Internet Appendix: Additional Tables and Figures

Table IA-1: Medicaid income eligibility limits for childless adults, % of FPL

This table documents income eligibility limits (as a % of FPL) across states for non-disabled adults over time. Data is collected by The Kaiser Family Foundation.

Location	2011	2012	2013	2014	2015	2016	2017
Alabama	0	0	0	0	0	0	0
Alaska	0	0	0	0	0	1.38	1.38
Arizona	1.1	1.1	1	1.38	1.38	1.38	1.38
Arkansas	0	0	0	1.38	1.38	1.38	1.38
California	0	0	0	1.38	1.38	1.38	1.38
Colorado	0	0	0.2	1.38	1.38	1.38	1.38
Connecticut	0.73	0.72	0.7	1.38	1.38	1.38	1.38
Delaware	1.1	1.1	1.1	1.38	1.38	1.38	1.38
District of Columbia	2.11	2.11	2.11	2.15	2.15	2.15	2.15
Florida	0	0	0	0	0	0	0
Georgia	0	0	0	0	0	0	0
Hawaii	1	1	1	1.38	1.38	1.38	1.38
Idaho	0	0	0	0	0	0	0
Illinois	0	0	0	1.38	1.38	1.38	1.38
Indiana	0	0	0	0	0	1.39	1.39
Iowa	0	0	0	1.38	1.38	1.38	1.38
Kansas	0	0	0	0	0	0	0
Kentucky	0	0	0	1.38	1.38	1.38	1.38
Louisiana	0	0	0	0	0	0	1.38
Maine	0	0	0	0	0	0	0
Maryland	0	0	0	1.38	1.38	1.38	1.38
Massachusetts	0	0	0	1.38	1.38	1.38	1.38
Michigan	0	0	0	1.38	1.38	1.38	1.38
Minnesota	0	0.75	0.75	2	1.38	1.38	1.38
Mississippi	0	0	0	0	0	0	0

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Location	2011	2012	2013	2014	2015	2016	2017
Missouri	0	0	0	0	0	0	0
Montana	0	0	0	0	0	1.38	1.38
Nebraska	0	0	0	0	0	0	0
Nevada	0	0	0	1.38	1.38	1.38	1.38
New Hampshire	0	0	0	0	1.38	1.38	1.38
New Jersey	0	0	0	1.38	1.38	1.38	1.38
New Mexico	0	0	0	1.38	1.38	1.38	1.38
New York	1	1	1	1.38	1.38	1.38	1.38
North Carolina	0	0	0	0	0	0	0
North Dakota	0	0	0	1.38	1.38	1.38	1.38
Ohio	0	0	0	1.38	1.38	1.38	1.38
Oklahoma	0	0	0	0	0	0	0
Oregon	0	0	0	1.38	1.38	1.38	1.38
Pennsylvania	0	0	0	0	1.38	1.38	1.38
Rhode Island	0	0	0	1.38	1.38	1.38	1.38
South Carolina	0	0	0	0	0	0	0
South Dakota	0	0	0	0	0	0	0
Tennessee	0	0	0	0	0	0	0
Texas	0	0	0	0	0	0	0
Utah	0	0	0	0	0	0	0
Vermont	1.6	1.5	1.6	1.38	1.38	1.38	1.38
Virginia	0	0	0	0	0	0	0
Washington	0	0	0	1.38	1.38	1.38	1.38
West Virginia	0	0	0	1.38	1.38	1.38	1.38
Wisconsin	0	0	0	1	1	1	1
Wyoming	0	0	0	0	0	0	0

Table IA-2: Medicaid income eligibility limits for parents, % of FPL

This table documents income eligibility limits (as a % of the Federal Poverty Line) across states for parents over time. Data is collected by The Kaiser Family Foundation.

Location	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Alabama	0.19	0.26	0.26	0.25	0.24	0.24	0.24	0.23	0.16	0.18	0.18	0.18
Alaska	0.81	0.81	0.81	0.85	0.81	0.81	0.81	0.78	1.28	1.46	1.43	1.41
Arizona	2	2	2	2	1.06	1.06	1.06	1.06	1.38	1.38	1.38	1.38
Arkansas	0.19	0.18	0.18	0.17	0.17	0.17	0.17	0.16	1.38	1.38	1.38	1.38
California	1.07	1.07	1.06	1.06	1.06	1.06	1.06	1.06	1.38	1.38	1.38	1.38
Colorado	0.38	0.67	0.66	0.66	0.66	1.06	1.06	1.06	1.38	1.38	1.38	1.38
Connecticut	1.57	1.57	1.91	1.91	1.91	1.91	1.91	1.91	2.01	2.01	1.55	1.55
Delaware	1.07	1.07	1.06	1.21	1.21	1.2	1.19	1.2	1.38	1.38	1.38	1.38
District of Columbia	2	2.07	2.07	2.07	2.07	2.07	2.06	2.06	2.21	2.21	2.21	2.21
Florida	0.6	0.58	0.56	0.55	0.53	0.59	0.58	0.56	0.35	0.34	0.34	0.33
Georgia	0.56	0.55	0.53	0.52	0.5	0.5	0.49	0.48	0.39	0.38	0.37	0.37
Hawaii	1	1	1	1	1	1	1	1.38	1.38	1.38	1.38	1.38
Idaho	0.3	0.43	0.42	0.28	0.27	0.39	0.39	0.37	0.27	0.27	0.26	0.26
Illinois	1.92	1.92	1.91	1.85	1.85	1.91	1.91	1.39	1.38	1.38	1.38	1.38
Indiana	0.28	0.27	0.26	0.26	0.25	0.36	0.24	0.24	0.24	0.24	1.39	1.39
Iowa	0.79	0.77	0.89	0.86	0.83	0.83	0.82	0.8	1.38	1.38	1.38	1.38
Kansas	0.37	0.36	0.34	0.34	0.32	0.32	0.32	0.31	0.38	0.38	0.38	0.38
Kentucky	0.68	0.66	0.64	0.62	0.62	0.62	0.59	0.57	1.38	1.38	1.38	1.38
Louisiana	0.2	0.2	0.2	0.26	0.25	0.25	0.25	0.24	0.24	0.24	0.24	1.38
Maine	1.57	2.07	2.06	2.06	2.06	2	2	2	1.05	1.05	1.05	1.05
Maryland	0.39	0.38	0.37	1.16	1.16	1.16	1.16	1.22	1.38	1.38	1.38	1.38
Massachusetts	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.38	1.38	1.38	1.38
Michigan	0.58	0.61	0.61	0.66	0.64	0.64	0.63	0.64	1.38	1.38	1.38	1.38
Minnesota	2.75	2.75	2.75	2.75	2.15	2.15	2.15	2.15	2.05	1.38	1.38	1.38
Mississippi	0.34	0.33	0.32	0.46	0.44	0.44	0.44	0.29	0.29	0.28	0.27	0.27

