

Moral Hazard and Long-Term Care Insurance

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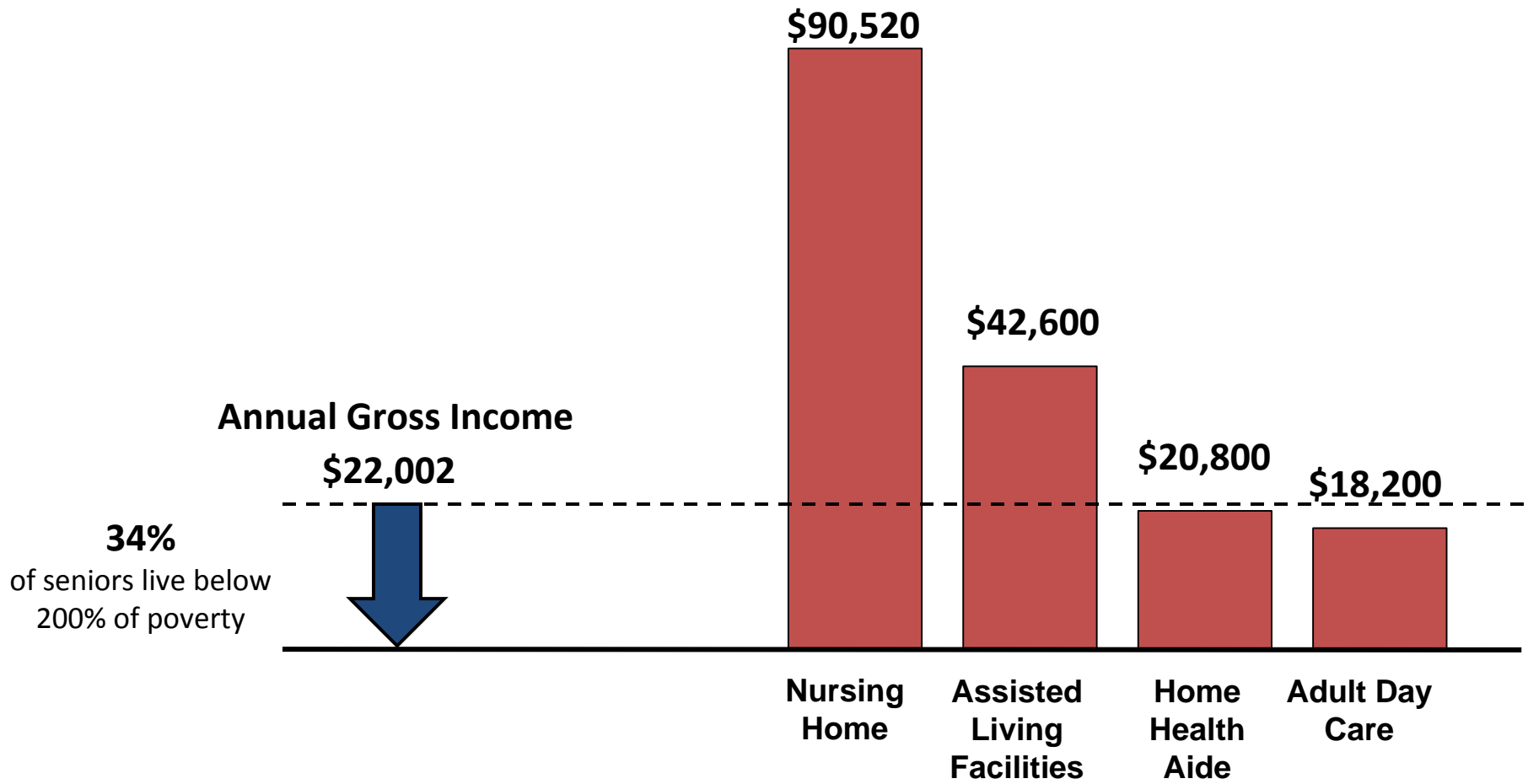
Outline / Preview

- Context: Financing of long-term care (LTC) in the USA, concerns about private LTC insurance markets, and public policy
- Little current evidence on moral hazard
- We estimate moral hazard in private LTC insurance markets with respect to nursing home and home care utilization using:
 - Health and Retirement Study data
 - Bivariate probit with instrumental variables
- We find significant moral hazard in nursing home use

