

Supplemental Security Income and Caregiving Burden for Families of Children with Special Health Care Needs

Stephanie Rennane, Andrew Dick, Lynn Karoly ²

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Caring for children with special health needs is mentally and financially costly

Children with special health care needs (CSHCN) are *“at increased risk of a chronic physical, developmental, behavioral, or emotional condition, and [...] require health and related services [...] beyond that required by children generally”*

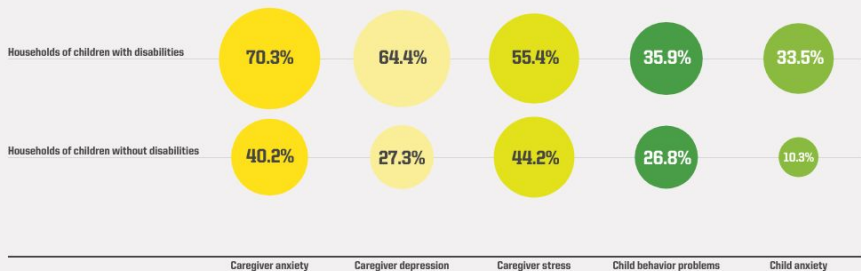
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- Families play additional roles as caregivers and care coordinators
- Challenges in coordinating and providing care lead to increased stress, financial risk, and health consequences (Currie 2005, Kuhlthau et al. 2010, Schuster et al. 2011, Romley et al. 2017)
- Difficulties are highest for disadvantaged families, leading to disparities in caregiving burden (Halfon et al. 2012, Miller et al. 2015)

The pandemic has exacerbated these challenges

CAREGIVER AND CHILD MENTAL HEALTH



The forgotten households - WEEK 2

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Source: "The Forgotten Households", Rapid Assessment of Pandemic Impact on Development Early Childhood Household Survey Project, University of Oregon

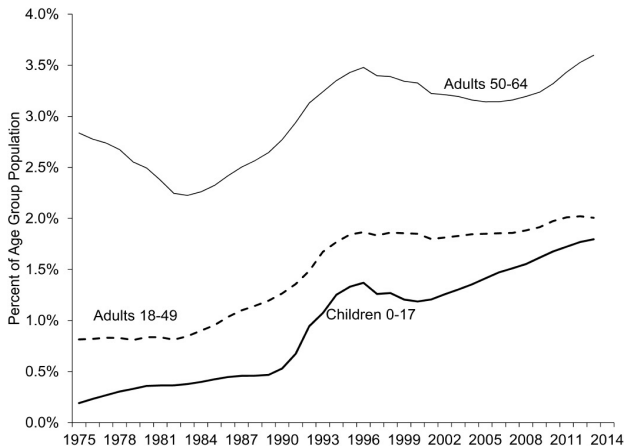
Supplemental Security Income could mitigate these costs

- Supplemental Security Income (SSI) provides cash and access to Medicaid for low-income families of children with special needs
- Program is means tested, benefits typically phase out for families with incomes at or above 200% of FPL
- Eligible children have *“a medically determined physical or mental impairment which results in marked and severe functional limitations, which can be expected to lead to death or which has been or can be expected to last for a continuous period of not less than 12 months”*

Our Research Questions

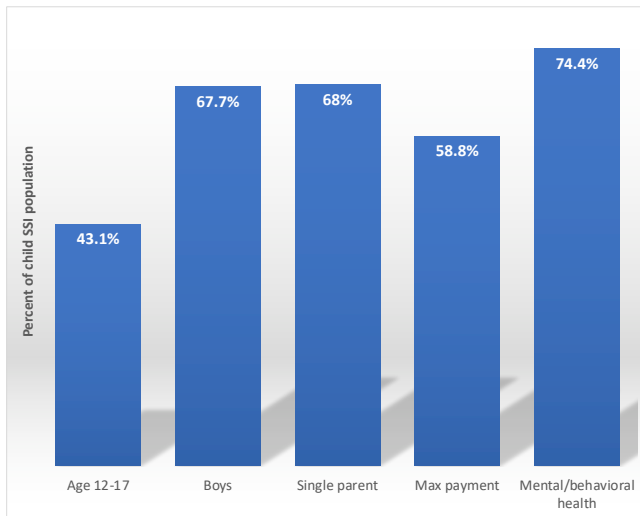
- ① To what extent does SSI reduce caregiver burden for families of children with special needs?
 - *Caregiver burden*: family mental health and financial strain
- ② Does SSI mitigate disparities in caregiver burden for low income families and families of color who have children with special needs?