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Location	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Missouri	0.42	0.4	0.39	0.26	0.25	0.37	0.36	0.35	0.24	0.23	0.22	0.22
Montana	0.64	0.62	0.6	0.58	0.56	0.56	0.55	0.54	0.52	0.51	1.38	1.38
Nebraska	0.6	0.58	0.59	0.58	0.58	0.58	0.57	0.58	0.55	0.55	0.63	0.63
Nevada	0.84	0.86	0.94	0.91	0.88	0.88	0.87	0.84	1.38	1.38	1.38	1.38
New Hampshire	0.58	0.56	0.55	0.51	0.49	0.49	0.49	0.47	0.75	1.38	1.38	1.38
New Jersey	1	1.15	1.33	2	2	2	2	2	1.38	1.38	1.38	1.38
New Mexico	0.67	0.65	0.63	0.69	0.67	0.67	0.85	0.85	1.38	1.38	1.38	1.38
New York	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.38	1.38	1.38	1.38
North Carolina	0.56	0.54	0.52	0.51	0.49	0.49	0.49	0.47	0.45	0.45	0.44	0.44
North Dakota	0.67	0.65	0.63	0.62	0.59	0.59	0.59	0.57	1.38	1.38	1.38	1.38
Ohio	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.96	1.38	1.38	1.38	1.38
Oklahoma	0.44	0.43	0.5	0.48	0.47	0.53	0.53	0.51	0.48	0.46	0.44	0.44
Oregon	1	1	1	1	0.4	0.4	0.4	0.39	1.38	1.38	1.38	1.38
Pennsylvania	0.63	0.61	0.59	0.36	0.34	0.46	0.46	0.58	0.38	1.38	1.38	1.38
Rhode Island	1.92	1.92	1.91	1.81	1.81	1.81	1.81	1.81	1.38	1.38	1.38	1.38
South Carolina	0.97	0.97	1	0.9	0.89	0.93	0.91	0.89	0.67	0.67	0.67	0.67
South Dakota	0.59	0.58	0.56	0.54	0.52	0.52	0.52	0.5	0.54	0.53	0.52	0.51
Tennessee	0.81	0.8	0.8	1.34	1.29	1.27	1.26	1.22	1.11	1.03	1.01	0.99
Texas	0.3	0.29	0.28	0.27	0.26	0.26	0.26	0.25	0.19	0.19	0.18	0.18
Utah	0.5	0.49	0.47	0.68	0.44	0.44	0.44	0.42	0.47	0.46	0.45	0.44
Vermont	1.92	1.92	1.91	1.91	1.91	1.91	1.91	1.91	1.38	1.38	1.38	1.38
Virginia	0.31	0.31	0.31	0.3	0.29	0.31	0.31	0.3	0.52	0.45	0.39	0.38
Washington	0.81	0.79	0.76	0.77	0.74	0.74	0.73	0.71	1.38	1.38	1.38	1.38
West Virginia	0.37	0.36	0.35	0.34	0.33	0.33	0.32	0.31	1.38	1.38	1.38	1.38
Wisconsin	1.92	1.92	1.91	2	2	2	2	2	1	1	1	1
Wyoming	0.59	0.57	0.55	0.54	0.52	0.52	0.51	0.5	0.59	0.58	0.57	0.56

Table IA-3: Medicaid asset limits, 2013

This table documents the state asset limits in 2013. These are the maximum amount of assets that a household could hold and still be eligible for Medicaid. States excluded from this table had no corresponding asset test. Data is collected by The Kaiser Family Foundation.

