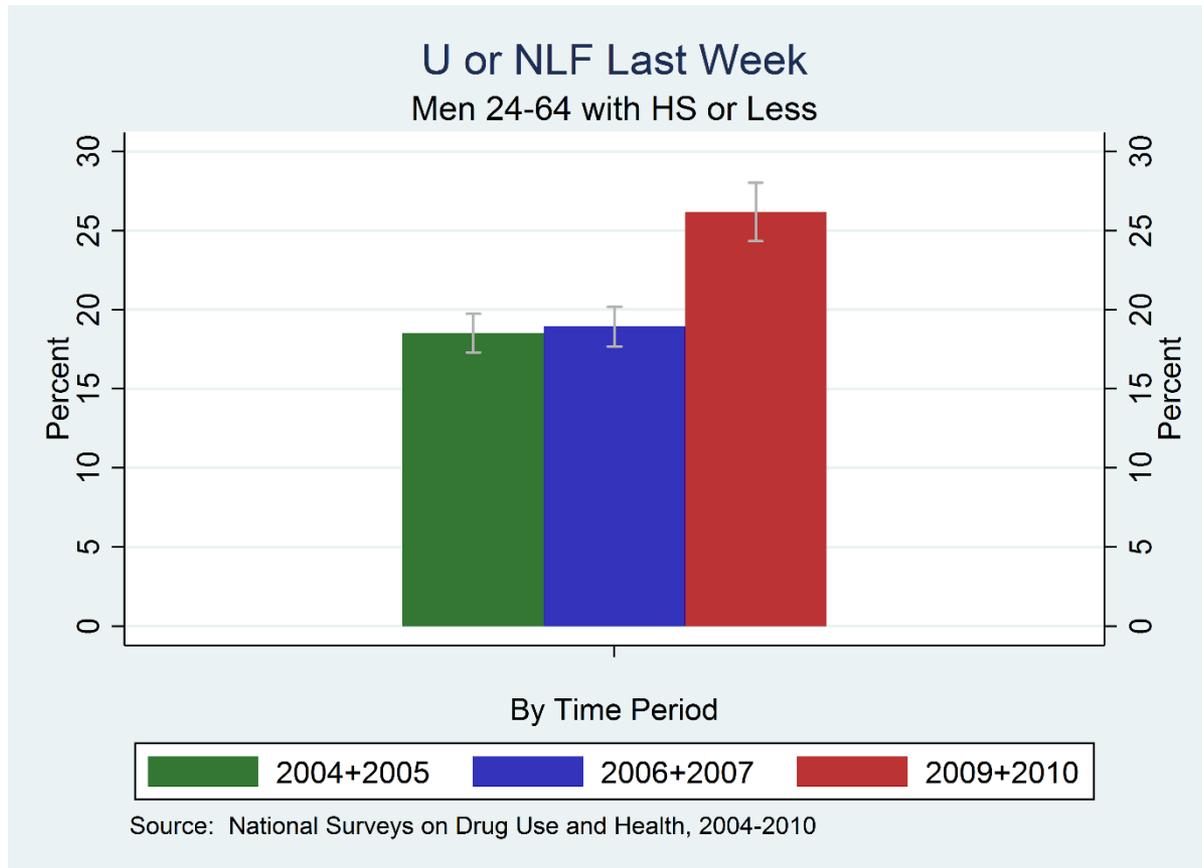
Connections between the Opioid Crisis and the Labor Market?

- Evidence that the labor market causes opioid abuse.
 - Increase in overdose deaths, suicides, and liver disease or “Deaths of despair” over the poor labor market prospects of low education groups (Case and Deaton, 2015).
- Evidence that opioid availability causes poor labor market outcomes.
 - Labor force participation is lower in counties with higher opioid Rx rates, even after accounting for economic conditions (Krueger, 2018; Ruhm, 2018).
- The research is far from conclusive as researchers across a range of disciplines continue to work on a variety of issues.

Did the Great Recession Increase Opioid Use?

