PDMPs and Child Maltreatment in the United States, 2004–2018

January 27, 2022
Prescription Drug Monitoring and Child Maltreatment in the United States, 2004–2018

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January 27, 2022
Disclosures

None
Overview

• Substance use and child welfare involvement
• Recent trends in maltreatment and foster care
• PDMP impacts
• Policy implications and ongoing questions
Collaborators

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Substance Use and Child Welfare Involvement
Movement Through the Child Welfare System

Referrals (100%)
3.4 million referrals
6.2 million children

Screened in (61%)
2 million referrals
3.7 million children

Not determined to be victims (47%)
2.4 million children

In-home (12%)
645,000 children

Foster care (1%)
None (6%)
315,000 children

In-home (4%)
224,000 children

Foster care (2%)

Maltreatment

“Any recent act or failure to act on the part of a parent or caretaker which results in death, serious physical or emotional harm, sexual abuse or exploitation; or which presents imminent risk of serious harm.”

- Federal CAPTA (1974) legislation
- States definitions may vary

Indications
- Neglect (medical neglect)
- Physical Abuse
- Sexual Abuse
- Psychological Abuse

Exposure to parental substance use alone does not constitute maltreatment
Prenatal substance exposure

“Infants born with and identified as being affected by substance abuse or withdrawal symptoms resulting from prenatal drug exposure, or a Fetal Alcohol Spectrum Disorder.”

- Federal CARA (2016) legislation
- Mandates state policies for identification and safety planning in cases of prenatal substance exposure
  - CPS/health department notification procedures
  - Plan of safe care
  - Data collection

Guidance
- Requires evidence of ‘harm’
- Includes both alcohol and drugs (including legal drugs)
- Addresses needs of both mothers and infants
- Distinguishes ‘notification’ from ‘reporting’
Foster Care

Indications

Maltreatment

Neglect
Physical Abuse
Sexual Abuse

Alcohol use (parent)
Drug use (parent)
Drug use (child [i.e. PSE])

Parental incarceration
Caretaker inability to cope
Abandonment/relinquishment
Inadequate housing
Child disability
Child behavior problem
Parent death

Other Indication
Trends in substance use-related child welfare involvement
Maltreatment
1998 to 2019
Foster Care, 1998 to 2019

Total Number in Care

Entries

U.S. Department of Health and Human Services, Administration for Children and Families, Administration on Children, Youth and Families, Children's Bureau
Foster Care Entries Attributable to Parental Drug Use, 2000 to 2017

Entries, %

Entries owing to parental drug use

Proportion of entries owing to parental drug use

Total entries

Entries owing to other reasons


Foster Care Entries per 100,000 Child Population Attributable to Parental Drug Use, 2010 to 2015

County-Level Associations, Opioid Prescribing and Foster Care Entries in Florida

# Zip Code-Level Associations, Hospital Discharges and Child Maltreatment Prevalence in California and Pennsylvania

<table>
<thead>
<tr>
<th></th>
<th></th>
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</tr>
</thead>
<tbody>
<tr>
<td><strong>Hospital discharges, opioid-related</strong></td>
<td>OR 1.089* (1.004, 1.165)</td>
<td>OR 1.059* (1.012, 1.107)</td>
</tr>
<tr>
<td><strong>Hospital discharges, alcohol related</strong></td>
<td>OR 1.068* (1.015, 1.068)</td>
<td>OR 1.016 (0.985, 1.044)</td>
</tr>
</tbody>
</table>
Federal lawsuit targets West Virginia foster care system

By JOHN RABY  October 1, 2019

States Seek $26.4 Billion From Drug Companies in Opioid Litigation

Higher settlement demand comes as trial dates in Ohio and West Virginia add urgency to talks

