

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

**APPENDIX M:**

**IN-DEPTH DESCRIPTION OF AVALERE HEALTH MODEL**

## **Technical Specifications for the Avalere Long-Term Care Policy Simulator Modified for the Assistant Secretary for Planning & Evaluation to Estimate the CLASS Program**

### **Introduction**

The Patient Protection and Affordable Care Act (ACA) contains a provision that supporters hope will help strengthen the United States' system of financing long-term care (LTC). This new program, established under Title VIII, Section 8002 of the ACA has attracted attention and support because it has the potential to add a new funding source to a system that current relies heavily on Medicaid and provides little insurance coverage.

In the absence of increasing public or private LTC coverage, this country's long-term care system and the people who use it will continue to experience significant funding and delivery gaps. Individuals who need LTC rely on unpaid family members and friends or dip into their home equity, personal savings, and other out-of-pocket dollars to finance home care, assisted living, or nursing home care. Medicaid has become the country's long-term care safety net for individuals who exhaust their individual and family resources. However, the federally and state-funded program pays for nursing home care but does not guarantee access to home and community-based services. Only seven percent of Americans currently have private long-term care insurance coverage.

Congress designed the CLASS program to address these gaps. It is a public, voluntary long-term care (LTC) insurance program that will be open to all actively employed adults. Following a five-year vesting period, individuals who become disabled in two or three of the Activities of Daily Living (or have a similar level of cognitive impairment) will be eligible to receive benefits and will receive a lifetime, cash benefit, averaging \$50 per day. As written in statute, the CLASS program offers level, age-based premiums and includes subsidies for low-income individuals and full-time students. The Secretary may raise premiums only to preserve program solvency. The CLASS program will be entirely premium-funded and must be solvent over a 75-year period.

In creating the CLASS program, Congress also created unique challenges for financial evaluation and implementation. It prohibited two common front-end actuarial risk and cost controls employed by nearly all other insurance programs: mandatory enrollment and underwriting. Without these, program sustainability depends on encouraging adequate enrollment of healthy individuals to offset the effects of adverse selection. Adequate enrollment, however, depends on an attractive premium, which must be set in advance by the Secretary of the Department of Health and Human Services (HHS).

The ACA requires the Secretary to evaluate the financial viability of this premium-based program and to promulgate regulations to develop an expedited eligibility determination process, an appeals process, and a redetermination process, including whether an enrollee is eligible for a cash benefit under the program as well as the level of cash benefit. Because of the unique nature of the program, there are few real-life experiences of behavior to draw upon to evaluate the potential for adverse selection and to subsequently set premium levels.

To assist the Secretary of HHS, Avalere has modified a long-term care actuarial model it previously constructed under a grant from The SCAN Foundation. Avalere has designed the new model to evaluate key assumptions about the CLASS program and their effects on premiums over a 75-year window. The model estimates the impact on premiums of adverse selection, different benefit triggers and benefit amounts, program enrollment rates, low-income subsidies, and various benefit structures (including cash vs. services).

The remainder of this paper is laid out as follows: Section II outlines the steps taken for the full Model. Section III details the construction of our general population estimates. Section IV illustrates the process of estimating participation in the CLASS program. Section V outlines the construction of the disability rates. Section VI deals in depth with modeling of adverse selection. Section VII details the Medicaid estimates in the Model. Section VIII lists several of the limitations of the Model. Appendix 1 lists each of the data sources used in the Model. Appendix 2 describes in further detail some of the key data sets that we utilized.

Finally, we referenced countless articles on this subject published over the past 30 years. That contributed to our analysis. Instead of attempting to identify the precise contribution of each article, we have included a full bibliography of these sources at the end of the paper.

## **Section II: The Long-Term Care Policy Simulator**

Avalere Health has modified its existing Long-Term Care Policy Simulator (LTC-PS) model to more closely reflect the specifications of the CLASS program as included in the ACA. The LTC-PS is an Excel-based model that tracks age-specific groups of CLASS program enrollees for 75 years. This paper describes many of the key assumptions and modeling options that we incorporated into the LTC-PS in order to provide estimates of premiums for variations of the CLASS program that may be under consideration by the Secretary of HHS.

The LTC-PS creates enrollment groups from the overall population and calculates the expected costs and premiums for each enrollment group separately by age. For the most part, the same process is repeated for each consecutive group of annual enrollees. We make exceptions to this repetition with estimates for expected enrollment, adverse selection, and premiums.

The CLASS program is required to be actuarially balanced over a 75-year window. This, in short, means that the present value of total expected costs of the program, including benefit payments, administrative costs, and subsidies, must equal the present value of total expected income of the program, including premiums and interest payments. The estimated premium represents the average premium required in the initial year for each age of estimated enrollment to accomplish an actuarially balanced model.

In order to construct these expected costs and expected income, we estimate for each enrollment group the number of people participating in the program and receiving benefits as well as the number of people participating in the program and paying premiums. Depending on the policy options selected, these may or may not be mutually exclusive categories. In order to calculate the total costs of the program and the total income, the steps described in this paper

are applied to each age group above 18 years old for 75 consecutive years. In addition, each enrollment year is modeled separately.

The following provides an overview of the major functions of the model and the conceptual sequence of these functions. It is followed by a more detailed explanation of each of the major functions.

**Estimating Program Enrollment.** In order to determine costs and income, we first estimate how many people are enrolled in the program. There are two key analyses associated with program enrollment: the eligibility requirement and voluntary participation.

- **Eligibility requirement.** The CLASS program is available to individuals over the age of 18 who have at least 3 years of active work experience. At the onset of the program, we assume that the work requirement will prevent most of the currently disabled population from being able to participate. We make an exception for individuals who have a severe disability and are currently working (approximately 5 percent to 7 percent of the severely disabled population is currently employed). We incorporate these individuals through our estimates of adverse selection, discussed in Section VI.
- **Voluntary participation.** The CLASS program is a voluntary benefit. As such, enrollment is based on the expected value for each individual relative to the estimated premium. The assumptions used to estimate participation are described in detail in Section IV.

**Estimating Benefit Eligibility.** After determining the enrolled population, we determine the proportion of individuals who are eligible to receive benefits (i.e., who are vested). The CLASS program has a 5-year vesting requirement with an earnings threshold. In the model, we assume any individual who has been enrolled for five consecutive years will be eligible to receive benefits.

**Estimating Individuals Qualified to Receive Benefits.** Once the Model has calculated the enrolled population and those eligible to receive benefits, we must estimate how many enrolled and eligible people have a disability that qualifies them to receive benefits. Section V details our method for constructing estimates of severe disability. For each age and year in the Model, there are two components of the disabled population: newly disabled and continuing disabled.

- **Newly disabled.** Using age-specific incidence rates we calculate the number of individuals who are eligible to receive benefits who develop a severe disability in a given year. The calculated incidence rates are for an entire calendar year, but for modeling purposes we only want to track the average number of people who would receive benefits in their first year of need. We therefore discount a portion of the incident population in each year, and include the remaining incident population in our total estimates for the following calendar year.
- **Continuing disabled.** We also adjust the prior-year age-specific population with a disability to account for both the estimated number of individuals who cease to be

severely disabled, either through death or improvement in condition. This is done via the continuance estimates as described later.

