

APPENDIX Pd:

**PRESENTATION ENTITLED “THE AVALERE LONG-TERM
CARE POLICY SIMULATOR MODEL”**



The Avalere Long-Term Care Policy Simulator Model

June 22, 2011

Avalere Health LLC

Presentation Purpose and Agenda

- The purpose of this presentation is to describe Avalere's approach for estimating the premiums for the CLASS Act, as written and with modifications
- Agenda
 - » Provide brief project background
 - » Summarize overall modeling approach
 - » Highlight key issues/challenges
 - Adverse selection
 - Enrollment rates
 - » Questions/Discussion

Long-Term Policy Simulator (LTC-PS) Overview

Basic Overview

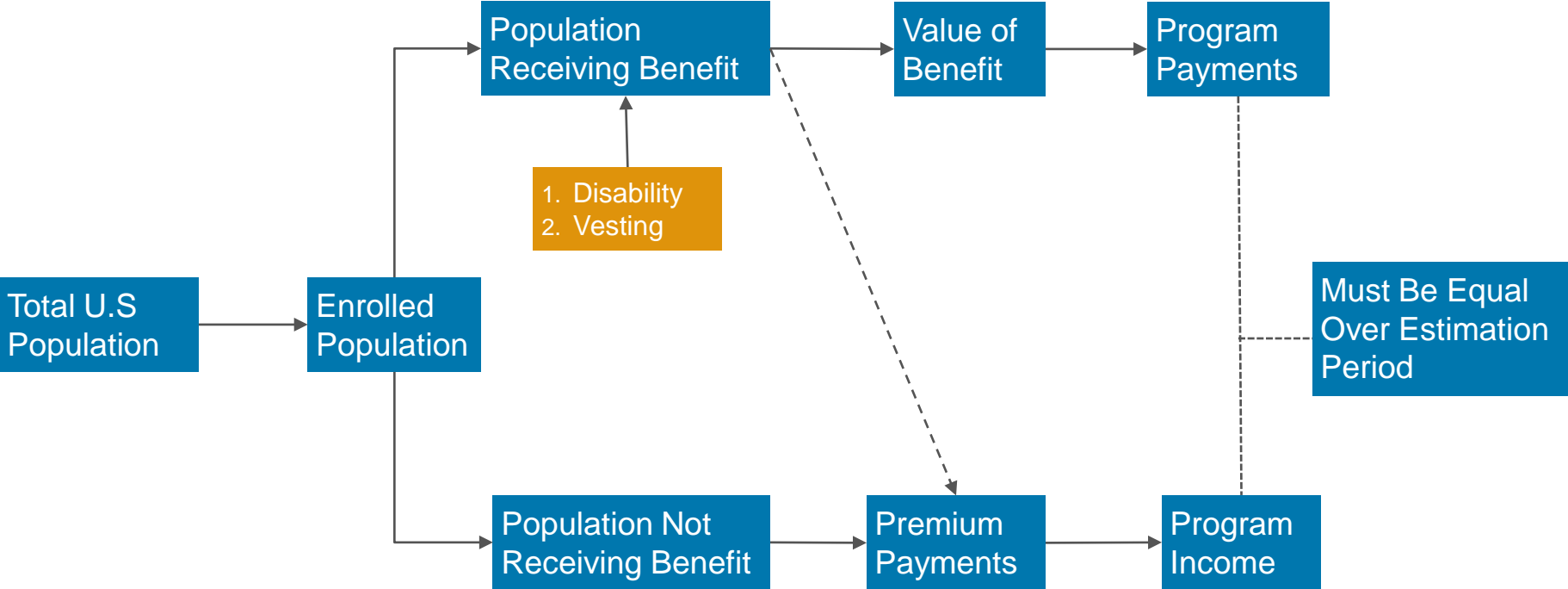
- The LTC-PS is an Excel-based spreadsheet model
- Originally built to allow policy makers to test a broad array of public insurance policy options and subsequently modified for ASPE to allow for testing CLASS-specific implementation policy options
- The LTC-PS is an incidence and continuance model
 - » Creates enrollment groups and calculates the age-specific costs and premiums over a 75 year window
 - » Models incidence and continuance of disability to determine when an individual becomes disabled and how long he or she remains disabled

LTC-PS Overview (cont.)