Child participation in SSI has grown significantly



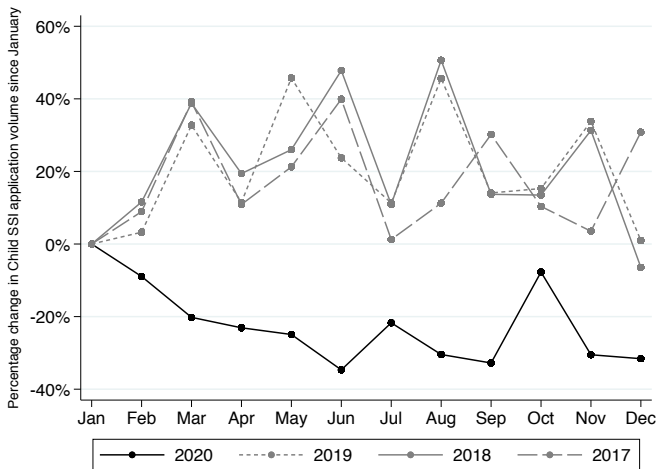
Source: Duggan, M.G., Kearney, M.S., Rennane, S. 2016. "The Supplemental Security Income Program" In R. A. Moffitt (Ed.) *Economics of Means-Tested Transfer Programs in the U.S., Volume II* (pp. 1-58). Chicago, IL: University of Chicago Press.

Characteristics of children receiving SSI in 2019



Source: Social Security Administration. SSI Annual Statistical Report, 2019.

But, child SSI applications declined during COVID



Source: SSA State Agency Monthly Workload Data

SSI applications and COVID

SSI could be an effective mechanism to mitigate disparities in caregiver burden during the pandemic, but the pandemic has also introduced significant barriers preventing access.

- SSA field offices closed on March 17, 2020 and have not yet reopened
- Field office closures reduce applications and awards (Deshpande & Li 2019)
- Online SSDI application increases applications and awards (Foote, Grosz, Rennane 2019)..but that's not an option for SSI
- Child SSI applications must be done in person or over the phone

Prior work on the effects of Child SSI

Child SSI has been shown to:

- Increase household income (Duggan & Kearney 2007)
- Stabilize household income over time (Deshpande 2016b)
- Reduce food insecurity (Schmidt et al. 2016, Rose-Jacobs et al. 2016)
- Reduce parental labor supply on the intensive margin (Deshpande 2016a, Guldi et al. 2018)
- Improve infant development and parenting behaviors of low-birthweight infants (Guldi et al. 2018)

But, the effect of child SSI on family caregiver burden (mental health, financial stress) remains unknown.

A growing lit considers broader effects of transfer programs

- Public health insurance shown to have large effects on household financial outcomes and mental health (Finkelstein McKnight 2008; Finkelstein et al. 2012; Baicker et al. 2013)
- SSDI has financial benefits for beneficiaries (Desphande, Gross, Su, 2021), effects on mortality (Moore, Gelber, Strand 2018)
- SSDI and SSI increase informal caregiving (Rennane 2020)

Approach

- ① Analyze survey data with a representative population of children with special health care needs
- ② Present descriptive evidence on disparities in caregiver burden
- ③ Exploit policy features to identify how SSI mitigates caregiver burden via:
 - ① Reducing barriers to Medicaid access
 - ② Cash value of SSI benefits

Data sources

- ① **National Survey of Children with Special Health Care Needs, 2001-2009**
 - Nationally and state representative sample of children with special needs ($n \sim 40,000$ per wave), 9% receive SSI
 - Includes data on SSI receipt, child demographics and health conditions and family outcomes of interest

Data sources

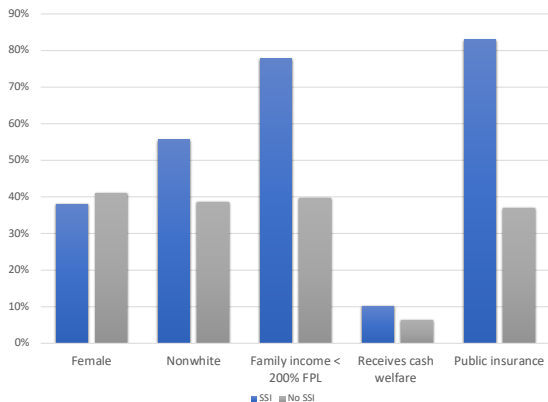
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② Policy data sources