**Estimating the Disabled Who Are Receiving Benefits.** While a person might be enrolled in the program and meet the vesting as well as the disability requirements to receive benefits, that person might have exhausted benefits in a program that pays for a specified period of time less than lifetime (i.e., one or three years). For any CLASS options with a limited benefit of less than lifetime, we apply a factor to account for people with disabilities who have already received the maximum amount of allowable benefits in the program. To estimate these factors, we use the continuance estimates as described in section V.

- As an example, if the CLASS program were to have a one-year benefit, the Model calculates for each age the number of persons with a severe disability who are still disabled for more than one year. We remove them from the count of total disabled to construct the premium estimate for this program variation.
- One of the limitations of the Model lies in the interaction of a limited benefit and the non-continuance population. We are not able to estimate the number of persons who develop a disability, receive benefits for a short time, stop receiving benefits due to an improvement in their condition, but then develop a disability a second time and start receiving benefits again. While an actual long-term care program would be able to track these individuals and stop benefits in a limited-benefit situation, we are unable to do the same from a modeling perspective.
- We do not model the impact of a delayed receipt of benefit in the CLASS program, either under a lifetime or limited benefit. We assume that once a person enrolled in the program has developed a disability severe enough to qualify for benefits, he will begin receiving payments from the program.

**Amount of benefit payment.** After determining the number of people receiving benefits, the Model next calculates the amount paid for each recipient. There are two options for the user to select: a cash benefit or a services benefit.

- **Cash benefit.** Users can select a cash benefit amount of \$50 per day, \$75 per day, or \$100 per day. This amount is increased by the estimated annual increase in the CPI-U, set at the first year that benefits are paid in the program. The cash benefit is paid to all of the “disabled receiving benefits” population in the Model.

In the aggregate, we assume that every beneficiary receives the full amount of the average cash payment. However, it is possible to alter the amount of benefit received based on the level of disability or setting of care. We incorporate these differences for each age-specific estimate of disability and setting.

- **Service benefit.** We used the estimates of paid utilization from each of the main surveys (SIPP and NNHS) to determine approximate service utilization. For any given year, we assume the ratio of community care to institutional care for each age remains constant. Any shift in the overall mix of services is caused by a shift in the average age of

beneficiaries. We assume that annual costs increase by the expected growth in nominal wages.

**Low-income subsidy.** The low-income subsidy in the CLASS program is internally financed. The cost of the subsidy is paid for by higher premiums to non-subsidized participants. The amount of the subsidy is based on the number of low-income participants less any low-income premium. The estimated number of individuals receiving the low-income subsidy is modeled separately, and discussed in section III.

**Administrative costs.** Any insurance program has administrative costs associated with marketing, premium collection, benefit payments, and other operational costs. The law requires a 3 percent administrative cost level, which we estimate based on the annual premium amounts.

**Fund balance.** For most insurance programs, there is an annual difference between premiums collected and benefits paid. Given that the CLASS program is a new program that pays for a relatively low occurrence but high cost event, the program will collect significant amounts of premiums in the early years. As the program, and the population, ages, it then pays out these funds. For any annual excess collections, our baseline assumptions use the current expectations for Treasury bonds rates to calculate the interest income of surplus funds.

**Premium calculations.** Finally, after making all of the above calculations, we have the total expected cost of the program for the next 75 years for each enrollment group and each age. These values are adjusted to 2012 dollars (or first year of the program) via the expected rate of inflation for each of the next 75 years. Once the total present value of all spending is estimated, we estimate the level of premiums required over the course of the same 75 years such that the 2012 present value of these payments equal the total costs.

- **Premium increases.** The Model allows a user to test the impact of increasing premiums by inflation on an annual basis.
- **Age-adjusted premiums.** Since each age is separately modeled, each age also has an actuarially-balanced premium. Note, given the interactions with adverse selection, low-income, and other items that will impact the first enrollment group more than subsequent enrollment groups, we require each subsequent round of enrollees to pay the same age-specific premium as individuals already enrolled in the program. Without this requirement, it would be possible for future years' enrollees to have lower age-specific premiums than prior years' enrollees.

### Section III: Estimating the Premium Paying, Benefit Eligible Population

In order to estimate the first group that would be enrolling in the program we start with an estimate of the overall population. From that, we estimate the enrolled population by determining the overall population that is eligible to enroll through attachment to the work force. We then derive the population that would be eligible to pay premiums and receive benefits. The following provides the steps involved in creating the estimate of people eligible to enroll.

1. **Estimating the Overall Population.** Our first step was to estimate the entire population, by age, from 2010 through 2100. We started with Social Security estimates of population, which contain all residents of the United States, and account for the agency's expectations for changes in nativity, mortality, immigration and emigration.
2. **Estimating Attachment to Work Force.** Next, we subdivided the population according to work status. We used estimates of the labor force (people working or looking for work) as well as an estimation of retirement by age, in order to account for individuals who are participating in the program for three or more years and retire but continue to pay premiums.
  - a. **Working.** To calculate employment, we used data from ACS. To identify workers, we used the variables for "Employed-at work" and "Employed, with a job but not at work,"<sup>1</sup> which combined we called "Working." This was approximately 48 percent of the total population in 2007.
  - b. **Looking for Work.** We also created, as an initial calculation, estimates of the number of unemployed persons as recorded in ACS. Using the initial estimate of approximately 6 percent unemployment<sup>2</sup>, we varied this rate annually by the projected unemployment rate as published by the CBO. This unemployment rate is a percentage of the labor force. When expressed as a percentage of the total population, the same figure is only 3 percent.
  - c. **Labor Force.** The labor force, which is the combination of people working, unemployed or "looking for work," comprises approximately 51 percent of the total population. For future estimates of the size of the labor force, we assumed the percentage of people at each age in the labor force remains constant at the initially estimated rate over the entire course of our projections.
3. **Low-Income Individuals.** After constructing these basic groups of individuals by age, we also needed to determine how many individuals would be above the minimum earnings threshold but below the low-income earnings threshold. These estimates are necessary to estimate the impact of varying the program's low-income subsidy on premiums as well as calculate the impact on Medicaid spending. We created various levels of income thresholds to mirror possible options of the CLASS program.

We model the enrollment of low-income individuals separate from overall enrollment, given the different motives of this population. We assume a good portion of individuals eligible for the low-income subsidy will enroll in the program, although not the entire population. While there is a relationship between income and age, we estimate that in the initial years of the program, new enrollment of low-income eligible individuals will

---

<sup>1</sup> "Employed, with a job but not at work" is approximately 1 percent of the total population, and largely represents persons on temporary leave such as maternity

<sup>2</sup> This figure represents the unemployment rate in the 2007 ACS survey.

likely include a higher percentage of older individuals. For subsequent years' enrollment, we estimate a larger portion of the low-income subsidized individuals will be younger.

Given the general relationship between age and income, most individuals lose low-income eligibility as they age. We assume the average low-income enrollee does not remain in the program after they lose eligibility, given the expected increase in premiums. In addition, we do not include any estimation of individuals gaining low-income premium eligibility in retirement, given the uncertainty in the CLASS program with this option.