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

Model Overview



Modeling Enrollment: Population and Program Eligibility

Overall Population

- We use Social Security estimates of the total population by age from 2010 through 2100 accounting for the agency's expectations for changes in nativity, mortality, immigration, and emigration

Estimating Attachment to Workforce

- **All workers:** using data from the American Community Survey (ACS), we calculate employment, unemployment, and the total labor force (includes people who are working, unemployed individuals, and individuals “looking for work”)
- **Program eligible workforce:** the CLASS program is open to all individuals over 18 who have at least 3 years of working experience. We exclude people who are disabled at the outset of the program 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: Vesting

- We estimate compliance with the 5 year vesting period
- We consider two factors that result in an individual not meeting the vesting requirements:
 - » Mortality: we use mortality estimates from the Social Security Trustees report
 - » Policy Lapse: we assume a 0.5 percent lapse rate each year for the first 20 years and after that we assume there are no additional policy cancellations

Modeling Enrollment: Participation

Overall Participation

- Experts believe enrollment in CLASS will be between one and six percent of eligible individuals
- We assume as a baseline that two percent of the working population will enroll in the first year
- In subsequent years, we assume enrollment will be a fraction of the baseline with declining enrollment rates for the next five years and finally reaching a steady enrollment rate of 0.1 percent of the eligible population
 - » These estimates lead to non-low income enrollment of 2.2 million in the first year; 145 thousand new enrollees in 2017; and total enrollment of 3.5 million in 2020
- We then apply age-adjusted participation rates using two separate methods: smooth enrollment and Federal Long-Term Care Insurance Participation

