A REPORT ON THE ACTUARIAL, MARKETING, AND LEGAL ANALYSES OF THE CLASS PROGRAM

APPENDIX N:

SEPTEMBER 22, 2010 TECHNICAL EXPERTS MEETING

Na: AGENDA, LIST OF PARTICIPANTS, AND SPEAKER BIOS

Nb: PRESENTATION ENTITLED "ACTUARIAL RESEARCH CORPORATION'S LONG TERM CARE INSURANCE MODEL"

Nc: PRESENTATION ENTITLED "THE LONG-TERM CARE POLICY SIMULATOR MODEL

Nd: PRESENTATION ENTITLED "COMMENTS ON 'THE LONG-TERM CARE POLICY SIMULATOR MODEL'"

APPENDIX Na:

AGENDA, LIST OF PARTICIPANTS, AND SPEAKER BIOS

CLASS Act Models Meeting
Agenda

September 22, 2010
9:00 am – 12:00 pm

Hubert H. Humphrey Building, Room 505A
200 Independence Avenue, SW
Washington, DC 20201

Contact: Marie Belt or Goldwyn Smith at 202 690 6443

9:00 – 9:15: Welcome and Introductions
- **Richard Frank, PhD:** Deputy Assistant Secretary for Disability, Aging and Long-Term Care Policy, HHS

9:15 – 9:45: Actuarial Research Corporation (ARC) CLASS Model
- **John Wilkin**: Senior Actuary, Actuarial Research Corporation

9:45 – 10:00: Review of the ARC CLASS Model
- **Steve Goss**: Chief Actuary, Social Security Administration

10:00 – 10:15: Questions and Comments on the ARC CLASS Model

10:15 – 10:45: Avalere Long-Term Care Policy Simulator (LTC-PS)
- **Anne Tumlinson**, Senior Vice President, Avalere Health
- **Eric Hammelman**, Director, Avalere Health

10:45 – 11:00 – Review of the Avalere LTC-PS

- **Richard Johnson**: Senior Fellow and Director, Program on Retirement Policy, Urban Institute

11:00 – 11:15: Questions and Comments on the Avalere LTC-PS

11:15 – 12:00: Structured Discussion
- **Do the models incorporate realistic assumptions related to incidence/continuance of functional limitations and trends in disability? Are the assumptions related to the prevalence and trends in cognitive impairment reasonable?**
- **Are there alternative approaches to modeling the relationship between CLASS participation and premiums?**
- **Is potential adverse selection adequately incorporated into the models?**

12:00: Adjourn

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Speaker Bios

STEPHEN C. GOSS
Chief Actuary, Social Security Administration

Steve Goss is currently Chief Actuary at the Social Security Administration. Mr. Goss joined the Office of the Chief Actuary in 1973 after graduating from the University of Virginia with a Masters Degree in Mathematics. He graduated from the University of Pennsylvania in 1971 with a Bachelors degree in mathematics and economics. He has worked in areas related to health insurance as well as pension, disability, and survivor protection. Mr. Goss has written articles and actuarial studies on several topics and has made presentations and participated in panel discussions at numerous conferences. He has worked closely with members of the executive branch, members of Congress and their staff, and numerous commissions, as well as with private organizations. Mr. Goss is a member of the Society of Actuaries, the American Academy of Actuaries, the National Academy of Social Insurance, the Social Insurance Committee of the American Academy of Actuaries, and the Social Security Retirement and Disability Income Committee of the Society of Actuaries.

ERIC HAMMELMAN
Avalere Health

Eric Hammelman, Director, provides data-driven analysis of the impact of various legislative and policy changes on the healthcare industry, with a specific focus on reimbursement for providers. Prior to joining Avalere, Eric was an Associate Analyst with J.P.Morgan, where he analyzed healthcare service companies and provided investment advice to institutional investors. He built financial and industry models for hospitals, nursing homes, dialysis, hospice, ambulatory surgery centers, clinical labs, inpatient rehab, long-term acute care, and physician groups. He also analyzed payment policies for each of these areas, including Medicare, Medicaid, and private payers.

Eric has a Bachelors of Music Performance from the University of Illinois at Urbana-Champaign. He also earned an M.B.A. from the Marshall School of Business (University of Southern California), as well as a Masters of Music Performance from the Mannes College of Music in New York, N.Y. Eric has passed all three levels of the CFA exam.

RICHARD JOHNSON
URBAN INSTITUTE

Richard W. Johnson, is a senior fellow at the Urban Institute, where he directs the Program on Retirement Policy. An economist specializing in health and income security at older ages, he has written extensively about the availability and cost of health insurance in later life, particularly retiree health benefits, and has projected health care cost burdens for future generations of retirees. His long-term care research includes studies of family care's impact on nursing home admissions, decisions to purchase private long-term care insurance, and the effects of demographic change on the future demand for paid care services. He has testified before Congress about the family costs of elder care and about gaps in health insurance coverage among older adults who have not yet qualified for Medicare. Dr. Johnson is also an expert on older Americans' employment and retirement decisions. He received an A.B. from Princeton University and a Ph.D. from the University of Pennsylvania, both in economics.