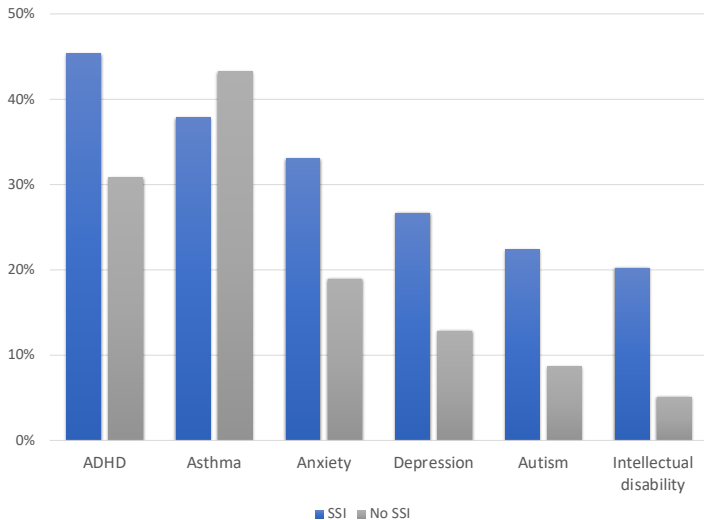
- Kaiser Family Foundation State Health Facts (Medicaid)
- SSI Annual Statistical Report, other state sources (SSI policies)
- Urban Institute Welfare Rules Database (TANF)
- Urban Institute CCDF Policy Database (Child care subsidies)

Demographics



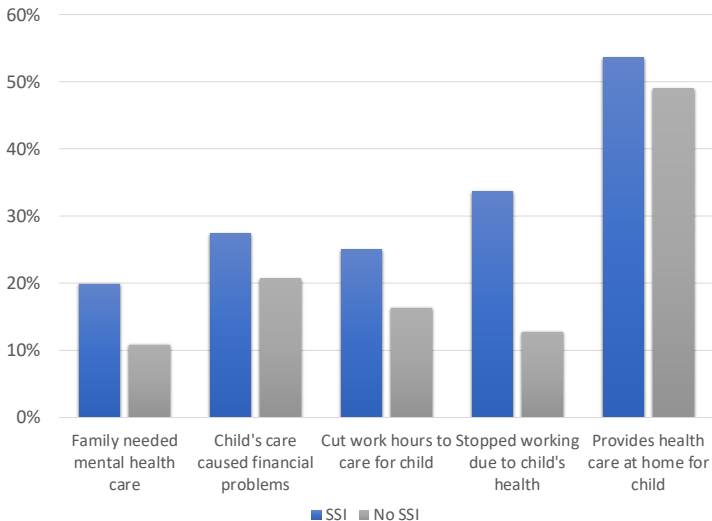
Source: National Survey of Children with Special Health Care Needs, 2009

Health conditions



Source: National Survey of Children with Special Health Care Needs, 2009

Caregiver burden



Source: National Survey of Children with Special Health Care Needs, 2009

Key Takeaways

- ① Families of children on SSI experience more socioeconomic disadvantage compared to other CSHCN
- ② Children on SSI have more severe health conditions
 - 85% have more than one condition, versus 66% among other CSHCN
 - On average, report 4 conditions, versus 2.4 among other CSHCN
- ③ Families of children on SSI face higher caregiving burden

Key Takeaways

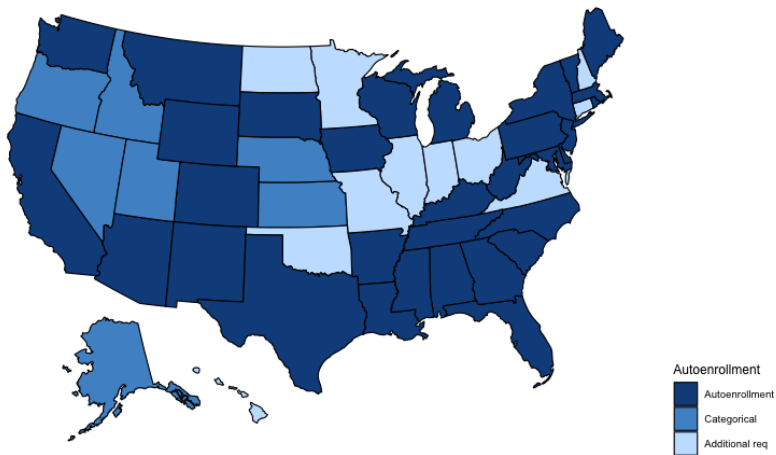
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These differences confirm that the targeting of SSI program is working

- But, present an empirical challenge to estimate the effect of SSI on child and family outcomes
- Our work introduces an empirical approach to overcome this challenge

Access to Medicaid

SSI Facilitates Access to Medicaid via Automatic Enrollment



Medicaid enrollment policies for SSI beneficiaries

	Eligibility	Enrollment	N
Automatic enrollment (1634)	X	X	35
Categorical eligibility	X		7
Additional requirements (209(b))			9

Medicaid, SSI and Caregiving

Administrative burden limits access to Medicaid (Kenney et al. 2015, Chan et al. 2012, Son et al. 2018, Alker et al. 2020)

Automatic enrollment and express-lane eligibility (ELE) policies increase Medicaid enrollment in the general pop (e.g., Hoag 2015, Blavin et al. 2014, Dorn et al. 2018) and among SSI adults (Rupp and Riley 2016)

Medicaid is a salient consideration for individuals seeking SSI (Levere et al. 2019)

