

Long-Term Care Insurance: Does Information Matter?



Norma B. Coe

Center for Retirement Research at Boston College

Meghan Skira

Boston College / University of Georgia

Courtney Harold Van Houtven

Duke University Medical Center, Department of Veterans Affairs

ILPN

London, England

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Long-term Care Insurance Puzzle

- Long-term care is one of the biggest uninsured risks facing the elderly today (Brown and Finkelstein, 2007).
- Yet, only 13% have private long-term care insurance.
 - Expense;
 - Social Insurance/Medicaid;
 - Informal Care;
 - Incomplete nature of the insurance;
 - Myopia;
 - **Misinformation.**

What misinformation may exist?

- Aging process generally

Informal care: 70 percent of elderly rely solely on informal care.

- 9 million Americans age 65+ today; 12 million by 2020.
- 10 hours/week; 4 years

Formal Care: 45% chance of a 65 year old needing Nursing Home

- 15-20% will stay more than 5 years.

- *Own* aging trajectory

What misinformation may exist?

- Costs of care

Informal care:

- “Free”; caregiver burden/reward
- Willingness of family members to provide care

Formal care:

- Average private room nursing home ~\$70,000

Public Insurance: Incomplete

- Medicare: Recoverable-condition, first 100 days
- Medicaid: Deductible and co-pays= wealth and income, choice of nursing home

What is the information mechanism?

People who have Parents/Loved ones use the LTC system

| <u>Information</u> | <u>Predicted Effect</u> | <u>Differential effects?</u> |
|--------------------------|-------------------------|---|
| Aging Process | | |
| Generic | + Need | |
| Genetic | + Need | Parent vs. Loved one |
| | | |
| Costs of Care | | |
| Financial Cost | + Insurance | Formal vs. Informal care |
| Caregiving burden/reward | Δ Care delivery | Formal vs. Informal care provider |
| | | |
| Own financial state | Δ Inheritances | Formal vs. Informal care provider Parent vs. Loved one |

Does misinformation explain the lack of LTCI?

- Does experience with LTC in the G_1 generation impact LTCI directly and/or indirectly through:
 - Expectations about *any* future care needs?
 - Expectations about *own* aging process?
 - Expectations about type of care that I'd prefer?
 - Expectations about own financial status?

Preview of key findings:

- Probability of needing a nursing home increases with:
 - Having a parent OR in-law use a nursing home;
 - Providing informal care to *in-law*.
- Expectations about children providing care change with:
 - Decrease after having a *parent* use a nursing home;
 - Increase after providing informal care to *parent*.
- Inheritance expectations change with:
 - Decrease after formal-care use, especially *parents*.
 - Increase after informal care provision.
- LTCI coverage and purchase change with:
 - 3 percentage point *increase* with nursing home use.
 - 2 percentage point *decrease* with providing informal care.

Data

- *Health and Retirement Study*
 - 1998-2008 (2-years) panel.
 - Over age 65.
 - Have at least 1 child.
 - Survey complete.

G₁ Care Prevalence

Analysis Sample

| | |
|--|-------|
| Probability of entering a NH | 0.108 |
| Expect informal care from children/children-in-law | 0.502 |
| Probability of receiving inheritance | 0.092 |
| LTC insurance | 0.139 |
| Any G ₁ received LTC | 0.697 |
| Any G ₁ used nursing home care | 0.570 |
| Any G ₁ received informal care | 0.381 |
| Parent used nursing home care | 0.395 |
| In-law used nursing home care | 0.321 |
| Parent received informal care from self | 0.135 |
| Parent received informal care from sibling(s) | 0.187 |
| In-law received informal care from self | 0.079 |
| In-law received informal care from sibling(s)-in-law | 0.155 |

Test1: Knowledge about Aging Process

Two questions to measure “LTC need”:

- Subjective probability of NH entry
 - (What is the percent chance) that you will move to a nursing home in the next five years?
- Care from children
 - “Suppose in the future, you needed help with basic personal care activities like eating or dressing. Do you have relatives or friends (besides your partner) who would be willing and able to help you over a long period of time?”
 - Who?