4. **Vesting.** Since each enrollment group is modeled and tracked separately, we are able to directly estimate the impact of vesting by requiring each group to complete five years of participation before they are eligible to receive benefits. We include two factors that result in an individual not reaching their vesting threshold: mortality and policy lapse.
  - **Mortality:** we use the overall population mortality estimates as published by the Social Security Trustees. We do not assume that CLASS program enrollees differ in their average mortality rate than non-CLASS enrollees.
  - **Policy lapse:** For a baseline estimate, we assume that 0.5 percent of participants allow their policies to lapse each year for the first 20 years, after which we assume there are no additional policy cancellations. We also vary the lapse assumptions to determine the potential impact on premiums for each enrollment group.

#### Section IV: Estimating Participation in the CLASS Program

One of the most challenging aspects of constructing a model that estimates voluntary participation in a new long-term care insurance product is the relationship between premiums and participation. We believe the level of participation in a voluntary, federally run long-term care insurance program will largely be based on the premium. To estimate premiums in an actuarially balanced insurance program, we must estimate both expected costs as well as expected income. Both costs and premium income are directly estimated via the participation in the program, putting us back where we started. As a result, premiums depend on participation, but participation depends on premiums.

From an economic standpoint, we would expect rational individuals to enroll in the program if the expected value of the benefit were greater than the expected cost of premiums over the course of enrollment. Once we determined this relationship, we could use observed rates of elasticity for long-term care insurance to vary enrollment for each age group based on the actual premium calculated by the Model. However, for the CLASS program we must also factor in the interaction with private long-term care insurance as well as general uncertainty about the need for any long-term care insurance.



Most of the observed elasticity rates are based on varying levels of benefits from different private long-term insurance programs, with different sub-populations of enrollment. To use these elasticity rates properly, we would need to anchor each age group to an external participation and premium level, which is difficult given the differences in benefits offered by traditional long-term care insurance. In addition, enrollees in private long-term care insurance may react differently than the general public to the need for long-term insurance, given the expected differences in demographic profiles. Both of these factors are likely to make enrollment in the CLASS program lower than it would be otherwise.

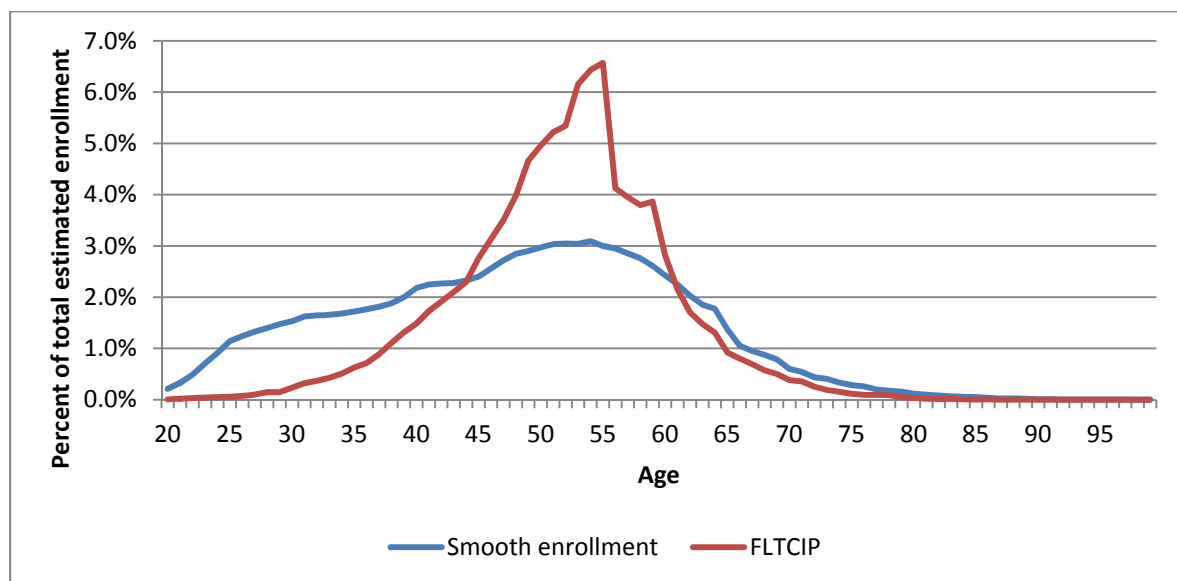
There is little evidence to determine the willingness to enroll in a program such as CLASS, although most experts tend to believe enrollment will be between one and six percent of eligible individuals. As such, we use a baseline assumption that two percent of the working population will enroll in the CLASS program in the first year, not including individuals eligible for the low-income subsidy. We assume subsequent years' enrollment will be a fraction of this amount, with declining enrollment rates for the next 5 years, reaching a steady annual enrollment rate of approximately 0.1 percent of the eligible population. For the baseline model, these assumptions lead to non-low income enrollment of 2.2 million individuals in the first year, declining to 145 thousand new enrollees in 2017, and total enrollment by 2020 of 3.5 million individuals.

After estimating an overall participation rate, we applied age-adjusted participation rates. Since it is highly likely that participation will increase with age as individuals approach and begin to plan for retirement, we allow our participation estimate to also increase with age. We used two separate methods to estimate participation by age:

- **Smooth enrollment expectation:** One approach to enrollment that we modeled applied a constant rate of increase or decrease based on an inflection point. We chose the age of 50 as our inflection point, assuming that the average participation would equal participation at age 50. We then increased participation at a rate of 2 percent for each age above 50, and decreased participation at a rate of 1 percent for each age below 50. This adjustment was applied as a growth rate. For example, with the baseline model assumption of 2 percent overall participation, we used this rate for enrollment at age 50. Using the smooth curve process, estimated participation at age 49 is 1.98 percent (2 percent x 0.99) and participation at age 51 is 2.04 percent (2 percent x 1.02). After experimenting with different factors, we chose these growth rates because they maintain an overall participation rate equal to our estimated rate.
- **Federal Long-Term Care Insurance Participation:** In addition to the smooth estimation process, we modeled a separate enrollment expectation rate based on the observed enrollment rates in the federal long-term care insurance program (FLTCIP). Using the actual enrollment rates by age for in-force policies, we constructed a curve that starts with the total estimate of enrollment and distributes the enrollment by age mimicking the actual experience of the FLTCIP.

Exhibit 1 displays the enrollment distribution under these two options. Under the FLTCIP option, enrollment is much more heavily weighted towards individuals aged 50-60, while the smooth enrollment estimation has a higher proportion of enrollees aged 25-40.

### Exhibit 1: Enrollment Estimation Methods



### Section V: Estimating Incidence, Prevalence and Continuance

The LTC-PS uses estimates of the total number of people with a disability in any given year (prevalence), the number of people newly disabled in a given year (incidence), and the length of time they remain disabled (continuance). Incidence is important because the program will not cover all individuals with a disability at any given point. Continuance allows users to test the impact of varying the amount of time over which benefits will be paid.

The creation of incidence and continuance estimates is inherently difficult because there are few sources of information on the number of people who develop a disability as well as the length of time they remain disabled. Therefore, we estimated prevalence, incidence and continuance by combining four disparate data sets: the 2004 Survey of Income and Program Participation (SIPP), Wave 5, for disability prevalence in the community; the 2004 National Nursing Home Survey (NNHS) for disability prevalence in a nursing home; the Individual Disability Experience Commission (IDEC) table of disability incidence and continuation for the under-65 population; and transition matrixes as published by Eric Stallard/Yee/Manton using the 1984, 1989, and 1994 National Long-Term Care Survey (NLTCS). The following describes our method in more detail.

