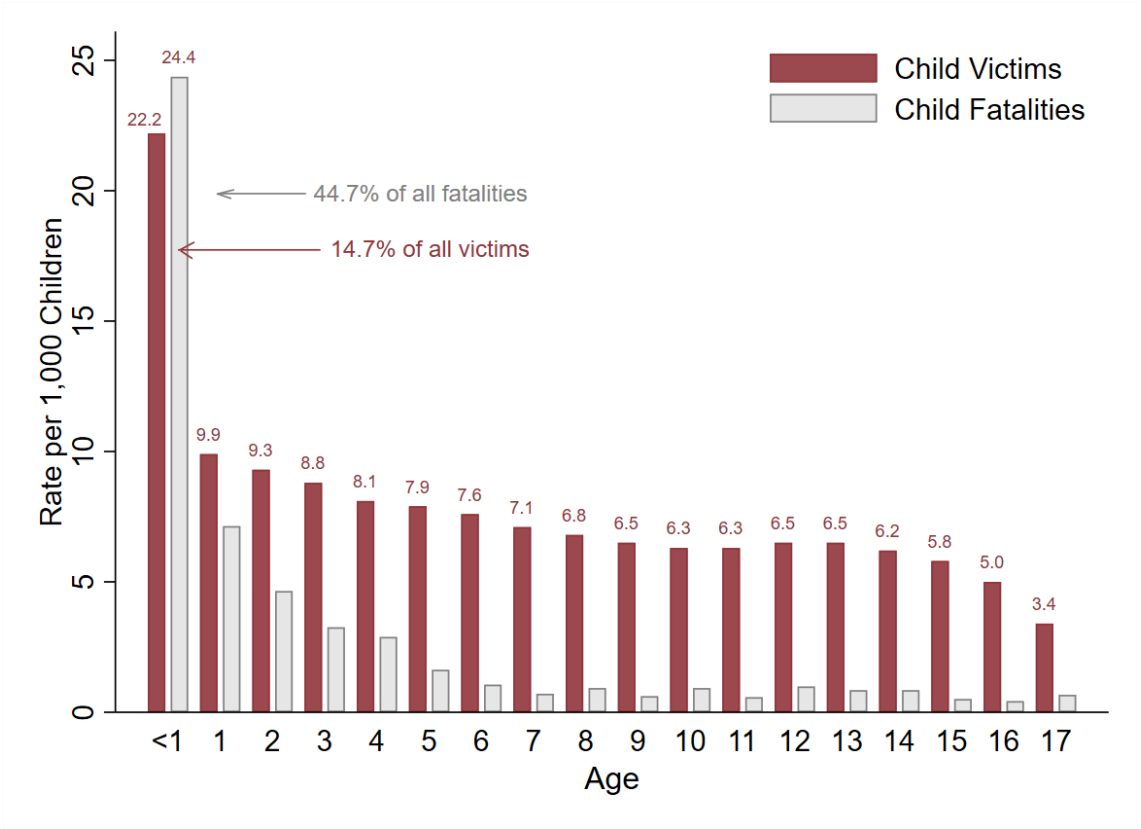
Proximity to Abortion Services and Child Maltreatment

Erkmen G. Aslim (GVSU → Vermont), Wei Fu (Louisville),
Erdal Tekin (American University & NBER)

National Bureau of Economic Research
Children Program Spring Meeting
May 2, 2024

Child maltreatment

- Child maltreatment, including neglect, physical, emotional and sexual abuse, is a serious and prevalent societal problem in the U.S.
  - In 2022 $\rightarrow$ **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 ≈ **$578 billion** in 2018 (Klika, Rosenzweig, and Merrick, 2020)

Abortion and child maltreatment

- Abortion legalization and restrictions, 1976 - 1996 (Bitler and Zavodny, 2002, 2004) and 1981 - 2002 (Sen, 2007)
  - Medicaid funding restrictions
  - Parental involvement laws
  - Mandatory waiting period

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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

Potential pathways

- Increased travel distance
  - → "*unwanted*" or "*unplanned*" children
  - → higher maltreatment risk

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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) $\rightarrow$ 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) $\approx$ **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 $\rightarrow$ 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 $\rightarrow$ "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 $\rightarrow$ 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 $\rightarrow$ the number of children under 17 served by each agency

Methodology

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- County characteristics
  - % 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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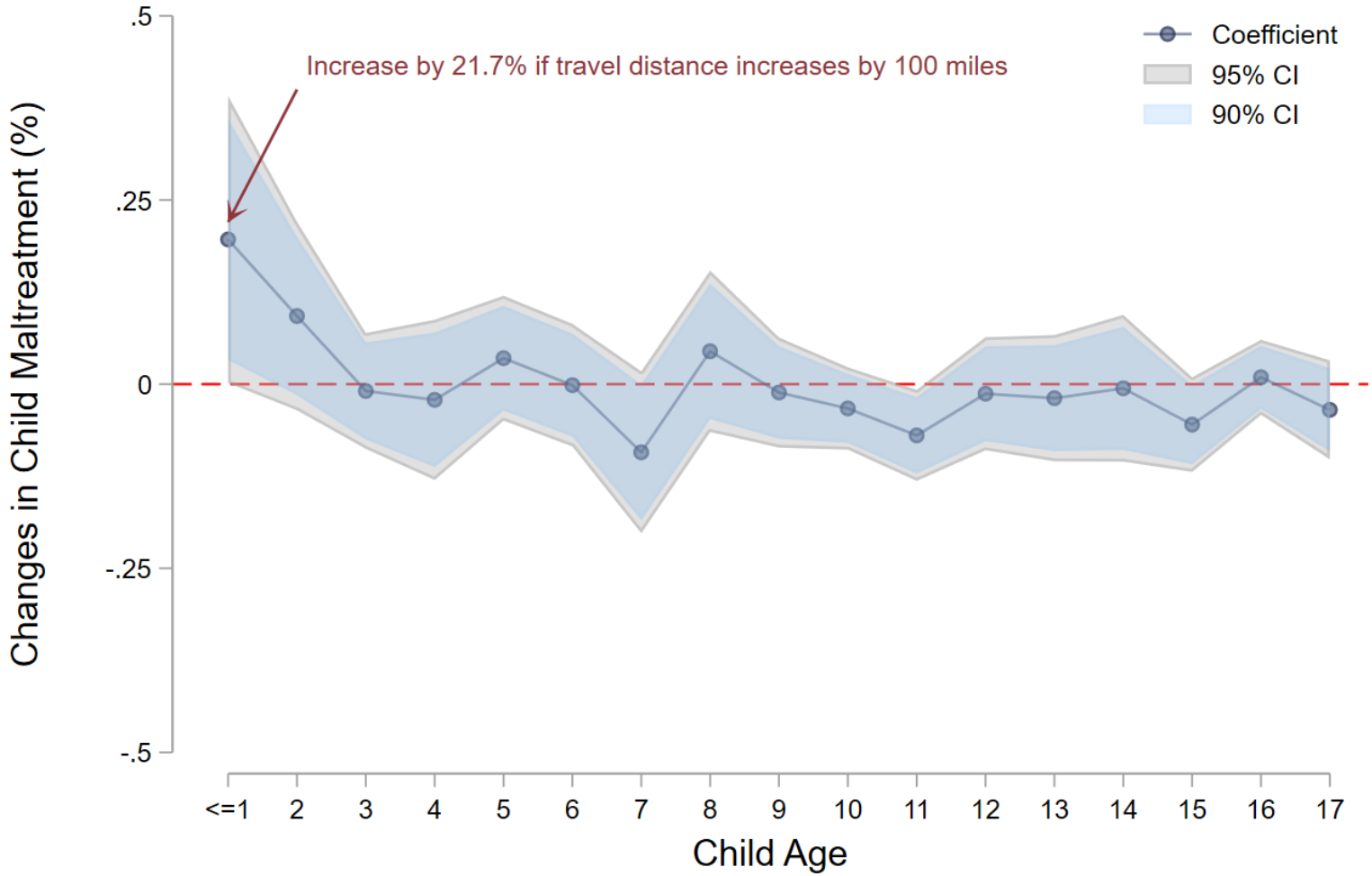
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  - one- and two-trip mandatory waiting periods, parental involvement laws, the average service population (log), ...