Estimation: Nursing Home Expectations

$$P(NH) = \beta_1 + \beta_2(G_1 * LTC) + \beta_3(Health) + \beta_4(Alt.Care) + \beta_5(X) + \varepsilon$$

- $P(NH)$: self-reported probability of needing a nursing home
- $G_1 * LTC$: Parent/in-law has used LTC
- $Health$: cognition, incontinence, chronic conditions, prior LTC use
- $Alt. Care$: number and characteristics of children, married
- X : gender, race, age, age squared, education, financial and housing wealth quartiles

Results: Nursing Home Expectations

| | I | II | III |
|---------------------------------------|-----------------------|------------------------|-----------------------|
| Any G ₁ use LTC | 0.0095 ** (0.0040) | | |
| Any G ₁ uses Formal Care | | 0.0141 *** (0.0038) | |
| Any G ₁ uses Informal Care | | -0.0009 (0.0037) | |
| Parent uses Formal Care | | | 0.0086 ** (0.0038) |
| In-Law uses Formal Care | | | 0.0097 ** (0.0040) |
| R provides care to parent | | | 0.0000 (0.0056) |
| Sibling provides care to parent | | | -0.0016 (0.0049) |
| R provides care to in-law | | | 0.0131 * (0.0069) |
| Sibling provides care to in-law | | | 0.0001 (0.0050) |
| Observations | 17493 | 17493 | 17493 |
| R-Squared | 0.02 | 0.02 | 0.02 |

Standard errors in parentheses

* significant at 10%; ** significant at 5%; *** significant at 1%

Estimation: Informal Care Expectations

$$CareChild = \beta_1 + \beta_2(G_1 * LTC) + \beta_3(Family) + \beta_4(Alt.Care) + \beta_5(X) + \varepsilon$$

- *CareChild*: Child willing to provide informal care in future (0/1)
- $G_1 * LTC$: Parent/in-law has used LTC
- *Health*: cognition, incontinence, chronic conditions, prior LTC use
- *Alt. Care*: number and characteristics of children, married
- *X*: gender, race, age, age squared, education, financial and housing wealth quartiles

Results: Informal Care Expectations

| | I | II | III |
|---------------------------------------|---------------------|---------------------|---------------------|
| Any G ₁ use LTC | -0.0165 (0.0118) | | |
| Any G ₁ uses Formal Care | | -0.0271 (0.0111) | ** |
| Any G ₁ uses Informal Care | | 0.0020 (0.0108) | |
| Parent uses Formal Care | | | -0.0304 (0.0111) |
| In-Law uses Formal Care | | | -0.0174 (0.0119) |
| R provides care to parent | | | 0.0301 (0.0168) |
| Sibling provides care to parent | | | 0.0102 (0.0150) |
| R provides care to in-law | | | 0.0118 (0.0199) |
| Sibling provides care to in-law | | | -0.0142 (0.0153) |
| Observations | 17493 | 17493 | 17493 |
| Pseudo R-Squared | 0.06 | 0.06 | 0.07 |

Robust standard errors in parentheses

* significant at 10%; ** significant at 5%; *** significant at 1%

Results: Aging Information

- Formal care use in G_1 :
 - increased expectations about formal care.
 - Decreased expectations of informal care.
 - Change in care delivery expectation/preference.
- Informal care to in-law:
 - increase expectation about formal care
 - caregiver burden?
- Informal care to parent:
 - Increased expectations about informal care
 - demonstration effect?

Test 2: Own Wealth Effects

- Inheritance Expectations
 - “What are the chances you will receive an inheritance during the next 10 years?”

Estimation: Inheritance Expectations

$$P(\text{Inherit}) = \beta_1 + \beta_2(G_1 * LTC) + \beta_3(\text{Health}) + \beta_4(\text{Alt.Care}) + \beta_5(X) + \varepsilon$$

- $P(\text{Inherit})$: Inheritance Expectations
- $G_1 * LTC$: Parent/in-law has used LTC
- Health : cognition, incontinence, chronic conditions, prior LTC use
- Alt. Care : number and characteristics of children, married
- X : gender, race, age, age squared, education, financial and housing wealth quartiles

Results: Inheritance Expectations

| | I | II | III |
|---------------------------------------|--------------------|---------------------|---------------------|
| Any G ₁ use LTC | 0.0159 (0.0052) | *** | |
| Any G ₁ uses Formal Care | | -0.0102 (0.0053) | * |
| Any G ₁ uses Informal Care | | 0.0318 (0.0055) | *** |
| Parent uses Formal Care | | | -0.0186 (0.0055) |
| In-Law uses Formal Care | | | -0.0028 (0.0059) |
| R provides care to parent | | | 0.0246 (0.0090) |
| Sibling provides care to parent | | | 0.0329 (0.0079) |
| R provides care to in-law | | | 0.0115 (0.0109) |
| Sibling provides care to in-law | | | 0.0108 (0.0077) |
| Observations | 17493 | 17493 | 17493 |
| R-Squared | 0.05 | 0.05 | 0.05 |

Robust standard errors in parentheses

* significant at 10%; ** significant at 5%; *** significant at 1%

Results 2: Own Financial Information

- Having anyone in G_1 use LTC increases inheritance expectations
 - Formal care use decreases expectations, especially for parents.
- Family wealth effects could be important

Test 3: Direct Effects on LTCI Coverage

- 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?”

