Family Spillovers of Long-term Care Insurance

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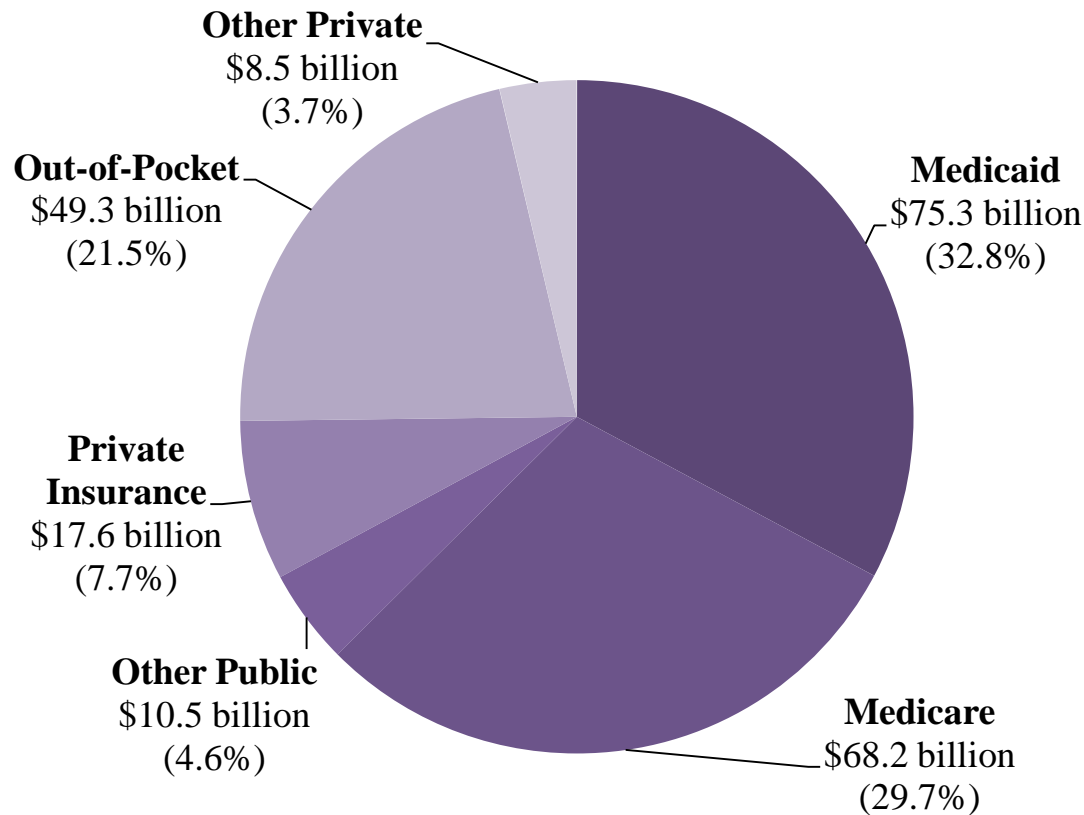
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Outline

- Background

- Research contribution

- Conceptual model

- Empirical strategy

- Data / Sample

- Results

- Conclusions

LTC is one of the largest risks for the elderly

National Spending for Long-Term Care, by Payer (2012)

Other Private
$8.5 billion
(3.7%)

Out-of-Pocket
$49.3 billion
(21.5%)

Medicaid
$75.3 billion
(32.8%)

Private Insurance
$17.6 billion
(7.7%)

Other Public
$10.5 billion
(4.6%)

Medicare
$68.2 billion
(29.7%)

Total = $230 billion (~ 1.5 percent GDP)

Existing LTC Insurance

- Medicare coverage is incomplete
- Medicaid coverage only for poor – coverage of last resort
- ACA's attempt to address the problem -- CLASS Act – repealed
- Now even more policy attempts to spur the private insurance market
  - Currently covers about 13-15% of 65+

LTC sources in home

- 87% of community-residing elderly needing assistance receiver care exclusively from informal sources
  - 66% of most disabled receive informal care only
- Insufficient future supply?
  - Smaller families
  - Geographic dispersion
  - Dual working families
  - Increased divorce
  - Delays in fertility

Why is LTCI demand so low?