1. **Prevalence.** We first estimated disability prevalence for individuals in the community by age using the 2004 SIPP. Specifically, we defined a person as 'severely disabled' if he needed help with two or more activities of daily living (ADL); had Alzheimer's Disease or any other serious problem with confusion or forgetfulness; or had a mental retardation or a developmental disability such as autism or cerebral palsy. This definition most closely matches the HIPPA disability requirement. In total, we estimated 3 percent of the over-15 population in the community has a severe disability.

We next estimated disability prevalence for individuals in a nursing home by age in the 2004 NNHS. Specifically, we defined a person as 'severely disabled' if he needed limited, extensive, or total assistance with two or more ADLs; was in an Alzheimer's or dementia specialty unit in the nursing home or had impaired decision making ability; or was admitted to the nursing home directly from an intermediate care facility for the mentally retarded (ICF/MR). In total, we estimated 91 percent of the over-15 population residing in a nursing home has a severe disability.

Since these two surveys represent distinct populations (SIPP does not include individuals in an institution such as a nursing home, and NNHS excludes individuals outside of the nursing home), we felt comfortable combining the estimates to develop a total HIPPA-equivalent disability prevalence estimate. When combined, we estimate slightly over 3 percent of the total US population has HIPPA-eligible disability. Of this group, 18 percent reside in a nursing home and 82 percent reside in the community.

There has been considerable debate concerning an apparent decline in disability prevalence over the last decade, including the magnitude and cause of the decline. Given this uncertainty, we chose to model as baseline a continued modest decline in the overall prevalence, at a rate of 0.5 percent per year through 2025, after which we allow the overall prevalence of disability to change with the age of the population. As a result, when the effect of the aging population is combined with this assumed decline in the prevalence rate, our average disability prevalence remains at slightly above 3 percent from 2010 through 2025, at which point it begins to increase slightly, reaching 4.6 percent by 2085.

In addition, it is possible that a higher percentage of individuals would be able to qualify for an additional measure of disability under the CLASS program given the economic incentives. To account for these individuals, we assume that a portion of the people who currently have one less measure of disability would qualify for the program. For a CLASS program that pays benefits to individuals with 2 or more ADLs, we assume 50 percent of individuals with only 1 ADL would qualify: all nursing home residents and a portion of the community population. For a CLASS program that pays benefits to individuals with 3 or more ADLs, we assume 50 percent of individuals with only 2 ADLs would qualify: all nursing home residents with 2 ADLs and a portion of the community population.

- 2. Incidence and Continuance.** For the continuation rates, we built separate tables for the under-65 and over-65 population. We constructed a disability continuance table for the under-65 population using the IDEC continuance worksheet. We used the published 90-day continuance rates from IDEC, again to use the HIPPA requirement that the disability be long-term in nature. For the over-65 population, we developed continuance rates using a series of transition matrices developed by Stallard & Yee via the NLTCs data, which uses the HIPPA definition of disability.

After constructing continuance rates from both of these sources, we created non-continuance rates, or the percentage of individuals with a disability in a given year that

ceased to be disabled in the following year. There are two reasons a person ceases to be disabled: mortality and recovery. We separated our non-continuance rate into an estimate of mortality and an estimate of recovery, using the same data sources we used to construct the overall continuance rates. We capped our annual modeled mortality rate at the age-specific mortality rate for all individuals (disabled and non-disabled) as published by the SSA, to ensure that total population mortality was never greater than our modeled mortality.

After constructing prevalence and continuance estimates for each age, we were able to estimate individual age incidence rates via the following formula: Prevalence in year 2 ( $P_2$ ) = Prevalence in year 1 ( $P_1$ ) + Incidence in year 2 ( $I_2$ ) minus non-continuance in year 2 ( $NC_2$ ). Rearranging the terms, we solve for incidence:  $I_2 = P_2 - P_1 + NC_2$ . We apply the incidence and continuance rates calculated via the surveys to individuals in each program by age.

## Section VI: Adverse Selection

In a mandatory long-term care insurance program, the rate of disability for participants will match the overall population average. Premiums will reflect the mix of people with disabilities and people without disabilities in the overall population. However, in a voluntary program, there is the possibility that certain individuals will have better knowledge of their own likelihood for disability. Those with knowledge that they will definitely require some sort of long-term care will be more likely to enroll in a program that pays these costs. This leads to higher than average costs for the program, which in turn leads to higher premiums, which can lead to lower participation among those with lower probability of disability. Called adverse selection and sometimes referred to as a death spiral, this effect at its worst results in an insurance program that is financially unsustainable.

The inverse of this situation is termed advantageous selection. Individuals may lack knowledge of their future expected need for long-term care, but may instead be risk averse and wish to sign up for the protection offered by long-term care insurance. Many times this risk aversion can also lead to a less risky lifestyle, which can lower the probability of certain types of disability.

The amount of adverse and advantageous selection in the current long-term care insurance market is a subject of debate. While some individuals likely do have better knowledge of potential future needs as a result of personal medical information or family history, the studies done to date have failed to show higher probability of disability among insured individuals. There are three factors that can account for much of this: risk underwriting by private long-term care insurance companies, the offsetting factors of adverse and advantageous selection, and the role of Medicaid as a safety-net program for low-income individuals which makes them less likely to purchase private long-term care insurance. Each of these factors has been cited in research as a possible reason for a lack of evidence of adverse selection.

For the CLASS program, the impact of adverse selection becomes more acute because there is no risk underwriting in this federal program. We treat the availability of this new federal program in much the same manner as the general Medicare program. Individuals are eligible to receive benefits as long as they have contributed for the required length of time, and the level of

contribution is not determined by personal health factors. While participants must be attached to the workforce and contribute to the program for five years before becoming eligible for benefits, neither of these requirements can completely eliminate the effect of adverse selection.

While we can expect some amount of advantageous selection would partially offset this risk, we also now have to consider the impact of the private long-term care insurance market. That market could potentially “cherry-pick” the low risk individuals, thus exacerbating the impact of adverse selection in the program. Finally, we believe there are likely a number of individuals who desire this form of insurance but are unable to purchase it due to lack of affordability in the private market. We believe this pent-up demand could also increase the potential impact of adverse selection in the program relative to the current private LTC insurance market.

In order to estimate the role of adverse selection in the program, we first developed an estimate of the number of people by age that will develop a severe disability over the next five years. Next, for a given rate of assumed overall participation in the program, we compared the number of people that we assumed would enroll in the program against the total estimated incidence of disability for the entire eligible population over the next five years. Under a pure adverse selection scenario, people who would develop a severe disability over the next five years would all enroll in the program, which we termed “perfect knowledge”. To calculate the impact of this “perfect knowledge” scenario, we created alternate incidence rates using the individuals who develop a severe disability over the next five years in the numerator and the estimated enrollment in the program (which we calculated separately) in the denominator. As the total estimated enrollment increases, the alternate incidence rate declines until it reaches the overall population incidence rate for a program enrollment of 100 percent.

