



Modeling the Impact of LTSS Policy Changes

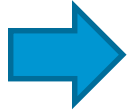
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December 17, 2015

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

Outcome	Data Source
Presence of problem that limits work	SIPP
Overall health status	Health and Retirement Study (HRS) matched to admin earnings records
Number of ADL/IADL limitations	HRS matched to earnings records
Number of chronic health conditions	HRS matched to earnings records
Cognitive status	HRS
Indicator that ADL meets HIPAA trigger	Medicare Current Beneficiary Survey

Key Data Sources: Use and Cost of LTSS

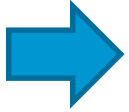
Outcome	Data Source
Use of home care, nursing home, residential care	HRS
Number of home care hours	HRS, National Health and Aging Trends Survey (NHATS)
Days of nursing home care	HRS, NHATS
LTSS prices, Medicaid	Various studies
LTSS prices, non-Medicaid	Genworth data

Key Data Sources: Payer Allocation of LTSS Costs

Outcome	Data Source
Private LTC insurance purchase	HRS
Private LTC insurance: Plan features	AALTCI and private industry
Allocation of costs to payers	MCBS, plus Medicaid and private plan rules
VA nursing home	MCBS

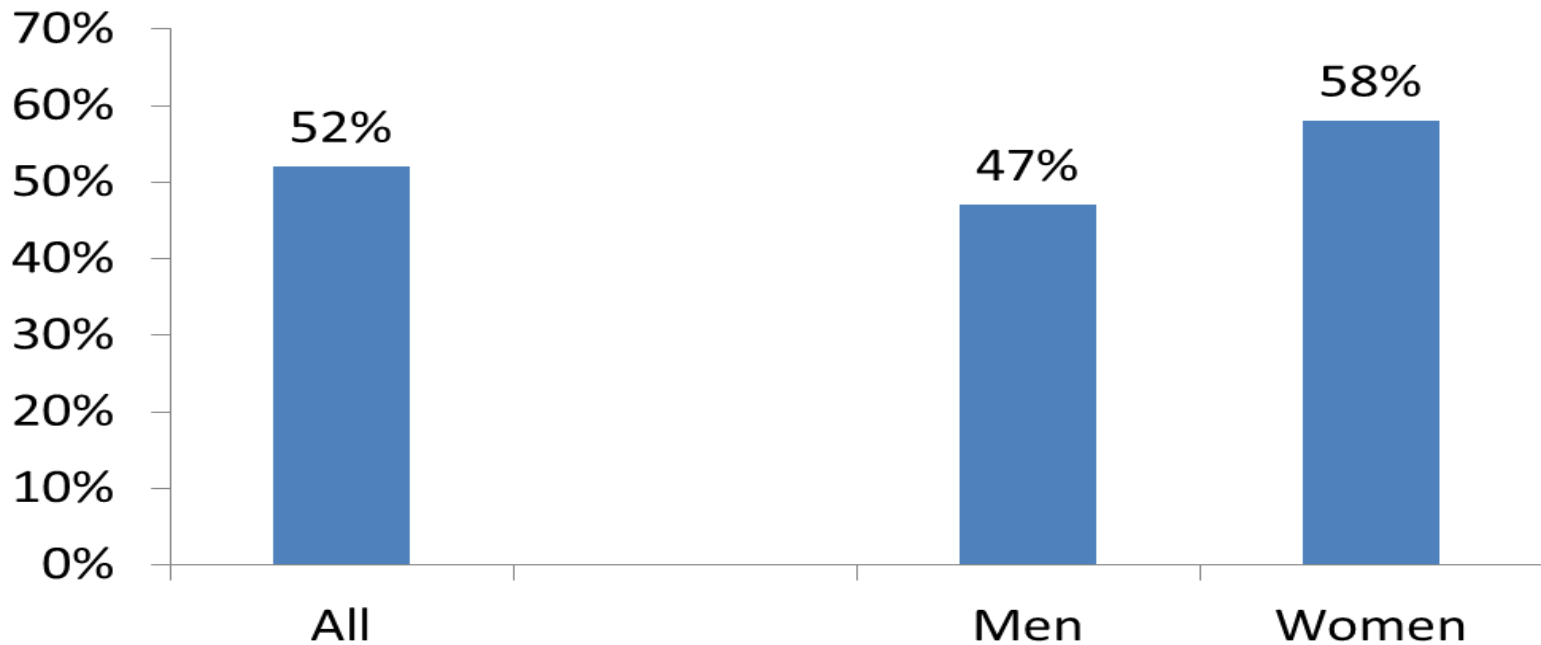
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About half of adults surviving to age 65 can expect to have severe LTSS needs before they die (closer to 70% if we include less severe LTSS needs)

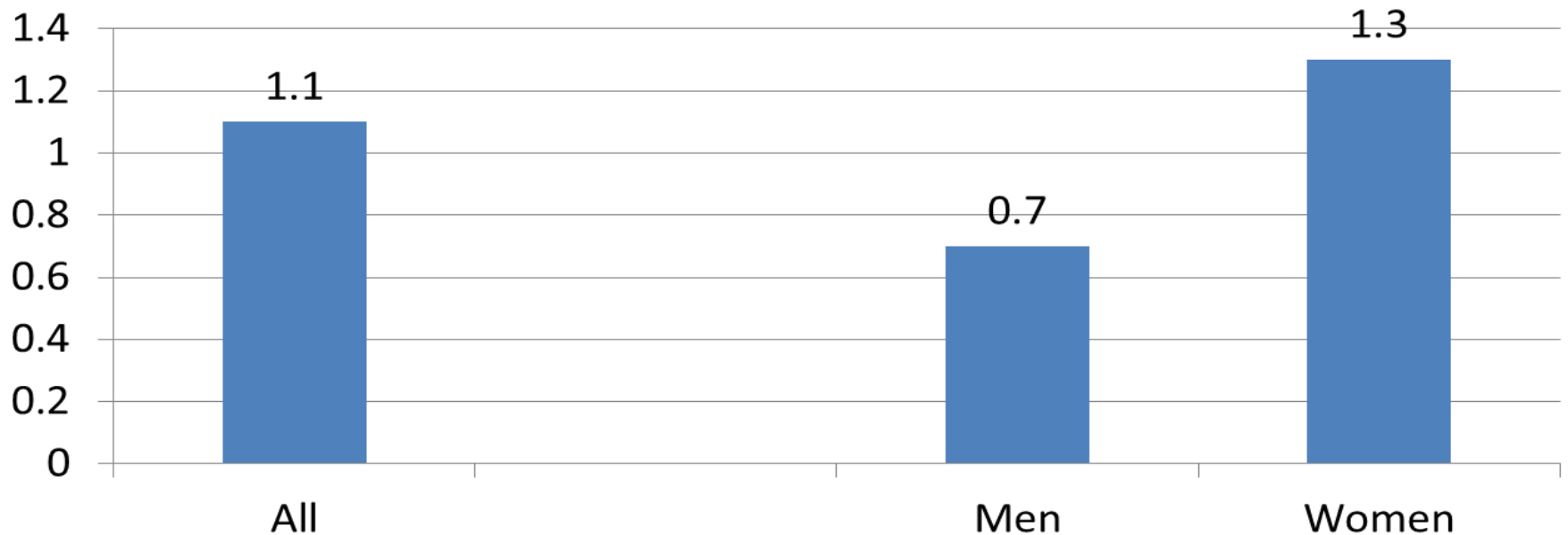
Percent with severe LTSS needs from age 65



