Long-term Care Insurance, Annuities, and the Under-Insurance Puzzle
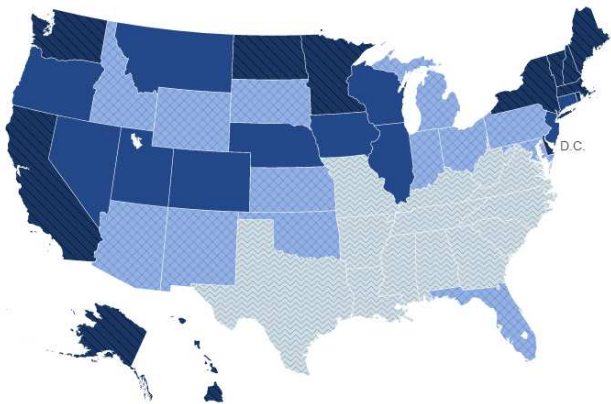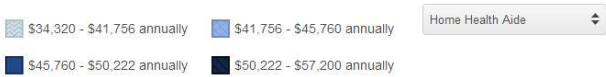
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May 8, 2015

- Long term care insurance market
  - Escalating premiums
  - Poor reimbursement model
  - High loads
- Large late in life risk that is not being insured
  - $< 10\%$ own any form of LTCI
  - Large public burden
- Room for improvement
  - Depends on counterfactual demand

Today:

- Present methods eliciting demand for improved LTCI

- Application to new sample VRI

  - Collaboration between Vanguard, NYU, and Michigan

  - http://ebp-projects.isr.umich.edu/VRI/

- Study of LTCI motivated by high late in life savings

Two late in life saving motives:

- High LTC costs
    - Brown and Finkelstein (2008)
    - De Nardi, French, and Jones (2010)
- Strong bequest motive
    - Kotlikoff and Summers (1981)
    - Luxury (De Nardi (2004))
- Separation of motives key to understand demand
- Prior paper studied preference for flexible LTC expenses

LTCI

$34,320 - $41,756 annually
$41,756 - $45,760 annually
$45,760 - $50,222 annually
$50,222 - $57,200 annually

Home Health Aide

D.C.

Data Source: Genworth Cost of Care Study 2013

$55,360 - $72,726 annually $72,726 - $86,505 annually

$86,505 - $102,049 annually $102,049 - $255,891 annually

Nursing Home (Private Roo... ⬍

D.C.

Data Source: Genworth Cost of Care Study 2013

- Two ways to model and measure demand
  - Measure motives (SSQs), use model, and map to demand
  - Stated demand (Model free)

- SSQs

  - Describe hypothetical environment
  - Describe hypothetical state
  - Describe hypothetical future
  - Describes hypothetical choice set
  - Verify understanding
  - Record a choice

Suppose you are 85 years old, live alone, rent your home, and pay all your own bills. You know with certainty that you will live for only 12 more months and that you will need help with *ADLs for the entire 12 months.

You have **$100,000** that you need to split into Plan E and Plan F.

•   Plan E is reserved for your spending. From Plan E, you will need to pay all of your expenses, including long-term care and any other wants, needs, and discretionary purchases.

•   Plan F is an irrevocable bequest.

Here are the rules for this scenario.

- You have no money other than the $100,000.

- Other than Plan E, you have no other resources available to help with your long-term care. You have to pay for any long-term care you may need from Plan E.

- Any money in Plan E that you do not spend cannot be given away or left as a bequest.

- You have full insurance that covers all of your hospital, doctor, and medications, but you have no long-term care insurance.

- There is no public-care option or Medicaid if you do not have enough money to pay for a nursing home or other long-term care.

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| Section 1 | Section 2 | Section 3 | Section 4 |

Click here for complete scenario

Please make your decision on splitting money into Plan E and Plan F by clicking on the scale below. To put more money in Plan E, move the slider to the right. To put more money in Plan F, move the slider to the left. The numbers in the box will change as you move the slider to let you know how much you will have to spend and how much you will leave as a bequest.

Please move the slider to see how it works. When you are ready, place the slider at the split you want and click NEXT to enter your choice.

Plan F
$50,000
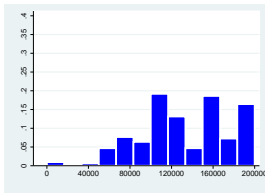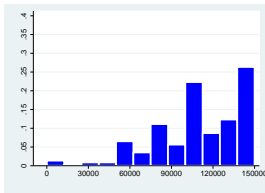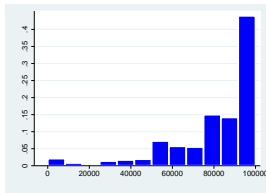
You will leave the
above amount as an
irrevocable bequest.