Modeling Enrollment: Participation

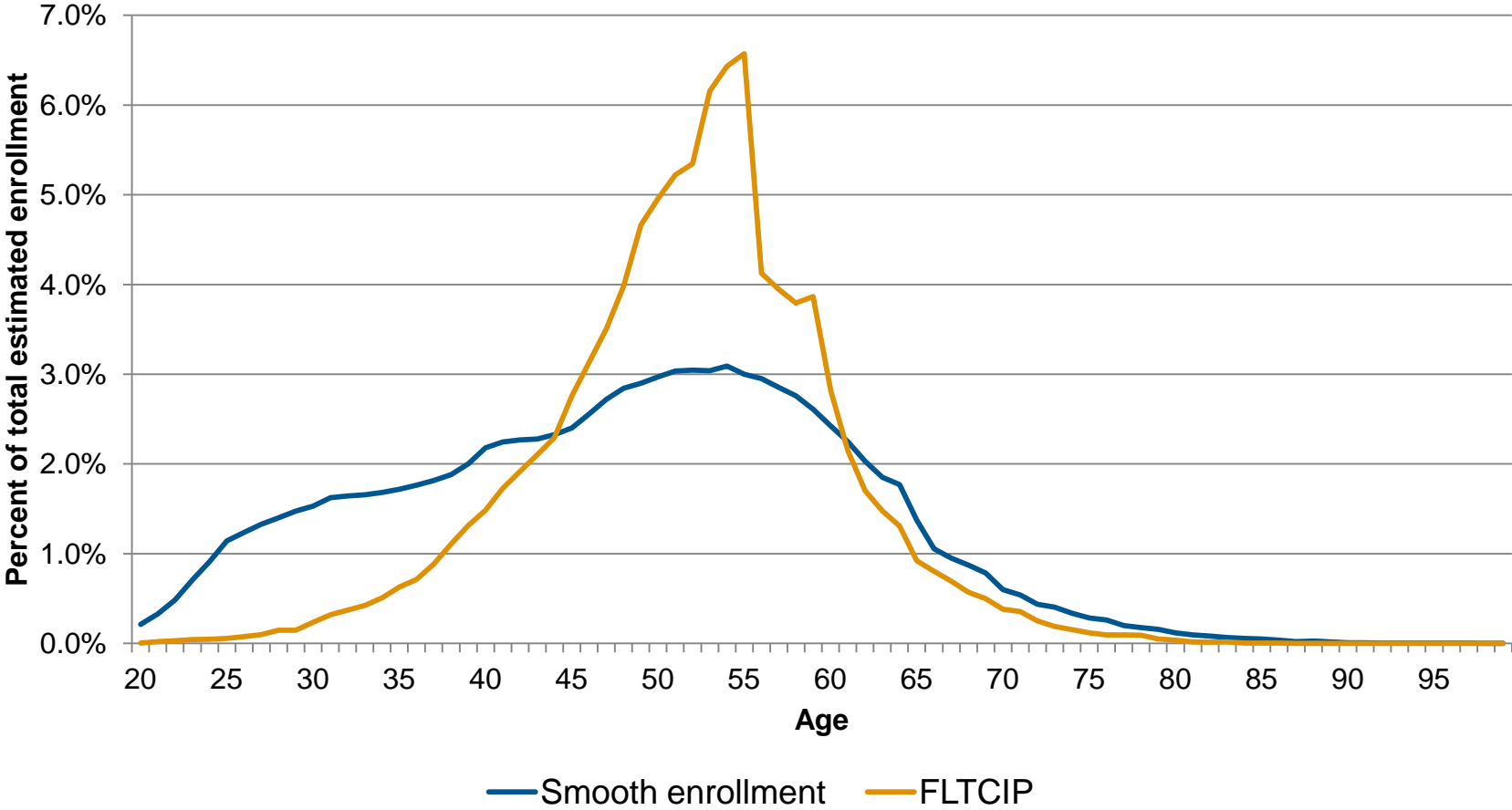
Smooth Enrollment

- We set an enrollment inflection point at age 50 in the assumption that the average participation would equal participation at age 50
- Increase participation at a rate of two percent for each age above 50 and decrease participation at a rate of one percent for each age below 50
- We use this method as our primary enrollment estimation

Federal Long-Term Care Insurance Participation

- We model a separate enrollment expectation rate based on the observed enrollment rates in the federal long-term care insurance program (FLTCIP)
- We use the actual enrollment rates by age for in-force policies

Enrollment Estimation Methods



Modeling Disability: Prevalence

Community Setting

- We estimate age-related prevalence from the 2004 Survey of Income and Program Participation (SIPP)
- We define severe disability as needing help with two or more ADLs; having Alzheimer's Disease or another serious problem with forgetfulness or confusion; having mental retardation or developmental disability (i.e. autism, cerebral palsy)
- We estimate that 3 percent of the over-15 population in the community has a severe disability

Nursing Home Setting

- We estimate age-related prevalence from the 2004 National Nursing Home Survey (NNHS)
 - We define severe disability as needing limited, extensive, or total assistance with two or more ADLs; living in an Alzheimer's or dementia unit or having impaired decision making ability; was admitted to the nursing home directly from an intermediate care facility for the mentally retarded (ICF/MR)
 - We estimate that 91 percent of the over-15 population residing in a nursing home has a severe disability
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Modeling Disability: Prevalence (cont.)

Prevalence Over Time

- Given the uncertainty about declining disability rates, we include a decline of disability rates of 0.5 percent per year through 2025
- Overall disability prevalence is slightly above 3 percent from 2010 to 2025 and increases slightly after that to reach 4.6 percent by 2085

ADL creep

- In a CLASS program with a benefit trigger of 2 or more ADLs, we assume that:
 - » 50 percent of individuals with just one ADL will qualify: all nursing home residents and a portion of community residents
- In a CLASS program with a benefit trigger of 3 or more ADLs, we assume that:
 - » 50 percent of individuals with 2 or more ADLs will qualify: all nursing home residents with 2 ADLs and a portion of community residents

Modeling Disability: Continuance

- To estimate continuance, or how long someone remains severely disabled, we use two data sets
 - » Over age 65: transition matrices from National Long Term Care Survey¹
 - » Under age 65: continuance tables from IDEC survey ²
- Non-continuance can be caused by two factors: mortality or improvement in condition/recovery
 - » 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