Source: DYNASIM3

On average, formal LTSS use lasts about one year

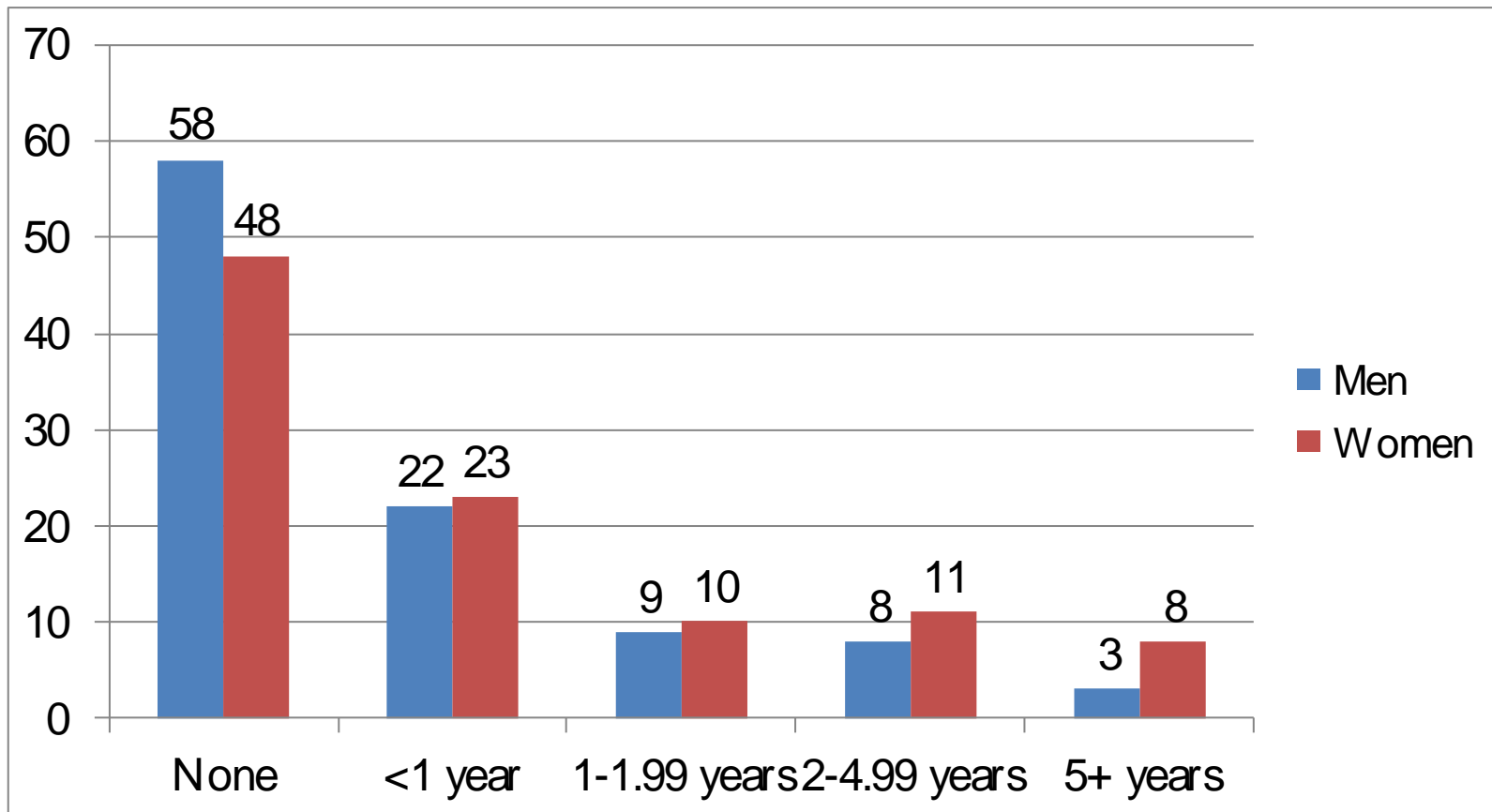
Average years of LTSS use with severe needs from age 65