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Speaker Bios

ANNE TUMLINSON
Avalere Health

Anne Tumlinson, Senior Vice President, leads projects and advises clients on a variety of post-acute and long-term care issues. These issues include private financing of long-term care, expansion of home- and community-based care, unification of the Medicare post-acute care benefit, integration of acute and long-term care, and reform of the U.S. long-term care system. Anne established the Post-Acute and Long-Term Care Practice at Avalere and, for several years, directed the firm's post-acute and long-term care portfolio of engagements with government, foundation, and commercial clients.

Prior to Avalere, Anne led Medicaid and long-term care policy for the federal Office of Management and Budget (OMB). Before joining OMB, Anne conducted health services research as a Senior Research Associate for LifePlans, Inc., and before that served as a legislative assistant on health and long-term care policy in the office of Rep. John Lewis (D-GA).

Anne holds a B.A. in Psychology from Furman University in Greenville, S.C., and a M.M.H.S. from the Heller School at Brandeis University.

JOHN WILKIN
Actuarial Research Corporation

John Wilkin has been with Actuarial Research Corporation since 1987 and he has been involved in long-term care insurance ever since. During the late 1980s and the 1990s, Mr. Wilkin worked with several insurance companies on designing, pricing, and reserving their long-term care insurance products. He also was an active member in several professional organizations concerned with the development of long-term care insurance, including the Society of Actuaries (SOA) Long-Term Care Section Council, the SOA Long-Term Care Experience Committee, the SOA Long-Term Care Valuation Committee, and the NAIC Ad Hoc Actuarial Group. Through the Experience Committee, his actuarial analysis of utilization rates from the 1985 National Long Term Care Survey was published in the Transactions, Reports 1988-89-90, through the Long-Term Care Valuation Committee he contributed to the Transactions XLVII article Long-Term Care Valuation Insurance Methods, and through the NAIC Ad Hoc Group he worked with a team of actuaries in the preparation of three reports to the NAIC on inflation protection and non-forfeiture benefits in long-term care insurance. Mr. Wilkin is responsible for the development of the ARC Long Term Care Pricing and Reserving Model, which was used by the U.S. Federal Office of Personnel Management (OPM) to help in the review of offerors of long-term care insurance to federal employees. Since 2000, Mr. Wilkin has done several studies on LTC insurance as well as served as an expert witness in class-action law suits involving the pricing of LTC insurance policies. Examples of the studies include one on claims experience by diagnosis at underwriting and another on the effect of lapse experience on coverage at time of claim. Mr. Wilkin is a Fellow of the Society of Actuaries and has a B.A. degree from The Johns Hopkins University.

APPENDIX Nb:

PRESENTATION ENTITLED
"ACTUARIAL RESEARCH CORPORATION'S
LONG TERM CARE INSURANCE MODEL"

Actuarial Research Corporation's Long Term Care Insurance Model

September 22, 2010

1

Actuarial Basis For Premium Formula

► For each issue age, projections of benefits, expenses, and premium income are made until age 100 (presumed to be the end of life for all individuals in the cohort).

► The Premium for each issue age is set so that the present value of benefits and expenses is equal to the present value of premium income.

2

Caveats

► No one can foresee how this program will operate, therefore premiums cannot be guaranteed to be adequate.
  - Unknowns include level of participation, level of antiselection, and the effectiveness of regulations and procedures to determine "actively at work," qualifications for benefits, and the effect of providing advocacy services

► Opinions on the reasonableness of the assumptions used to calculate premiums can be made.

► Premiums are indeterminate under variable indexing provisions.

3

Assumptions

► There will be no subsidy across years of issue or age at issue, as is typical of social insurance.

► There is a subsidy for low-income individuals.

► Premiums are based on a set of assumptions:
  - Interest Rates
  - Mortality Rates
  - Lapse Rates
  - Expense Levels
  - Utilization Rates

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Source for Assumptions

► Interest rates and mortality rates are taken from the 2010 OASDI Trustees Reports
► Lapse Rates are assumed to be zero.
► Premium load for expenses is assumed to be 3%.
► Utilization from survey data with several adjustments.

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Utilization Assumptions: Data Sources

► For nursing home prevalence rates, incidence rates, average length of stay, and continuance table: 1985 and 1999 National Nursing Home Surveys.
► For home care ages 65 and over prevalence rates, incidence rates, average length of episode, and continuance table: 1982-1999 National Long-Term Care Surveys as analyzed by Eric Stallard and Bob Yee.
► For home care ages under 65 prevalence rates from the 2009 National Health Interview Survey. Average length of episode is extrapolated from the over 65. Continuance table is from the over 65. Incidence rates are derived from the formula:
  ▪ PR = IR * ALOS, which is equivalent to IR = PR / ALOS

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Utilization Assumptions: Adjustments

- Utilization data are tabulated by age, gender, and ADL level
- Utilization of the under 65 are also tabulated by income level (our model has not yet incorporated all of these data)
- We assume that 25% of those with one ADL less than the requirement will receive benefits
- We calculate the number of new beneficiaries in the first year of benefit payments (2017) by using prevalence rates rather than incidence rates

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Utilization Assumptions: Selection and Antiselection

▶ Selection: Provisions that result in participants being healthier than average (average is based on survey data for the whole population)
- The 3-year work requirement
- HIS data shows that ADL level of those that work (even at the rate of $1) have significantly lower utilization than the total population

▶ Antiselection: Those in need of services are the most likely to participate in an unsubsidized / voluntary program.