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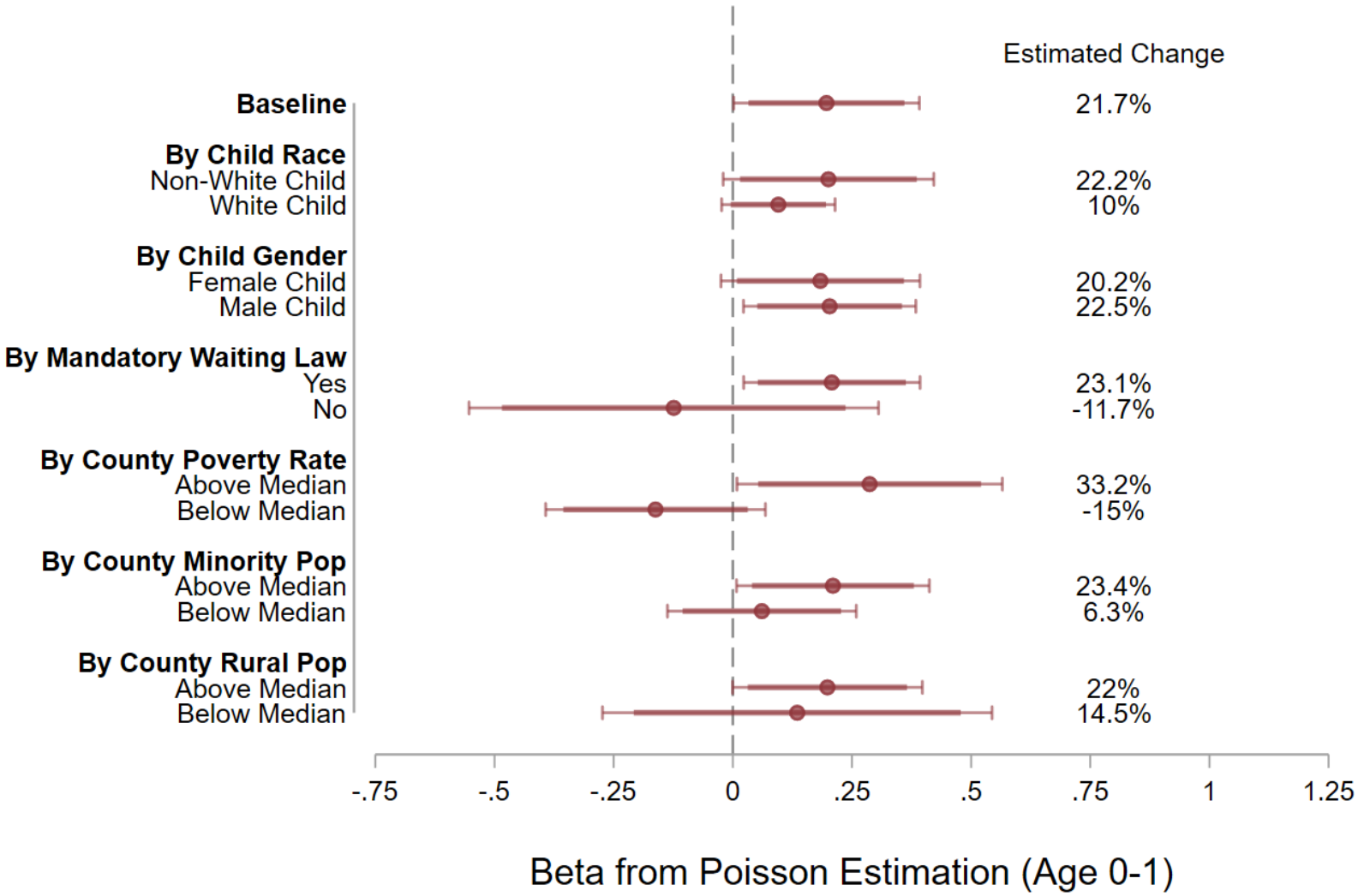
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- Alternative specifications using state-by-year FE ($\gamma_{s,t}$)