Source: DYNASIM3

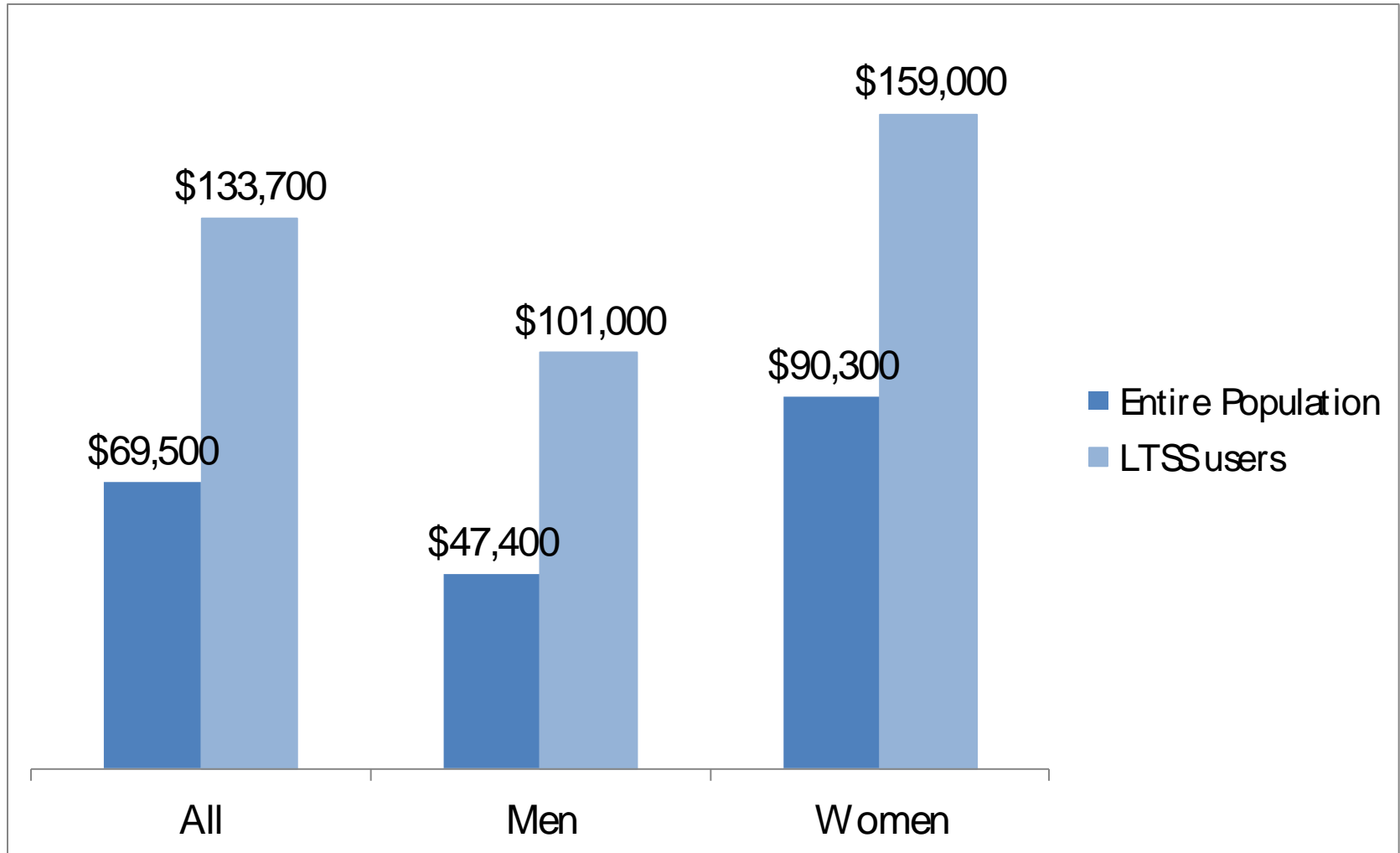
The average masks much variation

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



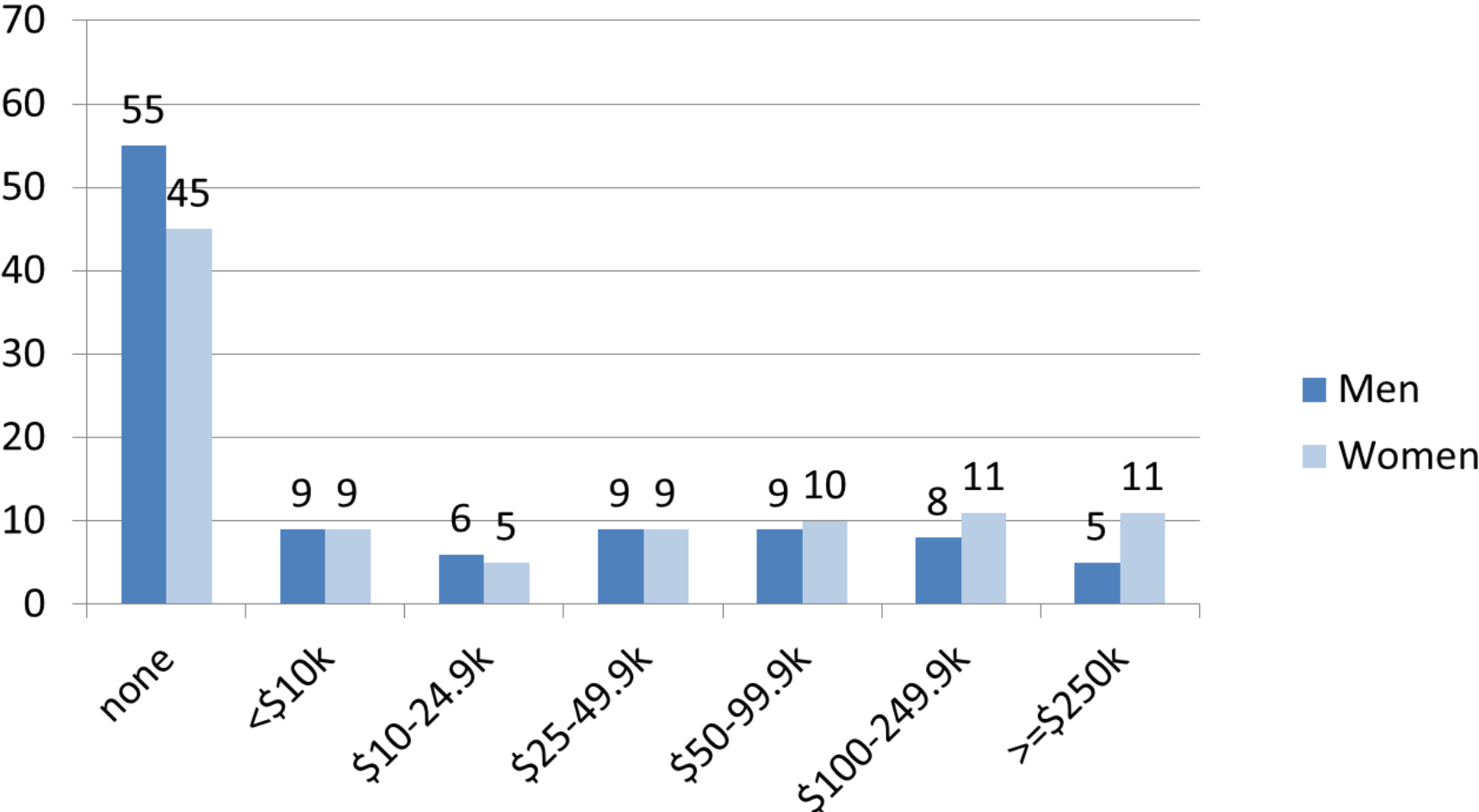
Source: DYNASIM3