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Utilization Assumptions: Selection

► Selection Factor: incidence rates in the last year of required work = 60% of ultimate
  ▪ Work is required for 3 out of the 5-year vesting period
► Selection wears off over 10-year period

Utilization Assumptions: Antiselection

► Antiselection Factor (AF): A function of the participation rates and prevalence rates and assumed to reach ultimate value of 110% over 20-year period.
► Different factor at each age and sex

Utilization Assumptions: Antiselection - Examples

► Example 1: participation & prevalence rates=1%
  ▪ AF = 1/.01 = 100 (perfect antiselection)
  ▪ AF = 100^0.7 = 25.12 (imperfect antiselection)
  ▪ AF(5) = 11.49 (interpolated value at duration 5)
► Example 2: participation=2%, prevalence=1%
  ▪ AF = 1/.02 = 50 (perfect antiselection)
  ▪ AF = 50^0.7 = 15.46 (imperfect antiselection)
  ▪ AF(5) = 8.82 (interpolated value at duration 5)

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Policy Options That Can Be Modeled

► Earnings requirement
  ▪ Years of work required (3)
  ▪ Level for participation (quarter of coverage = $1,090 in 2009)
  ▪ Level for subsidy (poverty line = $10,830 in 2009)
► Benefit trigger (ADL requirement)
► Dollars per day of benefit including indexing options
► Indexing of premium
► Waiver of premium while in claim status
  ▪ While in nursing home
  ▪ And / or while in home care
► Deductible period
► Lifetime maximum

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Premium Sensitivity

► Final set of assumptions for calculating premiums have not yet been determined.

► Premiums are very sensitive to some assumptions:
  ▪ Subsidy
  ▪ Participation rates
  ▪ Income requirements

► Premiums also can be sensitive to waiver of premium and indexing.

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Premium Sensitivity to Low Income Subsidy

► Data on workers by earnings levels for 2009 Current Population Survey.

► Roughly 28 million workers above QOC ($1,090) and below poverty ($10,830) in 2009 dollars.

► Roughly 130 million above poverty.

► Premiums for unsubsidized group is affected more by the dependency ratio than by utilization.

Low Income PR	High Income PR	Dependency Ratio (Total / Unsubsidized)
10%	1%	3.2
10%	6%	1.4
20%	1%	5.3
20%	6%	1.7

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Premium Sensitivity to Participation Rates

► Participation rates affect the level of antiselection assumed in the model, and thus the level of the premiums.
► The level of the premiums affects the level of antiselection.
  ▪ Once premium levels go above private insurance alternatives, participation drops and antiselection increases.
► We use participation rates that vary by age and gender according to the patterns from the Federal and California LTC programs.

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Premium Sensitivity to Income Requirements

► Model determines selection effect from NHIS data that shows ADL levels crossed with income levels.
► Model varies selection factor by level of earnings requirement and by years of work requirement.
► Selection effect stays in place until work requirement stops.
► Utilization rates decline as income requirement increases.

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Premium Sensitivity to Waiver of Premium

- ► Waiver of premium is also affected by the dependency ratio (beneficiaries divided by premium payers).
- ► If beneficiaries do not pay premiums, then the burden on premium payers increases.
- ► This provision interacts with the level of antiselection to destabilize premiums.
- ► Example: ratio of beneficiaries to premium payers when beneficiaries are 10% and 50%:
  - 10% / 90% = 11% vs 50% / 50% = 100%
- ► Note: Ceiling on premium with waiver of premium = infinity. Ceiling on premium with no waiver of premium = $1500 (=$50/day for 30 days).

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Premium Sensitivity to Indexation of Premium

- ► If benefits are indexed to inflation and premiums are level, premiums are highly sensitive to the actual level of inflation
  - Example: The difference between 2.8% inflation and 5.6% inflation could more than double premiums at younger ages and increase them by 50% at older ages.
- ► Indexing premiums at the same rate as benefits greatly reduces the sensitivity, but does not eliminate it.
  - Example: The difference between 2.8% inflation and 5.6% inflation could increase premiums at younger ages by 25% and increase them at older ages by 15%.

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Summary of Premium Sensitivity to Selected Parameters

Parameter	Premium SENSITIVITY to an Increase in parameter
Low-Income Subsidy	+ + + + +
Participation Rates (much more sensitive at low participation rates)	- - -
Income Requirement (while reducing low income group and sheltered workshop workers)	- - - - -
Income Requirement (while above low income group and sheltered workshop wage levels)	-
Waiver of Premium (while in nursing home)	+
Waiver of Premium (while in home care, but effect compounds with antiselection)	+ + +
Indexing of Premium	- - - -
Lapse	- - -

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APPENDIX Nc:

PRESENTATION ENTITLED
"THE LONG-TERM CARE POLICY SIMULATOR MODEL"

The Long-Term Care Policy Simulator Model

September 22, 2010

Avalere Health LLC

Presentation Purpose and Agenda

- The purpose of this presentation is to describe an approach for estimating the premiums for a voluntary, public long-term care insurance program.