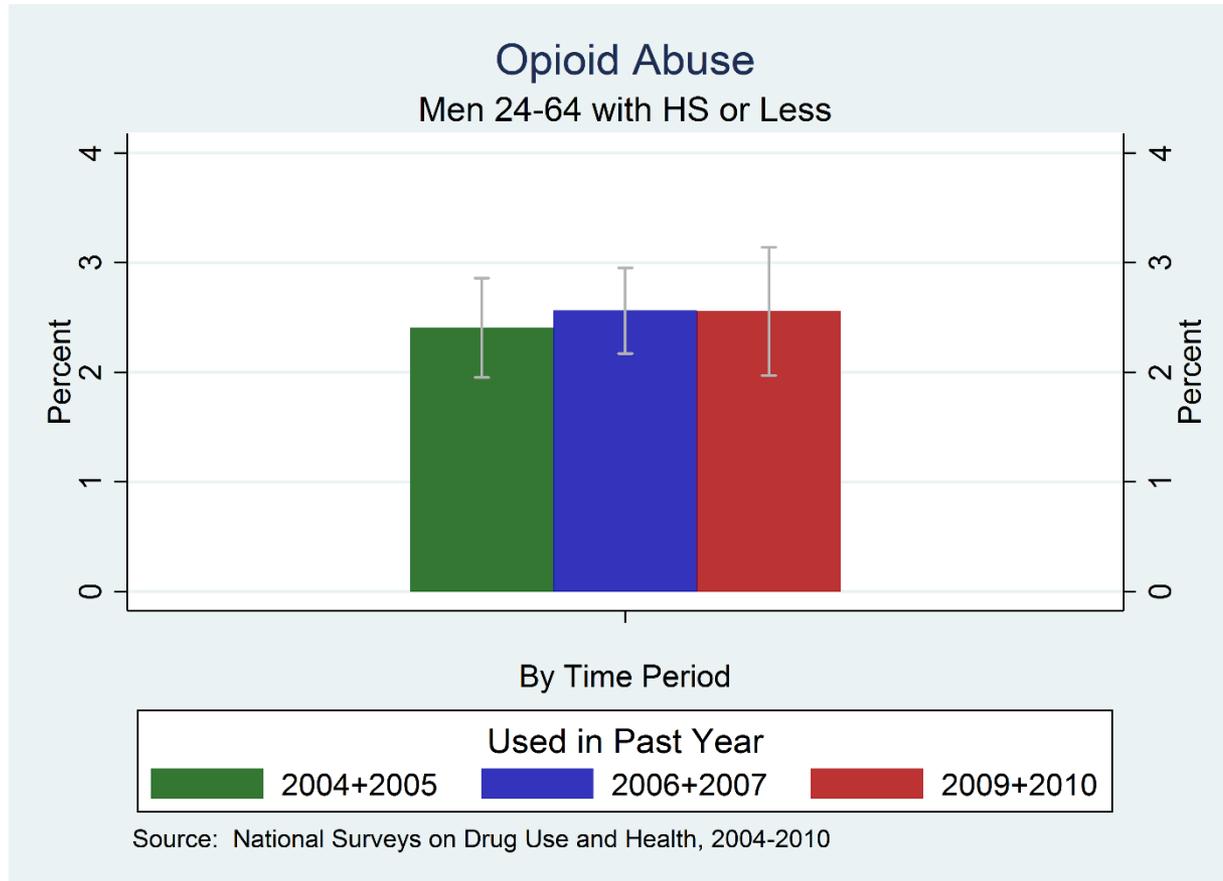
- The Great Recession was a major shock to the labor market.
- If the labor market drives opioid use, we should see an increase in use whose timing coincides with the Great Recession.
- We use individual-level data from a national survey focused on drug abuse.
 - The National Survey on Drug Use and Health (NSDUH)

The Great Recession Increased Joblessness.



Source: The National Survey on Drug Use and Health (NSDUH)

The Great Recession Did Not Increase Opioid Abuse.



Source: The National Survey on Drug Use and Health (NSDUH)

Does Opioid Availability Cause Poor Labor Market Outcomes?

- We follow up with a study of how the local availability of opioid Rx's impacts labor market outcomes.
- Innovations that we add:
 - Use county-level Rx data from 2006-2016
 - Link individual labor market outcomes more accurately with geography
 - This improves measurement for about 1/3 of US, often in rural areas
 - Link timing of Rx rate more accurately to labor market outcomes

Opioid Availability Causes Poor Labor Market Outcomes

- Moving from a low- to a high-Rx county:

Is a change from ≈ 60 Rx's per 100 people to ≈ 120 Rx's

	Men Participate	Men Emp/Pop	Men Unem/Pop	Women Participate	Women Emp/Pop	Women Unem/Pop
Lagged Prescrip.	-0.046*** (0.006)	-0.049*** (0.007)	0.004* (0.002)	-0.014** (0.005)	-0.015** (0.005)	0.001 (0.001)
R ²	0.09	0.11	0.02	0.06	0.06	0.02
N	5,835,200	5,835,200	5,835,200	6,021,178	6,021,178	6,021,178

All regressions include year and Census division fixed effects.
Robust standard errors with clustering on geographic units.

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Opioid Availability Causes Poor Labor Market Outcomes

Prime Age Men by Race/Ethnicity and Education				
	White	White	Nonwhite	Nonwhite
	HS or less	More than HS	HS or less	More than HS
Lagged Prescrip.	-0.074***	-0.019***	-0.097***	-0.041***
	(0.007)	(0.003)	(0.013)	(0.005)
R ²	0.07	0.03	0.11	0.04
N	2,053,403	2,418,539	735,239	628,019

All regressions include full set of controls with year and Census division fixed effects.
Robust standard errors with clustering on geographic units.

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Summary

- Economic impact studies probably underestimate the impact of the opioid epidemic.
- Influential researchers believe opioid abuse is a symptom of despair; from poor labor market prospects.
- We interpret the evidence from research as indicating:
 - Opioid abuse is not influenced by short-term labor market shocks.
 - Poor labor market outcomes are a symptom of opioid availability.
- Many ongoing issues to investigate.