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



Lifetime costs vary widely over the full population

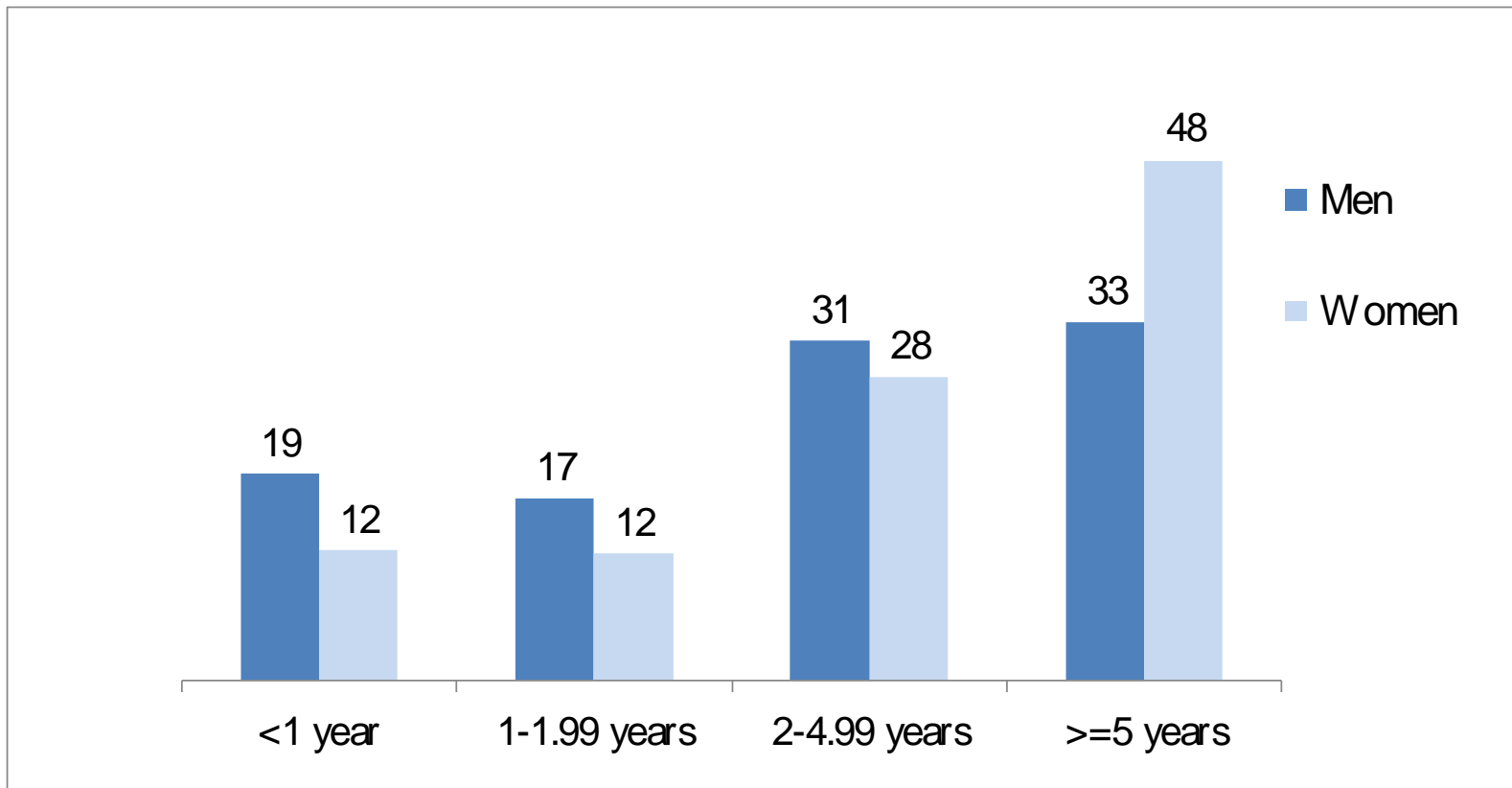
Distribution of PDV of formal LTSS costs (\$2015) after age 65 (%)