- Agenda

  » Provide brief project background

  » Summarize overall modeling approach

  » Highlight key issues/challenges

    – Adverse selection

    – Enrollment rates

    – Benefit qualification

  » Questions/Discussion

Description of the Long-Term Care Policy Simulator (LTC-PS)

Purpose
- In 2009, before health reform, The SCAN Foundation funded construction of a model that would estimate average premiums for four different long-term care public insurance reform approaches

Proposals to Model
- Mandatory or voluntary social insurance programs
- Either a cash benefit or services benefit
- Note: None of the proposals would allow underwriting other than age. Users could elect to require attachment to the workforce

Basic Overview
- The LTC-PS is an Excel-based spreadsheet model
- It has an inputs page that allows users to vary the key policy options
- The model then calculates the premiums necessary to have an actuarially-balanced program over 75 years

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LTC-PS Input Options

Choice	Benefit Description		Population Covered	Minimum Premium Payment Period	Length Of Benefit	Elimination Period	Cross Subsidies To Low-income Individuals [1]	Program Costs Funded Through Premiums [2]
Mandatory	Cash Benefit	$50 / day	Workers and Their Spouses May Participate	Zero Years	Lifetime	Zero Days	150% of the Federal Poverty Level	100%
		$75 / day			5 Years			75%
		$100 / day			4 Years	90 Days	100% of the Federal Poverty Level	
Voluntary	Services Benefit	No Cost Sharing	All Over Age 18 May Participate [3]	5 Years	3 Years			
		$500 Deductible, 20% Copayment			1 Year		No cross subsidy	50%

Options shaded in yellow are the closest to CLASS legislative specifications but there are a number of key CLASS inputs that were not included in this model

[1] Low income individuals pay no premium. All others pay additional premiums to compensate
[2] General revenues used to subsidize premiums in the 75% and 50% options
[3] Excludes people who are initially disabled and not working

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Key Differences between the LTC-PS and the CLASS Act

- CLASS prohibits non-working spouses from enrolling, but LTC-PS does not

- CLASS has a minimum income and work requirement, but LTC-PS simulates that anyone at work regardless of income could enroll

- CLASS applies the work and income requirement to low-income individuals, but LTC-PS simulates full participation by anyone below the subsidy threshold

- CLASS has a variable ADL trigger for payment of benefits, but the LTC-PS simulates a trigger of slightly below 2 ADLs

- CLASS has a minimal $5 premium for students and low-income individuals, but the LTC-PS has a $0 premium for low-income individuals and excludes students

- CLASS-Medicaid dual beneficiaries retain some of their CLASS payout[1], but LTC-PS simulates entire payout going to Medicaid

- CLASS has level premiums once a person enrolls, but LTC-PS uses inflation-adjusted premiums for all enrollees

- CLASS has the ability to require payment of premiums by enrollees receiving benefits, but LTC-PS simulates enrollees will either be paying premiums or receiving benefits, not both

[1] Public Health Service Act, §3205(c)(1)(D)(i) and (ii) specify that institutional and certain HCBS Medicaid beneficiaries retain 5 percent and 50 percent of their CLASS payouts.

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Model Overview

Model Description

- We use an incidence and continuance model
    - Track enrollees by age
    - Model incidence and continuance of disability to determine when a person becomes disabled and how long he or she remains disabled

Data Sources

- Point-in-time surveys for prevalence of disability in the community (Survey of Income and Program Participation, American Community Survey, Current Population Survey) and in nursing homes (National Nursing Home Survey)

- Longitudinal survey for continuance rates among elderly aged 65+ (National Long Term Care Survey) and actuarial data for continuance rates among disabled aged 18 to 65

- Data Issues:
    - No national, longitudinal data for disability across age spectrum
    - Aggregation of data from multiple surveys
    - No single accepted method to estimate adverse selection

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Model Overview
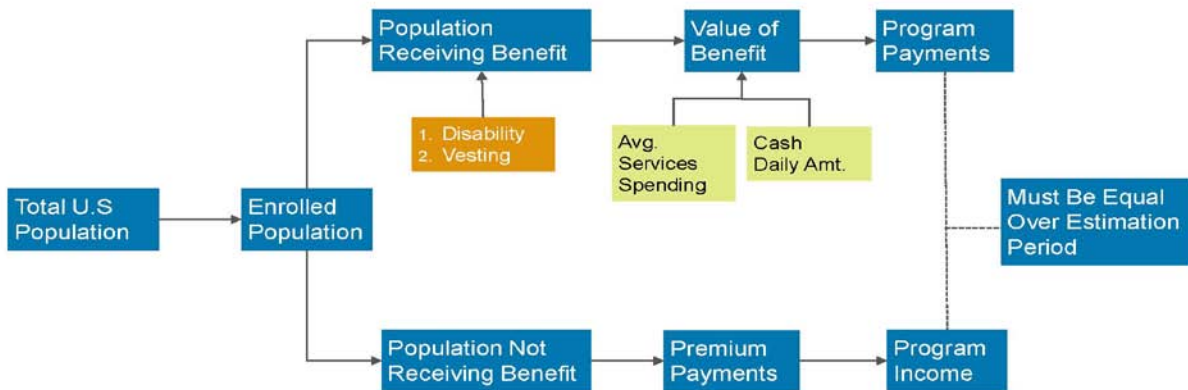
Modeling Enrollment: Population and Program Eligibility

- We use Social Security estimates of the total population by age through 2085.
- Eligibility can be extended to:
  - » **All workers:** we estimate attachment to workforce from American Community Survey.
  - » **All over age 18:** we exclude people currently disabled unless they are currently working (regardless of reported income).
    - – We estimate 5 to 7 percent of people with 2+ ADL disabilities in the community setting are currently working (approximately 400,000 people).