Empirical work has focused on:

- Expense

- Non-group market (transactions cost, competition)

- Limited consumer rationality

- Misconceptions about the extent of public health insurance coverage for long-term care

- Availability of imperfect but cheaper substitutes (Medicaid, children)

- Fraud and abuse

Theory has focused on:

- Asymmetric information/intra-family moral hazard

This paper:

Estimate the causal impact of LTCI on:

(1) Intra-family moral hazard.

- – Expectations about future family-provided informal care
- – Actual use of family-provided informal care

(2) Strategic bequest motive.

- – Inter-vivos transfers to children
- – Expectations about leaving a bequest to children

This paper:

Estimate the causal impact of LTCI on:

(3) Spillovers to adult children

– Work

– Living arrangements

– Financial ties

Disability occurs –   kids 'freed' from IC responsibility

None occurs –   no IC occurs; so may miss
the effect of LTCI on the family

Theories to test

- Intra-family moral hazard (IFMH)

- Strategic bequest motive

- Exchange motive
  - Parents provide inter-vivos transfers to kids to get their preferred informal care

Conceptual model

IFMH

- Demand for LTCI low because parents prefer IC from kids (Pauly, 1990).

- Buying insurance makes formal care relatively cheaper compared to IC, so demand remains low

- LTCI reduces expectations for IC.
    - Reduced actual demand or shorter duration
        - Predicts positive labor force response
        - Reduces co-residence or having to live close by

Conceptual model

IFMH

- Alternative explanation. Preferences not correct.
  - Parents do not want to place time or financial burden on kids
  - Buy insurance to reduce burden

Conceptual model

Strategic Bequest Motive (Bernheim, Schleifer, Summers '85)
- – Reward or promise reward to children if they pay attention to the parent
- Predicted impact of LTCI on expected bequests?
  - – Negative: **Premiums lower bequeathable wealth regardless of use of LTCI benefit**
  - – Negative: LTCI lowers need for IC and thereby need to promise rewards to gain kids attention
  - – Positive: LTCI protects assets/bequests and thereby higher bequeathable wealth and / or name a child on a will.
  - – Net impact unclear

Empirical challenge:
separate selection from IFMH

- People who buy LTCI are different than those who do not (Finkelstein and McGarry, 2006), possibly in unobservable ways

  - Higher likelihood of using LTC in future (adverse selection) or more risk averse

Empirical challenge:
separate selection from IFMH

- Solution: Instrumental Variables
  - State-level favorable tax treatment of LTCI policies have been shown to causally influence LTC holding (Goda, 2011).

Variation in state tax policy for LTCI

- Date of adoption
  - 3 states in 1996
  - 24 states plus DC by 2010
- Generosity of tax break
  - 16 states allow deductions of their premium
  - 9 offered credits for a certain percentage
  - Average value was 4.6% of premiums but varied from 0%-20%
- Goda, 2011 found average state tax subsidy → 28% increase in LTCI coverage rates

Empirical Strategy

- First stage:

$$LTCI_{ist} = \Phi(\beta_0 + \beta_1 Z_{st} + \beta_2 X_{it} + S_s + \lambda_t + u_{ist})$$

- Second stage:

$$Y_{ist} = \Phi(\alpha_0 + \alpha_1 LTCI_{ist} + \alpha_2 \hat{u}_{ist} + \alpha_3 X_{it} + s_s + \lambda_t + \varepsilon_{ist})$$

Estimation

1. 2nd stage outcomes are binary; most are low probability events

    – Probit instead of linear probability models

2. First stage outcome is binary

    – 2SRI   (Terza, Basu, and Rathouz, 2008)

    ➔ recycled predictions + bootstrapped standard errors to estimate the marginal effect

Outcomes – Y's

(1) Intra-family Moral Hazard

- Expectations about IC
  - "Suppose in the future, you needed help with basic personal care activities like eating or dressing. Do you have relatives or friends [besides your spouse] who would be willing and able to help you over a long period of time?"