Source: DYNASIM3

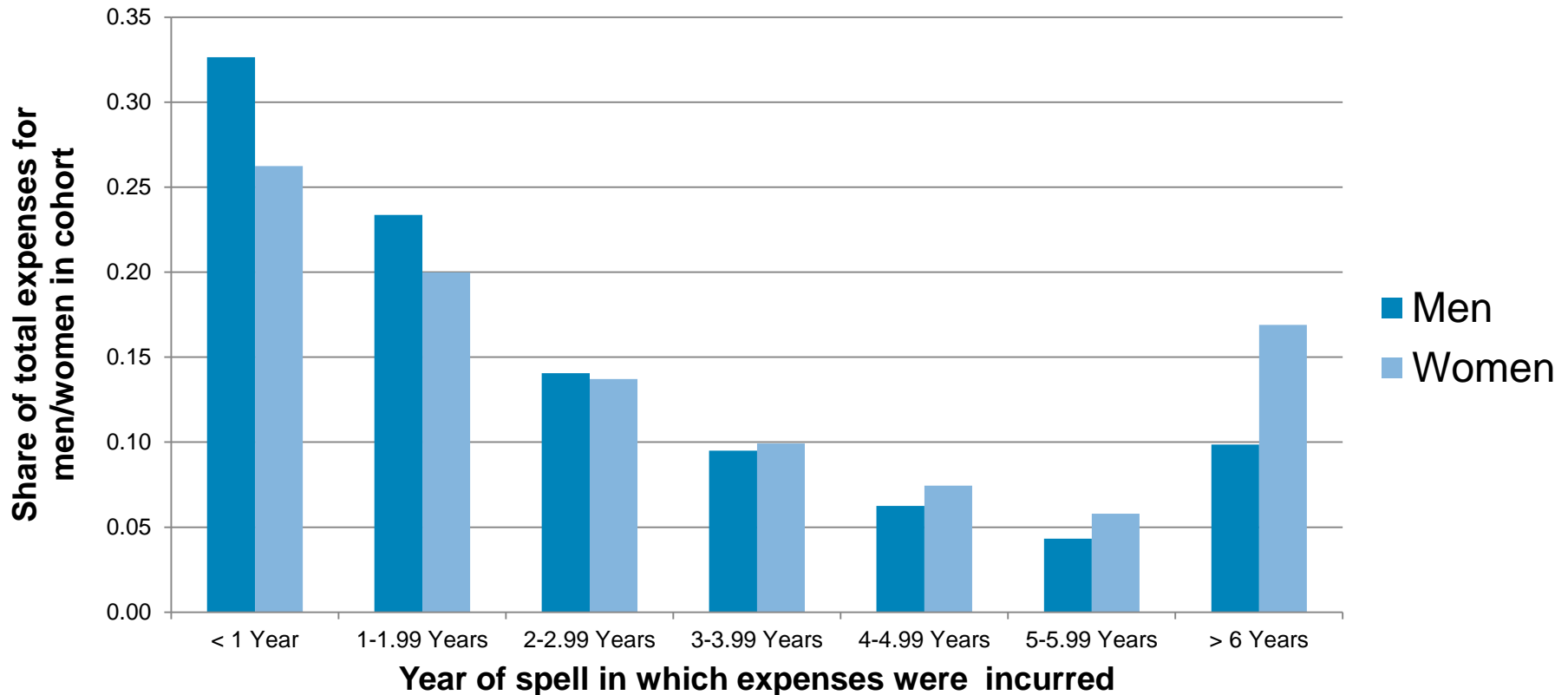
Those disabled for a long time account for a large share of total formal LTSS expenditures

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




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



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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

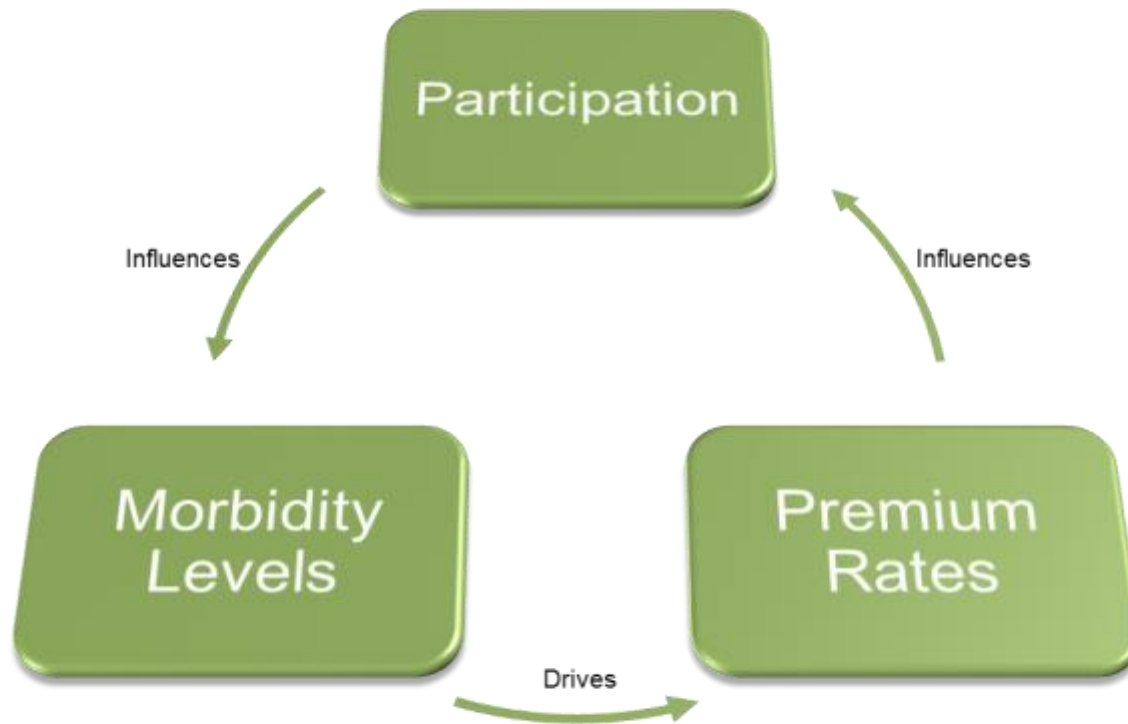
- Payroll tax funds mandatory options
 - uncapped payroll tax levied on employees only
 - need 10 years of work to qualify for benefits
 - mandatory
- Enrollee premiums fund voluntary options
 - general tax revenues fund the subsidies
 - must pay premiums for 5 years to qualify for benefits
- We assume 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