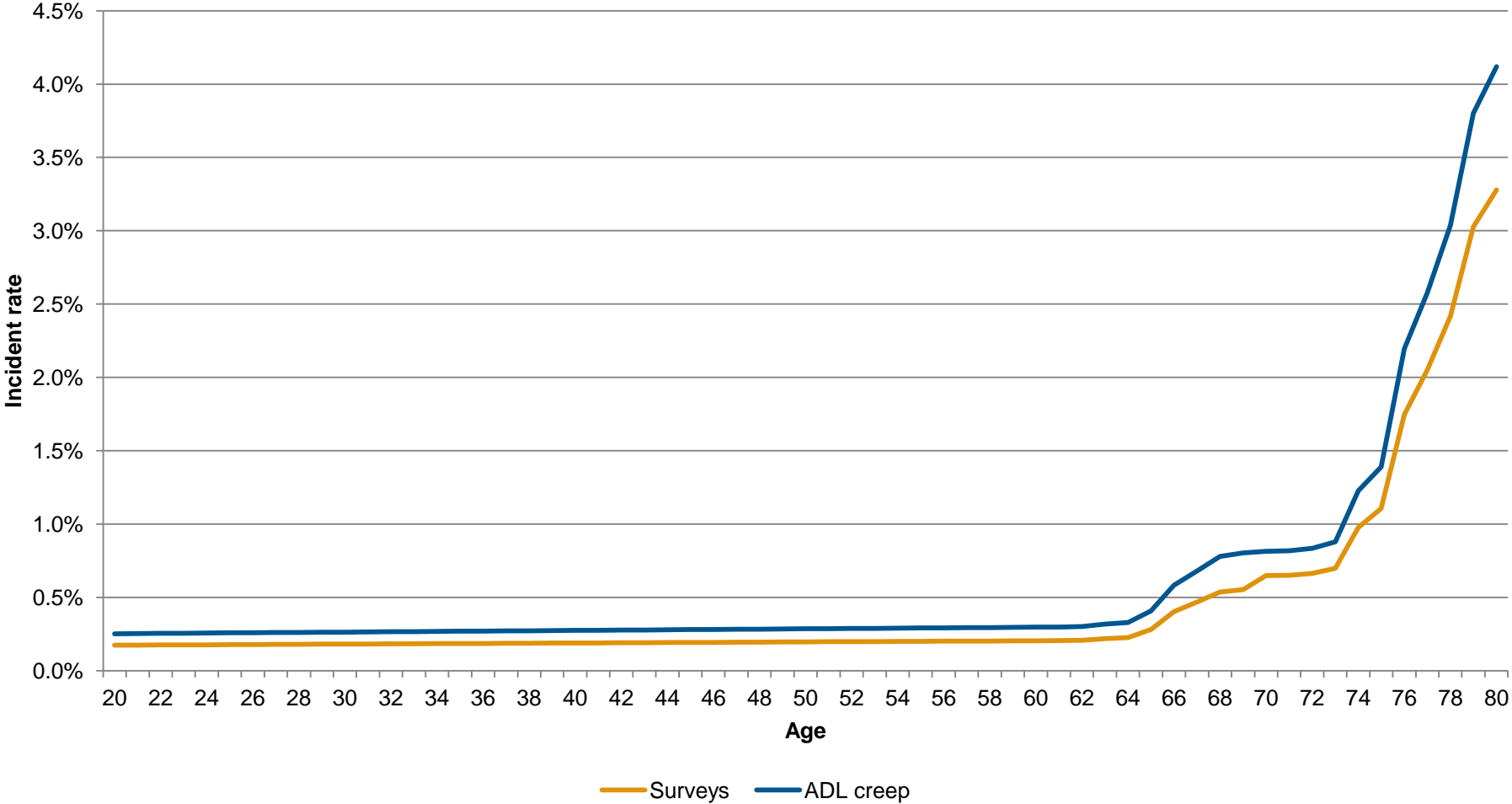
¹ Stallard, E and Yee, R.K.W. 1999. "Non-insured Home- and Community- Based Long-Term Care Incidence and Continuance Tables." Society of Actuaries

² Society of Actuaries. 2005. "Experience Studies in Individual Disability."