Plan E
$50,000

You will have the
above amount during
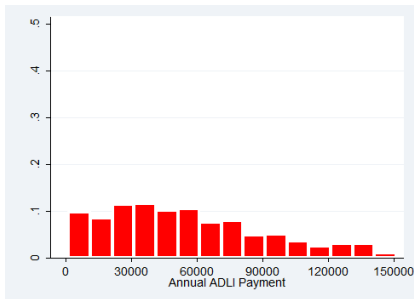the next year when
you need help with
ADLs.

| Previous | Next |

- Explore credibility of SSQ responses

- As in Manski 2004 on probabilities, look for internal coherence.

- SSQ 3 response coherence: bequest vs. LTC lock box.

- Measuring demand from model

- Use SSQ responses to estimate individual preferences

- Use estimated preferences in life cycle saving model to recover demand for hypothetical LTC insurance.

  - Arrow security that pays out in state when need help with ADLs
  - Actuarially fair
  - No default risk
  - Inflation protected

Figure: **Model Implied ADLI Demand:** We omit the 32.1 percent of individuals for whom demand is zero.

- Second demand measurement.

- Use survey to recover stated demand for identical product.

- Describe and confirm understanding for hypothetical LTC insurance. Again,

  - Arrow security that pays out in state when need help with ADLs
  - Actuarially fair
  - No default risk
  - Inflation protected

Please suppose that you are offered a hypothetical new form of insurance called ***ADL insurance** with the following features:

- You pay a one-time, nonrefundable lump sum to purchase this insurance.
- If you need help with activities of daily living (*ADLs), you will immediately receive a monthly cash benefit indexed for inflation.
- For each **$10,000** you pay for this insurance, you will receive $Y per month indexed for inflation in any month in which you need help with *ADLs
- There is **no restriction** on the use of the insurance benefits. You are free to use benefits in any way you wish: to pay for a nursing home; a nurse to help at home; for some other form of help; or in literally any other way you would like.
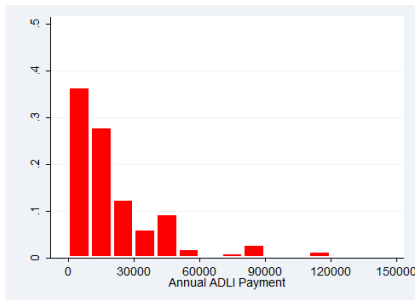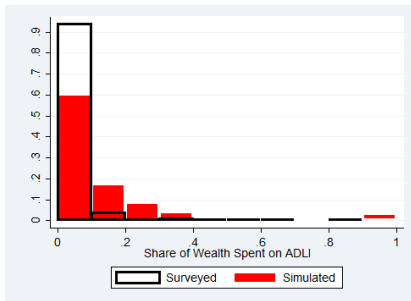- An impartial third party will determine eligibility

Figure: **Surveyed ADLI Demand:** We omit the 71.2 percent of individuals for whom stated demand is zero.

- Higher stated demand than observed holdings would suggest

- Model overpredicts demand significantly.

- Compare share of wealth spent on insurance in two measurements

- Repeat for annuities.
- Idealized product, surveyed and modeled demands measured.
- Even more significant overprediction.
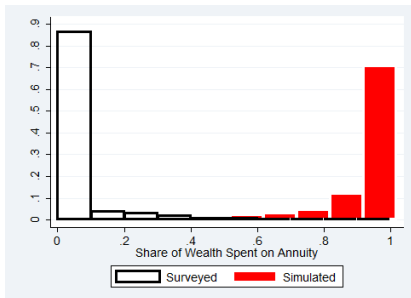
- Want to know why model overpredicts demands so significantly.
- Use difference in demand estimates to check for mis-specification
    - Develop a method to detect systematic patterns
- A priori family of interest given reduced form and small bequest motive (altruism?)
- VRI Survey 3 measures intergenerational transfers.

	ADLI difference	**Annuity difference**
Transfers	.348**	.191**
	(.097)	(.070)
$\mathbb{I}_{Transfer>20k}$	13889.892*	8251.2306
	(4659.1943)	(4654.281)
$\mathbb{I}_{child}$	5025.772	4321.438
	(4697.889))	(4959.016)

- Differences in insurance demands are large and significant.
    - Modeled demand for insurance is significantly larger than reported stated demands.
- Difference is predicted significantly by the presence of intergenerational transfers.
- Evidence that model is missing a motive related to the family.
- Ongoing work is developing a model of the family and intergenerational concerns

- CFPB interested in optimal design of nudges

- Requires understanding of underlying motives

- Research method provides way to understand motives beyond behavior

- Models have place, but need to incorporate feedback from measurement

    - "More to be done"