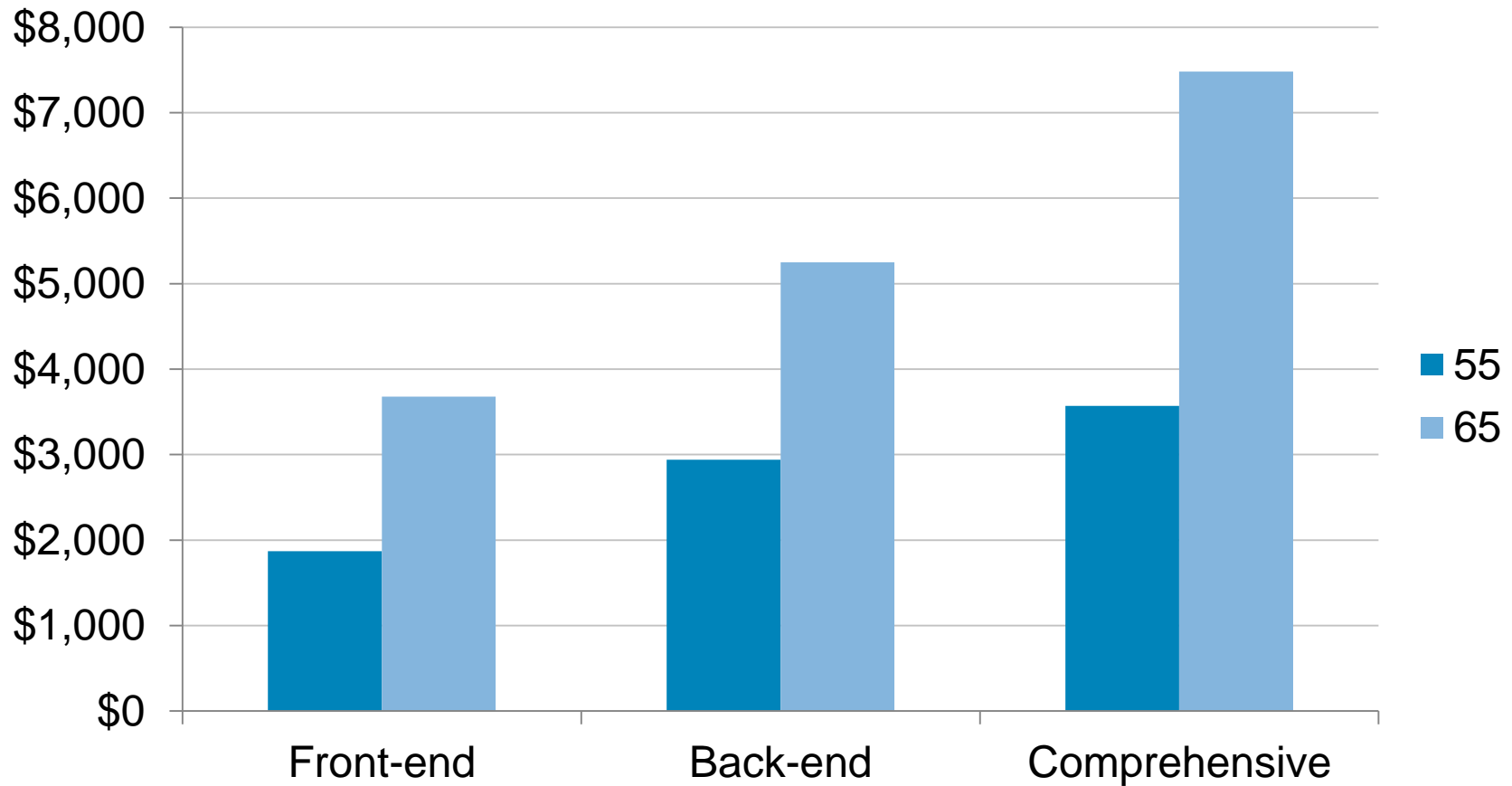
Estimate participation mix and premium levels -> voluntary designs



Milliman's Approach

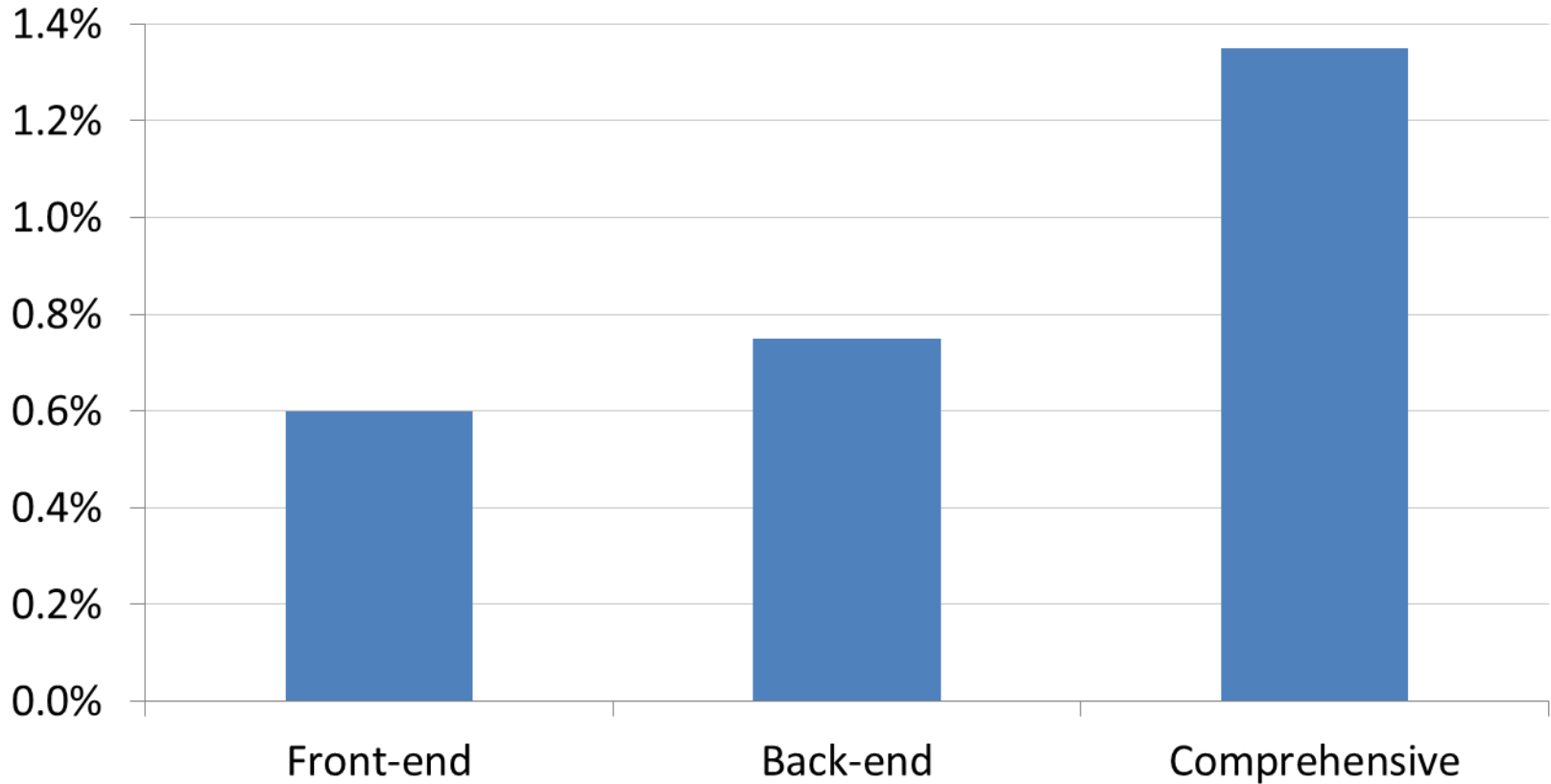
- 1) Baseline pricing model
 - “Recreate” insurance market premiums
 - Industry data / research
- 2) Participation mix model
 - LTSS needs
 - Health and wealth characteristics
- 3) Estimate incremental impacts