Modeling Enrollment: Participation

- We modeled participation using a points system:
  - » We constructed a points system based on plausible upper and lower bounds for participation.
  - » Options that **reduce cost**, like adding a deductible or elimination period, or reducing benefit amount or length, **increase participation**
  - » Typical enrollment rates for CLASS-like program: 12 to 18 percent
  - » We age-adjust participation rates
    - – Participation at age 50 is same as overall estimate
    - – Participation increases at a 2 percent growth rate for individuals aged over 50
    - – Participation decreases at a 1 percent growth rate for individuals aged under 50

We plan on refining the participation methodology for ASPE using assumptions about employer adoption and demand elasticity

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Participation by Age*

* Assumes 10 percent average enrollment

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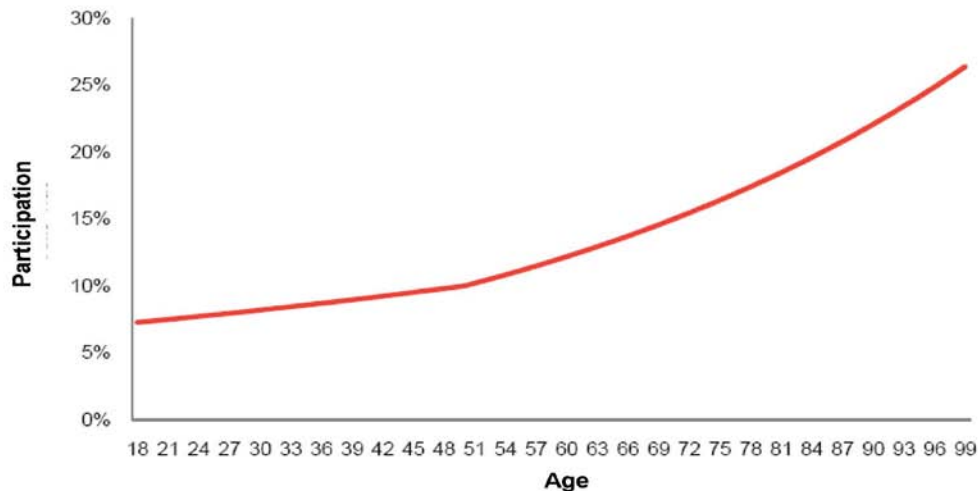
Modeling Enrollment: Vesting

- We estimate compliance with the 5 year vesting period using SSDI vesting as an analog
- We do not model the effect of lapses
  - » In our Excel-based model, we only need to know the percent of people in any given year that would be eligible to receive benefits
  - » Ineligibility could be related to vesting or lapses

EXHIBIT 3 Vesting Curve
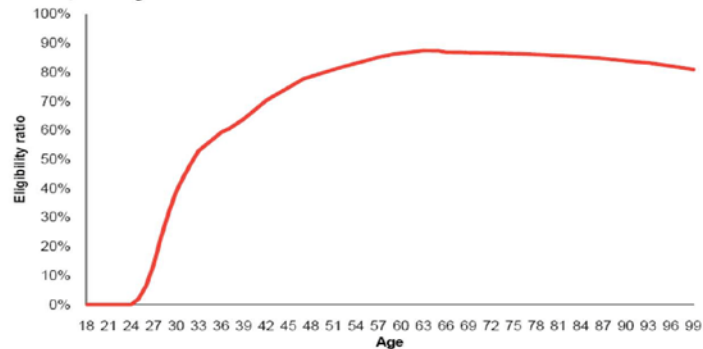
Modeling Disability: Prevalence

- We estimated prevalence from:
  - » 2004 SIPP for community setting
  - » 2004 NNHS for institutional setting
- We collected data on percent of individuals in each setting with:
  - » Only 1 ADL
  - » 2 or more ADLs
  - » 3 or more ADLs
- We assumed 50 percent of individuals with only 1 ADL would become eligible for the program
  - » Any individual in a nursing home with only 1 ADL would be eligible
  - » 48 percent of individuals in the community with only 1 ADL would be eligible
- We also adjust the SIPP data to account for individuals in an assisted-living facility
  - » Only the 65+ population
  - » We add these people to the 'institutional' estimates
  - » Shifts approximately 700k people from the community to institution estimates

Modeling Disability: Continuance

- To estimate continuance, or how long someone remains severely disabled, we used two data sets
    - » Over age 65: transition matrices from National Long Term Care Survey[1]
    - » Under age 65: continuance tables from IDEC survey [2]
- Non-continuance can be caused by two factors: mortality or improvement in condition
    - » Tend to see improvement at younger ages: these individuals are returned to the population eligible to pay premiums
    - » Mortality is higher for all ages of disabled individuals compared to non-disabled individuals
    - » We required non-continuance to always be at least as high as age-specific mortality from SSA

[1] Stallard, E and Yee, R.K.W. 1999. "Non-insured Home- and Community- Based Long-Term Care Incidence and Continuance Tables." Society of Actuaries
[2] Society of Actuaries. 2005. "Experience Studies in Individual Disability."