Location	Upper limit
Alaska	$2,000
Arkansas	$1,000
California	$3,150
Florida	$2,000
Georgia	$1,000
Hawaii	$3,250
Idaho	$1,000
Indiana	$1,000
Iowa	$2,000
Kentucky	$2,000
Maine	$2,000
Michigan	$3,000
Minnesota	$20,000
Montana	$3,000
Nebraska	$6,000
Nevada	$2,000
New Hampshire	$1,000
North Carolina	$3,000
Oregon	$2,500
South Carolina	$30,000
South Dakota	$2,000
Tennessee	$2,000
Texas	$2,000
Utah	$3,025
Vermont	$3,150
Washington	$1,000
West Virginia	$1,000

Table IA-4: Test of correlation between financial variables and the instrument for Medicaid eligibility, state vs. national income distribution

This table shows the results of regressions that relate $ProbNTL(Med)$ with average financial characteristics of demographic groups within state-years. The dependent variable is the probability of Medicaid eligibility for a given demographic group and state-year combination, $ProbNTL(Med)$. The independent variables are the average income of the corresponding group, $\bar{Income}$, and the fraction of households in the corresponding group that owns a house, $\bar{HomeOwn}$, based on the 2013–2016 ACS. All regressions include socio-demographics fixed effects, δ_j, and state-year fixed effects, $\delta_{s,t}$, (not shown). Standard errors, shown in parentheses, are clustered on state. *p = 0.1; **p = 0.05; ***p = 0.01 (statistically significant)

Dependent variable:	$ProbNTL(Med)$	$ProbNTL(Med)$
$\bar{Income}$	-0.001	
	(0.001)	
$\bar{HomeOwn}$		-0.004
		(0.003)
N	274858	274858
Adj. R-squared	0.785	0.785

Table IA-5: Reduced form estimates, multiple robustness checks

This table presents reduced form estimates. The dependent variable is the fraction of the tax refund that a household elects to save, *Saving* (measured in percentage points). Key explanatory variables include household's simulated Medicaid eligibility, $ProbNTL(Med)$, and tercile dummies of *Hardship*: *LowHardship*, *MidHardship* and *HighHardship*. All regressions include controls for $ProbNTL(Med) \times AssetTest_{s,t}$, socio-demographics, as well as state-year fixed effects (not shown). Standard errors, shown in parentheses, are clustered on state. *p = 0.1; **p = 0.05; ***p = 0.01 (statistically significant). Columns (1)-(3) test the robustness of the main specification, measuring hardship according to the principal components analysis detailed in Section 5.3. Column (1) presents the main specification in the paper. Column (2) presents estimates after removing parents living in the 21 states that reduced parent coverage as well as childless adults in Vermont. This test assures us that our main estimates are not not entirely powered by a loss of Medicaid coverage in certain states following the ACA. Column (3) shows the results of a test, wherein the instrument, $ProbNTL(Med)$, is generated using future, rather than current, Medicaid eligibility. In this test, we run our main specification on the 2013 sample, using the 2014 simulated probabilities of Medicaid eligibility. In Column (4), the ratio of *Liquid Assets/Income* is used in place of the *Hardship* measure from our main analysis. In particular, we use tercile dummies of liquid assets as a share of income.

Dependent variable: *Saving*				
	(1)	(2)	(3)	(4)
	Original	Reduced Eligibility	Future Eligibility	Liquidity/Income Hardship
$ProbNTL(Med)$	-2.502	-2.20	-3.11	-3.12
	(3.818)	(3.06)	(4.89)	(3.11)
$ProbNTL(Med) \times HighHardship$	10.694***	12.06***	4.71	10.89***
	(3.250)	(3.50)	(5.14)	(3.21)
$ProbNTL(Med) \times LowHardship$	0.317	0.73	-1.42	0.45
	(2.730)	(2.79)	(5.98)	(2.73)
$HighHardship$	-3.062***	-3.09***	-6.90***	-3.04***
	(0.381)	(0.42)	(0.77)	(0.38)
$LowHardship$	3.593***	3.57***	6.63***	3.60***
	(0.422)	(0.49)	(0.76)	(0.42)
N	57,648	51031	11912	57560
Adj. R-squared	0.071	0.07	0.05	0.07

Table IA-6: Reduced form estimates using the 2013 probability of Medicaid eligibility

This table presents reduced form estimates. The dependent variable is the fraction of the tax refund that a household elects to save, *Saving* (measured in percentage points). Key explanatory variables include a household's simulated Medicaid eligibility based on 2013 eligibility thresholds, $ProbNTL2013(Med)$, an indicator for whether the state has an asset test in place at the time of sampling, $AssetTest_{s,t}$, an indicator of top tercile financial strain, $HighHardship$. Regressions include the sample of parents only because very few states provided any coverage to childless adults in 2013. All regressions include socio-demographic controls as well as state-year fixed effects (not shown). Standard errors, shown in parentheses, are clustered on state. *p = 0.1; **p = 0.05; ***p = 0.01 (statistically significant)

Dependent variable: *Saving*		
	(1)	(2)
$ProbNTL2013(Med)$	0.241	-2.926
	(4.471)	(4.280)
$ProbNTL2013(Med) \times HighHardship$		6.568**
		(2.784)
$HighHardship$		-6.354***
		(0.510)
$ProbNTL2013(Med) \times AssetTest_{s,t}$	-15.852***	-17.980***
	(5.598)	(5.946)
N	14,023	13,952
Adj. R-squared	0.088	0.097
Sample	Parents	Parents

Table IA-7: Correlation between medical spending/debt and Medicaid eligibility/enrollment, OLS estimates

This table shows OLS estimates. The dependent variables capture a household's total out-of-pocket medical spending during the last year, $IHS(\$MedSpend)$, and the same variable plus its amount of medical debt, $IHS(\$MedSpend + \$MedDebt)$ – both variables are transformed using the IHS. The first explanatory variable is Medicaid eligibility (*Med*), estimated from a household's annual adjusted gross income, household size, and corresponding state eligibility threshold. The second explanatory variable is survey-reported Medicaid enrollment, *MedEnroll*. All regressions include socio-demographic controls as well as state-year fixed effects (not shown). Standard errors, shown in parentheses, are clustered on state. *p = 0.1; **p = 0.05; ***p = 0.01 (statistically significant)