To address the unlikely nature of “perfect knowledge”, we dampened these alternate incidence rates downward to account for a portion of the population that would not have “perfect knowledge”, but would instead represent the overall average incidence rate. We also changed this dampening factor over time, to account for the likely pent-up demand in the early years of this new social program. For the first enrollment group, we assume the impact of adverse selection will be the greatest, with an initial weight of 75 percent towards the “perfect knowledge” incidence and 25 percent towards average incidence. This weighting declines for the first enrollment group over time as the effect of the initial pent-up demand wanes. For subsequent enrollment groups, we assume the impact of adverse selection will be muted but still present given the nature of the CLASS program.

Finally, we vary the starting impact of adverse selection based on a number of variables associated with earnings and work requirements for the program. Based on an analysis of the ACS, we determined that there is a higher prevalence of modest disability with lower-wage workers. If the earnings requirement is raised, it is possible that the initial impact of adverse selection on the overall CLASS program would be reduced. Therefore, we lower the starting weight for the “perfect knowledge” situation for higher levels of earnings requirement. Similar to the overall adverse selection calculations, this impact is also dampened for estimates of future enrollment groups.

Our baseline estimates do not make any adjustment to continuance rates based on program enrollment. In other words, we assume the average disabled person in the CLASS program will remain disabled for the same length of time as the average disabled person who is not enrolled in the CLASS program. If one of the results of adverse selection is not only a higher incident rate but also a higher continuance rate, the program could cost even more than our model currently estimates.

## Section VII: Estimating the Medicaid Impact

One of our key underlying policy assumptions for the LTC-PS is that the CLASS program would provide benefits for eligible participants before Medicaid payments. Effectively Medicaid would remain a “payer of last resort”. As such, we needed to create estimates of current spending estimates by Medicaid for the population in question (the baseline), how this spending would be impacted by CLASS policy options, and how many CLASS enrollees would otherwise have Medicaid as their primary payer of long-term care services. The following describes the steps we undertook to estimate the impact of policy choices on Medicaid spending.

- 1. Determining Medicaid Utilization.** For the baseline estimates, we first estimated the number of people receiving Medicaid payment for care provided in either a nursing home or home and community-based setting. We began with information in both SIPP and NNHS. Each of these surveys has information on the source of payment for any care received. We utilized this detail from the surveys to estimate the percentage of people with severe disabilities in each setting that had Medicaid as a payer. According to the surveys, approximately 61 percent of the disabled population residing in a nursing home and 7 percent of the disabled population residing in the community and receiving paid help had Medicaid as a payer. Using these rates, we calculated that nearly 0.9 million nursing home residents with a severe disability and 0.5 million persons with a severe disability living in the community were receiving help for their disability and had Medicaid as a primary payer.

While we were fairly comfortable with the nursing home estimate, we believed the community estimate was too low. Specifically, we felt that due to the nature of the paid help question in SIPP—a potential response to the survey question “Who is the primary provider of assistance with your disability?”—respondents were likely reporting family members. It is possible that they were also receiving paid help from the Medicaid program via either Medicaid home health or personal care services, or a Home and Community Based Services (HCBS) Medicaid waiver program, but not reporting this care due to the nature of the survey question.

To address the apparent underreporting of Medicaid utilization, we referenced the total estimated population receiving Medicaid home and community based services as published by the Kaiser Commission on Medicaid and the Uninsured. Using the same base year as the SIPP data (2004), Kaiser reported an estimated 2.7 million individuals received home-based care from Medicaid at some point during the year. To adjust this figure to represent a single point-in-time estimate comparable to the data from SIPP as well as remove any non-disabled individuals who qualify for Medicaid home care via

alternate mechanisms, we applied a ratio slightly higher than the average relationship between Kaiser-estimated rates of average monthly Medicaid enrollment in June 2004 and total Medicaid enrollment in all of 2004. This ratio is approximately 71 percent, which if applied directly to the Medicaid home-based care recipient estimate of 2.7 million would still overestimate for purposes of the Model. That's because some individuals could qualify for Medicaid home-based care and not qualify for community care in the Model. We removed an additional 5 percent to account for these individuals, leaving an estimated 1.8 million persons receiving home-based care paid for by Medicaid. We therefore inflated our initial estimates of 0.5 million persons with a severe disability in the community to 1.8 million.

We then re-calculated the ratio of Medicaid beneficiaries to total beneficiaries for the community setting, resulting in a revised estimate of 26 percent of persons with a disability residing in the community who receive paid help for their disabilities from Medicaid.<sup>3</sup> We applied this revised community estimate along with the nursing home estimate of 61 percent to each year's estimated disabled population in each setting to calculate the number of individuals with a disability in any given year at any given age who would be receiving Medicaid-financed assistance with their disability.

- 2. Determining Medicaid Spending.** After creating estimates of the size of each Medicaid population, we also needed to determine the average per capita Medicaid spending for these residents. This estimate of Medicaid costs allows us to determine the potential for savings to Medicaid from the implementation of this federally run, long-term care insurance program.

Having previously determined the size of the Medicaid population in each setting, we constructed a national average cost for these patients. For nursing home patients, we combined data from *A Report on Shortfalls in Medicaid Funding for Nursing Home Care, October 2008*, published by the American Health Care Association (AHCA) and adjusted this data to match the total estimated spending by Medicaid in nursing homes as published by the National Health Expenditures (NHE). In the nursing home setting, we assumed the per diem is equal to the national average per diem (approximately \$125 per day in 2010). For the community setting, we utilized data published in the same Kaiser report we used to develop the estimated size of this population. This report estimates 2006 annual Medicaid payments for an individual receiving home care was \$13,320. We adjusted this community setting data to 2010 rates using the growth in nominal wages as published by the BLS from 2006 to 2010.

Once we determined the average Medicaid spending per person, we were able to develop an estimate of total Medicaid spending for the population with severe disabilities included in the Model. For purposes of calculating Medicaid savings in the Model, we estimated the portion of the baseline applicable to participants in the specific scenario

---

<sup>3</sup> Johnson and Weiner, using the 2002 HRS, found approximately 27 percent of older people with severe disabilities were Medicaid eligible, and approximately 35 percent of older people with severe disabilities received paid home care.

(adjusted for the low-income subsidy interaction described previously)<sup>4</sup>. Since the CLASS program offers a cash benefit, we calculated the difference between expected Medicaid spending on the beneficiary and cash payments from the program. If expected Medicaid spending was higher than the cash payment, the Medicaid savings equaled the amount of cash paid, and if expected spending was lower than the cash payment, the Medicaid savings equaled total estimated Medicaid spending. We did not allow for a “personal care allowance” portion of the cash payment in the Model.

- 3. Estimating Medicaid participation for CLASS enrollees:** The final step in estimating the impact of the CLASS program on Medicaid spending is to estimate the number of CLASS enrollees who would have had Medicaid payment for their long-term care needs. To estimate this group, we worked with Medicaid experts to determine the relationship between the low-income subsidy, premium amount, and participation of future Medicaid enrollees. The basic relationship worked as follows: participation of individuals who would otherwise be eligible for Medicaid was higher for more generous low-income subsidies and lower premiums. We constructed a matrix of participation based on input from these Medicaid experts, shown in Exhibit 2.

