Modeling the Impact of LTSS Policy Changes

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Is There a Better Way to Finance LTSS?

- Americans face a significant risk of needing LTSS
- For those who require LTSS, needs may endure for a long time
  - two main payers: Medicaid, families
  - modest but significant risk of falling into poverty because of LTSS expenses
  - heavy caregiver burdens
- We simulated the potential impact of alternative financing options
Outline

• Methods

• LTSS under Baseline

• Alternative Financing Options

• Simulation Results of Financing Options
We Used DYNASIM, Our Dynamic Microsimulation Model, to Project Outcomes

• Starts with representative sample of individuals and families
  • 1990-93 panels of the Survey of Income and Program Participation (SIPP)

• We use a series of equations to age the data year by year
  • simulate demographic events (e.g., births, deaths, marriage, divorce)
  • simulate economic outcomes (e.g., education, earnings, savings, retirement)
  • simulate health outcomes (e.g., disability, health status, health care spending, ADLs, IADLs, LTSS use and spending)
DYNASIM

• We calibrate many key demographic and economic outcomes to Social Security trustees’ assumptions
  • intermediate assumptions

• Project outcomes through 2087
  • generates lifetime projections for some cohorts
  • projections cover much of the life course for others

• Our LTSS projections use HIPPA-level needs
  • 2 or more ADLs 90+ days, or severe cognitive impairment

• Projection equations use the best and most recent data available
  • emphasize large, longitudinal household surveys
Key Assumptions

• We assume that observed relationships between variables remain constant over time
  • outcomes shifts as predictors change
  • for example, improved education can affect LTSS needs

• We base ADL and IADL disability on relative age—years of remaining life expectancy
  • assume that healthy life expectancy increases a half year for every full year of total life expectancy

• LTSS costs are determined by price of each unit of services, multiplied by number of units
  • prices grows at same rate as average national wage
# Key Data Sources for LTSS Projections

<table>
<thead>
<tr>
<th>Outcome</th>
<th>Data Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>Presence of problem that limits work</td>
<td>SIPP</td>
</tr>
<tr>
<td>Overall health status</td>
<td>Health and Retirement Study (HRS) matched to admin earnings records</td>
</tr>
<tr>
<td>Number of ADL/IADL limitations</td>
<td>HRS matched to earnings records</td>
</tr>
<tr>
<td>Number of chronic health conditions</td>
<td>HRS matched to earnings records</td>
</tr>
<tr>
<td>Cognitive status</td>
<td>HRS</td>
</tr>
<tr>
<td>Indicator that ADL meets HIPAA trigger</td>
<td>Medicare Current Beneficiary Survey</td>
</tr>
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</table>
# Key Data Sources: Use and Cost of LTSS

<table>
<thead>
<tr>
<th>Outcome</th>
<th>Data Source</th>
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</thead>
<tbody>
<tr>
<td>Use of home care, nursing home, residential care</td>
<td>HRS</td>
</tr>
<tr>
<td>Number of home care hours</td>
<td>HRS, National Health and Aging Trends Survey (NHATS)</td>
</tr>
<tr>
<td>Days of nursing home care</td>
<td>HRS, NHATS</td>
</tr>
<tr>
<td>LTSS prices, Medicaid</td>
<td>Various studies</td>
</tr>
<tr>
<td>LTSS prices, non-Medicaid</td>
<td>Genworth data</td>
</tr>
</tbody>
</table>
### Key Data Sources: Payer Allocation of LTSS Costs

<table>
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<tr>
<th>Outcome</th>
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<tbody>
<tr>
<td>Private LTC insurance purchase</td>
<td>HRS</td>
</tr>
<tr>
<td>Private LTC insurance: Plan features</td>
<td>AALTCI and private industry</td>
</tr>
<tr>
<td>Allocation of costs to payers</td>
<td>MCBS, plus Medicaid and private plan rules</td>
</tr>
<tr>
<td>VA nursing home</td>
<td>MCBS</td>
</tr>
</tbody>
</table>
Outline

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About half of adults surviving to age 65 can expect to have severe LTSS needs before they die (closer to 70% if we include less severe LTSS needs)

Source: DYNASIM3
On average, formal LTSS use lasts about one year.
The average masks much variation

Distribution of years of LTSS use from age 65, severe needs (%)

Source: DYNASIM3
Expected present discounted value of formal LTSS costs ($2015) at age 65 (severe LTSS needs)

- **All**: $69,500
- **Men**: $47,400
- **Women**: $159,000
- **Entire Population**: $133,700
- **LTSS Users**: $90,300

Source: DYNASIM3
Lifetime costs vary widely over the full population

Distribution of PDV of formal LTSS costs ($2015) after age 65 (%)

Source: DYNASIM3
Those disabled for a long time account for a large share of total formal LTSS expenditures.

