Opioid Prescription Rates & Child Removals in Florida

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Our Practice Is Our Passion

Outline

1. <mark>Very brief background on me & this paper</mark>

2. How an outsider discovered PDMP data

3. Background on child removals & data

4. Methodology

5. Results

6. Potential implications

7. Limitations

8. Questions / Comments

Background

- Me
  - Economist
  - Diverse/scattered research agenda
  - Goal: Use data to increase understanding of significant health questions

- Paper
  - Learned of suspected opioid/foster care relationship 1st & 2nd hand
  - Surprised by lack of existing research on question

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Discover PDMP Data

- Little/no background using population-level pharma utilization data

- Initial conjecture: Lack of research on topic reflected lack (or expense) of data

- Google search led to website for FL PDMP

- Quickly learned that underlying data are very closely held

- However, found # opioid scripts by county & year

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Child Removals

- Process
  - Grounds for removal
    - The child has been abused, neglected, or abandoned, or is suffering from or is in imminent danger of illness or injury as a result of abuse, neglect, or abandonment
  - Selected potential maltreatments (causes)
    - Physical abuse, sexual abuse, neglect, parental alcohol abuse, parental drug abuse, abandonment

Child Removals

- Data

  - AFCARS (Adoption & Foster Care Analysis & Reporting System)

    - Mandatory system to which states must report data

    - Variable used: # children removed by county, year, & cause

    - Children may be removed for multiple causes

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Methodology

- Goal
  - Investigate association between rates of child removals & opioid scripts

- Sample
  - FL counties, 2012-2015

- Dependent variables
  - # removals per 1000 children aged 0-19
    - All causes
    - Parental drug abuse
    - Parental neglect

Methodology

- Explanatory variable of interest
  - \# opioid scripts per 100 capita (all ages)

- Statistical approach
  - Linear regression
  - Fixed effects
    - County
    - Year

Methodology

- Control variables
  - Additional script rates
    - Benzodiazepines
    - Stimulants
  - Pop percentages by demographic
    - Gender
    - Race
    - Ethnicity
  - Poverty rate

- Separate analyses by quartile white population proportion
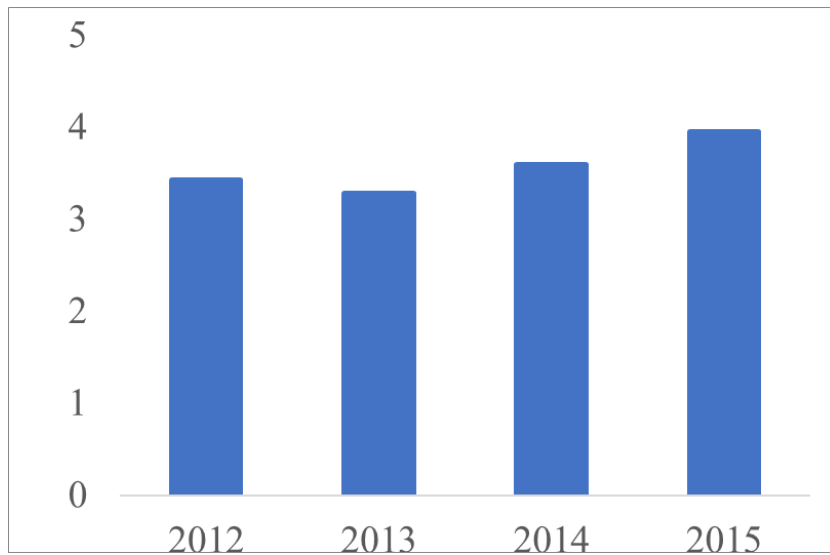
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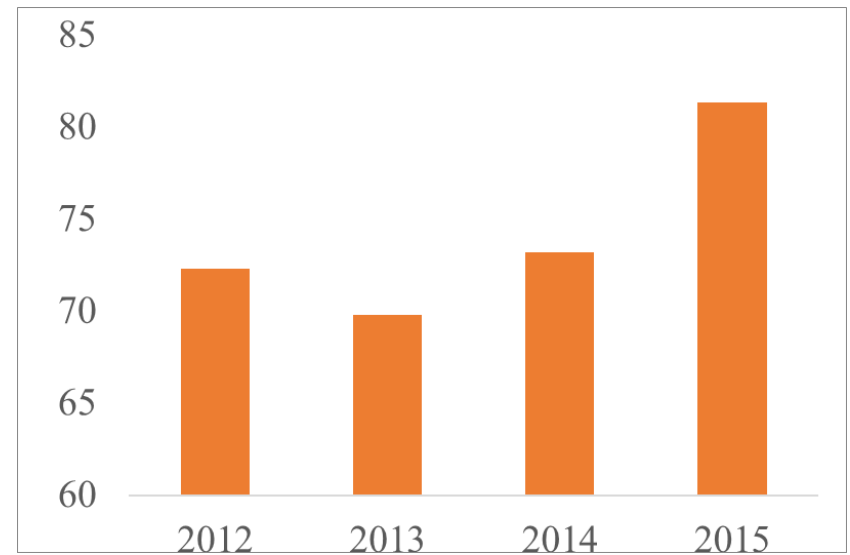
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Results

- Statewide rates

All Child Removals

Opioid Prescriptions

Results

- Regression estimates – all counties

Included Counties		All Causes		Parental Drug Abuse		Parental Neglect
All counties		.09		.07*		.07*

- 1 unit increase in script rate associated with .09-unit increase in all causes rate

- 1 "standard deviation" increase in script rate associated with 32% increase in parental neglect rate

Results

- Regression estimates – by quartile white population proportion

Included Counties	All Causes		Parental Drug Abuse		Parental Neglect
1st quartile	.17**		.09		.05
4th quartile	.32***		.30***		.12***

- – Associations roughly twice as large (or larger) in 4th quartile than 1st

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Potential Implications

- Well-documented direct costs of opioid crisis

- Our results highlight an indirect cost

- State fiscal costs
  - 1 additional opioid script per 100 people statewide was associated with
    - 300 children removed due to parental neglect
    - Annual cost of $6m

- Human toll
  - Worse educational, health, legal outcomes

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Limitations

- Estimates reflect associations, not causations

- Measure # scripts, not volume of meds

- Do not reflect illicit opioids

- Do not control for diversion across counties

- Only reflect FL experience

- Can't be completely certain that legal changes regarding removals did not affect results

- Only examining extreme outcome of removal

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Questions / Comments

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Thank you!