**Exhibit 2: Low-income subsidy and premium interaction matrix**

		Low-income Subsidy		
		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%

### Section VIII: Limitations

Due to the significant number of disparate data sets and assumptions used to create the LTC-PS, there are a number of limitations regarding the analysis. Beyond the issues already highlighted in this paper, we note the following points:

- **Disability estimates.** Throughout the course of creating the Model, the single biggest issue we encountered was the lack of consistent estimates regarding the number of individuals with severe disabilities. Many of the data sets we examined had different ways of measuring disability, which in turn led to different estimates of total prevalence. In addition, there is no single data set that has information containing incidence and continuance of disability, the key measures needed for the Model. In order to develop

<sup>4</sup> As further explained in section VIII, we did not make any assumptions about delayed entry into Medicaid as a result of the program. If a participant in the Avalere LTC Model was estimated to have Medicaid as a payer, we assumed that person would continue to qualify for Medicaid benefits despite receiving benefits from the new federally run, long-term care insurance program.



the Model, we combined four data sets, which could have created certain biases in our parameters.

- **Adverse selection.** Another inherently complex estimation centers on the level of adverse selection. There is considerable debate among researchers regarding the magnitude of adverse selection and its impact on expected costs of a long-term care insurance program. We followed what we believe to be fairly standard actuarial assumptions regarding the magnitude of adverse selection, but acknowledge that different analysts could reach different conclusions.
- **Medicaid interactions.** One of the assumptions regarding potential Medicaid savings we used in our model is that the introduction of the new program will not lead to a delay of Medicaid eligibility for any individual. Most states set Medicaid eligibility partly based on income and assets, and the introduction of a long-term care insurance program could delay people from having to use personal savings to pay for this care. Therefore, the program could result in delayed eligibility for Medicaid, leading to higher savings. However, given the complexity of the interactions between income, assets, and Medicaid eligibility, we chose not to address this issue. We instead assumed any individual who would qualify for Medicaid without the long-term care insurance program would continue to qualify with the program.

## Appendix 1: Data sources

To construct this model, we used the following data sources:

- 2004 Survey of Income and Program Participation (SIPP) Wave 5
- 2004 National Nursing Home Survey (NNHS)
- Society of Actuaries (SOA) Individual Disability Experience Commission (IDEC) Incidence and Continuance Tables
- Disability Transition Matrices as constructed by Eric Stallard, Robert Yee, and Ken Manton from the National Long Term Care Survey (NLTC)
- Social Security Trustees Report population estimates for 2000-2085
- Social Security Administration Life Tables
- Social Security Administration Estimated Number of Fully Insured Workers
- 2008 American Community Survey (ACS)
- 2008 Census Bureau Current Population Survey (CPS) Annual Social and Economic Supplement (ASEC)
- Long-Term Economic Projections from the Congressional Budget Office (CBO)
- Center for Medicare and Medicaid, Office of the Actuary *National Health Expenditures*
- 2008 MetLife Mature Market Institute *The MetLife Market Survey of Nursing Home and Assisted Living Costs*
- 2008 MetLife Mature Market Institute *The MetLife Market Survey of Adult Day Services and Home Care Costs*
- 2009 LifePlans Inc. *Cognitive and Functional Disability Trends for Assisted Living Facility Residents*
- 2009 Kaiser Commission on Medicaid and the Uninsured *Medicaid Home and Community-Based Service Programs: Data Update*

## Appendix 2: Description of key data sources

Of the data sources listed in Appendix 1, there are four that provided the inputs to allow us to construct our incidence, prevalence, and continuance factors that are key to the Model. We describe each of these data sources in greater detail below.

### 2004 Survey of Income and Program Participation (SIPP), Wave 5

- **Use in the Avalere LTC Model:** SIPP provided estimates of prevalence of disability in the community setting, as well as Medicaid coverage and amount of paid help
- **Source:** US Census Bureau
- **Design:** Annual survey of 14,000 to 36,700 households
- **Demographics:** U.S. civilian noninstitutionalized population over the age of 15
- **Measuring disability:** To construct our estimates of severe disability, we relied on the following data in SIPP:
  - Count of activities of daily living (ADL) that the person needs the help of another person. ADLs include transfer, bathing, dressing, walking, eating, and toileting.

- We included an individual under cognitive impairment if they were not included under the ADL definition and SIPP indicated they had “Alzheimer’s disease or any other serious problem with confusion or forgetfulness”.
- We included an individual under mental retardation/development disability if they were not included under the ADL definition or the cognitive impairment definition and SIPP indicated the person had a mental retardation or a developmental disability such as autism or cerebral palsy.

### **2004 National Nursing Home Survey (NNHS)**

- **Use in the Avalere LTC Model:** NNHS provided estimates of prevalence of disability in the nursing home setting
- **Source:** US Centers for Disease Control
- **Design:** Survey conducted every 5 years of 1,174 nationally representative nursing homes
- **Demographics:** All current residents of US nursing homes
- **Measuring disability:** To construct our estimates of severe disability, we relied on the following data in NNHS:
  - Count of activities of daily living (ADL) that the person needs limited, extensive, or total assistance. ADLs include transfer, bathing, dressing, walking, eating, and toileting.
  - We included an individual under cognitive impairment if they were not included under the ADL definition and NNHS indicated the person was either in specialty unit within the nursing home dedicated to Alzheimer’s disease or dementia or if the person had an impaired decision making ability.
  - We included an individual under mental retardation/development disability if they were not included under the ADL definition or the cognitive impairment definition and NNHS indicated the person was either directly admitted to the nursing home from an intermediate care facility for the mentally retarded (ICF/MR) or the person was in a specialty unit within the nursing home dedicated to MR/DD.

### **Society of Actuaries (SOA) Individual Disability Experience Commission (IDEC)**

- **Use in the Avalere LTC Model:** We used the IDEC tables to construct disability continuance estimates for the under-65 population
- **Source:** Society of Actuaries
- **Design:** Claim incidence and termination study of twelve individual disability income carriers. Claim experience used in analysis covers 1990-1999 time period.
- **Demographics:** Covered lives from twelve long-term care insurance carriers, representing approximately 64% of the US individual disability income market in 1995.
- **Notes on IDEC:** The IDEC tables are presented in spreadsheet format, which allow users to select key variables concerning the population in question, including age, gender, occupation, type and nature of disability, and any elimination period. Once a user selects these options, the Model provides estimated continuance rates until the person reaches the age of 65. We gathered these continuance rates for each age

between 18 and 65 and each gender, allowing for any type of severe disability, requiring a 90-day elimination period (to exclude any short-term disabilities), and setting occupation to a equal mix of class 1 (white collar, professional, executive occupation) and class 2 (supervisory and other skilled clerical and skilled technical people). We then created a single continuance estimate for each age by weighting the output by the overall population.

### **National Long-Term Care Survey (NLTC)**

- **Use in the Avalere LTC Model:** We used transition matrices prepared by Eric Stallard, Robert Yee, and Ken Manton using different waves of the NLTC to construct disability continuance estimates for the over-65 population
- **Source:** NLTC is administered by the US Census Bureau and published by the National Institute of Aging and Duke University
- **Design:** The NLTC is a longitudinal survey that tracks the same individuals every 5 years to determine health and functional status, health expenditures, Medicare service use, and the availability of personal, family and community resources for care giving.
- **Demographics:** NLTC surveys a sample of over 35,000 US residents over the age of 65. As individuals in any survey drop from the sample due to mortality, NLTC replaces with new individuals.
- **Notes on NLTC:** Stallard, Yee and Manton have prepared a series of analyses using the subsequent waves of the NLTC to estimate disability incidence, prevalence, and continuance. The continuance estimates are largely presented by the authors as transition matrices, which we have used in the Model to construct overall continuance estimates.