Medicaid is the largest payer for behavioral health care (e.g., Breslau et al. 2017, Zur et al. 2021)

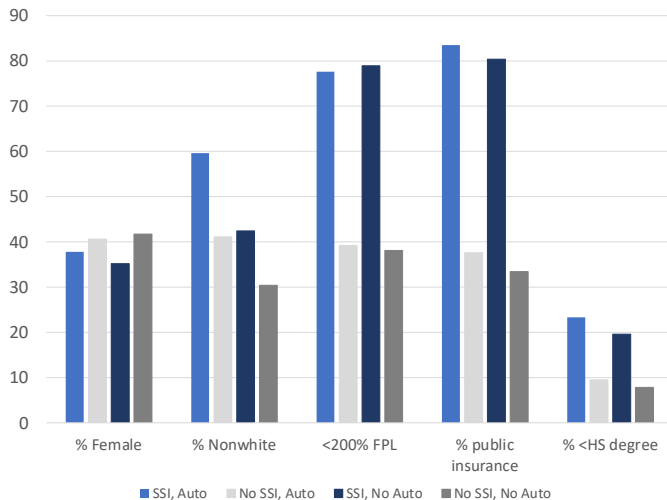
We Use a Difference in Differences Strategy to Identify the Effect of Automatic Enrollment

Outcomes: Insurance coverage, caregiver burden

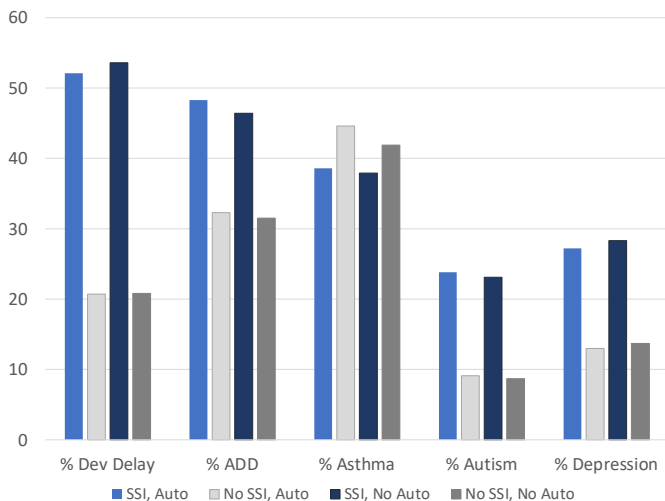
$$Y_{is} = \beta_1 + \beta_2 SSI_{is} * AUTO_s + \beta_3 SSI_{is} + \beta_4 AUTO_s + X_{is}\theta + \gamma_s + \epsilon_{is}$$

- Treatment: SSI; Control: Other CSHCN
- Exploit variation across states in automatic enrollment policies
- Assume: similar patterns in characteristics within states for children on SSI and other CSHCN [► trends](#)

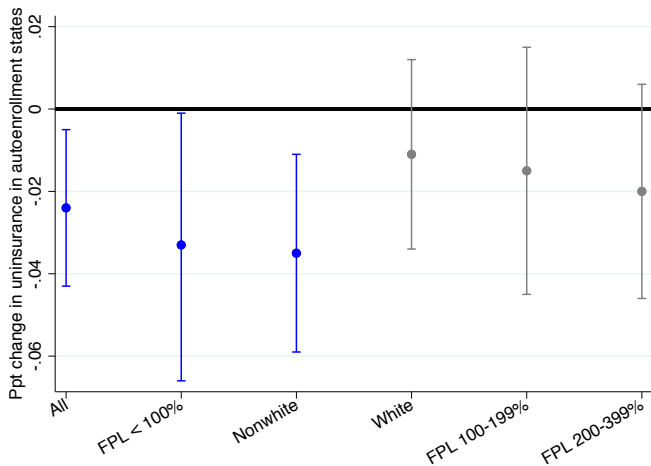
Patterns in demographics are similar in states with and without automatic enrollment



Patterns in health conditions are similar in states with and without automatic enrollment