DID estimates by age



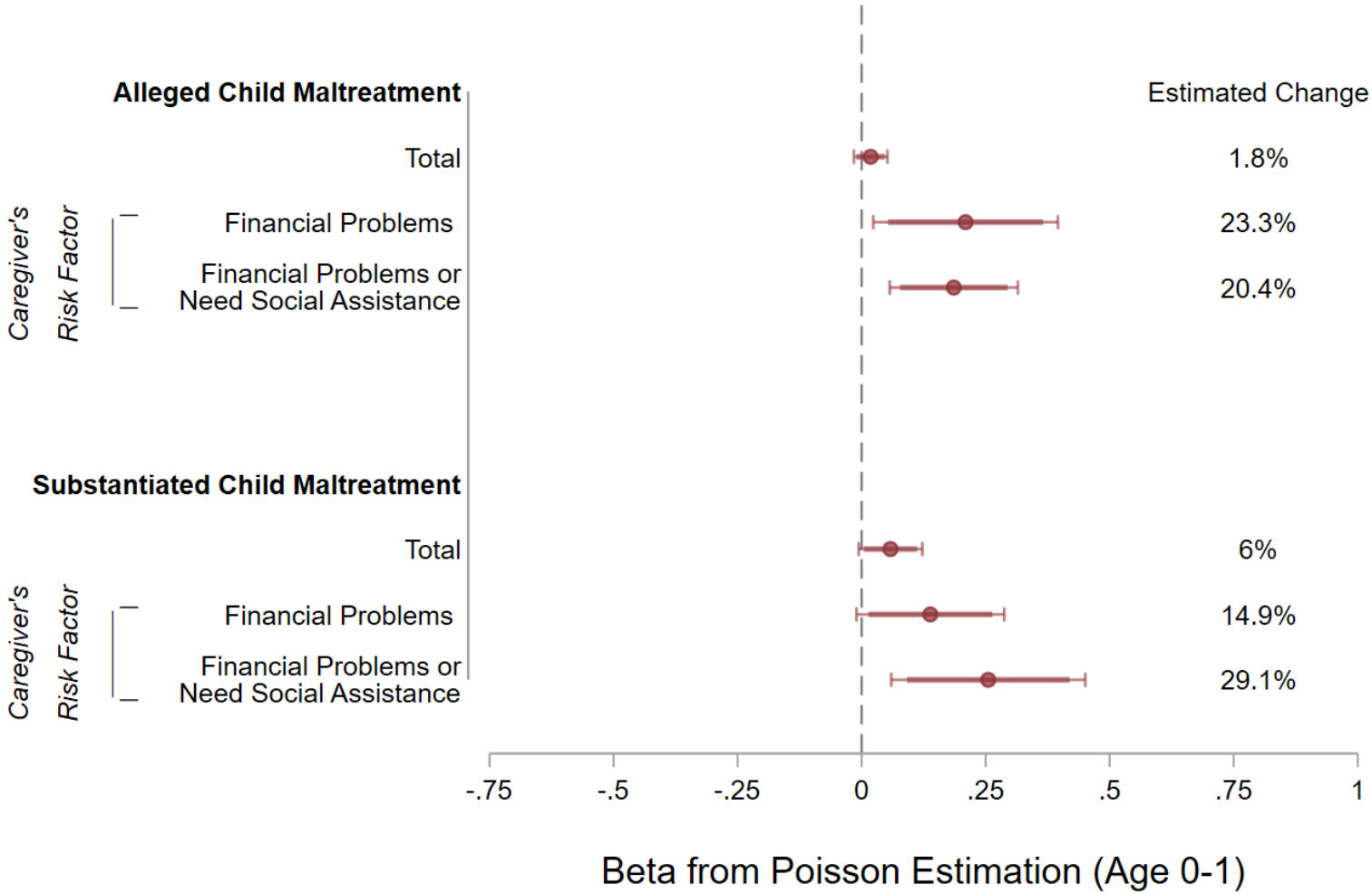
Heterogeneity



Additional checks

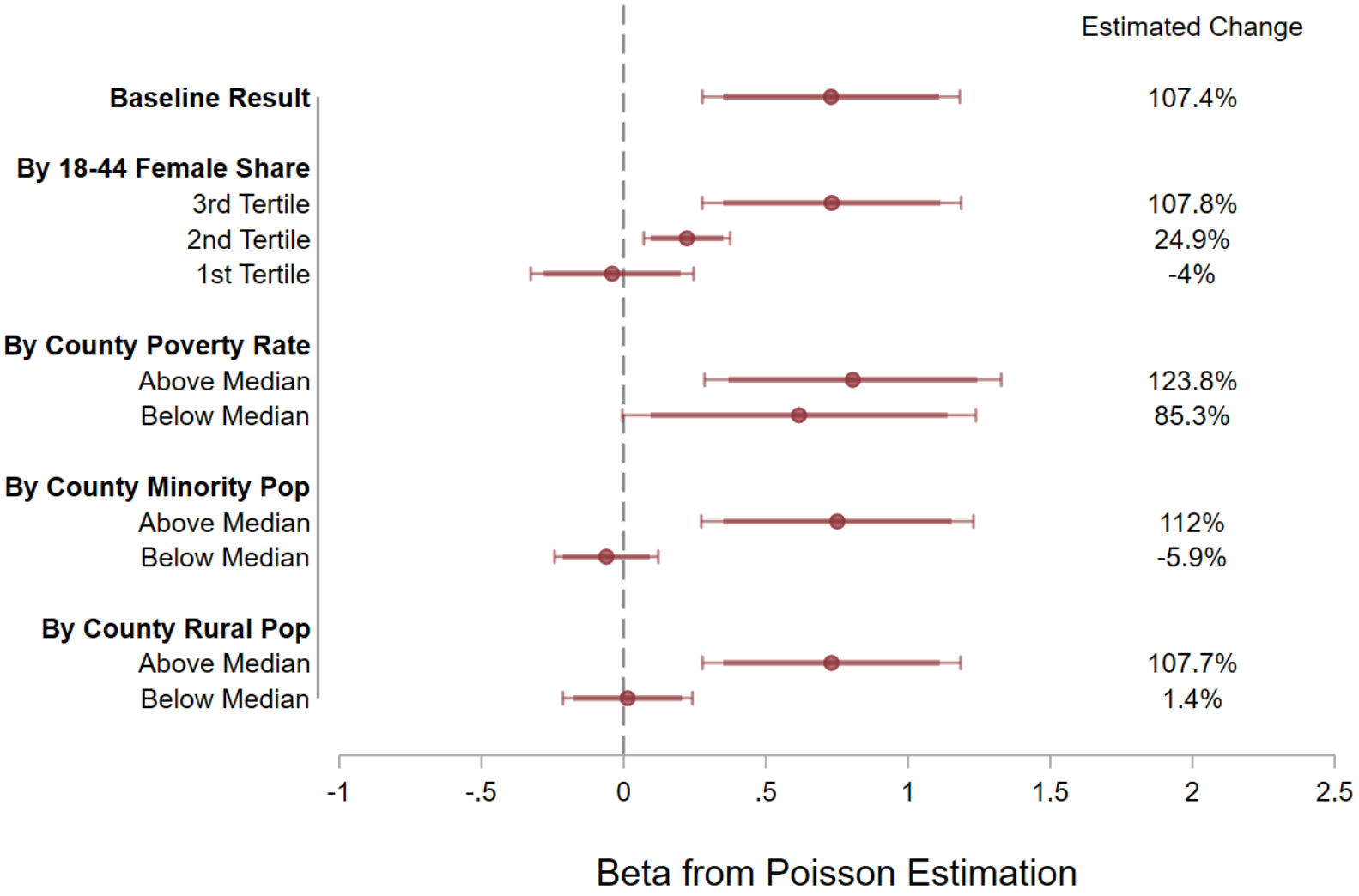
- Nonlinear effects Nonlinearity
- Inclusion of state-by-year FE Alternative Specifications
- Placebo checks w/ and w/o state-by-year FE Placebo Test
- Reverse causality (Maltreatment $\leftarrow$ **Abortion** $\rightarrow$ **Distance**) Endogenous Distance
- Event study Event Study