Modeling Disability: Incidence

- Incidence can be computed once we have estimated prevalence and continuance
- $\text{Prevalence}_{P2} = \text{Prevalence}_{P1} + \text{Incidence}_{I2} - \text{Non Continuance}_{NC2}$
- We apply incidence and continuance rates to individuals in each program by age

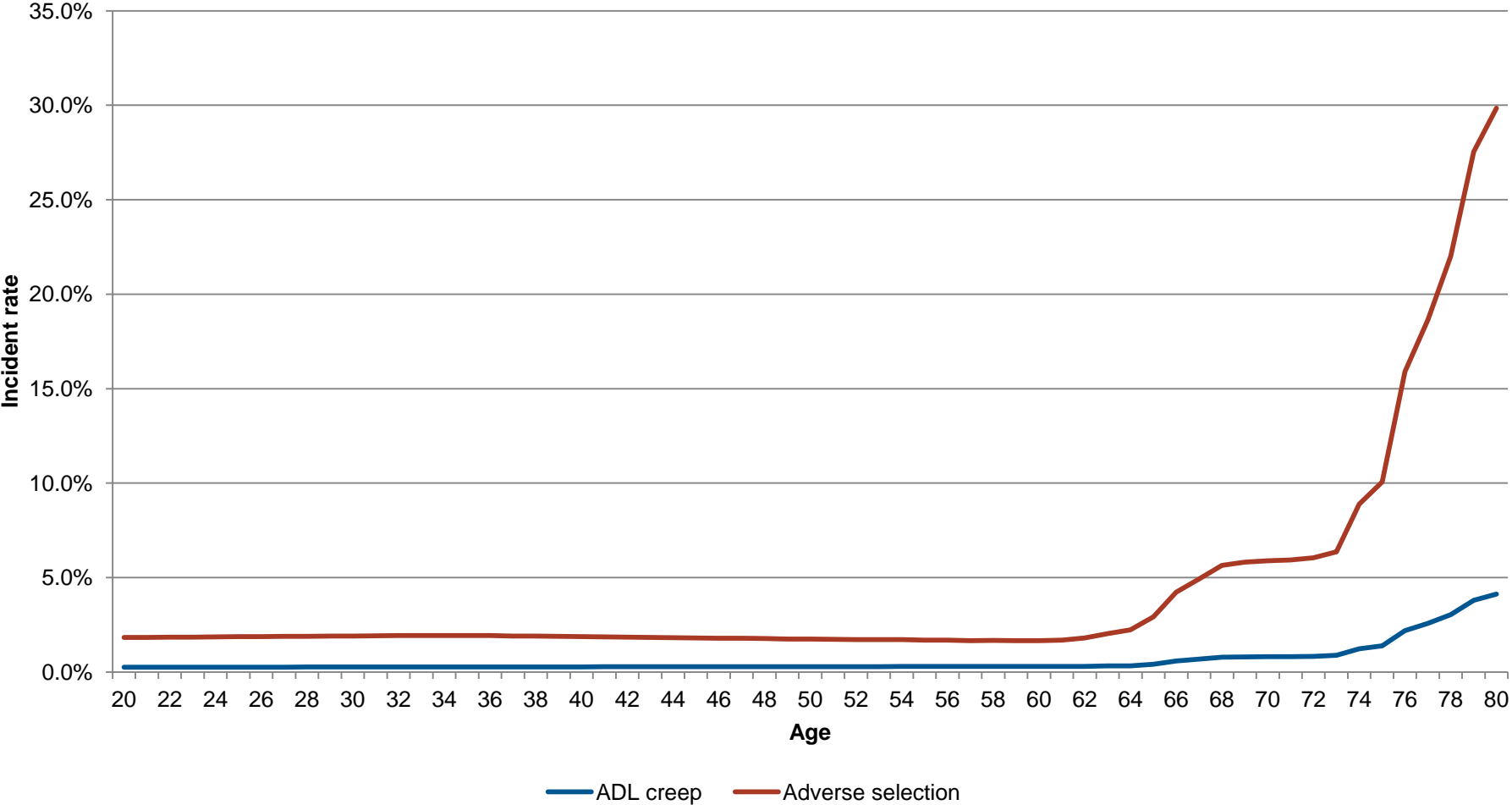
Incidence Comparisons, 2+ ADLs



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 include a dampening factor to address the unlikely nature of “perfect knowledge”:
 - » For the first enrollment group, we assume enrollment is weighted at 75% to perfect knowledge scenario in the first year of benefit eligibility
 - » We assume this ratio will decline over 20 years, reaching a final weight of around 10%
 - The starting weights are lower at a higher earnings requirement and also dampened for estimates of future enrollment groups
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Impact of Adverse Selection on Incidence, 2+ ADLs