Need for LTC

- In the US, \$220 billion spent on LTC in 2012
- 8.7% of total health care expenditures (CMS)
- Large and uncertain risk:
 - 35-50% of 65 year-olds will use a nursing home at some point.
 - Of those, 10-20 percent will live there more than five years (Brown and Finkelstein, 2009)

Average Annual Care Costs, by Type of Service



SOURCES: MetLife Mature Market Institute. *The 2012 MetLife Market Survey of Nursing Home, Assisted Living, Adult Day Services, and Home Care Costs*, November 2012, available at: <https://www.metlife.com/mmi/research/2012-market-survey-long-term-care-costs.html#keyfindings>; U.S. Census Bureau, *Current Population Survey*, 2012 Annual Social and Economic Supplement, Table POV01.

Financing of Formal LTC in the US

- Public payers
 - Medicaid
 - State and local programs
- Out of pocket
- Private long-term care insurance
- Very fragmented across payers
- Very fragmented across acute vs LTC

Rise and demise of the CLASS Act

- Community Living Assistance Services and Supports passed as Title VIII of the ACA
 - Voluntary, premium-funded, publicly provided
 - Employer-based with opt-out for employees
 - Vesting period of 5 years, 3 working (minimally)
 - Lifetime cash benefit
 - Financially sustainable at least 75 years
- October 2011: HHS says CLASS is not viable
- January 2013: CLASS officially repealed

Private Long-Term Care Insurance

- Given large but uncertain risk, seems an ideal insurance market
- But only 12% of US elderly individuals have it
- Repeated efforts by policymakers to expand the market
 - Standardized policies
 - Tax treatment
 - Partnerships with Medicaid
- Recent exodus of insurers from the market, in part due to higher than expected claims

Prior Evidence on Moral Hazard in LTC

- Grabowski and Gruber JHE 2007
 - use variation in state Medicaid eligibility policies to proxy for the “price” of nursing home care (more generous Medicaid policies make nursing home care cheaper)
 - find no moral hazard in nursing home use
- Li and Jensen Inquiry 2011
 - Use HRS data to examine utilization of LTC services among those who have LTC insurance vs those who do not
 - Instruments for LTC insurance ownership at individual level, potentially invalid
 - Find “increased access to nursing home care” due to LTC insurance

Theoretical Framework

- Standard approach to ex post moral hazard: Insured individuals consume more services than uninsured individuals
- The additional consumption may be socially inefficient if due to price effects
- The additional consumption may be socially efficient if due to income effects
- We estimate combined effect, remain agnostic as to welfare

Data

- Health and Retirement Study (HRS)
 - nationally representative, longitudinal study of persons over age 50
 - consistently worded questions on LTCL.
 - Respondents interviewed every two years
 - restricted geocode data
- RAND longitudinal files + imputations
- Waves 3 to 10 (1996-2010)
 - Original HRS Cohort (born 1931-1941)
 - AHEAD cohort (born prior to 1924)
 - War Baby Cohort (born 1942-1947)
 - Children of the Depression Cohort (born 1924-1931)

Sample

- Eligible for LTCI purchase
 - Exclude those with insurance in baseline year of any two-wave transition
 - Exclude those not qualified for purchase according to typical underwriting standards
 - over the age of 80
 - memory problems
 - stroke
 - poor self-rated health or functional impairment at baseline
 - prior nursing home or home care use
- To focus on those who might buy, exclude:
 - on Medicaid
 - bottom quartile of the income distribution
 - under the age of 50
- Final sample: 15,665 observations

Measures

- LTC Insurance purchase – insurance in time t ; no insurance in $t-1$
 - Some measurement error
 - Some useful follow-up questions
- Nursing home use: data on whether used since last wave; number of times; total number of nights
 - Any nursing home use (1/0)
 - Any nursing home use + average duration at least 30 days
 - Any nursing home use + average duration at least 100 days
- Home care use: data on whether used since last wave
 - No data on duration
 - Includes post-acute care funded by Medicare or private acute-care insurance

Empirical Approach

Jointly model (using bivariate probit):

$$Purchase_{it} = \gamma_0 + \gamma_1 Instruments_{it} + \gamma_2 X_{it-1} + \lambda_t + State_i + \varepsilon_{it}$$

$$Utilization_{t+1...3} = \beta_0 + \beta_1 Purchase_{it} + \beta_2 X_{it-1} + \lambda_t + State_i + \varepsilon_{it}$$

