

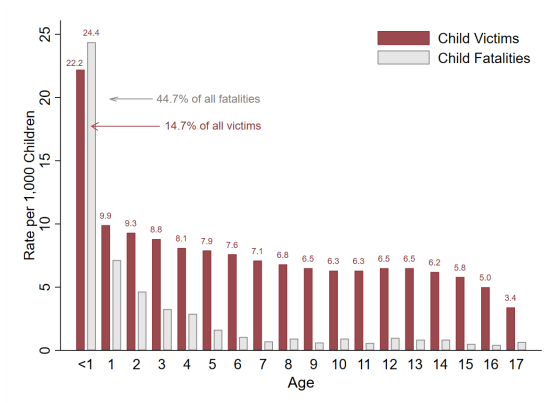
Proximity to Abortion Services and Child Maltreatment

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Child maltreatment

- Child maltreatment, including neglect, physical, emotional and sexual abuse, is a serious and prevalent societal problem in the U.S.
 - In 2022 → **558,899** child victims reported at a rate of **7.7** per 1,000 children
 - The youngest children are the *most vulnerable* to maltreatment



Source: US Department of Health & Human Services, ACF, Children's Bureau, 2022

Far reaching implications...

- Consequences at early stage extend far into adulthood, adversely affecting:
 - psychological and behavioral health (Lansford et al., 2002; Fletcher, 2009; Danese and Widom, 2023)
 - substance dependence (Min et al., 2013)
 - physical health / chronic medical conditions (Min et al., 2013)

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- A series of lifelong repercussions beyond health:
 - ↓ education levels (Currie and Spatz Widom, 2010; Henkhaus, 2022)
 - ↓ employment, earnings, and assets (Currie and Spatz Widom, 2010)
 - ↑ incarceration and crime rates (Currie and Tekin, 2012)
 - ↑ teen pregnancy (Anda et al., 2001)

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 - ↑ teen pregnancy (Anda et al., 2001)
- Lifetime economic burden \approx **\$578 billion** in 2018 (Klika, Rosenzweig, and Merrick, 2020)

Abortion and child maltreatment

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 - Medicaid funding restrictions
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- **Question:** What is the impact of abortion access on child maltreatment?
 - Use travel distance to the nearest abortion facility
 - Capture real-world barriers (financial and logistical)
 - Dynamic perspective on access over time
 - Broader applicability across various legal contexts

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 - financial problems
 - reliance on public assistance (TANF, SNAP, Medicaid, etc.)
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 - Mental health problems
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 - Intimate partner violence
- Family instability (Fomby and Cherlin, 2007)

Data

- FBI's National Incident-Based Reporting System (NIBRS)
 - Concatenated NIBRS data by Kaplan (2021), 2011-2018
 - Victim's age < 18
 - Kaplan and Block (2023) → the offender is the victim's biological parent, a stepparent, or the significant other of the biological parent
 - Simple and aggravated assault (physical abuse) + intimidation (psychological abuse) ≈ 90% of offenses when victim is the youngest
 - Limit to agencies that reported consistently throughout the year
 - 6,104 police agencies, 1,708 counties, 41 states

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- Myers Abortion Facility Database (**Myers, 2024**)
 - Travel distance from the population centroid of each origin county to all facilities → search for the *minimum* distance **Distribution**
 - County-by-month panel between January 1, 2009 and May 1, 2023

Visualizations

Myers Database

Other Databases

Additional Data

- National Child Abuse and Neglect Data System (NCANDS) Child Files
 - Provided by the National Data Archive on Child Abuse and Neglect (NDACAN) at Cornell
 - Each report of alleged child abuse and neglect that received a Child Protective Services (CPS) response
 - State reporting is voluntary but most states consistently report during years 2011-2018
 - Aggregate case-level to county-level measures of child maltreatment
 - Use identified counties (see [Evans et al., 2022](#) → “super” counties)

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- Eviction filings from the Eviction Lab at Princeton ([Gromis et al., 2022](#))
 - Draws on **99.9** million court records → eviction case filings
 - Purchased **73.2** million individual eviction records from LexisNexis Risk Solutions and the remaining electronic records came directly from courts
 - Aggregated counts by county, 2011-2018

Methodology

$$E(Y_{a,c,s,t+1} | distance_{c,s,t}, X_{c,s,t}, \gamma_c, \gamma_t) = \exp[f(distance_{c,s,t}) + \beta X_{c,s,t} + \gamma_c + \gamma_t + \gamma_{s,t}]$$