- Receipt of informal care
    - Respondent gets help with IADLs/ADLs from an unpaid family member or friend and which ones
    - t+1, t+2, t+3 waves out to allow time for disability to accrue

Outcomes – Y's

"What are the chances that you (and your [husband/wife/partner]) will leave any inheritance?"

(2) Strategic bequest motive.
- – Inter-vivos transfers to children
  - Gave transfer to at least one child

- – Expectations about leaving a bequest to children
  - Respondent names a child as beneficiary of will/trust

Outcomes – Y's

(3) Family spillovers

- Co-residence
  - Any child lives with a parent
- Proximity
  - At least one child lives within 10 miles of parent
- Work
  - At least one child works full-time; part-time
- Transfers
  - At least one child gave transfer to respondent

Data

- Health and Retirement Study: 1996-2010
  - **+** State identifiers
  - **+** State tax incentives
- Nationally representative of near elderly, elderly
  - – LTCI "Not including government programs, do you now have any long term care insurance which specifically covers nursing home care for a year or more or any part of personal or medical care in your home?"
- Sample: report filing taxes, median income or above

Results: Descriptives

Table 1: Summary Statistics: Controls

	mean	sd	min	max
LTCI Coverage	0.157	0.364	0	1
Divorced	0.114	0.318	0	1
Widowed	0.165	0.371	0	1
Unmarried	0.0618	0.241	0	1
Female	0.557	0.497	0	1
1 Child	0.102	0.302	0	1
2 Children	0.307	0.461	0	1
3+ Children	0.505	0.500	0	1
No. of Children Missing	0.0132	0.114	0	1
Retired	0.466	0.499	0	1
High School	0.345	0.476	0	1
Some College	0.261	0.439	0	1
College Plus	0.303	0.459	0	1
$30K<Income\leq$100K	0.361	0.480	0	1
Income>$100K	0.639	0.480	0	1
African American	0.0649	0.246	0	1
Other Race	0.0316	0.175	0	1
Fair/Poor Health Status	0.166	0.372	0	1
1+ ADLs	0.0954	0.294	0	1
Tax Subsidy	0.335	0.472	0	1
Observations	46639			

Source: HRS Waves 3-10 (1996-2010)

Table 2: Summary Statistics: Outcomes

	mean	sd	min	max
Expectation Outcomes				
Inf Care	0.604	0.489	0	1
Inf Care-Kid	0.432	0.495	0	1
Inf Care-Relative	0.165	0.371	0	1
Inf Care-Other	0.119	0.324	0	1
High Pr(Beq)	0.830	0.375	0	1
Informal Care Utilization Outcomes				
Informal Helper (Wave $t+1$)	0.091	0.288	0	1
Informal Helper (Wave $t+2$)	0.154	0.371	0	1
Informal Helper (Wave $t+3$)	0.210	0.435	0	1
Child Outcomes				
Child Co-Res	0.245	0.429	0	1
Child 10 mi.	0.513	0.500	0	1
Child FT	0.919	0.273	0	1
Child PT	0.242	0.428	0	1
R Helps Child	0.569	0.495	0	1
Child Helps R	0.031	0.173	0	1
Will Names Child	0.592	0.492	0	1
Observations	46639			

Source: HRS Waves 3-10 (1996-2010)

Results: Estimation Approach

First Stage: LTCI

LTCI	(1)
Current Subsidy	0.044***
LTCI mean	0.157
F-statistic	13.7
Adj R^2	0.048
Clusters	51
Obs	46,639

