

The Distribution of Lifetime Nursing Home Use and of Out-of-Pocket Spending

Michael D. Hurd, Pierre-Carl Michaud and Susann Rohwedder

Comments by Raun van Ooijen

University of Groningen and Netspar

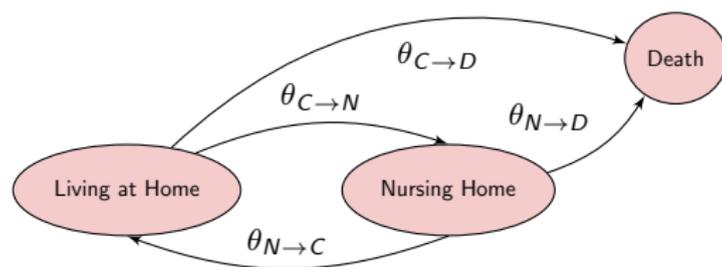
Netspar International Pension Workshop
Amsterdam, January 29, 2014

Summary

- ▶ Determine lifetime nursing home use (and the pattern).
- ▶ National representative sample of the U.S. elderly population **including institutionalized persons**.
- ▶ Almost complete information (i.e. 12 years for three cohorts in the HRS).
- ▶ Exit interviews are important because of the importance of nursing home use at the end-of-life.

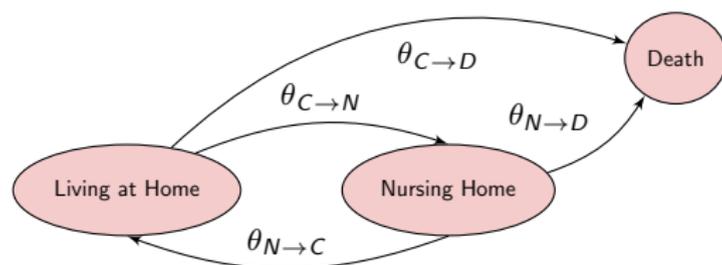
Summary

- ▶ Determine lifetime nursing home use (and the pattern).
- ▶ National representative sample of the U.S. elderly population **including institutionalized persons**.
- ▶ Almost complete information (i.e. 12 years for three cohorts in the HRS).
- ▶ Exit interviews are important because of the importance of nursing home use at the end-of-life.



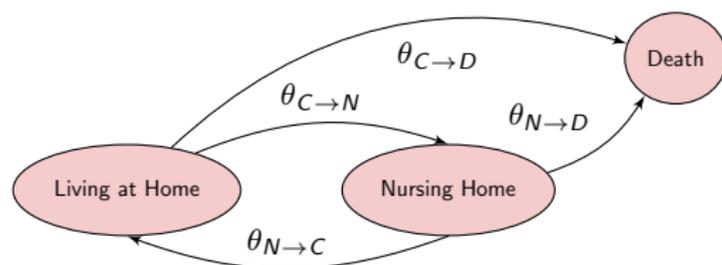
Summary

- ▶ Determine lifetime nursing home use (and the pattern).
- ▶ National representative sample of the U.S. elderly population **including institutionalized persons**.
- ▶ Almost complete information (i.e. 12 years for three cohorts in the HRS).
- ▶ Exit interviews are important because of the importance of nursing home use at the end-of-life.
- ▶ Transition rates are estimated (account for previous nursing home spells).
- ▶ A second-stage model is then used to simulate the **number of nights** in a nursing home and **out-of-pocket expenses** between waves.



Summary

- ▶ Determine lifetime nursing home use (and the pattern).
- ▶ National representative sample of the U.S. elderly population **including institutionalized persons**.
- ▶ Almost complete information (i.e. 12 years for three cohorts in the HRS).
- ▶ Exit interviews are important because of the importance of nursing home use at the end-of-life.
- ▶ Transition rates are estimated (account for previous nursing home spells).
- ▶ A second-stage model is then used to simulate the **number of nights** in a nursing home and **out-of-pocket expenses** between waves.
- ▶ Main finding: there is a significant risk of nursing home entrance; with a sizable risk of a prolonged stay; which may involve substantial costs.



Overall

- ▶ Carefully conducted econometric research, with a clear focus, using a very valuable data source.
- ▶ The research question is highly relevant for policymakers involved with long-term care reforms, companies who design long-term care insurance, individuals who have to make sufficient provisions for old-age, and researchers can incorporate the results in their models to evaluate saving adequacy and better understand saving behavior.

Main recommendations

- ▶ The model can be further improved by taking duration dependence into consideration.
- ▶ Account for important trends to make more adequate predictions.
- ▶ Evaluate the topic from a broader perspective by considering other forms of long-term-care.
- ▶ Use the model to predict out-of-pocket expenses.
- ▶ Use the information in HRS to replicate earlier studies who find lower nursing home risk.

Take duration dependence into consideration

- ▶ Allow for lagged duration dependence (analogous to including past occurrences in the second-stage regression model).
- ▶ Account for unobserved heterogeneity (or frailty) such as disability status (Mixed proportional hazard model and allow for competing risks).