- Exposure variable → the number of children under 17 served by each agency

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 - % of white females aged 15 to 44, % of children under 17, median household income (log), unemployment rate, the number of psychiatric treatment facilities

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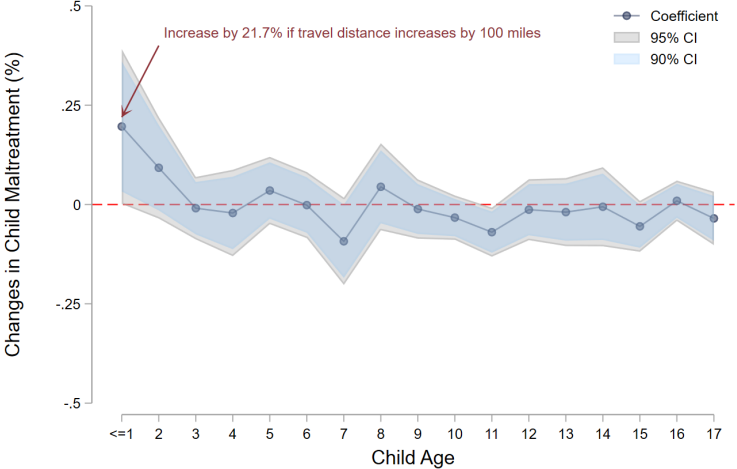
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- State policy and welfare measures
 - one- and two-trip mandatory waiting periods, parental involvement laws, the average service population (log), ...

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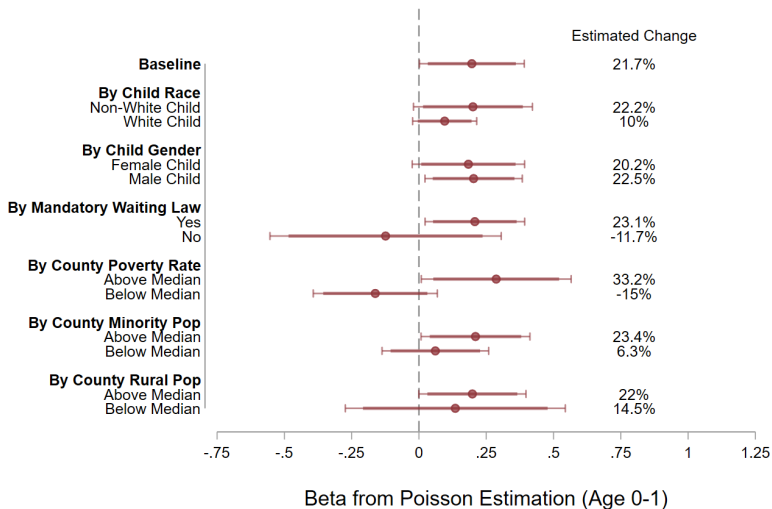
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- Alternative specifications using state-by-year FE ($\gamma_{s,t}$)