Annual Premiums for Unsubsidized Voluntary Programs by Issue Age



Source: DYNASIM3

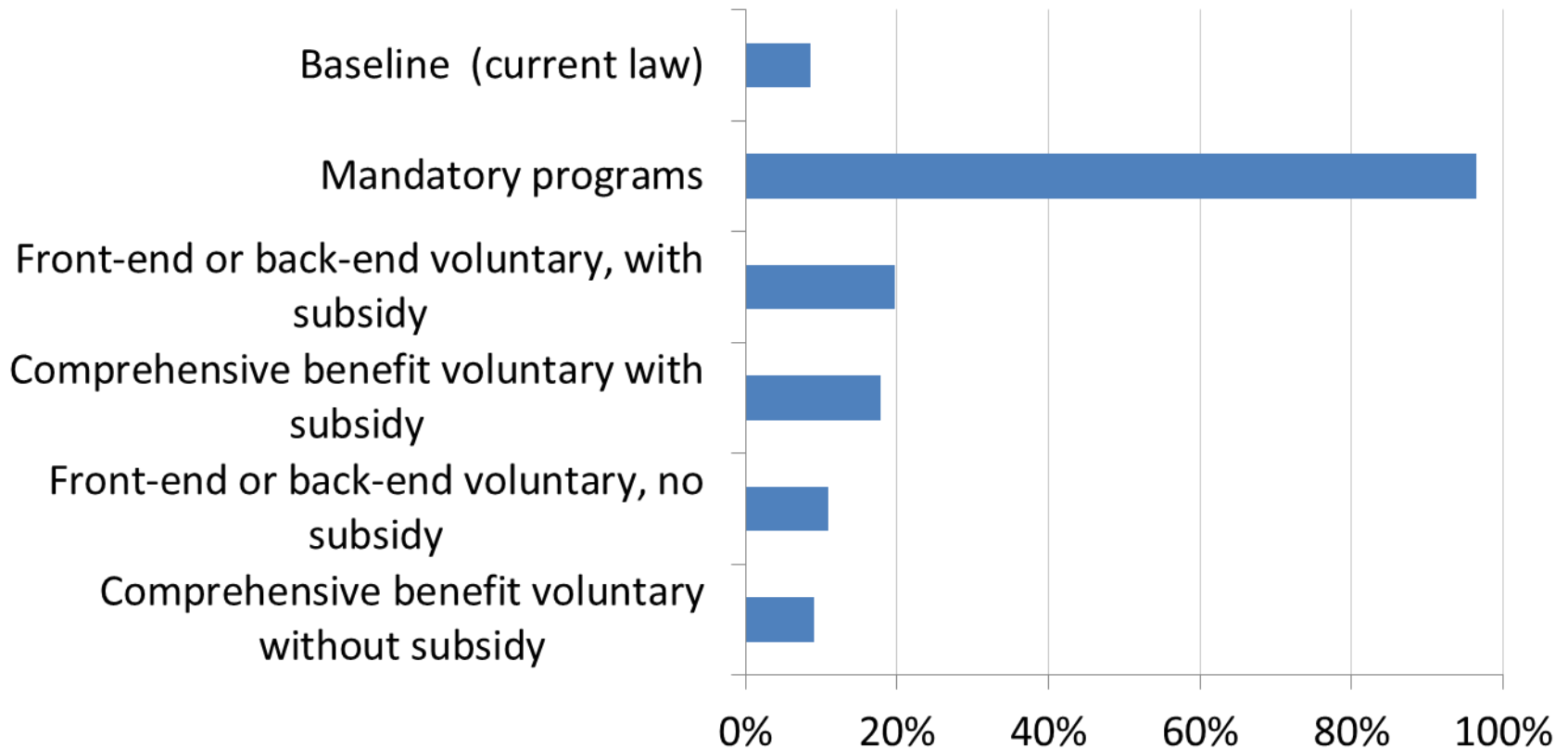
Payroll Tax Rate for Mandatory Programs



Source: DYNASIM3

Participation Rates

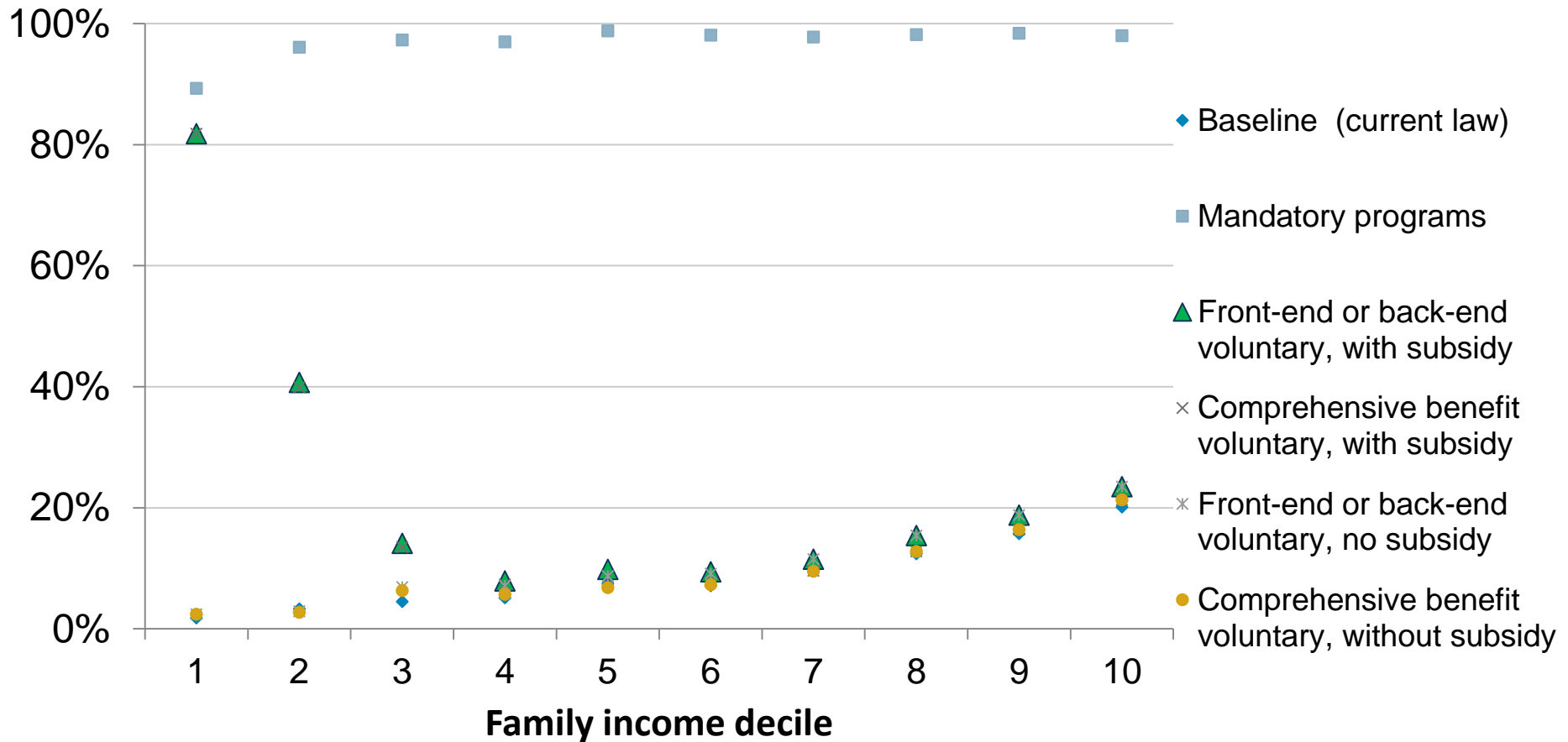
(Adults Born during 1976-80)



Source: DYNASIM3

Participation Rates by Income

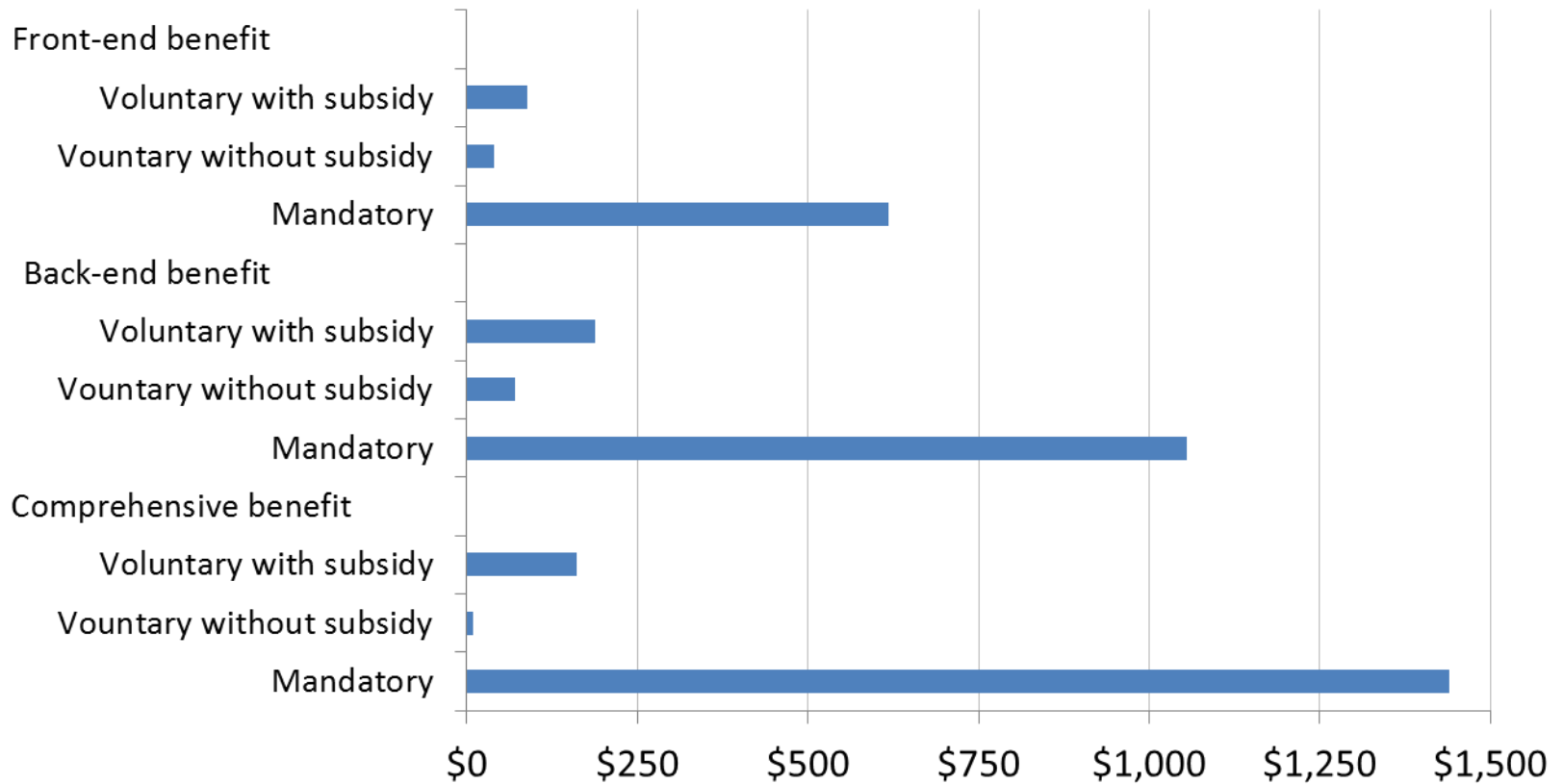
(Adults Born during 1976-80)