Dependent variable:	$IHS(\$MedSpend)$		$IHS(\$MedSpend + \$MedDebt)$	
Med	-270.587***		-147.417***	
	(22.844)		(21.154)	
MedEnroll		-619.051***		-509.155***
		(26.710)		(35.608)
N	56457	50493	57645	51538
Adj. R-squared	0.053	0.067	0.090	0.092

Notes on Table IA-8:

It is important to instrument for enrollment. A reasonable concern is that households may not be aware of their Medicaid access until after a health event. If greater awareness comes from health shocks, then "awareness," as measured through enrollment, might be correlated with the household's financial condition (and its savings decision) through both an income (Dobkin et al., 2018a) channel and a health spending (Finkelstein et al., 2012) channel. This issue poses an identification challenge.

To overcome this issue, we run a 2SLS regression with enrollment as the endogenous outcome variable and either actual or simulated Medicaid eligibility as the instrument. Results are presented in Table IA-8.[29] The interaction coefficients have the same signs as in our main 2SLS regression, in Table 4 (in which Medicaid *eligibility*, rather than *enrollment*, is the first stage endogenous variable). Panels correspond to whether actual (Panel A) or simulated (Panel B) Medicaid eligibility is used as the instrument for enrollment. In both panels, the interaction effects are statistically significant, and large in magnitude – indicating that constrained households save 19.6 percentage points *more* of their tax refund when they are *enrolled* in Medicaid. Compare this amount to the 5 percentage point effect in the 2SLS regression in Table 4.

There is also some evidence of a precautionary savings effect. Households that are not in hardship save 11–38 percentage points less of their tax refund when they are enrolled in Medicaid. This effect is statistically significant only in Panel A, however, where actual Medicaid eligibility is used as the instrument for Medicaid enrollment. Clearly, actual Medicaid eligibility is a stronger instrument for enrollment than simulated eligibility (see the F-statistics at the bottom of the tables); although, actual eligibility may result in biased 2SLS estimates if households manipulate their income to qualify for Medicaid.

[29]Note that these tests are subject to an unknown degree of measurement error. Due to the way the question was worded on the survey, we cannot perfectly distinguish the adult's Medicaid enrollment status from the child's. Missclassification is possible in about 8% of cases (a detailed discussion of this problem is available in the appendix of Gallagher et al. 2019). Our simulated instrument is, of course, specific to the adult in the household only.

Table IA-8: The effect of Medicaid enrollment on tax refund savings, 2SLS IV estimates

This table presents 2SLS IV regression estimates. The dependent variables are the fraction of the tax refund that a household intends to save, *Saving* (measured in percentage points), as well as the IHS transformation of *Saving* in dollars, *IHS($Saving)*, or of liquid assets, *IHS($LiqAssets)*. The endogenous outcome variable in the first stage (not shown) is Medicaid enrollment (*MedEnroll*) as well as its interaction with top tercile of our financial hardship index (*HighHardship*). First stage regression F-statistics, based on the Kleibergen-Paap weak instrument test, are shown below each table. The instrument in Panel A is actual Medicaid eligibility (*Med*), as determined by the 1040-tax form, as well as its interaction with *HighHardship*. The instrument in Panel B is simulated Medicaid eligibility, $ProbNTL(Med)$, as well as its interaction with *HighHardship*. All regressions include controls for $ProbNTL(Med) \times AssetTest_{s,t}$, socio-demographics, as well as for state-year fixed effects (not shown). Standard errors, shown in parentheses, are clustered on state. *p = 0.1; **p = 0.05; ***p = 0.01 (statistically significant)

Panel A: Actual Medicaid eligibility as the instrument for Medicaid enrollment

	Saving	*Saving*	*IHS($Saving)*	*IHS($Saving)*	*IHS($LiqAssets)*	*IHS($LiqAssets)*
$\widehat{MedEnroll}$	-31.460***	-37.636***	-1,610.981***	-1,849.674***	-2,311.755***	-2,306.799***
	(2.703)	(2.991)	(178.041)	(202.347)	(194.082)	(236.958)
$\widehat{MedEnroll} \times HighHardship$		19.635***		625.590***		1,285.426***
		(2.660)		(124.156)		(190.208)
HighHardship		-6.561***		-69.798**		-1,788.019***
		(0.574)		(28.398)		(65.349)
N	51,481	51,481	51,481	51,481	51,481	51,481
First stage F-test (*MedEnroll)*	443.17	237.06	443.17	237.06	443.17	237.06
First stage F-test ($MedEnroll \times HardRent$)		211.57		211.57		211.57

Panel B: Simulated Medicaid eligibility as the instrument for Medicaid enrollment

	Saving	*Saving*	*IHS($Saving)*	*IHS($Saving)*	*IHS($LiqAssets)*	*IHS($LiqAssets)*
$\widehat{MedEnroll}$	-13.692	-11.394	-571.465	-551.870	-1,056.753	-199.272
	(15.416)	(16.510)	(657.854)	(698.028)	(1,038.220)	(1,068.951)
$\widehat{MedEnroll} \times HighHardship$		19.167**		571.198		1,871.447***
		(7.565)		(349.541)		(609.003)
HighHardship		-8.371***		-151.939***		-2,079.999***
		(1.236)		(43.587)		(158.707)
N	51,481	51,481	51,481	51,481	51,481	51,481
First stage F-test (*MedEnroll)*	27.10	30.89	27.10	30.89	27.10	30.89
First stage F-test ($MedEnroll \times HardRent$)		28.91		28.91		28.91

Table IA-9: Principal components analysis of financial hardship

This table describes the principal components of variables that proxy financial hardship: *LateRent*, *LowNW*, *SkipFood*, *Overdraft*, and *CCDecline*. In Panel A, the eigenvalues for different components and a variance decomposition are reported. In Panel B, the factor loadings used to construct our index of financial hardship are reported.