The opioid crisis is forcing more kids into the foster system

By DEAN REYNOLDS  October 21, 2019 / 6:42 PM / CBS NEWS

The Opioid Plague’s Youngest Victims: Children in Foster Care

By Sherry Lachman  Dec. 28, 2017
Summary

• Prior to 2010, foster care caseloads were decreasing
• Around 2012, caseloads began increasing
• The proportion of foster care entries attributable to parental substance use, primarily drug use, has been increasing since 2000
• Maltreatment is decreasing but we are not able to track indicators of parental substance use disorder
• Places with higher rates of opioid-related morbidity and mortality also have higher prevalence rates of maltreatment and foster care entry
Our Research
Aims

• Was the introduction of PDMPs between 2004 and 2018 associated with reductions in state-level, Child Protective Services (CPS)-reported, maltreatment prevalence?

• What are the potential pathways through which PDMPs might impact maltreatment prevalence?

• Given pervasive disparities in child welfare system involvement and the disproportionate impact of the opioid crisis on American Indian/Alaskan Native communities, is the relationship between PDMPS and maltreatment modified by race/ethnicity?
Potential Mechanisms

Direct Risk
Parents experiencing SUD are more likely to maltreat their children
SUD interferes with other aspects of the caregiving environment

Reporting biases
Maltreatment more commonly reported/substantiated when parental substance use is suspected or identified

Community/family factors
High intergenerational or community-level SUD prevalence reduces opportunities for out-of-home care
Methods

Maltreatment:

National Data Archive on Child Abuse and Neglect
• Total Incidents
• Total Victims
• Incidents by type
  • Neglect
  • Physical Abuse
  • Psychological Abuse
  • Sexual Abuse
• Incidents by race/ethnicity
  • American Indian/Alaskan Native
  • Asian or other Pacific Islander
  • Black
  • Hispanic

PDMPs:

Modern operational PDMP
• Operational PDMP (not law enactment)
• Data accessible to authorized parties
• Electronic system (not paper based)
  Must query requirements

Other state-level factors
• % Child poverty
• % < High-school education
• % Rural
• Unemployment rate
• Prevalence of illicit substance use
Methods

Analysis Approach

• Compare changes in maltreatment prevalence in states after PDMP adoption to maltreatment prevalence in states:
  • With no PDMP
  • States that had not yet adopted PDMPs
• We know that maltreatment prevalence is decreasing overall, did prevalence decrease more in states that adopted PDMPs?
PDMP Adoption, 2004-2018

PDMP-adoption at the beginning (2004), middle (2011) and end (2018) of the observation period
Maltreatment by Type, 2004-2018

Maltreatment Type
- Total
- Victims
- Neglect
- Physical
- Psychological
- Sexual

Maltreatment incidents per 1,000 child population

Maltreatment by Race/ethnicity, 2004-2018

## Results, Overall and Type-Specific

<table>
<thead>
<tr>
<th>Maltreatment measure</th>
<th>PDMP Adoption</th>
<th></th>
<th>Relative reduction</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Estimate</td>
<td>95% CI</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total incidents</td>
<td>0.87*</td>
<td>(0.80, 0.94)</td>
<td>6-20%</td>
<td>0.01</td>
</tr>
<tr>
<td>Victimization</td>
<td>0.92*</td>
<td>(0.85, 0.98)</td>
<td>2-15%</td>
<td>0.02</td>
</tr>
<tr>
<td>Neglect</td>
<td>0.87*</td>
<td>(0.80, 0.93)</td>
<td>7-20%</td>
<td>0.01</td>
</tr>
<tr>
<td>Physical abuse</td>
<td>0.78*</td>
<td>(0.71, 0.87)</td>
<td>13-29%</td>
<td>0.01</td>
</tr>
<tr>
<td>Psychological abuse</td>
<td>0.88</td>
<td>(0.66, 1.17)</td>
<td></td>
<td>0.38</td>
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<tr>
<td>Sexual abuse</td>
<td>1.02</td>
<td>(0.97, 1.07)</td>
<td></td>
<td>0.46</td>
</tr>
</tbody>
</table>