Take duration dependence into consideration

- ▶ Allow for lagged duration dependence (analogous to including past occurrences in the second-stage regression model).
- ▶ Account for unobserved heterogeneity (or frailty) such as disability status (Mixed proportional hazard model and allow for competing risks).
 - ▶ Not taking into account unobserved heterogeneity may result in biased estimates
 - ▶ Estimate non-parametric using Heckman-Singer frailty
 - ▶ Allow for dependence between durations spent in different states
 - ▶ Multiple spells result in good identification (Abbring and Van den Berg, 2003)
 - ▶ Relatively easy to account for censoring
- ▶ Allow for inertia; updating the frailty term significantly improves the accuracy of the predictions (Koning and Spierdijk, 2014).
- ▶ Better distinction between short-term and long-term stays in a nursing home.

Account for important trends

- ▶ Clear downward trend in nursing home occupancy rate from 93% in 1977 to 83% by 2003 (Grabowski et al., 2012.)
- ▶ Downward trend in disabilities (Cutler, 2000) but an increase in degenerative diseases because of population aging (Hurd, 2013).
- ▶ Future cutbacks (or expansions) in Medicaid.
- ▶ A growing interest in assisted living and home care.
- ▶ Include cohort effect or a time trend in your model.
- ▶ Use information about wealth and income, disability and cognitive decline, private insurance (because these are important determinants for long-term care decisions).
- ▶ Back-testing to validate whether your presumption that nursing home use in the past is a good predictor of future nursing home use (out-of-sample).

Consider other forms of long-term care

- ▶ Individuals like to receive care in a homely environment.
- ▶ Negative association with nursing homes (reimbursed by Medicaid); see e.g. evidence provided by Ameriks et al., 2011.
- ▶ Policymakers seek cost-effective alternatives to providing services in nursing homes.

Consider other forms of long-term care

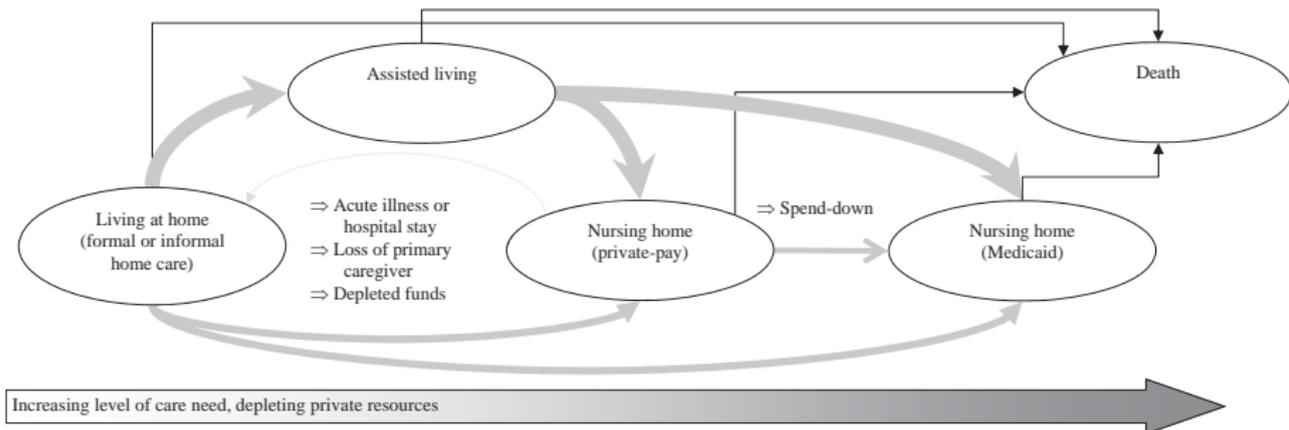
- ▶ Individuals like to receive care in a homely environment.
- ▶ Negative association with nursing homes (reimbursed by Medicaid); see e.g. evidence provided by Ameriks et al., 2011.
- ▶ Policymakers seek cost-effective alternatives to providing services in nursing homes.



'...promise me you will never put me in a nursing home.'

Consider other forms of long-term care

- ▶ What is the contribution of “short-term” nursing-home stays due to rehabilitation (to recover after a surgery or from a stroke)?
- ▶ Home-care or assisted living might be a close substitute in case of rehabilitation
- ▶ Covered by health insurance?



Transitions among Long-Term-Care Options. Source: Grabowski et al., 2012.

Other comments

- ▶ The model is used to simulate individual nursing home spending using out-of-pocket expenses, however, there are some concerns that health spending is overstated in the HRS (Venti, 2011).
 - ▶ Out-of-pocket expenses are endogenous and can be simulated using data on the costs per night from Medlife (and information about assets and the ownership of private long-term care insurance).
 - ▶ Use your model to validate HRS data.
- ▶ Use the information in the HRS to replicate earlier studies about nursing home risk.