Panel A. Eigen values of the correlation matrix

	Eigenvalue	Difference	Proportion	Cum.
Comp1	2.02	1.12	0.40	0.40
Comp2	0.91	0.12	0.18	0.59
Comp3	0.79	0.14	0.16	0.74
Comp4	0.65	0.02	0.13	0.87
Comp5	0.63		0.13	1.00

Panel B. Corresponding eigen vectors

	Comp1	Comp2	Comp3	Comp4	Comp5
LateRent	0.48	-0.01	-0.50	0.38	0.60
LowNW	0.32	0.87	0.38	0.02	0.06
SkipFood	0.48	0.10	-0.51	-0.22	-0.67
Overdraft	0.48	-0.31	0.29	-0.71	0.30
CCDecline	0.45	-0.38	0.51	0.56	-0.29

Table IA-10: Summary statistics by hardship tercile

Table documents summary statistics for key variables. The sample is split by low versus high tercile of hardship. Statistically significant differences are marked with an asterisk.

	LowHardship		*HighHardship*		Difference	
	Mean	Median	Mean	Median	Mean	Median
Savings (%)	77.31	100.00	69.93	90.00	7.38	10.00
Refund ($)	1,368.08	783.00	2,193.17	1,120.00	825.09*	337.00
Savings ($)	1,137.46	610.00	1,639.20	797.00	501.74*	187.00
LiqAssets ($)	5,596.52	2,200.00	898.48	195.00	4,698.04*	2,005.00
Net worth ($)	61,235.65	5,627.00	-3,169.17	-6,875.00	64,404.82	12,502.00
Income (% FPL)	1.06	0.99	1.00	0.93	0.06	0.06
LateRent	0.00	0.00	0.56	1.00	0.56*	1.00
LowNW	0.36	0.00	0.68	1.00	0.32*	1.00
SkipFood	0.00	0.00	0.78	1.00	0.78*	1.00
Overdraft	0.00	0.00	0.70	1.00	0.7*	1.00
CCDecline	0.00	0.00	0.43	0.00	0.43*	0.00
Med	0.41	0.00	0.40	0.00	0.01	0.00
ProbNTL(Med)	0.12	0.07	0.11	0.06	0.01	0.01
ProbSTATE(Med)	0.12	0.05	0.11	0.03	0.01	0.02
Age	31.39	27.00	35.00	32.00	3.61*	5.00
College grad	0.55	1.00	0.40	0.00	0.15*	1.00
White	0.86	1.00	0.81	1.00	0.05	0.00
Parents	0.14	0.00	0.34	0.00	0.20*	0.00
Male	0.53	1.00	0.50	0.00	0.03	1.00
N	27,352		17,277			

Table IA-11: The effect of Medicaid eligibility on savings measures, OLS estimates

This table presents OLS regression estimates. The dependent variables are the fraction of the tax refund that a household elects to save, *Saving* (measured in percentage points), the IHS transform of the implied dollar amount of the tax refund saved, *IHS($Savings)*, a household's liquid assets, *IHS($LiqAssets),* and household's net worth, *IHS($NetWorth)*. There is no instrument. Instead these savings measures are regressed directly on a binary indicator of whether the household is eligible for Medicaid, according to their 1040 tax form adjusted gross income, family size, and state of residence (*Med*). Certain specifications include and interaction between *Med* and $HighHardship$, our indicator of extreme financial constraint. All regressions include controls for $Med_i \times AssetTest_{s,t}$, socio-demographics, as well as state-year fixed effects (not shown). Standard errors, shown in parentheses, are clustered on state. *p = 0.1; **p = 0.05; ***p = 0.01 (statistically significant)

Dependent:	*Saving*		*IHS($Savings)*		*IHS($LiqAssets)*		*IHS($NetWorth)*	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Med	-5.757***	-6.282***	-288.513***	-291.626***	-410.786***	-363.759***	-1774.006***	-1463.941***
	(0.342)	(0.339)	(26.970)	(23.959)	(39.826)	(47.299)	(125.266)	(136.341)
$Med \times HighHardship$		2.879***		21.893		152.674***		20.460
		(0.706)		(29.198)		(41.622)		(146.491)
$HighHardship$		-6.299***		-63.694***		-1675.449***		-5665.863***
		(0.418)		(17.013)		(44.012)		(119.587)
Adj. R-squared	57560	57560	57560	57560	57560	57560	57560	57560
N	0.069	0.073	0.526	0.526	0.112	0.188	0.075	0.136

Notes on Table IA-12:

Table IA-12 helps address concerns about possible feedback effects between medical spending-related tax deductions, the size of the tax refund, and the savings response to Medicaid. Indeed, medical spending and medical debt are negatively correlated with Medicaid (see to Table IA-7) and, in principal, this correlation could influence the size of the tax refund. A number of studies observe variation in MPCs according to the size of the tax refund (Browning and Collado, 2001; Hsieh, 2003; Kueng, 2015). However, such concerns are aleviated by the fact that we do not observe a strong relationship between Medicaid and health-related tax deductions.