- Predictors of purchase at t-1
- Purchase at t
- Utilization at t+1.....t+3

- Standard errors clustered on household

Instruments

- Within-state changes in tax treatment of LTC insurance premiums (credits, deductions) (Goda 2011 + searches of state tax forms)
- Within-state changes in Medicaid asset requirements for singles and couples (Grabowski and Gruber 2007 + additional searches)
- Tax itemization status in 1996 – eligibility for 1997 change in federal tax benefit for LTC insurance purchase

Pooled Sample Summary Statistics

	Overall (N=15,665)	LTCI Purchasers (N=1,011)	LTCI Nonpurchasers (N=14,654)
Purchased LTCI (%)	6.5	100.0	0.0
Used nursing home (%)	2.4	2.7	2.4
Used nursing home >30 days(%)	0.9	0.8	0.9
Used home care (%)	8.8	7.6	8.9
Age	61.29	61.35	61.29
Female (%)	51.4	52.7	51.3
Black race (%)	8.2	8.6	8.1
Hispanic (%)	4.4	2.5	4.6
High school graduate (%)	83.7	87.1	83.5
College graduate (%)	25.1	33.6	24.5
Married (%)	86.4	87.2	86.3
At least one child (%)	96.0	94.8	96.0
On Medicare (%)	25.9	24.2	26.0

Bivariate Probit Results

	Nursing Home Estimation		Home Care Estimation	
	Purchase	Use	Purchase	Use
Purchased LTCI		2.324 ** (0.940)		-1.111 ** (0.521) **
Instruments				
Tax deduction	0.255 *** (0.081)		0.242 *** (0.085)	
Tax credit	0.077 (0.083)		0.074 (0.082)	
Itemized at baseline	0.073 ** (0.037)		0.070 * (0.037)	
Medicaid asset rule for a couple	0.006 (0.004)		0.005 (0.004)	
Medicaid asset rule for single	-0.009 (0.006)		-0.007 (0.006)	

Alternative Measures and Specifications

Model	Marginal Effect	
	Nursing Home Use	Home Care Use
Base Model from Table 2: Bivariate probit regressions of utilization on LTCI purchase	0.092* (0.050)	-0.188* (0.112)
Naïve models (simple probits without instruments)	-0.001 (0.004)	-0.007 (0.008)
Measuring nursing home use without length of stay restriction	0.112 (0.090)	
Excluding purchasers of home-care-only policies (nursing home use of any length)	0.127* (.071)	
Excluding purchasers of nursing-home-only policies		-0.133 (.140)
Excluding home health use if hospitalization		-0.020 (0.032)

***p<.01; **p<.05; *p<.10. All models include state and time fixed effects.

Robust standard errors clustered on the individual.

Falsification Tests: Services Not Covered by LTC Insurance

	Coefficient (std.error)	Marginal Effect (std.error)
Dependent Variable (dichotomous indicator of utilization in past two years)		
Outpatient Surgery	0.543 (0.628)	0.206 (0.235)
Dental Visit	0.606 (0.801)	0.163 (0.219)
Doctor Visit	-0.801 (0.817)	-0.133 (0.143)
Hospital Admission	-0.899* (0.522)	-0.322* (0.187)

***p<.01; **p<.05; *p<.10. All models include state and time fixed effects.

Conclusions/Discussion: Home Care Use

- Negative effect of LTC insurance on home care use
- Smaller and nonsignificant if only consider policies that cover home care or use that does not occur with a hospitalization (likely funded by other insurance)
- Consistent with Li and Jensen
- Lack of effect might be explained by
 - reluctance to trigger benefits for much less expensive product relative to nursing home care
 - Measurement issues

Conclusions/Discussion: Nursing Home Use

- We find moral hazard in nursing home use in the presence of private LTC insurance
- This is in contrast to Grabowski and Gruber, who studied only Medicaid nursing home care, but consistent with Li and Jensen
- Extrapolating from other studies (Goda, Golberstein Grabowski 2011; Konetzka He et al), this is likely a price effect and not an income effect
- Insurers/policymakers may want to incorporate disincentives to moral hazard