Modeling Disability: Incidence

- Incidence can be computed once we have estimated prevalence and continuance
- $\text{Prevalence}_{T2} = \text{Prevalence}_{T1} + \text{Incidence}_{T2} - \text{Non Continuance}_{T2}$
- We constructed a single cohort of individuals at all ages and tracked them for 100 years to develop incidence rates
    - » Population as of 2000, according to SSA
    - » Used age-specific prevalence and continuance
    - » Applied age-specific mortality estimates from SSA to non-disabled population
- After computing incidence by age, we accounted for an expected decline in prevalence through 2025
    - » We modeled a 0.5% decline in age-specific prevalence until 2025, at which point we hold prevalence constant
    - » We also hold continuance constant, which results in a decline in age-specific incidence
    - » A debatable proposition

Modeling Disability: Adverse Selection

- We increased incidence of participants in the LTC-PS to account for adverse selection
    - Enrolled population in voluntary program has higher disability than general population
- Under the extreme scenario, every individual who would develop disability within 5 years would enroll – this is the "perfect knowledge" scenario
- For the LTC-PS, we assumed enrollment in the initial years was weighted 75% to perfect knowledge scenario
    - This declines to 25% weighting within 10 years
    - Mimics pent up initial demand with continuing adverse selection
- Impact of adverse selection much higher for low-enrollment options

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2010 Incidence Curve Adjusted for Adverse Selection*

Standard incidence rate
Incidence rate adjusted for adverse selection

* Assumes 10 percent average enrollment

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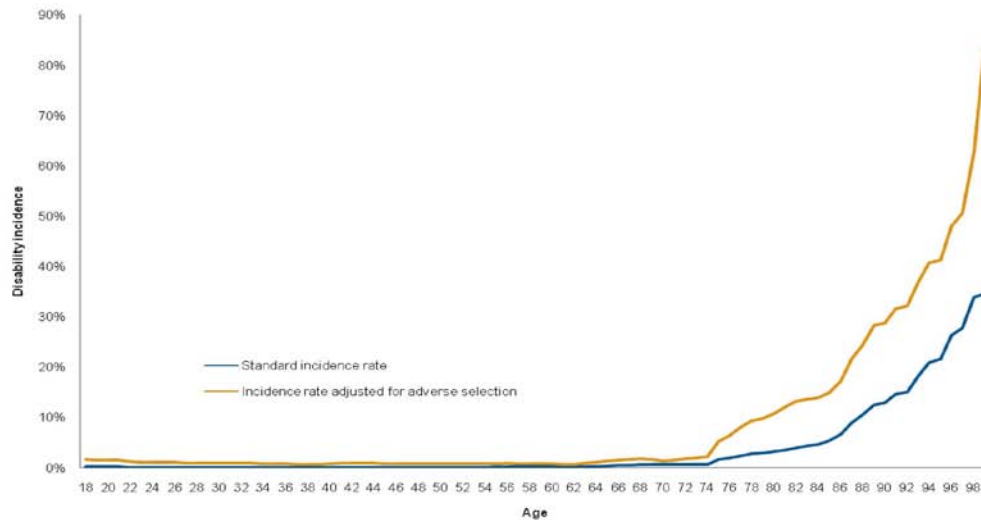
Modeling Costs: Medicaid Interactions

- We model the impact on Medicaid based on an assumption about participation by people who would eventually become Medicaid enrollees and the low-income subsidy.
- We model a Medicaid baseline using data from SIPP and NNHS, supplemented by information published by Brian Burwell and Josh Wiener.
- Even with a low-income subsidy, some future Medicaid beneficiaries would still be unlikely to enroll.
  - » Not all future Medicaid beneficiaries are currently below the Federal Poverty Limit (FPL)
- The table below shows our estimated participation rates by people who would eventually become Medicaid beneficiaries by the different low-income subsidy levels.
- We apply these participation rates to our Medicaid baseline to develop estimates of Medicaid savings.

Premiums	None	100% FPL	150% FPL
<$50	25%	50%	75%
$50-80	20%	45%	70%
$81-100	15%	40%	65%
$101-120	10%	35%	60%
$121-150	5%	30%	55%
>$150	0%	25%	50%

Limitations of the Model

- **Disability estimates:** The data sets used have somewhat different ways of measuring disability
- **Participation rates:** Estimating participation for such a novel program is complex. Participation will be driven by many factors, premiums being a large one. Our points system is an approximation.
- **Adverse selection:** Estimating adverse selection is complex. We followed a method used by actuaries and the CBO. However, there is considerable debate among researchers.
- **Impact to Federal budget:** Interactions with the federal budget, specifically around the tax implications of the program, are beyond the current scope of the model.

Questions and Answers

APPENDIX Nd:

PRESENTATION ENTITLED
"COMMENTS ON 'THE LONG-TERM CARE POLICY SIMULATOR MODEL'"

Comments on

"The Long-Term Care Policy Simulator Model"

Richard W. Johnson
Urban Institute

CLASS Act Models Meeting
September 22, 2010

What Does Avalere LTC Policy Simulator Model Say About CLASS?

- Plan parameters
  - only workers may participate
  - 5-year vesting
  - $50/day lifetime cash benefit
  - No elimination period
  - those in poverty pay zero premiums
  - premiums cover all costs

- Model output
  - participation rate = 15% (approx)
  - avg monthly premiums = $116 (in 2010)

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Generic Model Structure

- Establish pool of eligible participants
- Set benefits and premium schedule
- Identify those who choose to enroll
- Model their receipt of benefits
- Check that premiums cover costs
- Iterate

Avalere Developed a Cell-Based Model

- Start with SSA population forecasts
- Use 2007 ACS data to compute number of workers by age
- Assign enrollment rate based on benefits that plan provides
  - more generous plan reduces participation (because it raises premiums)
- Estimate benefits received by enrollees
  - attempt to account for adverse selection
- Set premiums to cover benefit payments

Participation Rates Seem Somewhat Arbitrary

- Assign points based on plan parameters

- Assume participation rates increase with number of points

- More generous plans get fewer points, because they charge higher premiums
  - exception: low-income subsidy

- Participation rates range from 5% to 35%
  - where do these rates come from?

