# Medicaid Insurance in Old Age

#### Mariacristina De Nardi Eric French John Jones

UCL, Chicago Fed, IFS, NBER, SUNY-Albany

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Medicaid Insurance in Old Age

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#### Public health insurance for the elderly

- Medicare: Virtually everyone age 65+ is eligible
  - No income or asset tests
  - Pays for most medical services, but not all (e.g., nursing homes)

## Public health insurance for the elderly

- Medicare: Virtually everyone age 65+ is eligible
  - No income or asset tests
  - Pays for most medical services, but not all (e.g., nursing homes)
- Medicaid: Means-tested health insurance that assists the poor or impoverished
  - Medicaid assists 70% of nursing home residents.
  - Nursing homes are very expensive.

- What is the degree of Medicaid redistribution?
  - How big are Medicaid payments for high-income versus low-income people?

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- How much do people value Medicaid insurance?
  - How big is this valuation for high-income versus low-income people?
- Is Medicaid of about the right size?
- Who pays for Medicaid?

- Household heads aged 70 or older in 1994
- Retired singles
- Follow-ups 1996, 1998, 2000, 2002, 2004, 2006, 2008, 2010
- Use full, unbalanced panel
- Sort households by permanent income

- Bottom income quintile:
  - Age 74: 60-70% on Medicaid.
  - Age 95: 60-70% on Medicaid.
- Top income quintile:
  - Age 74: 2-3% on Medicaid.
  - Age 95: over 10% on Medicaid.

## Forces working against redistribution

- High income live longer than low income. Life expectancy at age 70
  - 10th percentile of income distribution: 10.4 years.
  - 90th percentile of income distribution: 14.4 years.

# Forces working against redistribution

- High income live longer than low income. Life expectancy at age 70
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- Two pathways to qualify for Medicaid
  - Categorically needy: low income
  - Medically needy: low income net of medical spending
    - High income retirees wind up on Medicaid only if they have catastrophic medical spending

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Permanent Income	Average	Recipiency	Average Payment/
Quintile	Payment	Rate	Beneficiary
Bottom	9,080	.70	12,990
Fourth	5,720	.42	13,690
Third	2,850	.16	18,350
Second	1,950	.08	24,360
Тор	1,280	.05	23,790

**Table:** Average Medicaid payments, recipiency, and payments per beneficiary, 1996-2010 waves of the Medicare Current Beneficiary Survey.

- Single people aged 70 and older
- Consumption of medical and non-medical goods, and savings decision
- Medical care does not affect longevity

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- Single people aged 70 and older
- Consumption of medical and non-medical goods, and savings decision
- Medical care does not affect longevity
  - Consistent with many papers
  - Much of medical spending, especially late in life, is on long-term care
  - Spending improves quality of life, not length of life

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# Nursing home quality varies a lot



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### Model

- Single people aged 70 and older
- Flow utility from medical and non-medical consumption

$$u(c_t, m_t, \mu_t) = \frac{1}{1-\nu} c_t^{1-\nu} + \mu_t \frac{1}{1-\omega} m_t^{1-\omega},$$

where:

- t = age;
- $c_t =$  non-medical consumption;
- $m_t$  = consumption of medical goods and services, includes
  - nursing home, drugs, doctor visits;
  - items paid out of pocket as well as by Mediciad, Medicare, or other insurers
- $\mu_t = \text{stochastic medical needs shifter.}$

- Health takes on the states: good, bad, nursing home, dead. Transition probabilities vary by:
  - gender
  - permanent income
  - age
  - past health

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## Medical needs shocks components

- A deterministic function of age, gender, and health status.
- A persistent shock.
- A transitory shock.

### Two key features of the insurance system

• Private, Medicare, Veterans Administration health insurance

- pay a share of total medical expenditure  $m_t(1 q(h_t))$
- Using data from the MCBS we find
  - q(nursing home) = .68
  - q(good or bad) = .27

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- Social insurance programs (Medicaid and Supplemental Security Income (SSI))
  - Medicaid utility floors

# Medicaid as providing utility floor

- Need a model in which
  - Medicaid transfers vary with medical needs.
  - Model matches distribution of Medicaid payments.
- Government computes minimum expenditure to achieve a given level of utility, for each possible level of medical needs shocks.

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- Given needed expenditure, government makes transfer, netting out individual resources
- Given exogenous transfer, the person makes optimal decisions.

• First step: estimate parameters of income, health, mortality, and co-pay profiles.

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- Second step: taking as given the estimated first-step parameters, choose preference parameters, utility floor, and medical needs shocks to match
  - Median assets
  - Medicaid recipiency rate
  - Median and 90th percentile of out-of-pocket medical expenditures
  - First and second autocorrelations of medical expenditures

by PI quintile, cohort and age, using the method of simulated moments (MSM).

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	Medicaid payments		Out-of-pocket expenses		
Income	MCBS	Model	MCBS	AHEAD	Model
Quintile	Data		Data	Data	
Bottom	9,080	10,070	4,050	2,550	2,210
Fourth	5,720	7,960	5,340	4,270	3,800
Third	2,850	6,000	6,470	5,050	6,330
Second	1,950	3,910	7,300	6,360	8,500
Тор	1,280	2,250	8,020	7,000	10,600
Men	2,850	3,780	5,440	4,760	8,280
Women	4,410	5,980	6,470	5,230	6,420

**Table:** Average Medicaid payments and out-of-pocket expenses.

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Fix preference parameters at baseline estimates and

- Reduce consumption value of both categorically and medically needy floors by 10%
- Increase consumption value of both floors by 10%

	(1)	(2)	(3)
Permanent	Reduction	Compensating	Ratio
Income	in PDV of	Variation	of
Quintile	Payments		(2)/(1)
Bottom	4,500	6,300	1.40
Fourth	4,000	5,000	1.25
Third	2,900	4,400	1.52
Second	2,200	4,100	1.86
Тор	1,400	4,400	3.14
Men	1,300	1,100	0.85
Women	3,100	5,600	1.81
Good Health	2,600	4,800	1.85
Bad Health	3,300	5,000	1.52

Table: The costs and benefits of cutting Medicaid by 10%.

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Permanent	(1)	(2)	(3)
Income	Payment	Compensating	Ratio
Quintile	Increase	Variation	(2)/(1)
Bottom	4,700	2,600	0.55
Fourth	4,200	3,100	0.74
Third	3,100	3,600	1.16
Second	2,300	2,900	1.26
Тор	1,300	2,600	2.00
Men	1,400	600	0.43
Women	3,300	3,500	1.06
Good Health	2,500	3,000	1.20
Bad Health	3,500	3,000	0.86

Table: The costs and benefits of increasing Medicaid payments by 10%.

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Permanent	(1)	(2)
Income	Marginal	Tax Cost
Quintile	Valuation	
Bottom	0.55	0.20
Fourth	0.74	0.29
Third	1.16	1.01
Second	1.26	2.00
Тор	2.00	4.59

**Table:** The benefits of increasing Medicaid payments by 10% and their tax cost.

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- High income people ...
  - receive significant Medicaid transfers
  - value these transfers a lot
- Medicaid provides valuable insurance and its size is about right.