Alternative measures - NDACAN



Race/Ethnicity | Other Risk Factors | Regression Table

Eviction filings



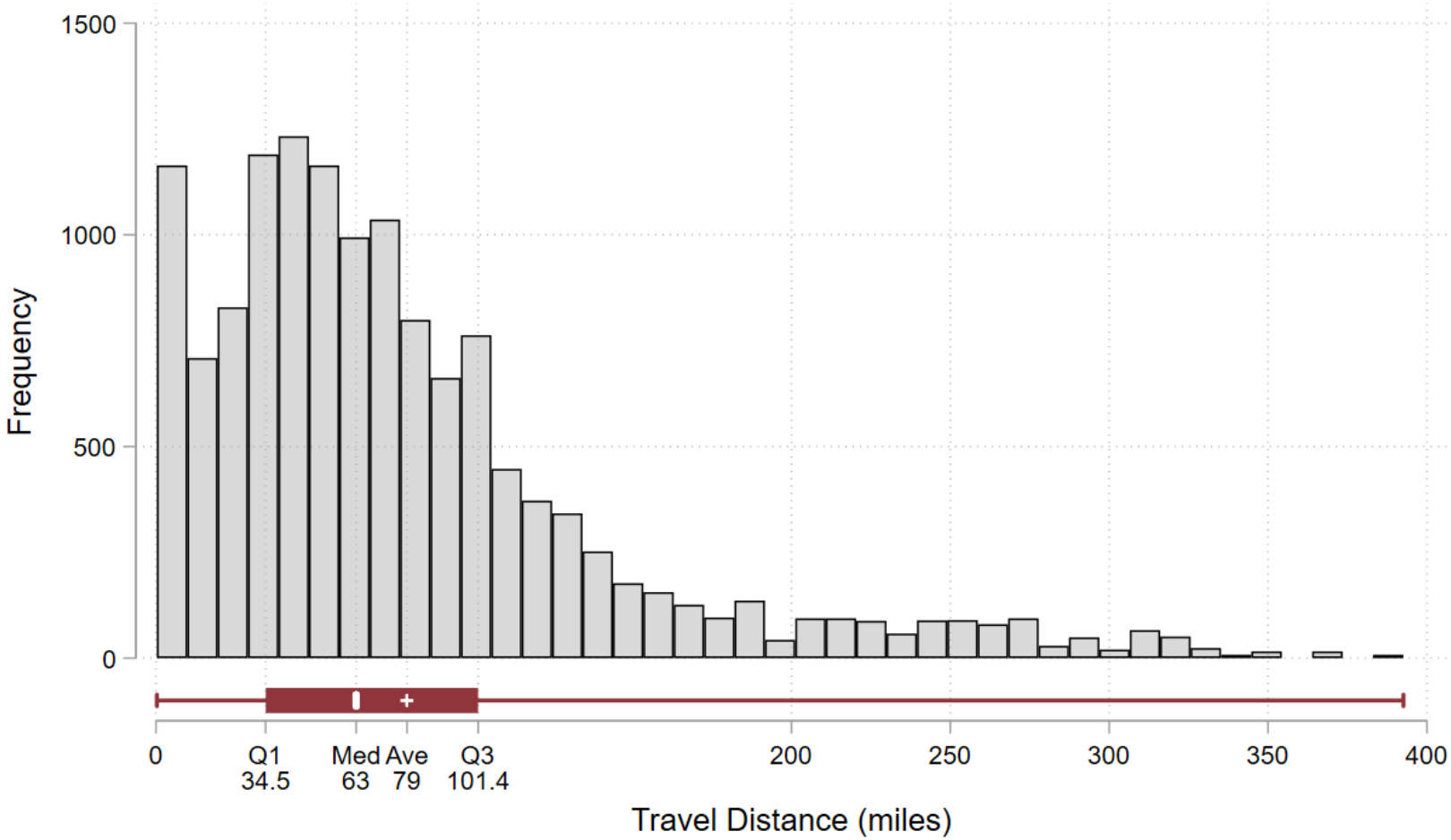
Conclusion

- 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:

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

- Need for accessible reproductive health services and comprehensive family support