DID estimates by age



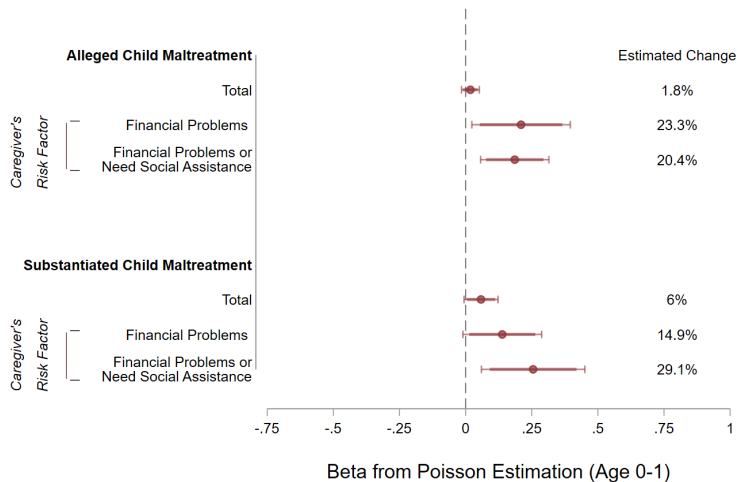
Heterogeneity



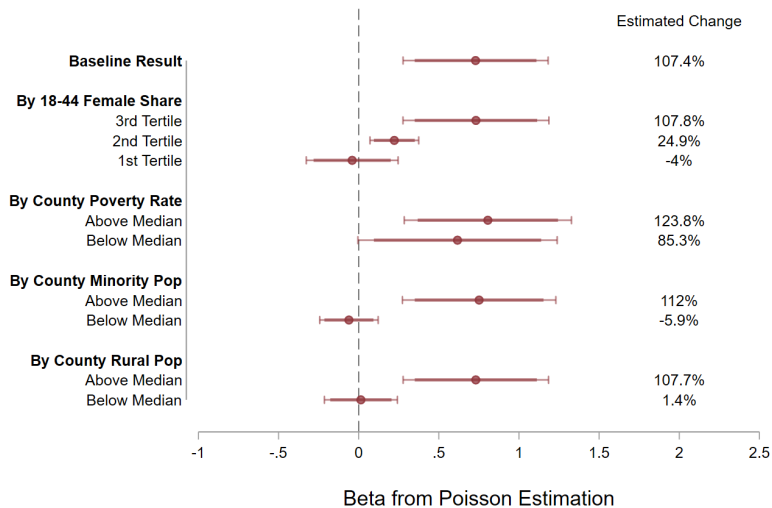
Additional checks

- Nonlinear effects Nonlinearity
- Inclusion of state-by-year FE Alternative Specifications
- Placebo checks w/ and w/o state-by-year FE Placebo Test
- Reverse causality (Maltreatment \leftarrow **Abortion** \rightarrow **Distance**) Endogenous Distance
- Event study Event Study

Alternative measures - NDACAN



Eviction filings



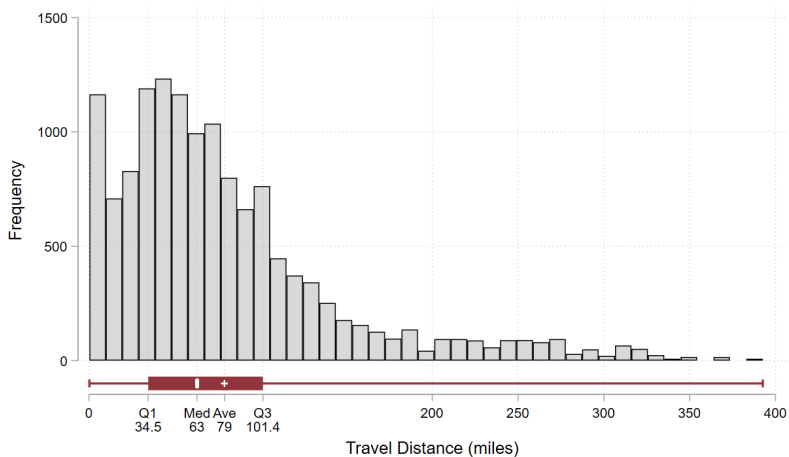
Conclusion

- Positive (nonlinear) relationship between distance to abortion clinics and child maltreatment
- Racial disparities suggest restrictive abortion policies could worsen societal inequities
- Economic disadvantages amplify issues of access
- Additional cost per children due to a 100-mile increase:

$$\underbrace{\$1,034,176}_{\text{Base Cost}} \times \underbrace{0.217}_{\% \text{ Increase}} = \$224,416$$

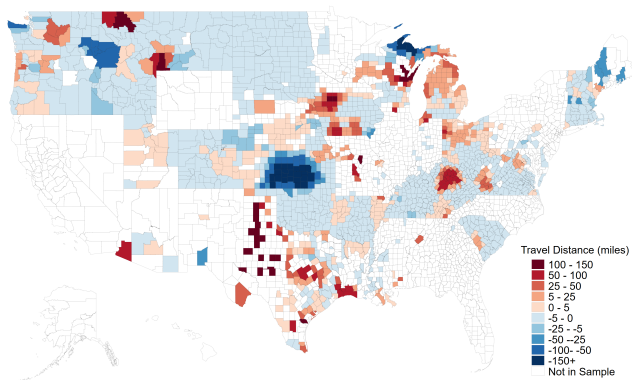
- Need for accessible reproductive health services and comprehensive family support