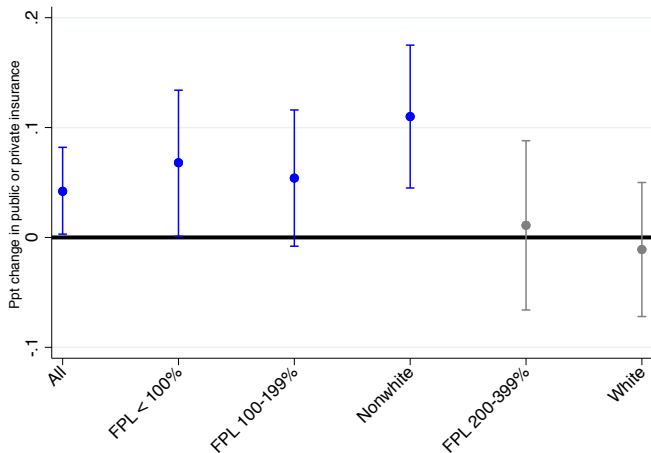


Automatic enrollment reduces uninsurance among children on SSI by 2-3 pp

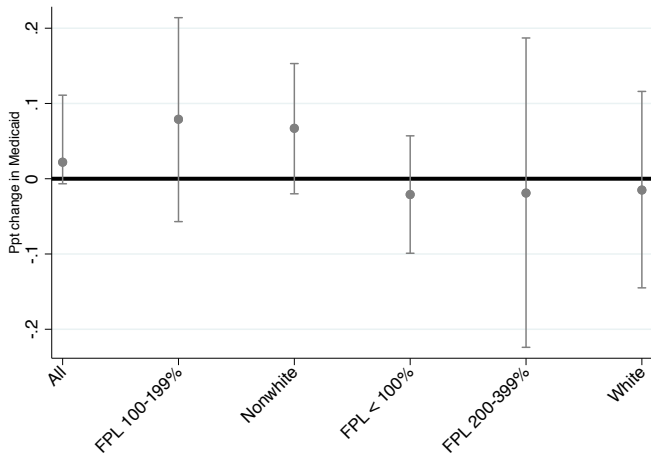


Source: Rennane and Dick 2021 working paper. National Survey of Children with Special Health Care Needs 2009.

Automatic enrollment increases public+private insurance coverage among children on SSI by 4-6 pp



Automatic enrollment increases Medicaid coverage among children on SSI



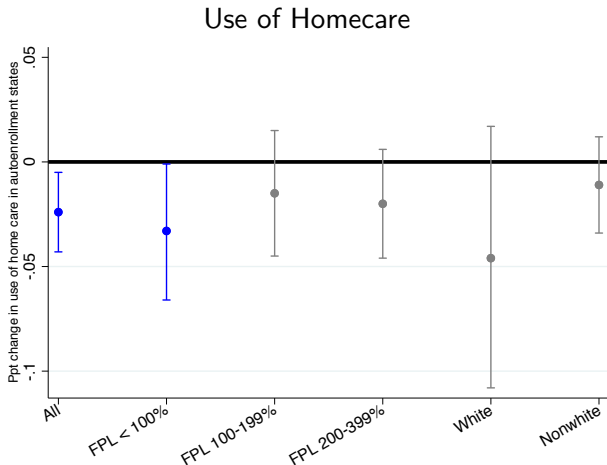
Source: Rennane and Dick 2021 working paper. National Survey of Children with Special Health Care Needs 2009. Sample limited to 29 states where Medicaid can be identified separately from other public insurance options, including SCHIP.

Sensitivity analyses

	(1) Mcaid Threshold	(2) < 400% FPL	(3) 209(b)	(4) SSI definition
SSI * Auto	-0.024** (0.009)	-0.026** (0.10)	-0.024** (0.009)	-0.029*** (0.010)
Obs	37,400	25,090	37,400	37,384
State FE	YES	YES	YES	YES
Y-mean	0.03	0.04	0.04	0.04

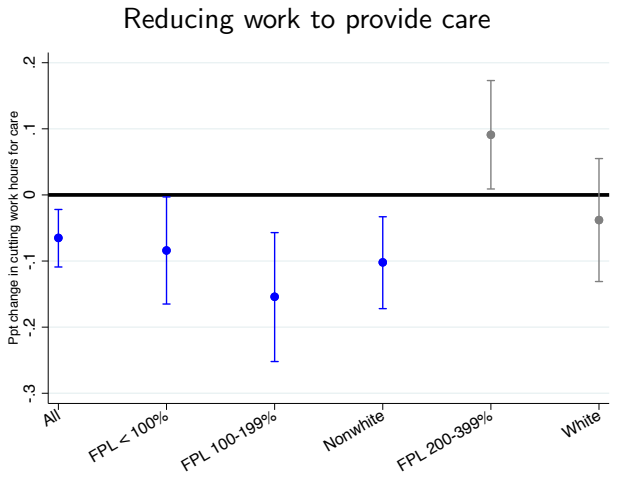
Source: Rennane and Dick 2021 working paper. National Survey of Children with Special Health Care Needs 2009.

Insurance coverage translates into reduced burden of care



Source: Rennane and Dick 2021 working paper. National Survey of Children with Special Health Care Needs 2009.