**References:**

*Public Health Service Act*, 42 U.S.C. 201

Cohen, M.A., Shi, X., and Miller, J.S. 2009. *Cognitive and Functional Disability Trends for Assisted Living Facility Residents*. Society of Actuaries.

Stallard, E. 2008. *Estimates of the Incidence, Prevalence, Duration, Intensity and Cost of Chronic Disability among the U.S. Elderly*. Society of Actuaries.

Manton, K.G., Corder, L.S., and Stallard, E. 1993. "Estimates of Change in Chronic Disability and Institutional Incidence and Prevalence Rates in the U.S. Elderly Population From the 1982, 1984, and 1989 National Long Term Care Survey." *Journal of Gerontology: Social Sciences* 8(4): S153-66.

Kemper, P., Komisar, H.L., and Alexcih, L. 2005. "Long-Term Care Over an Uncertain Future: What Can Current Retirees Expect?" *Journal of Inquiry* 42: 335-350.

Wang, H., Zhang, L., Yip, W., and Hsiao, W. 2006. "Adverse selection in a voluntary Rural Mutual Health Care health insurance scheme in China". *Social Science and Medicine* 63: 1236-1245.

De Donder, P., and Hindriks, J. 2008. "Adverse selection, moral hazard and propitious selection". *Journal of Risk and Uncertainty* 38(1): 73-86.

Belli, P. Year. *How Adverse Selection Affects the Health Insurance Market*. Harvard School of Public Health.

American Health Insurance Plans. 2007 *Who Buys Long-Term Care Insurance: A 15-year Study of Buyers and Non-Buyers, 1990-2005*.

Burman, L.E., and Johnson, R.W. 2007. *A Proposal to Finance Long-Term Care Services Through Medicare With an Income Tax Surcharge*. Working Paper No. 8, Georgetown University Long-Term Care Financing Project.

Manton, K.G., Corder, L., and Stallard, E. 1997. *Chronic disability trends in elderly United States populations: 1982-1994*. *Proceedings of the National Academy of Sciences* 94: 2593-98.

American Academy of Actuaries. 1999. *Long-term Care: Actuarial Issues in Designing Voluntary Federal-Private LTC Insurance Programs*. Public Policy Monograph.

Social Security Administration. 2008. *Characteristics of Disabled-Worker Beneficiaries Receiving Workers' Compensation or Public Disability Benefits Compared With Disabled-Worker Beneficiaries Without These Additional Benefits*. Office of Policy: Office of Disability and Income Assistance Policy. Research and Statistics Note No. 2008-01.

Oster, E., Shoulson, I., Quiad, K., and Dorsey, E.R. 2009. *Genetic Adverse Selection: Evidence From Long-Term Care Insurance and Huntington Disease*. National Bureau of Economic Research: Working Paper 15326.

Stallard, E., and Yee, R.K.W. 1999. *Non-Insured Home and Community-Based Long-Term Care Incidence and Continuance Tables*. Prepared for the Non-Insured Home and Community Experience Subcommittee of the Long-Term Care Experience Committee.

Rupp, K., Davies, P.S., and Strand, A. 2008. *Disability Benefit Coverage and Program Interactions in the Working-Age Population*. Social Security Bulletin: Vol 68, No. 1.

Spillman, B.C. 2005. *Assistive Device Use Among the Elderly: Trends, Characteristics of Users, and Implications for Modeling*. Prepared for Office of Disability, Aging and Long-Term Care Policy, Office of the Assistant Secretary for Planning and Evaluation, U.S. Department of Health and Human Services. Contract #HHS-100-97-0010.

Fang, H., Keane, M.P., and Silverman, D. 2008. "Sources of Advantageous Selection: Evidence from the Medigap Insurance Market". *Journal of Political Economy* 116(2): 303-350.

Miller, J.S., Shi, X., and Cohen, M.A. 2008. *Private Long-Term Care Insurance: Following an Admission Cohort over 28 Months to Track Claim Experience, Service Use and Transitions*. Prepared for Office of Disability, Aging and Long-Term Care Policy, Office of the Assistant Secretary for Planning and Evaluation, U.S. Department of Health and Human Services. Contract #HHS-100-02-0014.

Spillman, B.C. 2005. *The Impact of Disability Trends on Medicare Spending*. Prepared for Office of Disability, Aging and Long-Term Care Policy, Office of the Assistant Secretary for Planning and Evaluation, U.S. Department of Health and Human Services. Contract #HHS-100-97-0010.

Greene, V.L., Lovely, M.E., Miller, M.D., and Ondrich, J.I. 1995. "Reducing Nursing Home Use Through Community Long-Term Care: An Optimization Analysis." *Journal of Gerontology: Social Sciences* 50B(4): S259-268.

Purushotham, M. and Muise, N. 2006. *Long-Term Care Insurance Persistency Experience*. LIMRA International and Society of Actuaries.

Davey, A., Femia, E.E., Zarit, S.H., Shea, D.G., Sundstrom, G., Berg, S., Smyer, M.A., and Savla, J. 2005. "Life on the Edge: Patterns of Formal and Informal Help to Older Adults in the United States and Sweden". *Journal of Gerontology: Social Sciences* 60B(5): S281-288.

Freedman, V.A., Crimmins, E., Schoeni, R.F., Spillman, B.C., Aykan, H., Kramarow, E., Land, K., Lubitz, J., Manton, K., Martin, L.G., Shinberg, D., and Waidmann, T. 2004. "Resolving Inconsistencies in Trends in Old-Age Disability: Report from the Technical Working Group". *Demography* 41(3): 417-441.

Finkelstein, A., and McGarry, K. 2006. "Multiple Dimensions of Private Information: Evidence from the Long-Term Care Insurance Market". *The American Economic Review* 96(4): 938-958.

Murtaugh, C.M., and Litke, A., 2002. "Transitions Through Postacute and Long-Term Care Settings: Patterns of Use and Outcomes for a National Cohort of Elders." *Medical Care* 40(3): 227-236.

Brown, J.R., and Finkelstein, A. 2008. "The Interaction of Public and Private Insurance: Medicaid and the Long-Term Care Insurance Market." *The American Economic Review* 93(3): 1083-1102.

McNeil, J.M. 2000. *Employment, Earnings, and Disability*. Prepared for the 75<sup>th</sup> Annual Conference of the Western Economic Association International.

EIJay, LLC. 2008. *A Report on Shortfalls in Medicaid Funding for Nursing Home Care*. Prepared for the American Health Care Association.

Kaiser Commission on Medicaid and the Uninsured. 2009. *Medicaid Home and Community-Based Service Programs: Data Update*. Issue Paper #7720-03.

Mollica, R.L. 2009. *State Medicaid Reimbursement Policies and Practices in Assisted Living*. Prepared for the National Center for Assisted Living and the American Health Care Association.