Adverse selection assumes 2 percent participation

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 the Kaiser Commission on Medicaid and the Uninsured
- 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

		None	100% FPL	150% FPL
Premiums	<\$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%

Questions and Answers

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

[HTML versions of Appendices will be added as they are formatted]

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 CLASS Program	[6 PDF pages]
	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 CLASS Office	[11 PDF pages]
	http://aspe.hhs.gov/daltcp/reports/2011/class/appB.htm http://aspe.hhs.gov/daltcp/reports/2011/class/appB.pdf
APPENDIX C: <u>Federal Register</u> 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.pdf
APPENDIX E: CLASS Process Flow Chart	[2 PDF pages]
	http://aspe.hhs.gov/daltcp/reports/2011/class/appE.pdf
APPENDIX F: <u>Federal Register</u> Announcement for CLASS Independence Advisory Council	[3 PDF pages]
	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 of Members	[6 PDF pages]
Full Appendix	http://aspe.hhs.gov/daltcp/reports/2011/class/appG.htm http://aspe.hhs.gov/daltcp/reports/2011/class/appG.pdf
Ga: <u>Federal Register</u> Announcement for Personal Care Attendants Workforce Advisory Panel	http://aspe.hhs.gov/daltcp/reports/2011/class/appGa.pdf
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.pdf
Ja: A Profile of Declined Long-Term Care Insurance Applicants	http://aspe.hhs.gov/daltcp/reports/2011/class/appJa.pdf
Jb: CLASS Program Benefit Triggers and Cognitive Impairment	http://aspe.hhs.gov/daltcp/reports/2011/class/appJb.pdf
Jc: Strategic Analysis of HHS Entry into the Long-Term Care Insurance Market	http://aspe.hhs.gov/daltcp/reports/2011/class/appJc.pdf
Jd: Managing a Cash Benefit Design in Long-Term Care Insurance	http://aspe.hhs.gov/daltcp/reports/2011/class/appJd.pdf
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.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	[61 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 Bios	http://aspe.hhs.gov/daltcp/reports/2011/class/appNa.pdf
Nb: Presentation Entitled "Actuarial Research Corporation's Long Term Care Insurance Model"	http://aspe.hhs.gov/daltcp/reports/2011/class/appNb.pdf
Nc: Presentation Entitled "The Long-Term Care Policy Simulator Model"	http://aspe.hhs.gov/daltcp/reports/2011/class/appNc.pdf
Nd: Presentation Entitled "Comments on 'The Long-Term Care Policy Simulator Model'"	http://aspe.hhs.gov/daltcp/reports/2011/class/appNd.pdf
APPENDIX O: Actuarial Report on the Development of CLASS Benefit Plans	[47 PDF pages]
	http://aspe.hhs.gov/daltcp/reports/2011/class/appO.pdf

APPENDIX P: June 22, 2011 Technical Experts Meeting
Full Appendix

[77 PDF pages]

<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
Questions

<http://aspe.hhs.gov/daltcp/reports/2011/class/appPa.pdf>

Pb: Presentation Entitled "Core Assumptions and
Model Outputs"

<http://aspe.hhs.gov/daltcp/reports/2011/class/appPb.pdf>

Pc: Presentation Entitled "Actuarial Research
Corporation's Long Term Care Insurance
Model"

<http://aspe.hhs.gov/daltcp/reports/2011/class/appPc.pdf>

Pd: Presentation Entitled "The Avalere Long-
Term Care Policy Simulator Model"

<http://aspe.hhs.gov/daltcp/reports/2011/class/appPd.pdf>

Pe: Presentation Entitled "Alternative Approaches
to CLASS Benefit Design: The CLASS
Partnership"

<http://aspe.hhs.gov/daltcp/reports/2011/class/appPe.pdf>

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.pdf>