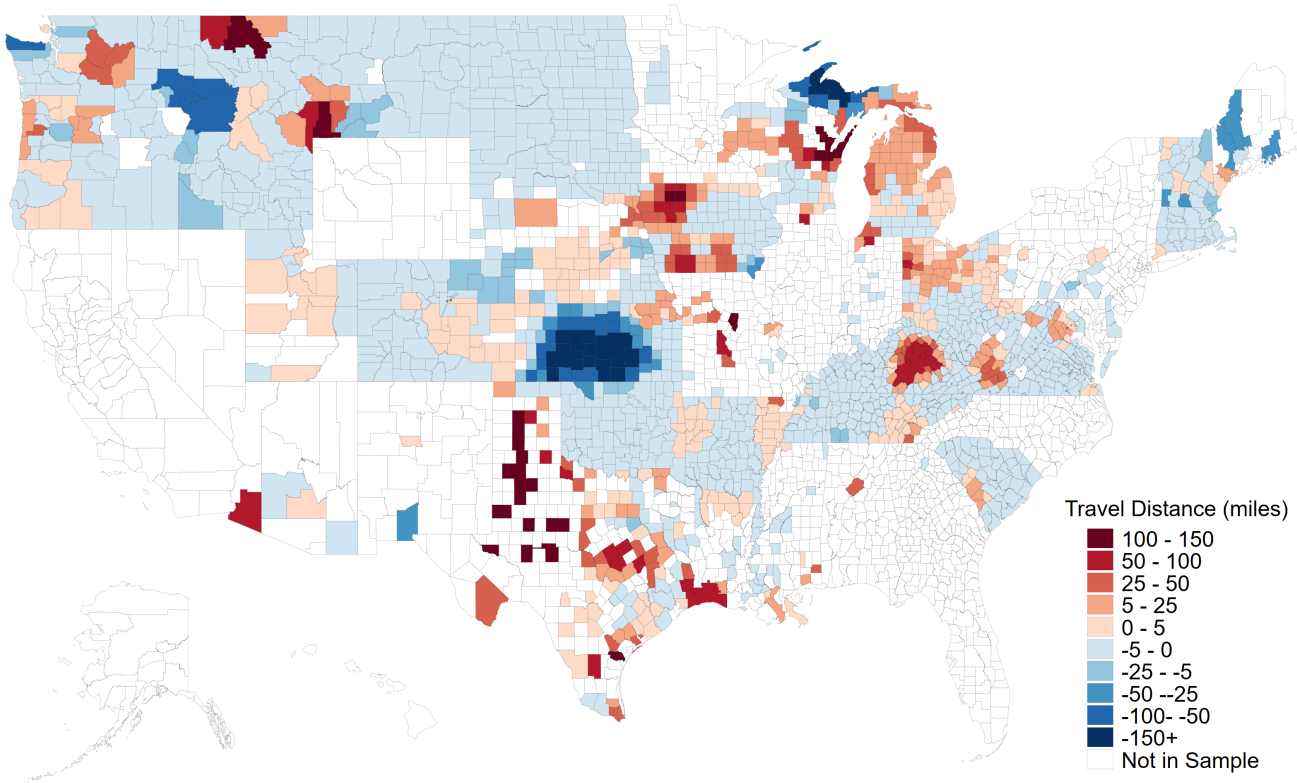
Appendix: Distribution of travel distance



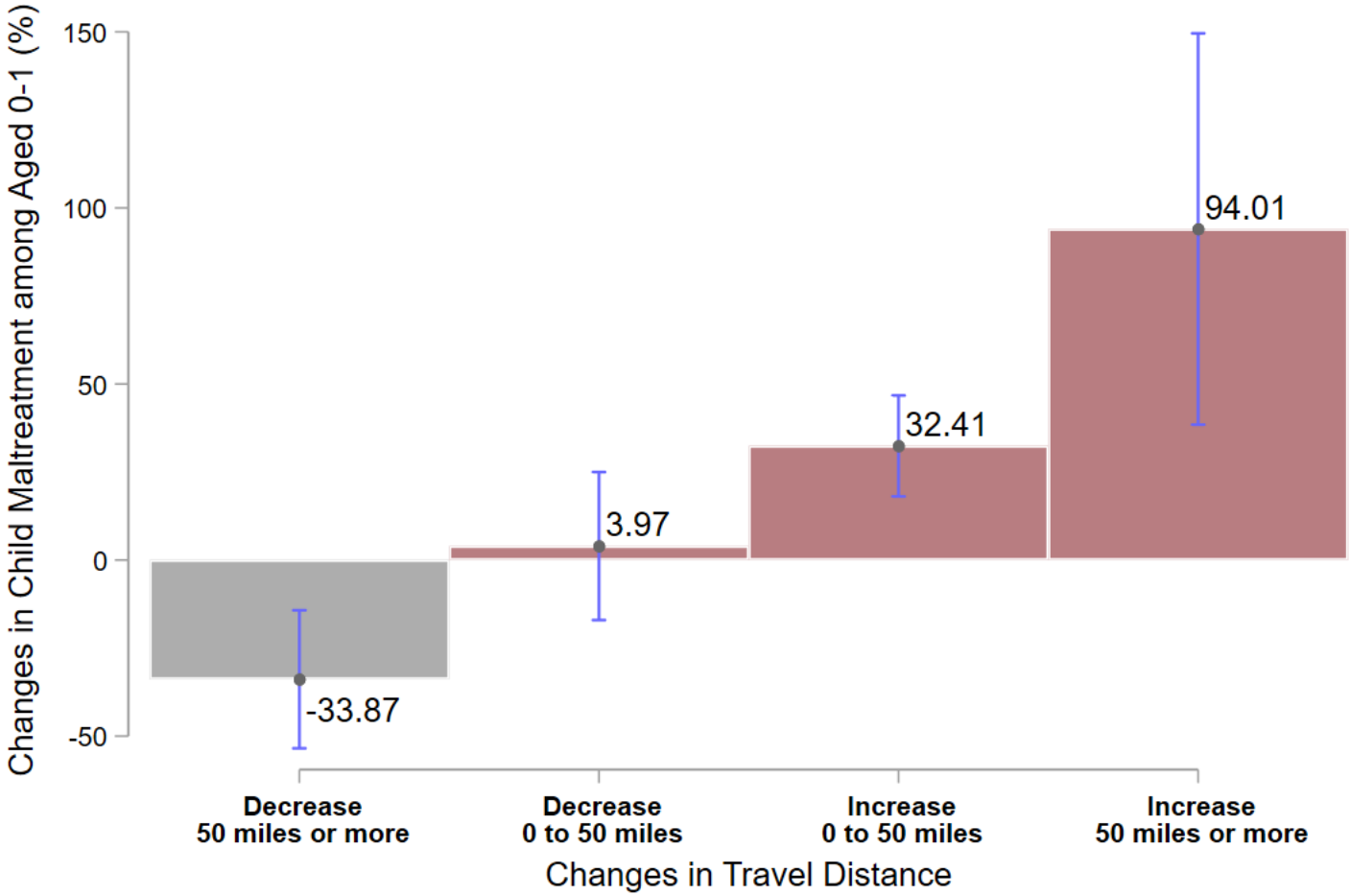
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Appendix: Variation in travel distance, 2010-2017

- 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



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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