- Implicit assumption is that enrollees minimize cost, not maximize utility

Participation Rates Increase with Age

- Increase participation rates by 2% per year above age 50 (not pct. points)

- Decrease participation rates by 1% for each year below age 50

- Example
  - age 30: 16%   age 50: 20%
  - age 65: 26%   age 90: 36%

- Should participation rates in CLASS increase in retirement?

Examples of Participation Rates at Age 50

	(1)	(2)	(3)
Cash benefit	$100	$75	$50
Length of benefit	lifetime	3 yrs	1 year
Vesting	none	5 yrs	5 yrs
Waiting period	none	none	90 days
Eligibility	all	all	workers
Subsidy level	none	100% pl	150% pl
Funded by govt	0%	25%	50%
Participation rate	**5%**	**20%**	**35%**

Adverse Selection

- Economists assume that people who will use more services will be more likely to purchase coverage
  - assumes policyholders have private knowledge of their disability risk
  - problem is likely to be especially severe in program that does not underwrite risk

- Model assumes that those with "perfect knowledge" that they will need LTC risk enroll
  - in the long-run (10 years after program inception) assume that 25% of population has perfect knowledge
  - in short-run, assume 75% has perfect knowledge

Model Limitations

- No role for income in the enrollment decision
- Does not account for heterogeneity in the population
  - income and disability are correlated
- Does not account for population changes over time (other than age)
  - i.e., income growth
- How will automatic enrollment affect enrollment?

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Dynamic Microsimulation Modeling Is an Alternative to the Cell-Based Approach

- Start with a nationally representative sample of the population
- Age population year by year
- Estimate equations of disability onset and duration
- Estimate equations of program enrollment
- Feedback to check that premiums cover benefit payouts

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Relative Merits of Cell-Based vs. Dynamic Microsimulation Approaches

	Cell-Based	Dynamic Microsim
tractability	✔	
transparency	✔	
development cost	✔	
projecting chars. of future population		✔
capturing heterogen. of population		✔

Summary

- The Avalere LTC model carefully simulates plan participation and costs
  - may be best option currently available to model CLASS
- But it relies heavily on assumptions that have not been thoroughly tested
- Alternative approaches would be expensive to develop

A REPORT ON THE ACTUARIAL, MARKETING, AND LEGAL ANALYSES OF THE CLASS PROGRAM

For additional information, you may visit the DALTCP home page at http://aspe.hhs.gov/_/office_specific/daltcp.cfm or contact the office at HHS/ASPE/DALTCP, Room 424E, H.H. Humphrey Building, 200 Independence Avenue, SW, Washington, DC 20201. The e-mail address is: webmaster.DALTCP@hhs.gov.

Files Available for This Report

Main Report   [48 PDF pages]

http://aspe.hhs.gov/daltcp/reports/2011/class/index.shtml

http://aspe.hhs.gov/daltcp/reports/2011/class/index.pdf

APPENDIX A: Key Provisions of Title VIII of the ACA, Which Establishes the   [6 PDF pages]

CLASS Program

http://aspe.hhs.gov/daltcp/reports/2011/class/appA.htm

http://aspe.hhs.gov/daltcp/reports/2011/class/appA.pdf

APPENDIX B: HHS Letters to Congress About Intent to Create Independent   [11 PDF pages]

CLASS Office

http://aspe.hhs.gov/daltcp/reports/2011/class/appB.htm

http://aspe.hhs.gov/daltcp/reports/2011/class/appB.pdf

APPENDIX C: Federal Register Announcement Establishing CLASS Office   [2 PDF pages]

http://aspe.hhs.gov/daltcp/reports/2011/class/appC.htm

http://aspe.hhs.gov/daltcp/reports/2011/class/appC.pdf

APPENDIX D: CLASS Office Organizational Chart   [2 PDF pages]

http://aspe.hhs.gov/daltcp/reports/2011/class/appD.htm

http://aspe.hhs.gov/daltcp/reports/2011/class/appD.pdf

APPENDIX E: CLASS Process Flow Chart   [2 PDF pages]

http://aspe.hhs.gov/daltcp/reports/2011/class/appE.htm

http://aspe.hhs.gov/daltcp/reports/2011/class/appE.pdf

APPENDIX F: Federal Register Announcement for CLASS Independence   [3 PDF pages]

Advisory Council

http://aspe.hhs.gov/daltcp/reports/2011/class/appF.htm

http://aspe.hhs.gov/daltcp/reports/2011/class/appF.pdf

APPENDIX G: Personal Care Attendants Workforce Advisory Panel and List   [6 PDF pages]

of Members

Full Appendix   http://aspe.hhs.gov/daltcp/reports/2011/class/appG.htm

http://aspe.hhs.gov/daltcp/reports/2011/class/appG.pdf

Ga: Federal Register Announcement for Personal   http://aspe.hhs.gov/daltcp/reports/2011/class/appGa.pdf