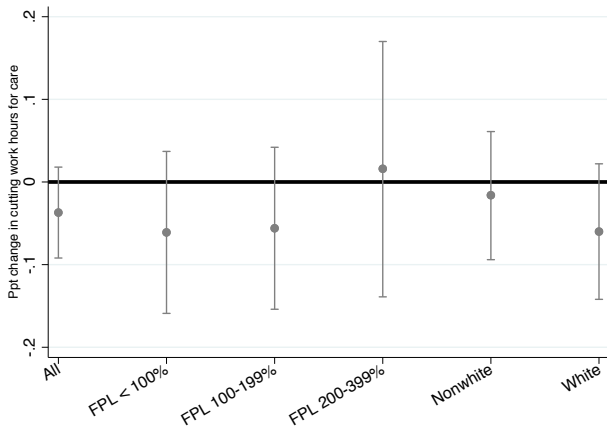
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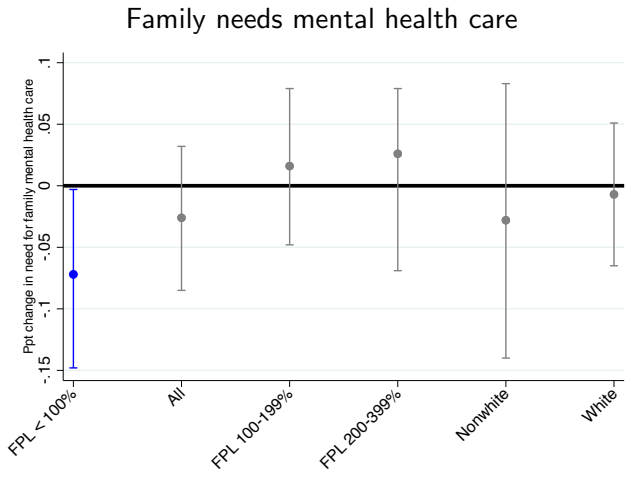
Insurance coverage translates into reduced burden of care

Care causes financial problems



Source: Rennane and Dick 2021 working paper. National Survey of Children with Special Health Care Needs 2009.

Insurance coverage translates into reduced burden of care



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Discussion

Takeaways:

- Despite the fact that most children on SSI would likely be eligible for Medicaid, automatic enrollment still increases insurance coverage
- Increased coverage - and perhaps access to a wider range of services through Medicaid - translate into reductions in caregiver burden.

Fast forward to 2021...

- Only 2 states have changed automatic enrollment criteria since 2009
- ELE policies may have reached more uninsured CSHCN through automatic enrollment for the general population
- But, uninsurance rates among children have increased since 2016, particularly for children of color (e.g., Alker et al. 2020)

Conclusions

- ① SSI's benefit package is relevant for families of CSHCN now more than ever
- ② Our ongoing work shows evidence that SSI mitigates caregiving burden through access to health insurance and the cash benefit
- ③ The gains are larger for lowest income families and families of color, suggesting the program may reduce disparities in caregiving burden

Next Steps

- ① Medicaid:
 - Explore further effects on health service utilization, more recent data
 - Exploit natural experiment in Ohio in 2016 with claims data
- ② Cash: [▶ Cash](#)
 - Refine IV with additional data sources
- ③ COVID and access to SSI

Thank you!

Stephanie Rennane
srennane@rand.org

Andrew Dick
andrewd@rand.org

Lynn Karoly
karoly@rand.org

SSI Cash Benefit

The Real Value of SSI Varies Across Place

- SSI is a federal benefit
 - Benefit maximum constant across states (\$794 in 2021)
 - Increased every year with a cost of living adjustment
 - 29 states offer supplements for children that vary in size (on average, 8% of federal benefit)
- The *real value* of SSI varies across place

We exploit variation in the relative value of SSI benefit

In most states, an individual cannot receive both SSI and TANF.

- *Individual incentives*: SSI benefit can be larger than TANF benefit
 - ~ 32% of growth in SSI participation in 1990s due to shifting from AFDC (Garret & Glied 2000)
 - Families with higher potential SSI benefits more likely to seek disability care for children (Kubik 1999)

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 - ~ 32% of growth in SSI participation in 1990s due to shifting from AFDC (Garret & Glied 2000)
 - Families with higher potential SSI benefits more likely to seek disability care for children (Kubik 1999)
- *State incentives*: SSI benefit is paid by federal government
 - Households in states with aggressive welfare reform are 21.6 pp more likely to participate in SSI (Schmidt & Sevak 2004)
 - SSI participation increased significantly after welfare reform (Schmidt 2013)
 - States experiencing negative fiscal shocks more likely to encourage SSI participation (Kubik 2003)

Within-state variation

When a child enrolls in SSI, she is removed from the TANF household

- TANF benefit is reduced when household size falls (Garret & Glied 2000, Wamhoff & Weismann 2005-06)

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Examples (2009):

State	Max SSI	Max TANF Benefit			Net Gain	
		Hhld 4	Hhld 3	Hhld 2	Hhld 4	Hhld 3
Illinois	\$674	\$474	\$432	\$318	\$632	\$560
New York	\$697	\$864	\$721	\$524	\$554	\$500