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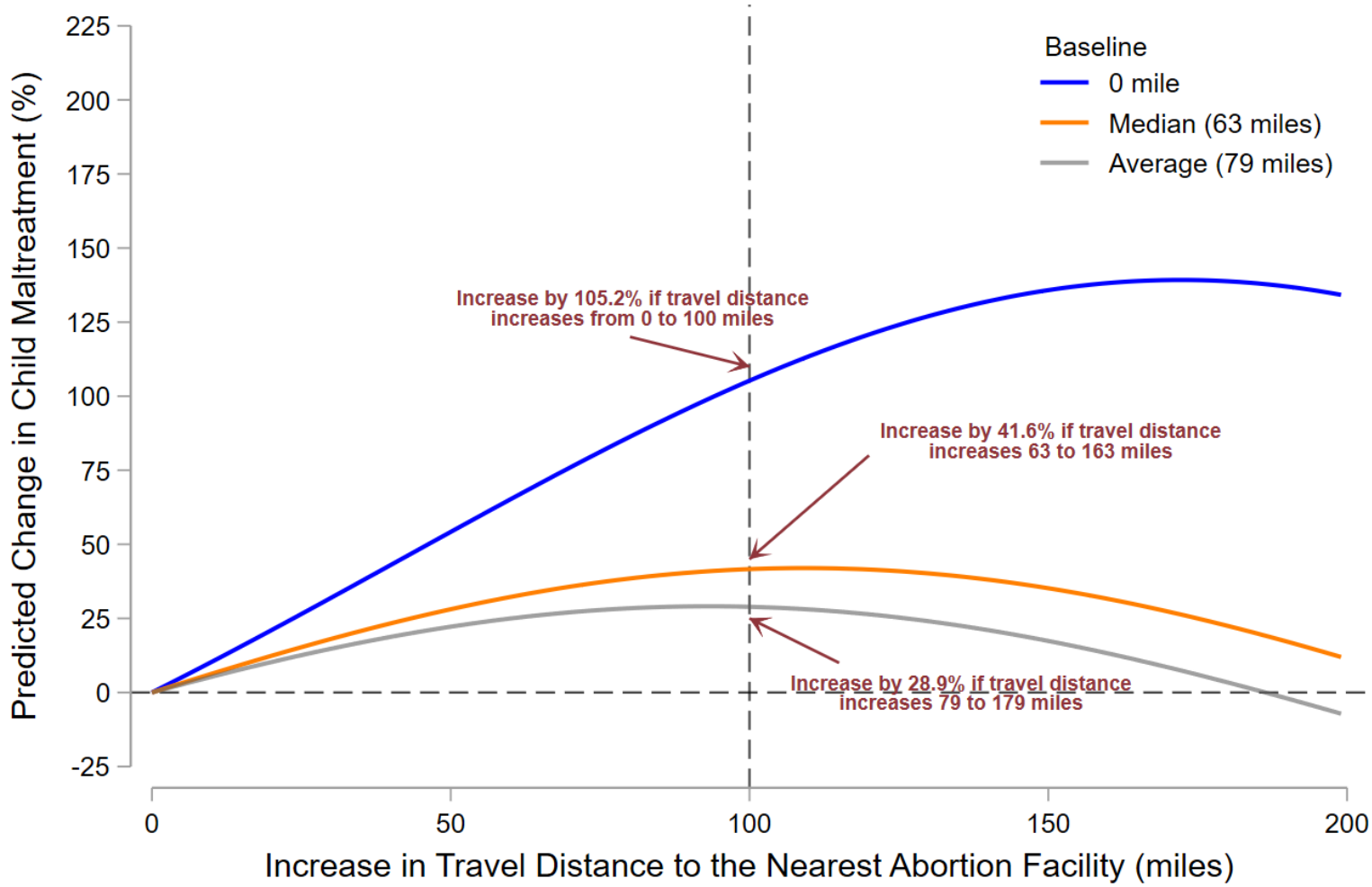
Appendix: Other Databases

- 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

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Appendix: Nonlinear Effects



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Appendix: Alternative Specifications

	Child Maltreatment (Children Aged 0-1)					
	(1)	(2)	(3)	(4)	(5)	(6)
Distance (100 miles)	0.196**	0.189**	0.507***	0.367**		
	(0.099)	(0.080)	(0.179)	(0.182)		
Distance (100 miles) Squared			-0.074**	-0.036		
			(0.029)	(0.031)		
Distance: 50-100 miles					0.307*	0.339**
					(0.182)	(0.140)
Distance: 100-150 miles					0.252	0.372*
					(0.246)	(0.215)
Distance: 150-200 miles					0.800***	0.730***
					(0.277)	(0.208)
Distance: 200+ miles					0.115	0.658*
					(0.356)	(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	0.870	0.870	0.870	0.870	0.870	0.870
County FE	√	√	√	√	√	√
Year FE	√	√	√	√	√	√
County Demographics	√	√	√	√	√	√
State Policy Measures	√		√		√	
State × Year FE		√		√		√

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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	0.022	-0.029	-0.057**	-0.021	-0.019
	(0.042)	(0.035)	(0.031)	(0.025)	(0.026)	(0.025)
Panel B: Quadratic						
Distance (100 miles)	0.116	-0.033	0.026	-0.122*	0.001	-0.065
	(0.091)	(0.091)	(0.072)	(0.068)	(0.078)	(0.072)
Distance (100 miles) Squared	-0.024	0.011	-0.013	0.013	-0.005	0.009
	(0.017)	(0.013)	(0.012)	(0.011)	(0.013)	(0.011)
Panel C: Categorical						
Distance: 50-100 miles	0.059	0.020	0.002	-0.084	0.022	-0.063
	(0.114)	(0.070)	(0.062)	(0.055)	(0.057)	(0.041)
Distance: 100-150 miles	0.018	-0.062	-0.032	0.005	0.016	-0.045
	(0.136)	(0.132)	(0.095)	(0.106)	(0.103)	(0.078)
Distance: 150-200 miles	0.142	0.122	-0.019	-0.026	-0.065	-0.043
	(0.111)	(0.130)	(0.094)	(0.107)	(0.104)	(0.094)
Distance: 200+ miles	-0.208	0.111	-0.303***	-0.146	-0.083	-0.047
	(0.172)	(0.136)	(0.115)	(0.127)	(0.117)	(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	2.534	2.534	2.702	2.702	3.444	3.444
County FE	√	√	√	√	√	√
Year FE	√	√	√	√	√	√
County Demographics	√	√	√	√	√	√
State Policy Measures	√		√		√	
State × Year FE		√		√		√

