

**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:

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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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CLASS Act Models Meeting

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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.

CLASS Act Models Meeting

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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.

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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.

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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

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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

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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	- - -