Appendix: Distribution of travel distance

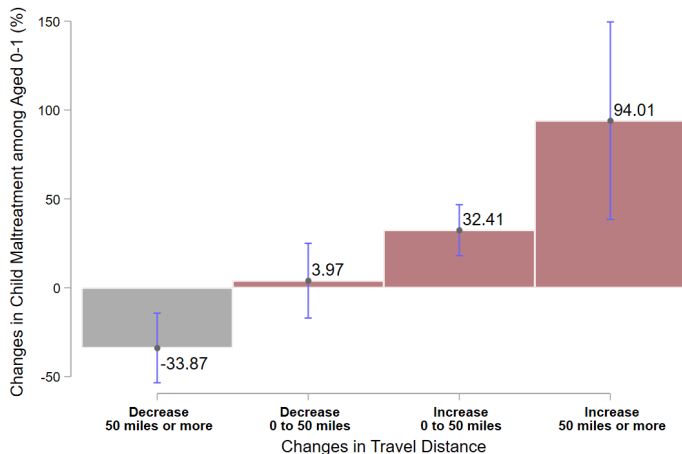


Appendix: Variation in travel distance, 2010-2017

- TRAP laws → e.g., Texas HB2 in 2013 - hospital admitting privileges and minimum proximity requirements (Lu and Slusky, 2014; Fischer, Royer, and White, 2018; Lindo et al., 2020)
- Openings → advanced practice clinicians providing abortion services (e.g., Colorado), telemedicine provision of abortion services (e.g., Maine), response to closures (e.g., Trust Women in Kansas)



Appendix: Change in child maltreatment



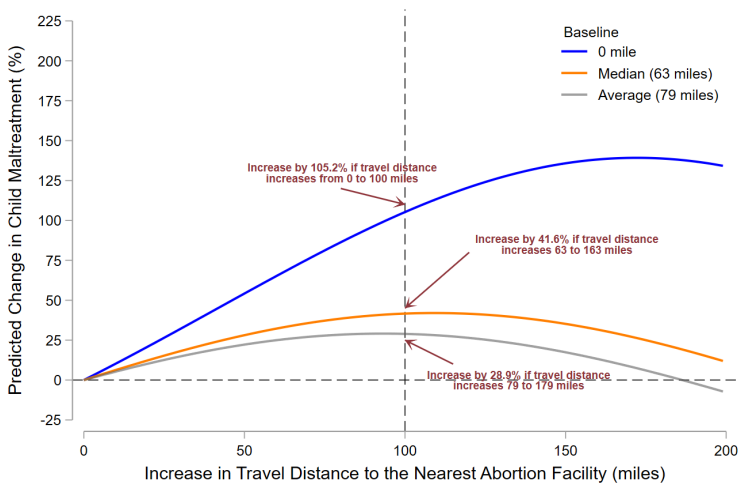
Appendix: Myers Database

- All publicly-identifiable abortion facilities
 - Excludes facilities that provide a small number of abortions and do not advertise their services
- Obtain physical addresses and dates of abortion services
 - State licensing databases
 - Current and historical versions of facility websites (e.g., Waybackmachine)
 - Current and historical directories of Planned Parenthood health centers
 - Current and historical directories of the National Abortion Federation (NAF)
 - News accounts of provider operations and protests
 - Corroborate sources using information from organizations with political agendas
 - Operation Rescue (abortiondocs.org)
 - Life Dynamics (childpredators.com/tape) - “sting” operation in 2002

Appendix: Other Databases

- Guttmacher Institute
 - Broader in scope than the Myers database
 - Includes all facilities even those that provide a small number of abortions, and even if they do not advertise
 - Intermittent snapshots of operations
 - E.g., 2010-2011, 2013-2014, 2016-2017
 - County-level counts **suppress** facilities providing **<400** abortions
 - Some counties to appear and disappear due to the suppression threshold
 - Not due to openings or closures
- Advancing New Standards in Reproductive Health (ANSIRH)
 - All publicly-identifiable abortion facilities
 - Current snapshot of operations (2018-2013)
 - Not a panel covering earlier years

Appendix: Nonlinear Effects



Appendix: Alternative Specifications

	Child Maltreatment (Children Aged 0-1)					
	(1)	(2)	(3)	(4)	(5)	(6)
Distance (100 miles)	0.196** (0.099)	0.189** (0.080)	0.507*** (0.179)	0.367** (0.182)		
Distance (100 miles) Squared			-0.074** (0.029)	-0.036 (0.031)		
Distance: 50-100 miles					0.307* (0.182)	0.339** (0.140)
Distance: 100-150 miles					0.252 (0.246)	0.372* (0.215)
Distance: 150-200 miles					0.800*** (0.277)	0.730*** (0.208)
Distance: 200+ miles					0.115 (0.356)	0.658* (0.390)
N	38,827	38,827	38,827	38,827	38,827	38,827
Clusters	1,708	1,708	1,708	1,708	1,708	1,708
Dep. Var. Mean	16.907	16.907	16.907	16.907	16.907	16.907
County FE	✓	✓	✓	✓	✓	✓
Year FE	✓	✓	✓	✓	✓	✓
County Demographics	✓	✓	✓	✓	✓	✓
State Policy Measures	✓		✓		✓	
State × Year FE		✓		✓		✓