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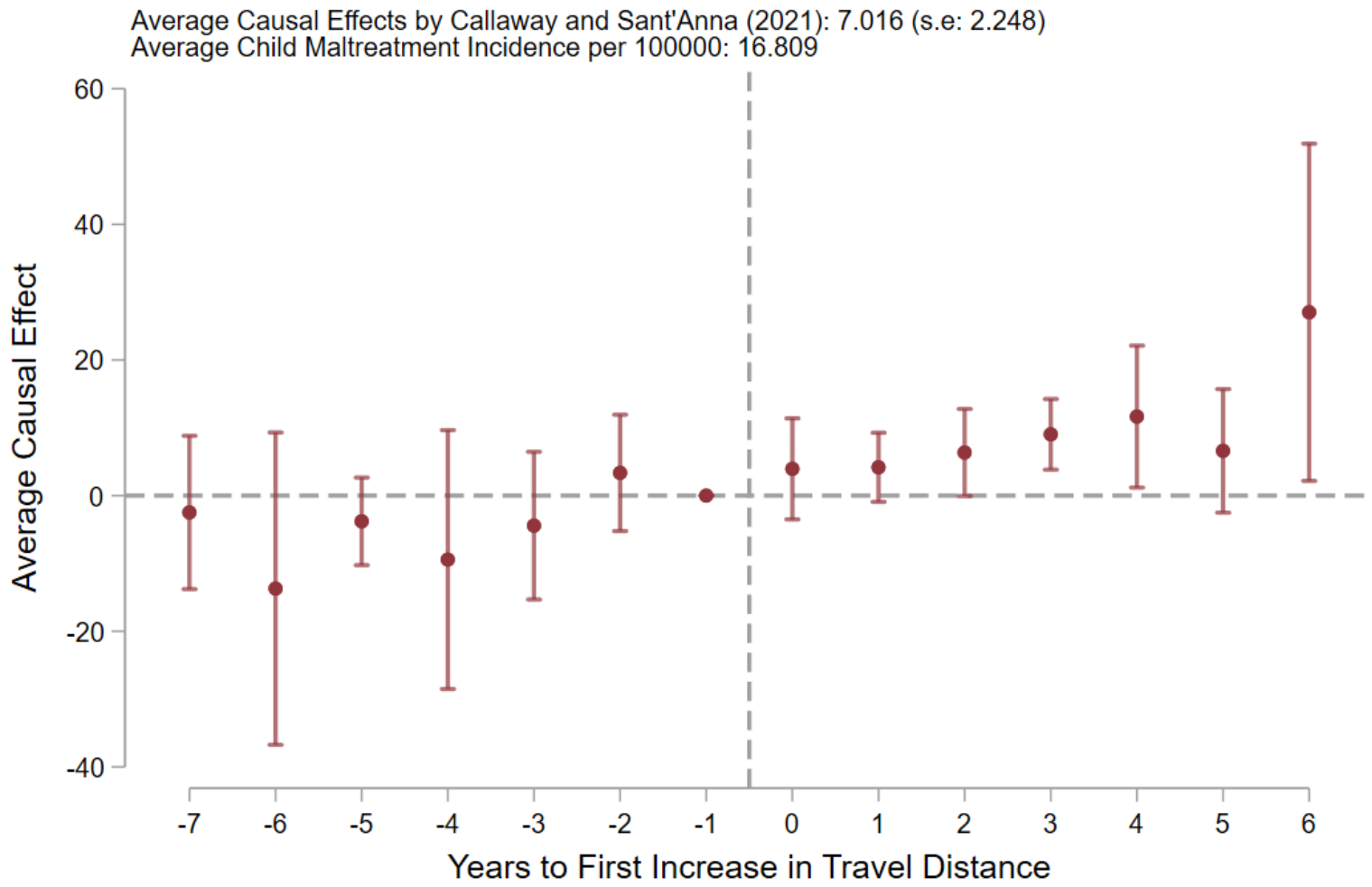
Appendix: Is distance driven by demand?

- Ideal path: Maltreatment ← Abortion ← Distance
- Violation: Maltreatment ← **Abortion → 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	-0.00298*	0.00136	-0.00069	0.00116	-0.00024	0.00030	-0.00074
	(0.00178)	(0.00178)	(0.00112)	(0.00106)	(0.00094)	(0.00097)	(0.00054)	(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 × Year FE		√		√		√		√

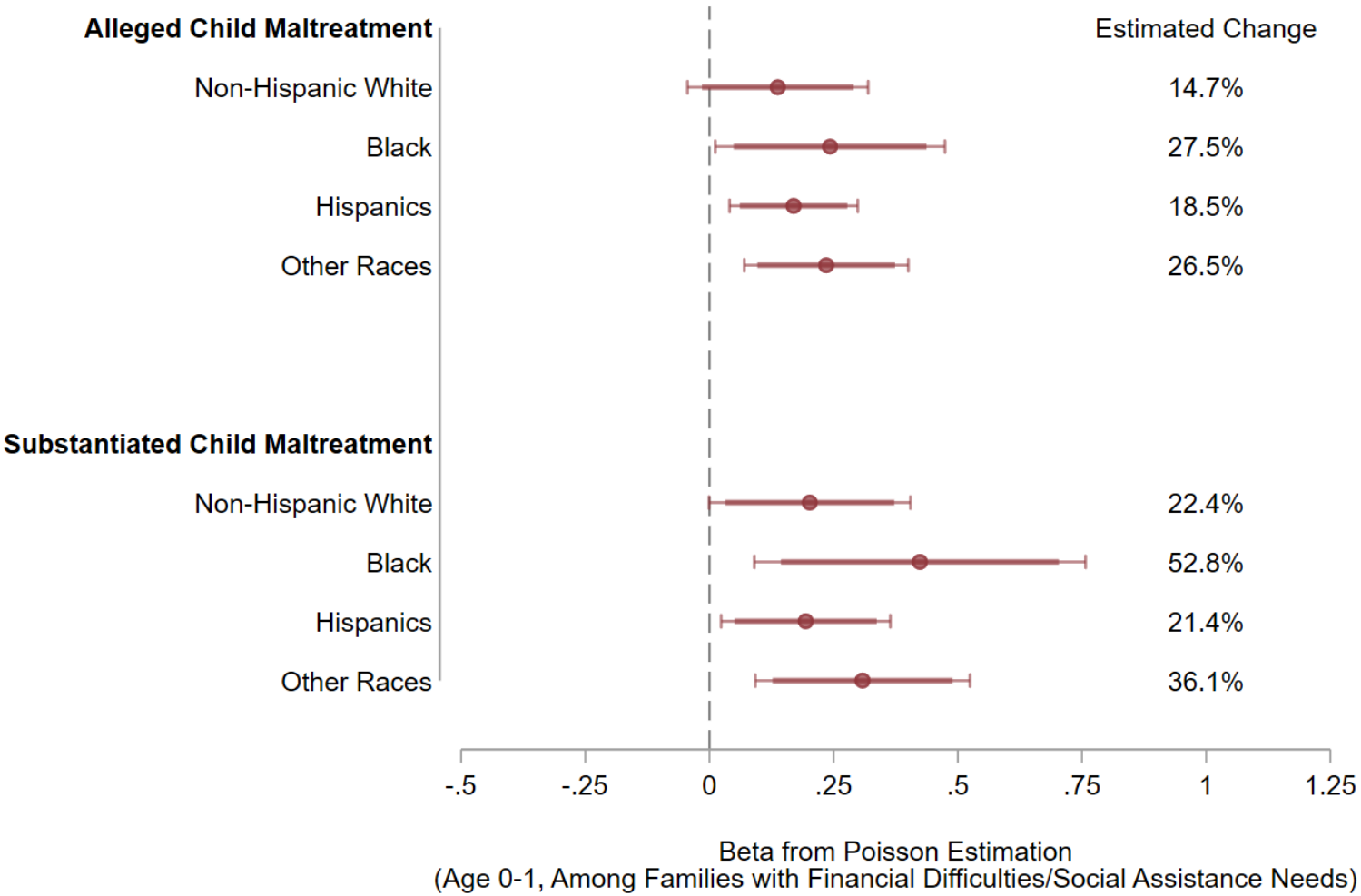
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Appendix: Event Study