Results: (1) Expectations of Informal Care

Table 3: 2SRI Estimates of Effects of LTCI on Expectations

	(1) Inf Care	(2) Inf Care-Kid	(3) Inf Care-Relative	(4) Inf Care-Other
Marginal Effect	-0.202**	-0.083	-0.157***	-0.032
Bootstrap S.E.	(0.096)	(0.098)	(0.041)	(0.043)
p-value	0.042	0.403	0.000	0.462
Mean of DV	0.603	0.432	0.165	0.119
FS Marginal Effect	0.039	0.039	0.039	0.039
FS F-Statistic	13.688	14.204	14.173	13.974
Pseudo R^2	.0629	.106	.0911	.0464
Clusters	48	49	47	48
Observations	46,612	46,625	46,589	46,601

Results: (1) Informal Care

Table 4: 2SRI Estimates of Effects of LTCI on Informal Care Utilization

	(1) Wave t to $t+1$	(2) Wave t to $t+2$	(3) Wave t to $t+3$
Marginal Effect	-0.089***	-0.096**	-0.127*
Bootstrap S.E.	(0.031)	(0.047)	(0.063)
p-value	0.007	0.045	0.051
Mean of DV	0.091	0.154	0.210
FS Marginal Effect	0.039	0.038	0.034
FS F-Statistic	13.681	10.677	7.601
Pseudo R^2	.272	.279	.279
Clusters	46	48	49
Observations	46,592	39,420	31,891

Results: (2) strategic bequests (or exchange)

	Table 3: 2SRI Estimates of Effects of LTCI on Expectations	Table 5: 2SRI Estimates of Effects of LTCI on Children Behavior	
	(5) High Pr(Beq)	(5) R Helps Child	(7) Will Names Child
Marginal Effect	-0.003	-0.300***	-0.052
Bootstrap S.E.	(0.069)	(0.098)	(0.123)
p-value	0.967	0.003	0.677
Mean of DV	0.830	0.569	0.592
FS Marginal Effect	0.039	0.042	0.041
FS F-Statistic	14.204	13.383	12.658
Pseudo R^2	.0927	.0996	.146
Clusters	49	49	49
Observations	46,625	43,079	42,552

Results: (3) family behavior

Table 5: 2SRI Estimates of Effects of LTCI on Children Behavior

	(1) Child Co-Res	(2) Child 10 mi.	(3) Child FT	(4) Child PT	(6) Child Helps R
Marginal Effect	-0.244***	0.129	0.073**	-0.156**	0.002
Bootstrap S.E.	(0.051)	(0.133)	(0.034)	(0.074)	(0.038)
p-value	0.000	0.339	0.039	0.040	0.951
Mean of DV	0.245	0.513	0.919	0.242	0.031
FS Marginal Effect	0.041	0.040	0.040	0.041	0.042
FS F-Statistic	12.543	11.717	12.624	13.046	13.074
Pseudo R^2	.116	.078	.189	.038	.094
Clusters	48	47	45	48	42
Observations	43,124	42,348	42,397	42,452	42,590

Limitations

- Generalizability
  - Median income / tax filers

- Identification
  - Focuses on individuals induced to hold LTCI due to slight reduction in price through tax code.
  - Are they different from other people policy makers want to target to buy LTCI using other tools?

Conclusions

- We estimated the causal effects of LTCI on informal care using best national source of data available.

- First to test for IFMH while addressing endogeneity.

- Evidence of intra-family moral hazard (Pauly, 1990)
  – LTCI lowers expectations for informal care from extended family
  – LTCI reduces informal care actually received

Conclusions

- Mixed evidence for strategic bequest motive
  - LTCI leads to fewer *inter vivos* transfers to children.
  - Does not change naming a child on a will

Conclusions

- LTCI changes family behavior consistent with children having a smaller role in caring for parents now and in the future.
    - Less co-residence
    - Higher labor force attachment
- Focusing only on informal care misses the full effect of LTCI on the family
    - Spillovers can occur before disability onset/ with our without disability onset
- Potentially important economic gains of LTCI to children to account for in policy calculations.