Appendix: Placebo Test

	Child Maltreatment Among Children Aged ...					
	2-6		7-12		13-17	
	(1)	(2)	(3)	(4)	(5)	(6)
Panel A: Linear						
Distance (100 miles)	0.016 (0.042)	0.022 (0.035)	-0.029 (0.031)	-0.057** (0.025)	-0.021 (0.026)	-0.019 (0.025)
Panel B: Quadratic						
Distance (100 miles)	0.116 (0.091)	-0.033 (0.091)	0.026 (0.072)	-0.122* (0.068)	0.001 (0.078)	-0.065 (0.072)
Distance (100 miles) Squared	-0.024 (0.017)	0.011 (0.013)	-0.013 (0.012)	0.013 (0.011)	-0.005 (0.013)	0.009 (0.011)
Panel C: Categorical						
Distance: 50-100 miles	0.059 (0.114)	0.020 (0.070)	0.002 (0.062)	-0.084 (0.055)	0.022 (0.057)	-0.063 (0.041)
Distance: 100-150 miles	0.018 (0.136)	-0.062 (0.132)	-0.032 (0.095)	0.005 (0.106)	0.016 (0.103)	-0.045 (0.078)
Distance: 150-200 miles	0.142 (0.111)	0.122 (0.130)	-0.019 (0.094)	-0.026 (0.107)	-0.065 (0.104)	-0.043 (0.094)
Distance: 200+ miles	-0.208 (0.172)	0.111 (0.136)	-0.303*** (0.115)	-0.146 (0.127)	-0.083 (0.117)	-0.047 (0.116)
N	38,827	38,827	38,827	38,827	38,827	38,827
Clusters	1,708	1,708	1,708	1,708	1,708	1,708
Dep. Var. Mean	55.064	55.064	57.032	57.032	75.213	75.213
County FE	✓	✓	✓	✓	✓	✓
Year FE	✓	✓	✓	✓	✓	✓
County Demographics	✓	✓	✓	✓	✓	✓
State Policy Measures	✓		✓		✓	
State × Year FE		✓		✓		✓

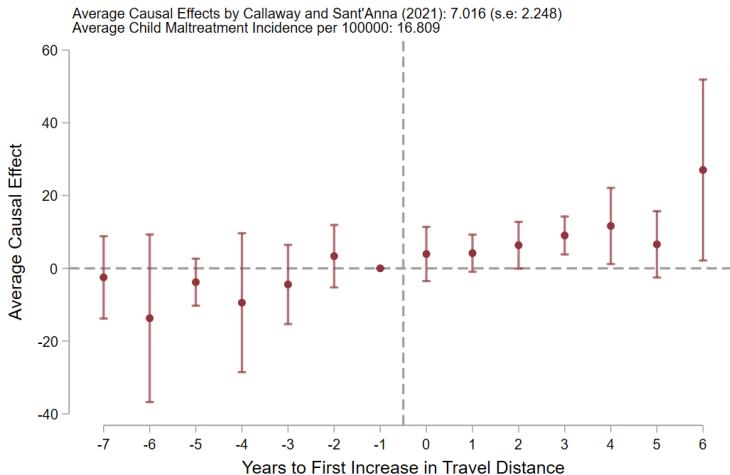
Appendix: Is distance driven by demand?

- Ideal path: Maltreatment \leftarrow Abortion \leftarrow Distance
- Violation: Maltreatment \leftarrow **Abortion** \rightarrow **Distance**