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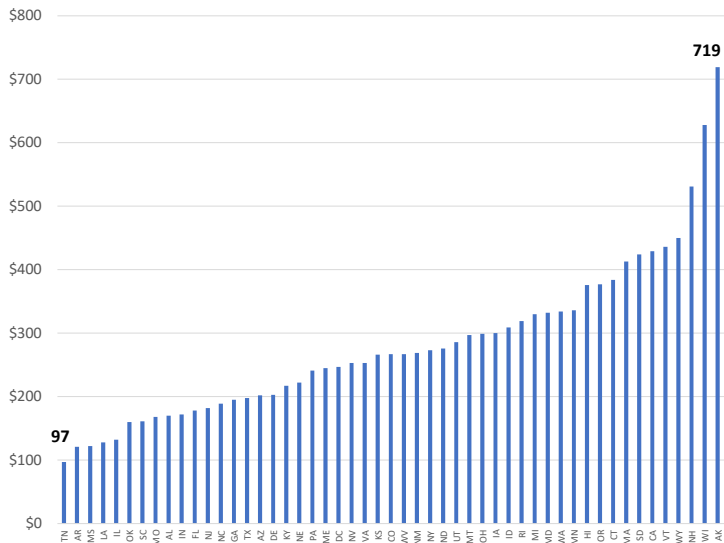
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Formula:

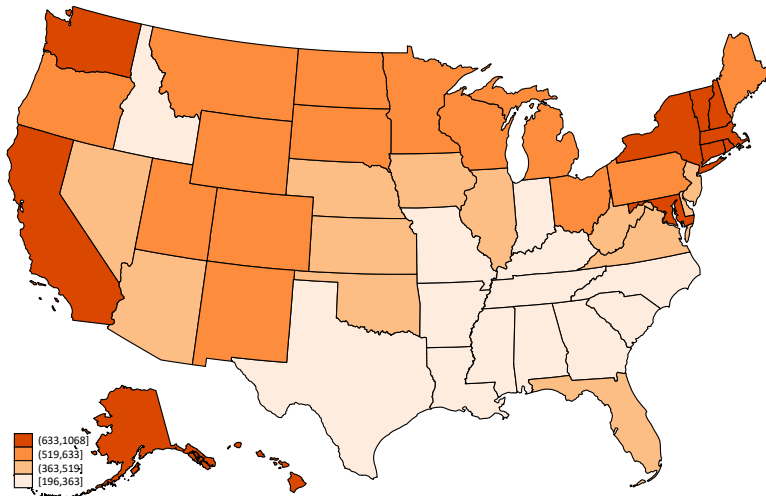
$$\text{MaxSSINetGain} = \text{SSISupplement} + \text{MaxSSIBenefit} - \text{TANFChange}$$

Difference in Net Gain of SSI for household of 2 vs 4



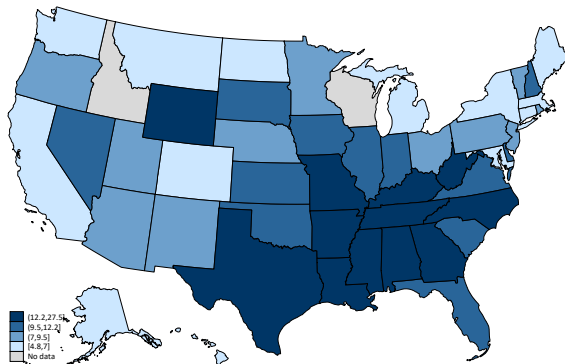
Source: National Survey of Children with Special Health Care Needs, 2009, Welfare Rules Database 2009

TANF Benefit for a Family of 3



Source: National Survey of Children with Special Health Care Needs 2009 and Urban Institute Welfare Rules Database

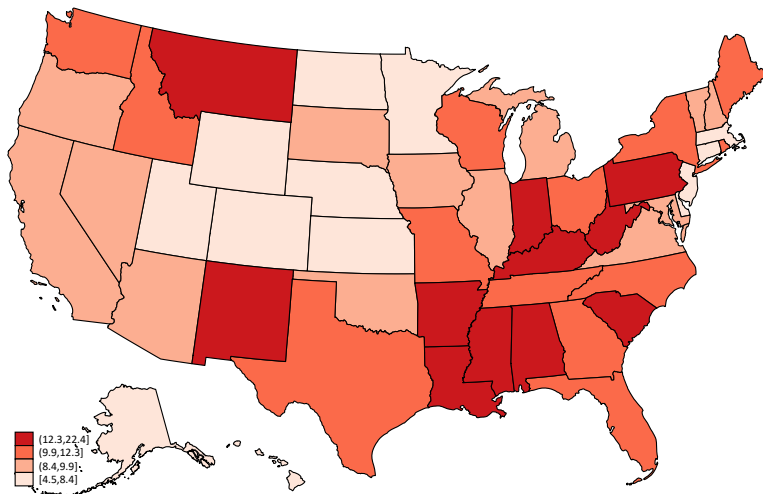
SSI Net Gain



$$SSIGain = SSISupplement + MaxSSIBenefit - \textbf{TANF Maximum}$$

Source: National Survey of Children with Special Health Care Needs 2009 and Urban Institute Welfare Rules Database