Estimation: LTCI coverage

$$LTCI = \beta_1 + \beta_2 (G_1 * LTC) + \beta_3 P(NH) + \beta_4 ChildCare + \beta_5 (Health) + \beta_6 (Alt.Care) + \beta_7 (X) + \varepsilon$$

- LTCI: own private long-term care insurance

Results: LTCI Coverage

| | I | | II | | III | |
|---------------------------------------|----------|-----|----------|-----|----------|-----|
| Any G ₁ use LTC | 0.0225 | *** | | | | |
| | (0.0076) | | | | | |
| Any G ₁ uses Formal Care | | | 0.0360 | *** | | |
| | | | (0.0072) | | | |
| Any G ₁ uses Informal Care | | | -0.0093 | | | |
| | | | (0.0073) | | | |
| Parent uses Formal Care | | | | | 0.0343 | *** |
| | | | | | (0.0077) | |
| In-Law uses Formal Care | | | | | 0.0261 | *** |
| | | | | | (0.0081) | |
| R provides care to parent | | | | | 0.0001 | |
| | | | | | (0.0115) | |
| Sibling provides care to parent | | | | | -0.0152 | |
| | | | | | (0.0096) | |
| R provides care to in-law | | | | | -0.0224 | * |
| | | | | | (0.0125) | |
| Sibling provides care to in-law | | | | | -0.0026 | |
| | | | | | (0.0104) | |
| NH Expectation | 0.0956 | *** | 0.0935 | *** | 0.0938 | *** |
| | (0.0150) | | (0.0150) | | (0.0149) | |
| Informal Care Expectation | -0.0115 | * | -0.0108 | * | -0.0099 | |
| | (0.0061) | | (0.0061) | | (0.0061) | |
| Inheritance Expectations | 0.0257 | ** | 0.0292 | *** | 0.0315 | *** |
| | (0.0112) | | (0.0112) | | (0.0112) | |
| Observations | 17493 | | 17493 | | 17493 | |
| Pseudo R-Squared | 0.11 | | 0.11 | | 0.12 | |

Robust standard errors in parentheses

* significant at 10%; ** significant at 5%; *** significant at 1%

What is the total Effect of Information on LTCI coverage?

Counterfactual exercise:

- Predict $P(NH)$ with and without G_1 care use
- Predict $CareChild$ with and without G_1 care use
- Predict $P(Inherit)$ with and without G_1 care use
- Predict $LTCI_1$ with G_1 care use, $CareChild_1$, $P(NH_1)$, $P(Inh_1)$
- Predict $LTCI_0$ without G_1 care use, $CareChild_0$, $P(NH_0)$,
 $P(Inh_0)$

What does this mean for LTCI coverage?

| Model | LTCI Coverage | No one | Everyone | Difference |
|-------|---|--------|----------|------------|
| III | NH, parent | 12.3% | 15.9% | 3.6 |
| | NH, in-law | 14.7% | 17.9% | 3.2 |
| | Respondent provides informal care, parent | 17.8% | 17.8% | 0.0 |
| | Sibling provides informal care, parent | 18.1% | 16.3% | -1.8 |
| | Respondent provides informal care, in-law | 16.5% | 13.9% | -2.6 |
| | Sibling in-law provides informal care, in-law | 13.8% | 13.7% | -0.1 |

Robustness Checks

- Different samples.
 - Largest samples per question.
 - All G_1 use LTC
- Additional X's:
 - Waves, risk aversion, US Born, additional health variables.
- LTCI purchase versus holding.
- Top $\frac{1}{2}$ of the total wealth distribution.

Conclusions

- Information *is* transmitted through care of G_1 .
 - Different types....
- Independent impact of G_1 care on LTCI coverage and purchase.
- Overall effect: similar impact on LTCI coverage as tax deductions.
- Why not bigger?
 - Information too late?
 - Product may be imperfect (Brown and Finkelstein)
 - Self-insure through bequests (Lockwood)

Thank You!