From the line items in the 1040 Form, we are able to compare the association between healthcare-related deductions and Medicaid eligibility. We find that a 1 percentage point increase in the probability of Medicaid eligibility decreases health-related deductions by just $13 (medical and dental expenses, health savings accounts, and self-employed health insurance premiums). Relative to the average health-related deductions, this is just a 3% decline. This may be because lower-income households tend to take the standard deduction. Regardless, such a small change in health-related deductions due to Medicaid is unlikely to bias our estimates, even if there is a higher MPC out of large payments relative to small payments.

As a more formal test of this conclusion, in Table IA-12, Panel A, we repeat our reduced form estimates with the *size of the tax refund* (both in inverse hyperbolic sine and in dollars, separately) as the dependent variable. We find no statistically significant relationship between Medicaid eligibility and the magnitude of

the tax refund. We conclude that differences in medical expenditures created by Medicaid do not translate into meaningful differences in the size of the tax refund.

We also evaluate whether our estimates vary by total refund payment. In Panel B, we run our main reduced form regressions with *Savings* as the dependent variable, but controlling for the size of the tax refund (column 1). We also repeat the main regressions within subsamples identified based on the size of the refund (columns 2-4). After controlling for the size of the refund, results are unchanged. The coefficient on the control, $IHS(\$Refund)$, in column 1 is significantly positive, which suggests that smaller payments might have have higher MPCs (less *Savings*). While the magnitude of the estimates on $ProbNTL(Med)$ are reasonably similar across the refund-size subsamples, the estimate on the interaction term ($ProbNTL(Med) \times HighHardship$) is statistically strongest within the *Large* refund group. Although that might indicate a statistically stronger tendency to save out of large payments, the coefficients are not statistically different across subsamples.

Table IA-12: The effect of Medicaid on tax refund savings, reduced form estimates, by refund size

This table presents reduced form estimates. In Panel A, the dependent variable is the IHS transformation of the *Refund* measured in dollars (*columns 1-4*), and the refund measured in dollars (*columns 1-4*). In Panel B, the dependent variable is the fraction of the tax refund that a household elects to save, *Saving* (measured in percentage points), and the sample is split into terciles according to the size of the refund. Key explanatory variables included are household's simulated Medicaid eligibility, $ProbNTL(Med)$, a top tercile dummy of $Hardship$: $HighHardship$, and a control for the IHS transormation of the dollar size of the refund, $IHS(\$Refund)$. All regressions include controls for $ProbNTL(Med) \times AssetTest_{s,t}$, socio-demographics, as well as state-year fixed effects (not shown). Standard errors, shown in parentheses, are clustered on state. *p = 0.1; **p = 0.05; ***p = 0.01 (statistically significant)

Panel A. Dependent variable: *$Refund*

Dependent variable tranform:	*IHS($)*	*IHS($)*	$	$
	(1)	*(2)*	*(3)*	*(4)*
$ProbNTL(Med)$	155.56	140.20	249.44	246.67
	(108.11)	(111.28)	(153.09)	(155.50)
$ProbNTL(Med) \times HighHardship$		54.86		14.01
		(79.98)		(111.78)
$HighHardship$		14.51		20.69
		(11.57)		(15.81)
N	57560	57560	57560	57560
Adj. R-squared	0.61	0.61	0.61	0.61

Panel B. Dependent variable: *Saving*

Refund size sample:	All	Small	Medium	Large
	(1)	(2)	(3)	(4)
$ProbNTL(Med)$	-3.34	-0.25	-2.51	-0.51
	(2.24)	(4.54)	(4.65)	(3.12)
$ProbNTL(Med) \times HighHardship$	9.98***	8.88	7.18	9.02**
	(2.74)	(6.09)	(5.51)	(3.45)
$HighHardship$	-5.41***	-4.53***	-5.79***	-5.78***
	(0.37)	(0.85)	(0.53)	(0.48)
$IHS(\$Refund)$	0.01***			
	(0.00)			
N	57640	19227	19202	19213
Adj. R-squared	0.12	0.04	0.08	0.10

Table IA-13: The relationship between health expenditure over the 6-months following tax time and simulated Medicaid eligibility, OLS estimates

This table shows regression estimates from the model:
$IHS(\$SpendMed_{i,t+1}) = \alpha + \beta_1 HighHardship_{i,t} + \beta_2 ProbNTL(Med)_{i,t} + IHS(\$SpendMed_{i,t}) + X'\gamma + \delta_{s,t} + \epsilon_i$
The dependent variable, $IHS(\$SpendMed_{i,t+1})$, measures household i's out-of-pocket health expenditure over the six months after filing their taxes (i.e., the period in which households receive their tax refund and can spend from it) transformed using the IHS. This measure comes from a follow-up survey that is conducted every August-September. The key independent variable is an indicator that a household is in the top tercile of our index of financial hardship, $HighHardship_t$. We control for a household's simulated probability of Medicaid eligibility, $ProbNTL(Med)_{i,t}$, as of tax time, as well as it's healthcare spending over the 6-months ending at tax time, $IHS(\$SpendMed_{i,t})$ (not shown). As insured households may be less likely to defer care until receipt of the tax refund, the sample is split according to whether the household is insured or uninsured as of tax time. All regressions control for socio-demographics and state-year fixed effects (not shown). *p = 0.1; **p = 0.05; ***p = 0.01 (statistically significant)