## Results, Race/ethnicity-Specific

<table>
<thead>
<tr>
<th>Coefficient</th>
<th>PDMP Adoption</th>
<th>95% CI</th>
<th>Relative Reduction</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>PDMP adoption</td>
<td>0.98</td>
<td>(0.91, 1.05)</td>
<td>0.53</td>
<td></td>
</tr>
<tr>
<td>American Indian/Alaskan Native</td>
<td>1.91</td>
<td>(1.66, 2.21)</td>
<td>0.01</td>
<td></td>
</tr>
<tr>
<td>Asian/other Pacific Islander</td>
<td>0.26</td>
<td>(0.23, 0.28)</td>
<td>0.01</td>
<td></td>
</tr>
<tr>
<td>Black</td>
<td>1.84</td>
<td>(1.67, 2.02)</td>
<td>0.01</td>
<td></td>
</tr>
<tr>
<td>Hispanic</td>
<td>1.03</td>
<td>(0.95, 1.13)</td>
<td>0.45</td>
<td></td>
</tr>
<tr>
<td>PDMP adoption*American Indian/Alaskan Native</td>
<td>0.78*</td>
<td>(0.65, 0.94)</td>
<td>6-35%</td>
<td>0.01</td>
</tr>
<tr>
<td>PDMP adoption*Asian/other Pacific Islander</td>
<td>0.87</td>
<td>(0.76, 1.00)</td>
<td>0.08</td>
<td></td>
</tr>
<tr>
<td>PDMP adoption*Black</td>
<td>0.98</td>
<td>(0.88, 1.09)</td>
<td>0.73</td>
<td></td>
</tr>
<tr>
<td>PDMP adoption*Hispanic</td>
<td>0.98</td>
<td>(0.89, 1.09)</td>
<td>0.77</td>
<td></td>
</tr>
</tbody>
</table>

Could other issues have affected findings

1. Different types of models: No change in results

2. Did the results differ by mandated query status: No change in results

3. Different ways states define neglect: No change in results

4. Does the timing of PDMP adoption/selection of observation window matter: Some changes in results, strongest effects for physical abuse

5. Could there be reverse causation: Changes in neglect results but not physical abuse

6. Can we assume trends in maltreatment would have been stable in the absence of PDMPs: Probably
Caveats

1. Other unmeasured factors
   • Polices/events occurring simultaneously

2. Could not isolate individual children where parental substance use was a precipitating factor in the substantiation of maltreatment
   • No evidence that PDMPs modify individual-level risk of maltreatment

3. Unreported incidents
Research Conclusions

• PDMPs likely contribute to small but meaningful reductions in statewide child maltreatment prevalence

• Greatest decreases observed among physical abuse-based incidents and potentially neglect-based incidents
  • Physical abuse: 13-29% relative reduction in prevalence
  • Neglect: 7-20% relative reduction in prevalence

• Evidence that the relationship between PDMP adoption and maltreatment prevalence may be modified by race/ethnicity
  • Greater relative reductions among American Indian and Alaskan Native children

• Results qualitatively similar when examining PDMP must-query requirements
Policy implications and ongoing questions
Implications

Data sharing
• CPS/law enforcement
  • Unclear to what extent this occurs in practice
  • Mechanisms may suggest population-level rather than individual-level risks
    • Prevention of SUD/OUD
  • Greater CPS reporting is not necessarily associated with better outcomes
  • SUD not an overt indication for maltreatment
  • Complications in the case of prenatal substance exposures
    • Could be associated with unintended consequences
• EHR integration
• Medicaid
Implications

Education and treatment opportunities
• Prescribers/dispensers
• Patient facing

Other opportunities?
Ongoing questions

1. Specific PDMP features with the greatest impact
2. PDMPs in conjunction with other opioid-related legislation and treatment factors
3. PDMPs in the context of changing medical and recreational cannabis legislation
4. PDMP impacts on prenatal substance exposures
5. Cost-benefit analyses
6. Other questions?
Acknowledgements

National Data Archive on Child Abuse and Neglect (NDACAN)

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