Percent of Children with Special Needs Who Receive SSI



Source: National Survey of Children with Special Health Care Needs 2009

We Instrument for SSI Participation using Relative Value of SSI

$$SSIPART_{is} = \alpha + \gamma SSIGAIN_{is} + X_{is}\pi + \phi_s + \mu_{is}$$

$$Y_{is} = \sigma + \beta \widehat{SSIPART}_{is} + X_{is}\theta + \delta_s + \epsilon_{is}$$

Key outcomes: Financial problems, reducing work to care for the child, needing mental health care

Exclusion restriction:

- SSI Net Gain *only* affects family caregiving outcomes through its effect on SSI participation
- We control for state FE, household size and policies that vary within states (e.g., child care subsidies) to control for unobservable factors correlated with SSI net gain.

First Stage

	(1) All	(2) All	(3) All	(4) < 200% FPL	(5) Severe
SSI Net Gain	0.030** (0.011)	0.027** (0.010)	0.026** (0.011)	0.047** (0.016)	0.067*** (0.022)
Observations	36,860	36,860	36,860	13,246	8,200
R-squared	0.084	0.145	0.145	0.180	0.181
Y-mean	0.090	0.090	0.090	0.182	0.179
State FE	YES	YES	YES	YES	YES
Demographic	YES	YES	YES	YES	YES
Health	NO	YES	YES	YES	YES
Policy	NO	NO	YES	YES	YES

Notes: National Survey of Children with Special Health Care Needs 2009. Robust standard errors in parentheses, *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$. Dependent variable is an indicator for SSI participation. SSI Net Gain is shown in hundreds.

IV: Child's health condition caused financial problems

	(1) OLS	(2) RF	(3) IV
SSI Receipt	-0.042*** (0.008)		-0.737 (0.494)
SSI Net Gain		-0.020* (0.012)	
Observations	36,803	36,803	36,803
R-squared	0.148	0.147	-0.062
Y-mean	0.203	0.203	0.203
F-Stat			9.148

Notes: National Survey of Children with Special Health Care Needs 2009. Robust standard errors in parentheses, *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$. Dependent variable is an indicator for the household reporting financial problems due to the child's health condition. SSI Net Gain is shown in hundreds.

IV: Family has cut work to care for child

	(1) OLS	(2) RF	(3) IV
SSI Receipt	-0.018** (0.008)		-0.809 (0.494)
SSI Net gain		-0.021** (0.011)	
Observations	36,844	36,844	36,844
R-squared	0.122	0.122	0.210
Y-mean	0.157	0.157	0.157
F-Stat			8.688

Notes: National Survey of Children with Special Health Care Needs 2009. Robust standard errors in parentheses, *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$. Dependent variable is an indicator for the household members needing to reduce work in order to care for the child. SSI Net Gain is shown in hundreds.

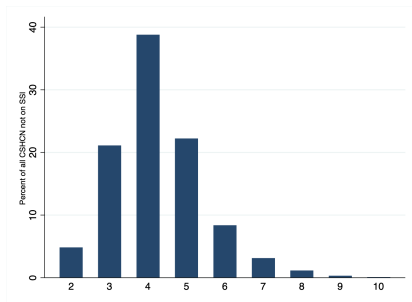
IV: Family needs mental health care

	(1) OLS	(2) RF	(3) IV
SSI Receipt	0.002 (0.007)		-0.153 (0.356)
SSI Net gain		-0.004 (0.009)	
Observations	36,843	36,843	36,843
R-squared	0.198	0.198	0.181
Y-mean	0.110	0.110	0.110
F-Stat			8.880

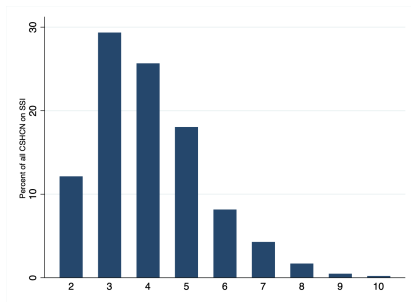
Notes: National Survey of Children with Special Health Care Needs 2009. Robust standard errors in parentheses, *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$. Dependent variable is an indicator for the household members reporting a need for mental health care. SSI Net Gain is shown in hundreds.

Extra slides

Distribution of Household Size by Child SSI Receipt



Households without SSI



Households with SSI

Source: National Survey of Children with Special Health Care Needs 2009

[▶ back](#)