The Relationship Between Opioid Prescription & Child Removals

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Outline

1. Very brief background on me & this research
2. Background on child removals & data
3. Florida study
4. California study
5. U.S. study
6. Takeaways & limitations
7. Questions / Comments
Background

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

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

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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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Florida Study

• Sample
  – FL counties, 2012-2015 (annual)

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

• Prescription variable
  – # opioid prescriptions per 100 capita
    • From FL prescription drug monitoring program
Florida Study

• Select control variables
  – Additional script rates
    • Benzodiazepines
    • Stimulants
  – Pop percentages by demographic
    • Gender
    • Race
    • Ethnicity
  – Poverty rate

• Separate analyses by quartile white population proportion

Florida Study

• Results
  – All counties
    • One “standard deviation” increase in script rate associated with 32% increase in parental neglect rate
  – By quartile white population proportion
    • Associations roughly twice as large (or larger) in 4th quartile than 1st
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California Study

• Sample
  – CA counties, 2009-2016 (quarterly)

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

• Prescription variable
  – Rate of residents prescribed 90+ MMEs/day
    • From CA Opioid Overdose Surveillance Dashboard
California Study

- Select control variables
  - Average weekly wage
  - Average number of jail bookings

- Separate analyses by urbanicity
  - RUCC group
    - Metro
    - Rural areas adjacent to metro area
    - Rural areas not adjacent to metro area

California Study

- Results
  - All counties
    - One “standard deviation” increase in rate of high-dose prescriptions associated with 9% increase in overall removal rate
  - By urbanicity
    - Associations largely limited to rural counties adjacent to metro areas
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U.S. Study

• Sample
  – US counties*, 2010-2015 (annual)

• Outcome variables
  – # removals per 1000 children aged 0-19
    • All causes
    • Parental drug abuse

• Prescription variable
  – # opioid prescriptions per 100 residents
    • From QuitilesIMS Transactional Data Warehouse (via CDC)
**U.S. Study**

- Select control variables
  - Proportion residents by gender, race, age/ethnicity
  - Poverty rate
  - Unemployment rate

- Separate analyses by state

**U.S. Study**

- Results

![Map of the United States with various color codes indicating different percentages.]

Legend:
- **< -10%**
- **(-10%, -5%)**
- **(-5%, 0%)**
- **(0%, 5%)**
- **(5%, 10%)**
- **>= 10%**
- **No association**
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Takeaways

• FL study
  – Positive association between removals & prescription rates
    • Especially in counties w/ high white population proportion

• CA study
  – Positive association between removals & high dosage prescriptions
    • Especially in rural areas adjacent to metro areas

• US study
  – Relationship between removals & prescription rates varies across states
    • Perhaps related to stage of opioid crisis in that state?
Limitations

- Estimates reflect associations, not causations
- Do not reflect illicit opioids
- Do not control for diversion across counties
- Only examining extreme outcome of removal

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Thank you!