Source: DYNASIM3

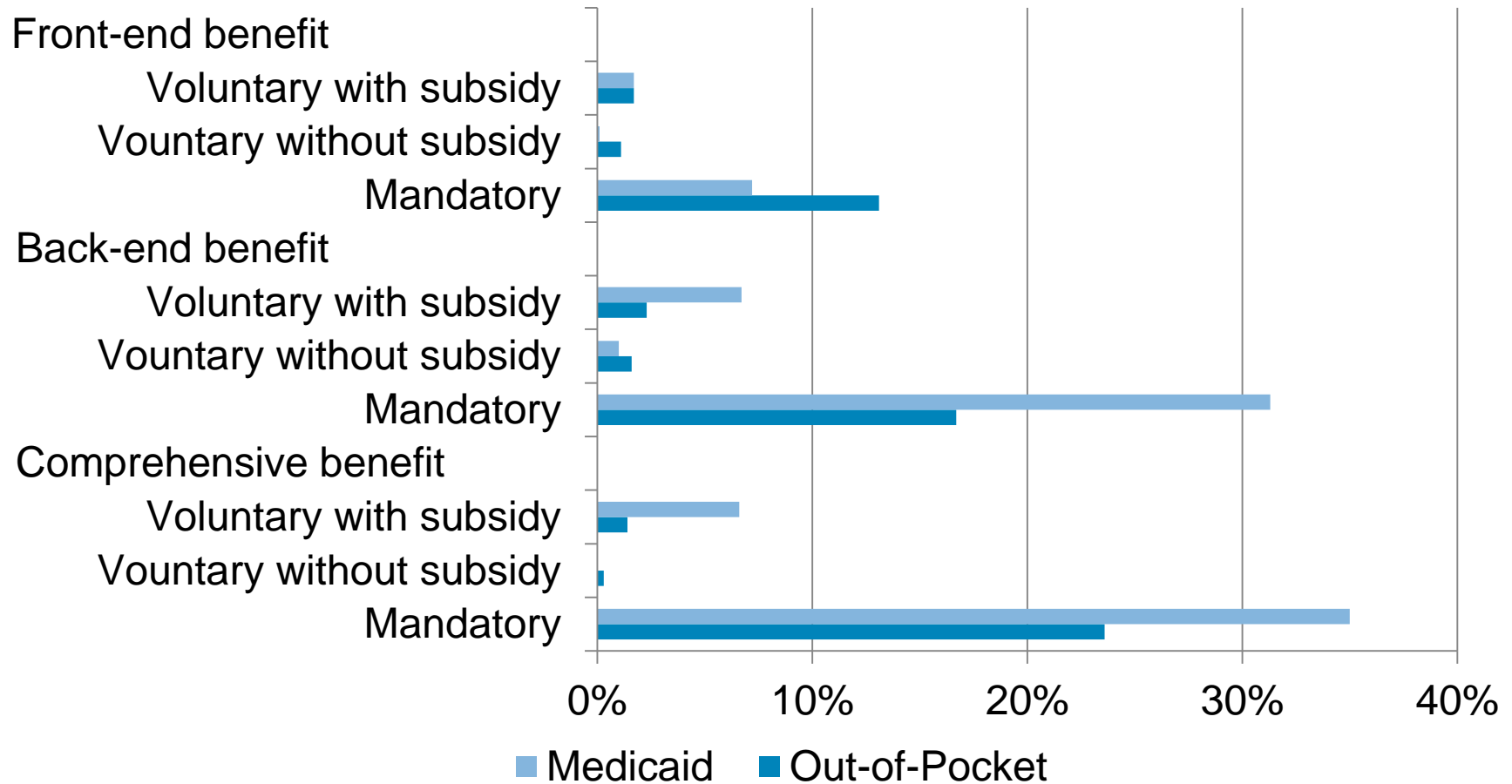
Annual Program Benefits Paid under Each Program, 2070

(billions of constant 2015 dollars)



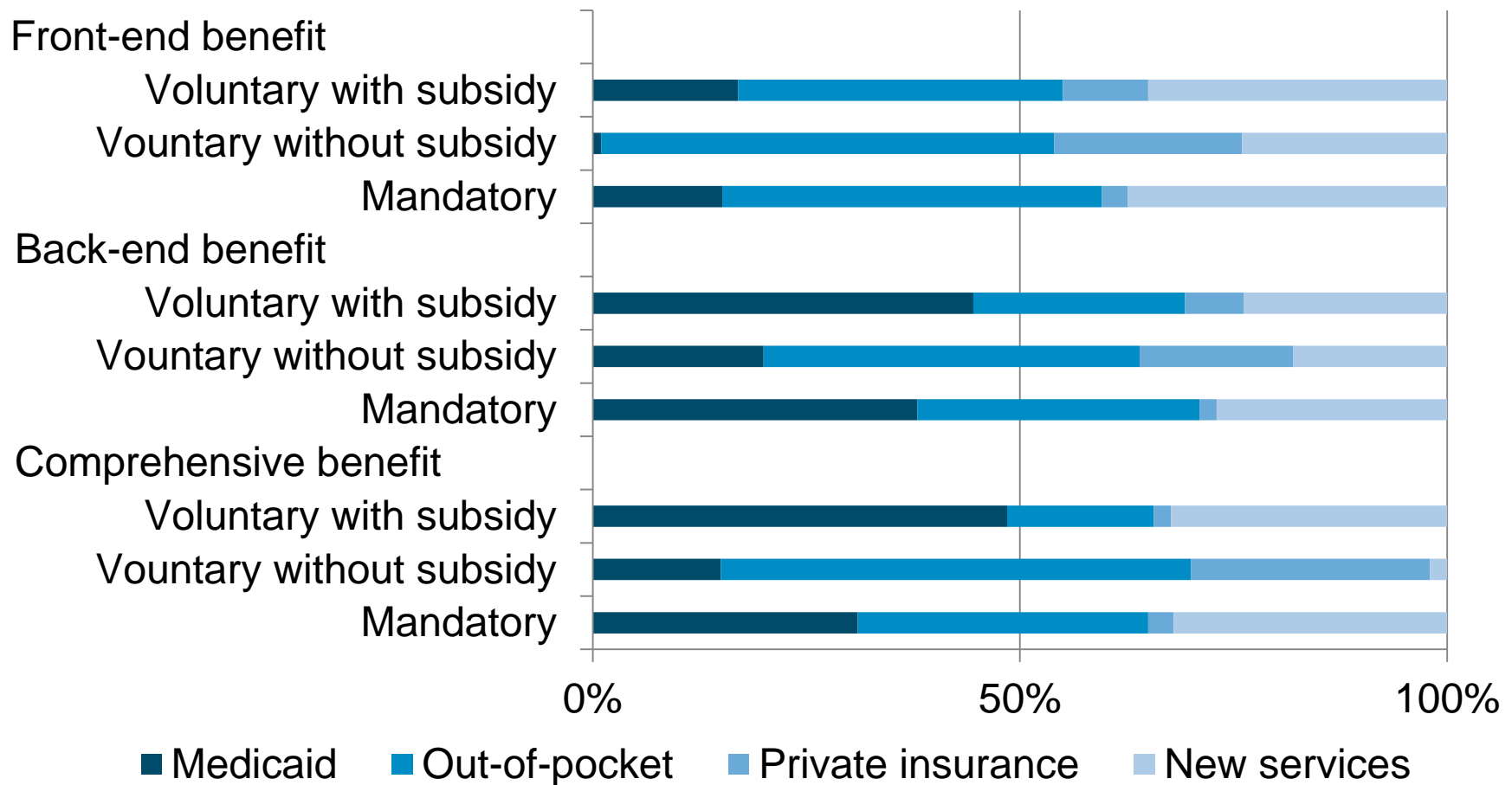
Source: DYNASIM3

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



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