Dependent variable: $IHS(\$SpendMed_{i,t+1})$				
	(1)	(2)	(3)	(4)
$HighHardship_{i,t}$	93.852	94.551	-30.482	-30.666
	(72.901)	(72.920)	(34.252)	(34.202)
$ProbNTL(Med)_{i,t}$		328.025		205.804
		(556.515)		(205.546)
Sample:	Uninsured		Insured	
N	854	854	6792	6792
Adj. R-squared	0.087	0.086	0.187	0.187

Table IA-14: Reduced form effects of Medicaid on savings, by skipped medical care

This table presents reduced form estimates. The dependent variables are the fraction of the tax refund that a household intends to save, *Saving* (measured in percentage points), as well as the IHS transformation of *Saving* in dollars, *IHS($Saving)*, or of liquid assets, *IHS($LiqAssets)*. Explanatory variables include household's simulated Medicaid eligibility probability, $ProbNTL(Med)$, an indicator for whether the state has an asset test in place at the time of sampling, $AssetTest_{s,t}$, and an indicator of top tercile financial strain, $HighHardship$. Regression samples are split according to an indicator of whether the households reports having skipped medical care in past 6 months. All regressions include socio-demographic controls as well as state-year fixed effects (not shown). Standard errors, shown in parentheses, are clustered on state. *p = 0.1; **p = 0.05; ***p = 0.01 (statistically significant)

Dependent variable:	*Saving*		*IHS($Saving)*		*IHS($LiqAssets)*	
Subsample:	SkipMed	No SkipMed	SkipMed	No SkipMed	SkipMed	No SkipMed
$ProbNTL(Med)$	-1.64	-0.57	-46.47	63.20	-324.30	-226.06
	(4.37)	(3.86)	(216.57)	(147.61)	(280.63)	(243.94)
$ProbNTL(Med) \times HighHardship$	10.88***	7.52**	158.44	176.57	576.21**	1453.42***
	(4.05)	(3.21)	(102.03)	(105.70)	(257.20)	(213.31)
$HighHardship$	-3.81***	-5.95***	-38.95**	-69.64***	-1015.58***	-1771.24***
	(0.49)	(0.44)	(16.20)	(15.58)	(41.16)	(41.20)
$ProbNTL(Med) \times AssetTest_{s,t}$	-11.37	-22.36***	-2314.72***	-2225.04***	368.09	144.82
	(6.87)	(7.42)	(631.54)	(349.68)	(436.76)	(315.37)
N	18190	39362	18190	39362	18190	39362
Adj. R-squared	0.07	0.07	0.49	0.53	0.16	0.16
Difference p-value:						
$Prob(Med)$	0.844		0.582		0.823	
$ProbNTL(Med) \times HighHardship$	0.459		0.910		0.005	

Table IA-15: The impact of state bankruptcy and Medicaid rules on savings behavior, reduced form estimates on border counties

This table presents reduced form estimates. The dependent variables are the fraction of the tax refund that a household elects to save, *Saving* (measured in percentage points), refund savings measured in dollars, *IHS($Saving)*, and household's liquid assets, *IHS($LiqAssets)* – dollar values are transformed using the IHS. Key explanatory variables include a household's simulated Medicaid eligibility, $ProbNTL(Med)$ and an indicator of financial strain, $HighHardship$. The sample is split according to the Mahoney (2015) parameterization of state bankruptcy rules, *CostB* – which is calculated as the mean financial cost of bankruptcy as though the national sample faced the asset exemption rules of each state. The data is restricted to include only counties that border a county in a different state, where the two states differ in their classification as either a high or low cost of bankruptcy state (*HighCostB* and *LowCostB*). To ensure sufficient sample size within each border county-pair, we further restrict the sample to only metropolitan statistical area (MSA) counties. All regressions include controls for $ProbNTL(Med) \times AssetTest_{s,t}$, socio-demographics, as well as border county-pair-year fixed effects (not shown). The bottom row of the table reports p-values from an F-test for the equality of reported coefficients. Standard errors, shown in parentheses, are clustered on state. *p = 0.1; **p = 0.05; ***p = 0.01 (statistically significant)

Dependent variable:	*Saving*		*IHS($Saving)*		*IHS($LiqAssets)*	
	(1)	(2)	(3)	(4)	(7)	(8)
$ProbNTL(Med)$	-0.25	-20.97***	493.81**	-140.22	-362.17	-641.36
	(6.74)	(6.93)	(182.72)	(294.66)	(319.25)	(688.26)
$ProbNTL(Med) \times HighHardship$	3.63	16.97**	-229.17	92.07	1512.79***	1999.18***
	(13.17)	(7.50)	(548.85)	(253.38)	(463.45)	(379.78)
$HighHardship$	-4.78***	-3.45***	-111.41**	-46.53	-1493.76***	-1879.25***
	(1.39)	(1.01)	(43.48)	(35.10)	(90.53)	(115.65)
N	3656	3797	3656	3797	3656	3797
Adj. R-squared	0.08	0.07	0.51	0.51	0.21	0.21
Sample	*LowCostB*	*HighCostB*	*LowCostB*	*HighCostB*	*LowCostB*	*HighCostB*
Difference p-value:						
$ProbNTL(Med)$	0.030		0.040		0.728	
$ProbNTL(Med) \times HighHardship$	0.358		0.563		0.398	