Distribution of formal LTSS expenses from age 65 by duration of severe disability (%)

Source: DYNASIM3
Most (but not all) LTSS expenses occur within two years

Share of Lifetime LTSS Expenditures at Age 65 in 2015-2019, by Point in Spell in Which They Were Incurred

Source: DYNASIM3
Outline

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• Simulation Results of Financing Options
Our Options Share Common Elements

- Cash benefit

- Daily benefit of $100 in 2015
  - increases 3% per year

- Enrollees with severe LTSS needs qualify for benefits
  - requires help with 2+ ADLs, or
  - have severe cognitive impairment

- Benefits may not begin before age 65

- No underwriting
Differences across Insurance Options

• When benefits begin and end
  • front-end: begins after 90 days, lasts 2 years
  • back-end: begins after 2 years, lasts lifetime
  • comprehensive: begins after 90 days, lasts lifetime

• Mandatory vs. voluntary

• Subsidized vs. unsubsidized versions of voluntary options
  • fully subsidize up to 150% of federal poverty level (FPL)
  • partial subsidy up to 200% of FPL
Nine Different Options

- Front-end benefit
  - voluntary, with subsidies
  - voluntary, without subsidies
  - mandatory

- Back-end benefit (catastrophic)
  - voluntary, with subsidies
  - voluntary, without subsidies
  - mandatory

- Comprehensive benefit
  - voluntary, with subsidies
  - voluntary, without subsidies
  - mandatory
Financing

- Payroll tax funds mandatory options
  - uncapped payroll tax levied on employees only
  - need 10 years of work to qualify for benefits
  - mandatory

- Enrollee premiums fund voluntary options
  - general tax revenues fund the subsidies
  - must pay premiums for 5 years to qualify for benefits

- We assume that administrative costs are 50% higher for voluntary programs
Mandatory Programs Could Be Financed in Many Other Ways

• Capped payroll tax
• Income tax
• Consumption/sales/excise tax
• Premiums
• Combine approaches to reduce size of each
  • i.e., payroll or consumption tax with premium
Milliman’s Modeling Role

Estimate participation mix and premium levels -> voluntary designs
Milliman’s Approach

1) Baseline pricing model
   ▪ “Recreate” insurance market premiums
   ▪ Industry data / research

2) Participation mix model
   ▪ LTSS needs
   ▪ Health and wealth characteristics

3) Estimate incremental impacts
Annual Premiums for Unsubsidized Voluntary Programs by Issue Age

Source: DYNASIM3
Payroll Tax Rate for Mandatory Programs

Source: DYNASIM3
Participation Rates
(Adults Born during 1976-80)

- Baseline (current law)
- Mandatory programs
- Front-end or back-end voluntary, with subsidy
- Comprehensive benefit voluntary with subsidy
- Front-end or back-end voluntary, no subsidy
- Comprehensive benefit voluntary without subsidy

Source: DYNASIM3
Participation Rates by Income
(Adults Born during 1976-80)

Baseline (current law)
Mandatory programs
Front-end or back-end voluntary, with subsidy
Comprehensive benefit voluntary, with subsidy
Front-end or back-end voluntary, no subsidy
Comprehensive benefit voluntary, without subsidy

Source: DYNASIM3
Annual Program Benefits Paid under Each Program, 2070
(billions of constant 2015 dollars)

Source: DYNASIM3
Percentage Decline in Out-of-Pocket and Aged LTSS Medicaid Expenditures Relative to Baseline, 2070

Source: DYNASIM3
Share of Program Spending that Would Offset Other Financing Sources or Fund New Services, 2070

Front-end benefit
- Voluntary with subsidy
- Voluntary without subsidy
- Mandatory

Back-end benefit
- Voluntary with subsidy
- Voluntary without subsidy
- Mandatory

Comprehensive benefit
- Voluntary with subsidy
- Voluntary without subsidy
- Mandatory

Source: DYNASIM3
Important Considerations in Program Design

- Understanding the policy objective
- Voluntary vs. mandatory
- Front-end benefit vs. back-end benefit
- Financing approach
- Availability of subsidies
- Phase-in of coverage
- Size of the daily benefit