Introduction and Research Questions

Many countries are facing aging societies meaning that the share of elderly has increased over the last decades. This development poses many challenges for social welfare systems. One of which is that alongside the increase in the share of elderly we see that public expenditures on elderly care has also increased tremendously. As such, there have been an emerging debate about:

1. What type of elderly care policies are cost-jeffective from the government’s perspective?
   - Increase in fee schedule is considered as unfair by Swedish municipalities of Sweden are in charge of offering formal care.

2. What is the optimal subsidy for formal elderly care?
   - In our paper we estimate the effect of a change in the price of formal elderly care on formal care utilization.

Institutional Setting: "High-cost" Protection Reform in Sweden

- Before the reform: 290 municipalities of Sweden are in charge of offering formal care (home care + nursing homes), allocating care, and setting the fee schedule. As a result of that, formal care fees vary up to 10k SEK per month between municipalities.

- After the reform: Variation in fee schedule is considered as unfair by Swedish government. We introduce unification of fee schedule in 2002. Fees are capped at a maximum of 1544 SEK per month which forced many municipalities to reduced fees for formal elderly care.

How do we answer this Question?

- Data Combine Swedish register data with survey data
  - Municipal level data (1998-2010): Fees in formal elderly care (home care + nursing homes), number of individuals in home care and nursing homes, hour brackets in home care
  - Individual level data (1996-2010): Health outcomes, employment history, family links

Empirical Strategy: Dynamic Difference-in-Differences

\[ \Delta \text{Health of the elderly} = \beta_0 + \beta_1 \text{Age} + \beta_2 \text{Gender} + \sum_{i=1}^{10} \beta_i \text{Conditions} + \theta_i \text{Individual FE} + \epsilon \]  

Who are the price-sensitive elderly?

- We find larger responses for conditions such as injuries, infectious diseases, and mental health suggesting that the drop in hospitalizations is driven by preventable causes.
- But we do not find an effect on mortality.

3. Does subsidizing elderly care affect children’s labor supply?

- We find larger responses for (i) only children, (ii) children with parents in poor health, and (iii) high-income children.
- Interestingly, the average long-term earnings effect is similar for both sons and daughters, challenging the conventional view that only daughters take responsibility for the informal long-term care of parents. However, sons are more likely to respond when being an only-child or in families with no sisters.

Conclusion

Subsidizing fees in elderly care lead to...

1. Improvement of utilization of formal elderly care (nursing homes and home care)
2. Decrease in hospitalizations for affected seniors
3. Increases in labor supply of children

Cost-benefit analysis:
1. Costly in the short-run
2. Self-funding in the long run due to positive labor supply responses among affected children

Results

1. Does subsidizing elderly care increase the take-up of formal elderly care?

- Yes! We find that the share of elderly above the age of 80 in formal care increases by 3.5% relative to the comparison group when facing the reduction in fees.

2. Does subsidizing elderly care affect seniors’ health outcomes?

- Yes, treated seniors experience 4% less hospitalizations that require at least one overnight stay at the hospital.

3. Does subsidizing elderly care affect children’s labor supply?

- We estimate that children whose parents are affected by the reform increase annual earnings by 2%
- Extensive margin: 6% more likely to be gainfully employed
- Intensive margin: 1.7% higher earnings conditional on positive earnings

4. Is subsidizing elderly care cost-effective?

- Not in the short-run, but yes, the policy becomes self-funding after nine years.
- Why do the costs turn negative? Behavioral changes in hospitalizations and labor supply lead to governmental savings from reduced public spending on healthcare and additional tax revenue from labor earnings. These increases outweigh the direct cost of the subsidy to the infra-marginal care recipients and the additional costs of behavioral changes in increased elderly care take-up.