Figure IA-1: Evidence of a monotonic instrument

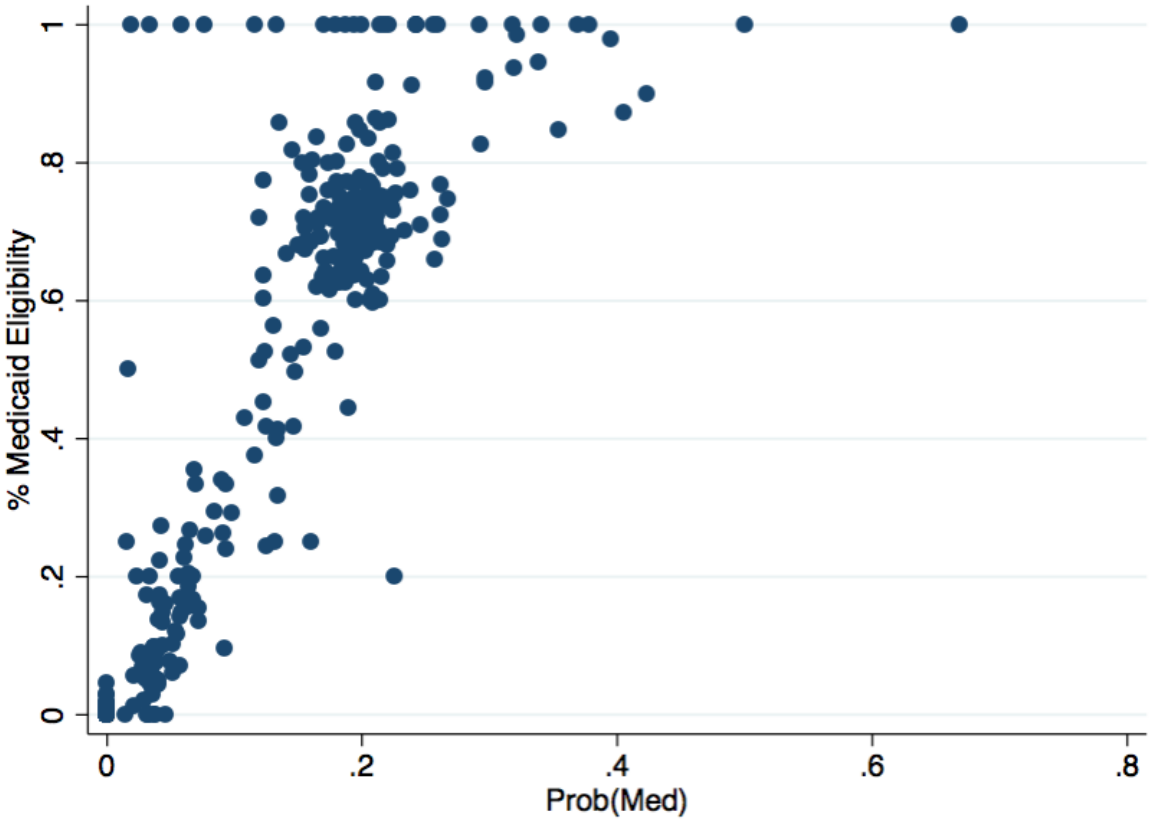
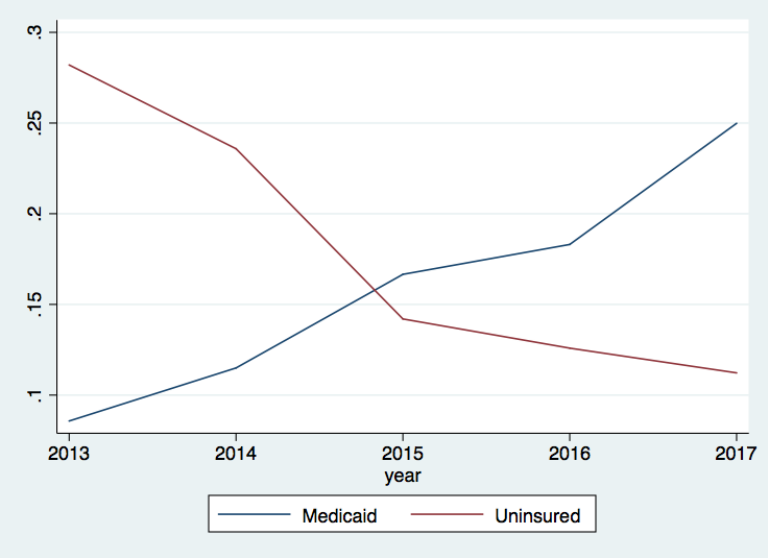


Figure plots the actual Medicaid eligibility share (y-axis) against the average simulated probability of Medicaid eligibility (x-axis) within groups – where groups are formed be splitting the sample according to parent status, year, and state. Actual Medicaid eligibility is determined by the household's adjusted gross incomes as reported on the 1040 Form. Simulated Medicaid eligibility, $ProbNTL(Med)$, is generated as described in Section 5.1. Note that we use the full national sample, which is unrestricted by income, to simulate the Medicaid probabilities of our low-income tax filer sample. This is why the slope is steep (not at 45 degrees) and there are occasions of 100% Medicaid eligible within certain state-years that have very high eligibility ceilings.

Figure IA-2: Medicaid share vs. uninsured share of the low-income population



This figure shows the percentage of low-income households enrolled in Medicaid and the percentage of low-income households that are uninsured, by year. These statistics are based on our sample of tax filers, weighted according to the ACS sample of low-income households.