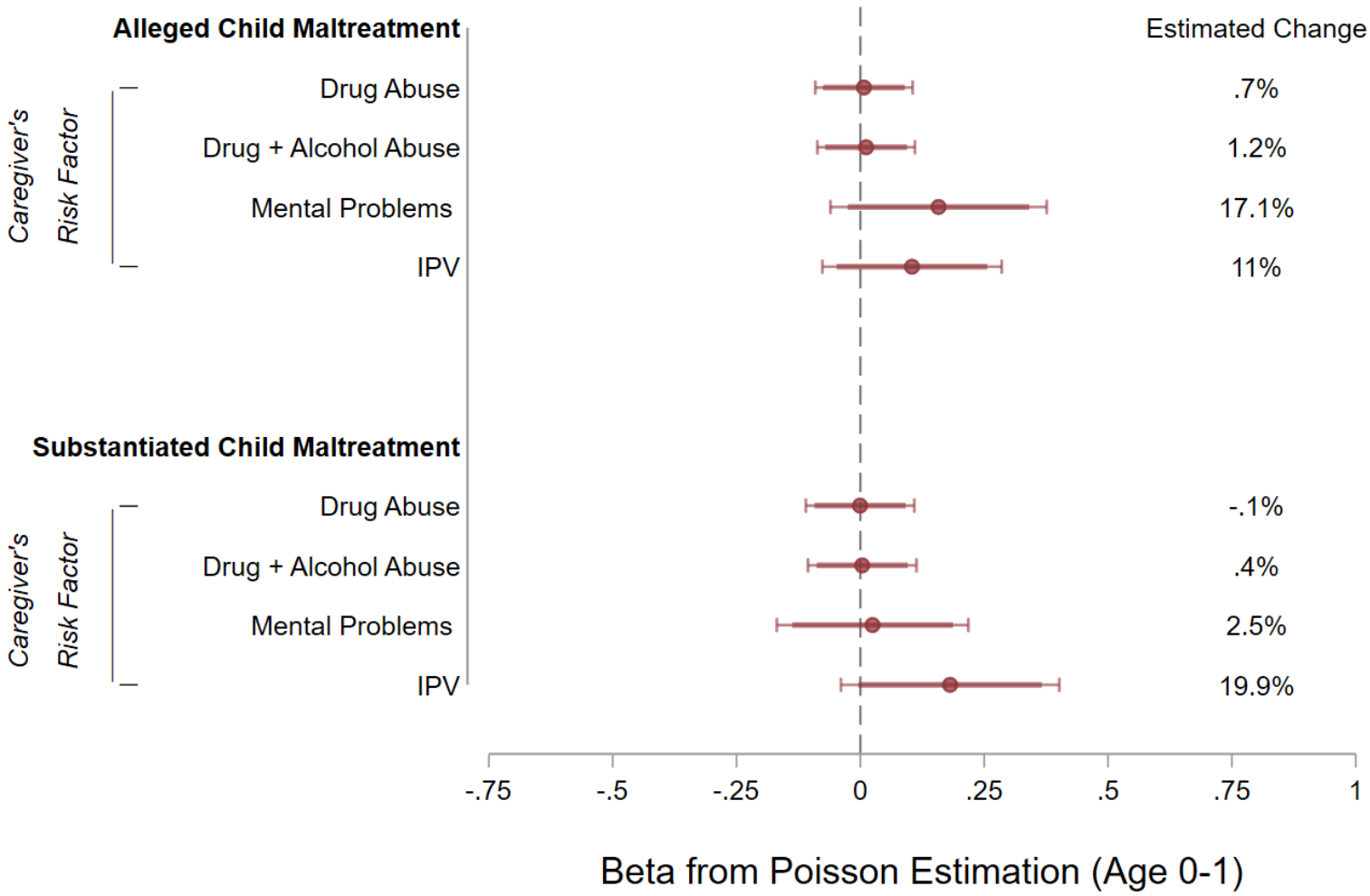
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Appendix: Race/Ethnicity breakdown



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Appendix: Other risk factors



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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*	0.138*	0.255**	-0.001	0.004	0.025	0.181
	(0.033)	(0.076)	(0.100)	(0.056)	(0.056)	(0.099)	(0.112)
Panel B: Quadratic							
Distance (100 miles)	0.170**	0.230**	0.521***	0.161	0.156	0.106	0.688***
	(0.067)	(0.115)	(0.173)	(0.098)	(0.096)	(0.205)	(0.266)
	-0.026**	-0.021	-0.064***	-0.037***	-0.035**	-0.018	-0.109**
Distance (100 miles) Squared	(0.011)	(0.019)	(0.023)	(0.014)	(0.014)	(0.031)	(0.043)
N	5981	5981	5981	5981	5981	5981	5981
Clusters	965	965	965	965	965	965	965
Child Maltreatment Mean	150.481	13.940	34.506	30.772	32.560	5.832	28.386
County Demographic	√	√	√	√	√	√	√
County FE	√	√	√	√	√	√	√
Year FE	√	√	√	√	√	√	√

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