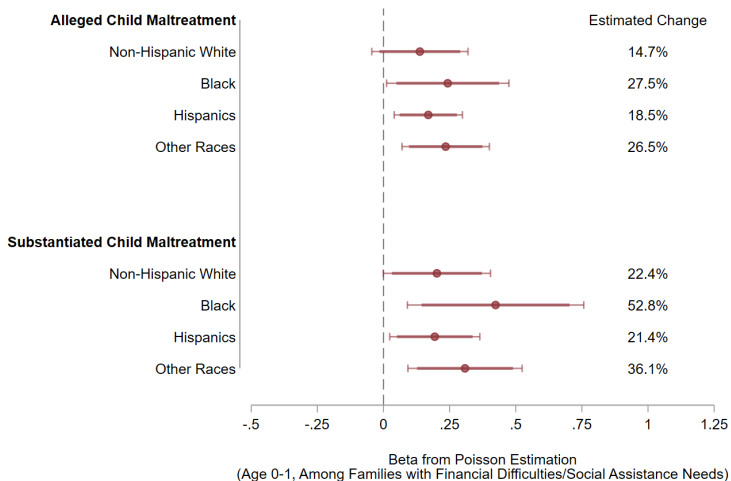
	Indicator for Travel Distance Increases ($t + 1$) by ...							
	1 mile		10 miles		25 miles		50 miles	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Abortion Rate (t)	0.00059 (0.00178)	-0.00298* (0.00178)	0.00136 (0.00112)	-0.00069 (0.00106)	0.00116 (0.00094)	-0.00024 (0.00097)	0.00030 (0.00054)	-0.00074 (0.00066)
N	16,405	16,405	16,405	16,405	16,405	16,405	16,405	16,405
Clusters	2,139	2,139	2,139	2,139	2,139	2,139	2,139	2,139
Dep. Var. Mean	0.086	0.086	0.038	0.038	0.020	0.020	0.010	0.010
County FE	✓	✓	✓	✓	✓	✓	✓	✓
Year FE	✓	✓	✓	✓	✓	✓	✓	✓
County Demographics	✓	✓	✓	✓	✓	✓	✓	✓
State Policy Measures	✓		✓		✓		✓	
State \times Year FE		✓		✓		✓		✓

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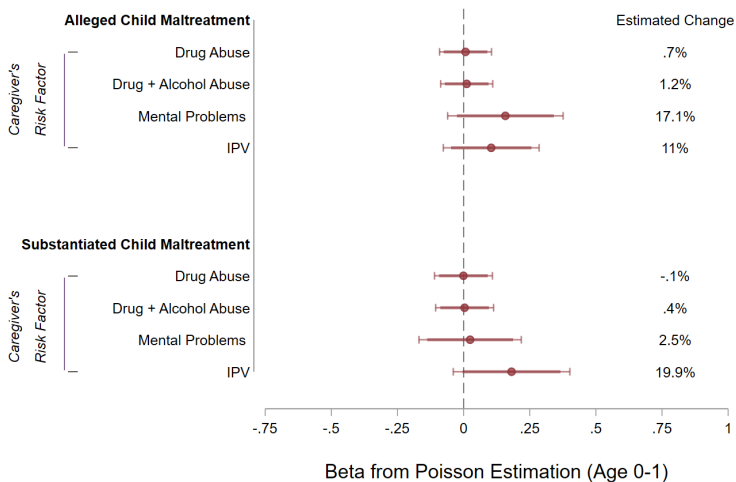
Appendix: Event Study



Appendix: Race/Ethnicity breakdown



Appendix: Other risk factors



Appendix: Substantiated Child Maltreatment

	(1) Total	(2) Fin. Prob	(3) Fin. Prob Social Assistance	(4) Drug Abuse	(5) Drug Abuse Alcohol Abuse	(6) Mental Prob	(7) IPV
Panel A: Linear							
Distance (100 miles)	0.058* (0.033)	0.138* (0.076)	0.255** (0.100)	-0.001 (0.056)	0.004 (0.056)	0.025 (0.099)	0.181 (0.112)
Panel B: Quadratic							
Distance (100 miles)	0.170** (0.067)	0.230** (0.115)	0.521*** (0.173)	0.161 (0.098)	0.156 (0.096)	0.106 (0.205)	0.688*** (0.266)
Distance (100 miles) Squared	-0.026** (0.011)	-0.021 (0.019)	-0.064*** (0.023)	-0.037*** (0.014)	-0.035** (0.014)	-0.018 (0.031)	-0.109** (0.043)
N	5981	5981	5981	5981	5981	5981	5981
Clusters	965	965	965	965	965	965	965
Child Maltreatment Mean	254.597	23.647	57.047	66.260	70.186	12.417	45.424
County Demographic	✓	✓	✓	✓	✓	✓	✓
County FE	✓	✓	✓	✓	✓	✓	✓
Year FE	✓	✓	✓	✓	✓	✓	✓

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