Care Attendants Workforce Advisory Panel

Gb: Advisory Panel List of Members   http://aspe.hhs.gov/daltcp/reports/2011/class/appGb.pdf

APPENDIX H: Policy Papers Discussed by the LTC Work Group   [36 PDF pages]
http://aspe.hhs.gov/daltcp/reports/2011/class/appH.htm
http://aspe.hhs.gov/daltcp/reports/2011/class/appH.pdf

APPENDIX I: CLASS Administration Systems Analysis and RFI   [10 PDF pages]
http://aspe.hhs.gov/daltcp/reports/2011/class/appI.htm
http://aspe.hhs.gov/daltcp/reports/2011/class/appI.pdf

APPENDIX J: Additional Analyses for Early Policy Analysis   [150 PDF pages]
    Full Appendix   http://aspe.hhs.gov/daltcp/reports/2011/class/appJ.htm
http://aspe.hhs.gov/daltcp/reports/2011/class/appJ.pdf

    Ja: A Profile of Declined Long-Term Care   http://aspe.hhs.gov/daltcp/reports/2011/class/appJa.pdf
    Insurance Applicants

    Jb: CLASS Program Benefit Triggers and   http://aspe.hhs.gov/daltcp/reports/2011/class/appJb.pdf
    Cognitive Impairment

    Jc: Strategic Analysis of HHS Entry into the   http://aspe.hhs.gov/daltcp/reports/2011/class/appJc.pdf
    Long-Term Care Insurance Market

    Jd: Managing a Cash Benefit Design in Long-   http://aspe.hhs.gov/daltcp/reports/2011/class/appJd.pdf
    Term Care Insurance

APPENDIX K: Early Meetings with Stakeholders   [4 PDF pages]
http://aspe.hhs.gov/daltcp/reports/2011/class/appK.htm
http://aspe.hhs.gov/daltcp/reports/2011/class/appK.pdf

APPENDIX L: In-Depth Description of ARC Model   [62 PDF pages]
http://aspe.hhs.gov/daltcp/reports/2011/class/appL.htm
http://aspe.hhs.gov/daltcp/reports/2011/class/appL.pdf

APPENDIX M: In-Depth Description of Avalere Health Model   [23 PDF pages]
http://aspe.hhs.gov/daltcp/reports/2011/class/appM.htm
http://aspe.hhs.gov/daltcp/reports/2011/class/appM.pdf

APPENDIX N: September 22, 2010 Technical Experts Meeting   [37 PDF pages]
    Full Appendix   http://aspe.hhs.gov/daltcp/reports/2011/class/appN.htm
http://aspe.hhs.gov/daltcp/reports/2011/class/appN.pdf

    Na: Agenda, List of Participants, and Speaker http://aspe.hhs.gov/daltcp/reports/2011/class/appNa.pdf
    Bios

    Nb: Presentation Entitled "Actuarial Research http://aspe.hhs.gov/daltcp/reports/2011/class/appNb.pdf
    Corporation's Long Term Care Insurance
    Model"

    Nc: Presentation Entitled "The Long-Term Care http://aspe.hhs.gov/daltcp/reports/2011/class/appNc.pdf
    Policy Simulator Model"

    Nd: Presentation Entitled "Comments on 'The   http://aspe.hhs.gov/daltcp/reports/2011/class/appNd.pdf
    Long-Term Care Policy Simulator Model'"

APPENDIX O: Actuarial Report on the Development of CLASS Benefit Plans   [47 PDF pages]
http://aspe.hhs.gov/daltcp/reports/2011/class/appO.htm
http://aspe.hhs.gov/daltcp/reports/2011/class/appO.pdf

APPENDIX P: June 22, 2011 Technical Experts Meeting   [46 PDF pages]
    Full Appendix   http://aspe.hhs.gov/daltcp/reports/2011/class/appP.htm
                                   http://aspe.hhs.gov/daltcp/reports/2011/class/appP.pdf

    Pa: Agenda and Discussion Issues and   http://aspe.hhs.gov/daltcp/reports/2011/class/appPa.pdf
    Questions

    Pb: Presentation Entitled "Core Assumptions and   http://aspe.hhs.gov/daltcp/reports/2011/class/appPb.pdf
    Model Outputs"

    Pc: Presentation Entitled "Actuarial Research   http://aspe.hhs.gov/daltcp/reports/2011/class/appPc.pdf
    Corporation's Long Term Care Insurance
    Model"

    Pd: Presentation Entitled "The Avalere Long-   http://aspe.hhs.gov/daltcp/reports/2011/class/appPd.pdf
    Term Care Policy Simulator Model"

    Pe: Presentation Entitled "Alternative Approaches   http://aspe.hhs.gov/daltcp/reports/2011/class/appPe.pdf
    to CLASS Benefit Design: The CLASS
    Partnership"

APPENDIX Q: Table 2: Actuarial and Demographic Assumptions   [2 PDF pages]
                                   http://aspe.hhs.gov/daltcp/reports/2011/class/appQ.htm
                                   http://aspe.hhs.gov/daltcp/reports/2011/class/appQ.pdf

APPENDIX R: Figure 1: Daily Benefit Amount for Increased Benefit   [2 PDF pages]
                                   http://aspe.hhs.gov/daltcp/reports/2011/class/appR.htm
                                   http://aspe.hhs.gov/daltcp/reports/2011/class/appR.pdf