*2009 Overview of Assisted Living*. A collaborative research project of the American Association of Homes and Services for the Aging; American Seniors Housing Association; Assisted Living Foundation of America; National Center for Assisted Living; and National Investment Center for the Seniors Housing and Care Industry.

*The MetLife Market Survey of Adult Day Services & Home Care Costs: 2008*. MetLife Mature Market Institute.

*The MetLife Market Survey of Nursing Home & Assisted Living Costs: 2008*. MetLife Mature Market Institute.

# **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](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](mailto:webmaster.DALTCP@hhs.gov).*

## Files Available for This Report

Main Report	[48 PDF pages]
	<a href="http://aspe.hhs.gov/daltcp/reports/2011/class/index.shtml">http://aspe.hhs.gov/daltcp/reports/2011/class/index.shtml</a> <a href="http://aspe.hhs.gov/daltcp/reports/2011/class/index.pdf">http://aspe.hhs.gov/daltcp/reports/2011/class/index.pdf</a>
APPENDIX A: Key Provisions of Title VIII of the ACA, Which Establishes the CLASS Program	[6 PDF pages]
	<a href="http://aspe.hhs.gov/daltcp/reports/2011/class/appA.htm">http://aspe.hhs.gov/daltcp/reports/2011/class/appA.htm</a> <a href="http://aspe.hhs.gov/daltcp/reports/2011/class/appA.pdf">http://aspe.hhs.gov/daltcp/reports/2011/class/appA.pdf</a>
APPENDIX B: HHS Letters to Congress About Intent to Create Independent CLASS Office	[11 PDF pages]
	<a href="http://aspe.hhs.gov/daltcp/reports/2011/class/appB.htm">http://aspe.hhs.gov/daltcp/reports/2011/class/appB.htm</a> <a href="http://aspe.hhs.gov/daltcp/reports/2011/class/appB.pdf">http://aspe.hhs.gov/daltcp/reports/2011/class/appB.pdf</a>
APPENDIX C: <u>Federal Register</u> Announcement Establishing CLASS Office	[2 PDF pages]
	<a href="http://aspe.hhs.gov/daltcp/reports/2011/class/appC.htm">http://aspe.hhs.gov/daltcp/reports/2011/class/appC.htm</a> <a href="http://aspe.hhs.gov/daltcp/reports/2011/class/appC.pdf">http://aspe.hhs.gov/daltcp/reports/2011/class/appC.pdf</a>
APPENDIX D: CLASS Office Organizational Chart	[2 PDF pages]
	<a href="http://aspe.hhs.gov/daltcp/reports/2011/class/appD.htm">http://aspe.hhs.gov/daltcp/reports/2011/class/appD.htm</a> <a href="http://aspe.hhs.gov/daltcp/reports/2011/class/appD.pdf">http://aspe.hhs.gov/daltcp/reports/2011/class/appD.pdf</a>
APPENDIX E: CLASS Process Flow Chart	[2 PDF pages]
	<a href="http://aspe.hhs.gov/daltcp/reports/2011/class/appE.htm">http://aspe.hhs.gov/daltcp/reports/2011/class/appE.htm</a> <a href="http://aspe.hhs.gov/daltcp/reports/2011/class/appE.pdf">http://aspe.hhs.gov/daltcp/reports/2011/class/appE.pdf</a>
APPENDIX F: <u>Federal Register</u> Announcement for CLASS Independence Advisory Council	[3 PDF pages]
	<a href="http://aspe.hhs.gov/daltcp/reports/2011/class/appF.htm">http://aspe.hhs.gov/daltcp/reports/2011/class/appF.htm</a> <a href="http://aspe.hhs.gov/daltcp/reports/2011/class/appF.pdf">http://aspe.hhs.gov/daltcp/reports/2011/class/appF.pdf</a>
APPENDIX G: Personal Care Attendants Workforce Advisory Panel and List of Members	[6 PDF pages]
Full Appendix	<a href="http://aspe.hhs.gov/daltcp/reports/2011/class/appG.htm">http://aspe.hhs.gov/daltcp/reports/2011/class/appG.htm</a> <a href="http://aspe.hhs.gov/daltcp/reports/2011/class/appG.pdf">http://aspe.hhs.gov/daltcp/reports/2011/class/appG.pdf</a>
Ga: <u>Federal Register</u> Announcement for Personal Care Attendants Workforce Advisory Panel	<a href="http://aspe.hhs.gov/daltcp/reports/2011/class/appGa.pdf">http://aspe.hhs.gov/daltcp/reports/2011/class/appGa.pdf</a>
Gb: Advisory Panel List of Members	<a href="http://aspe.hhs.gov/daltcp/reports/2011/class/appGb.pdf">http://aspe.hhs.gov/daltcp/reports/2011/class/appGb.pdf</a>



APPENDIX H: Policy Papers Discussed by the LTC Work Group	[36 PDF pages]
	<a href="http://aspe.hhs.gov/daltcp/reports/2011/class/appH.htm">http://aspe.hhs.gov/daltcp/reports/2011/class/appH.htm</a>
	<a href="http://aspe.hhs.gov/daltcp/reports/2011/class/appH.pdf">http://aspe.hhs.gov/daltcp/reports/2011/class/appH.pdf</a>
APPENDIX I: CLASS Administration Systems Analysis and RFI	[10 PDF pages]
	<a href="http://aspe.hhs.gov/daltcp/reports/2011/class/appI.htm">http://aspe.hhs.gov/daltcp/reports/2011/class/appI.htm</a>
	<a href="http://aspe.hhs.gov/daltcp/reports/2011/class/appI.pdf">http://aspe.hhs.gov/daltcp/reports/2011/class/appI.pdf</a>
APPENDIX J: Additional Analyses for Early Policy Analysis	[150 PDF pages]
Full Appendix	<a href="http://aspe.hhs.gov/daltcp/reports/2011/class/appJ.htm">http://aspe.hhs.gov/daltcp/reports/2011/class/appJ.htm</a>
	<a href="http://aspe.hhs.gov/daltcp/reports/2011/class/appJ.pdf">http://aspe.hhs.gov/daltcp/reports/2011/class/appJ.pdf</a>
Ja: A Profile of Declined Long-Term Care Insurance Applicants	<a href="http://aspe.hhs.gov/daltcp/reports/2011/class/appJa.pdf">http://aspe.hhs.gov/daltcp/reports/2011/class/appJa.pdf</a>
Jb: CLASS Program Benefit Triggers and Cognitive Impairment	<a href="http://aspe.hhs.gov/daltcp/reports/2011/class/appJb.pdf">http://aspe.hhs.gov/daltcp/reports/2011/class/appJb.pdf</a>
Jc: Strategic Analysis of HHS Entry into the Long-Term Care Insurance Market	<a href="http://aspe.hhs.gov/daltcp/reports/2011/class/appJc.pdf">http://aspe.hhs.gov/daltcp/reports/2011/class/appJc.pdf</a>
Jd: Managing a Cash Benefit Design in Long-Term Care Insurance	<a href="http://aspe.hhs.gov/daltcp/reports/2011/class/appJd.pdf">http://aspe.hhs.gov/daltcp/reports/2011/class/appJd.pdf</a>
APPENDIX K: Early Meetings with Stakeholders	[4 PDF pages]
	<a href="http://aspe.hhs.gov/daltcp/reports/2011/class/appK.htm">http://aspe.hhs.gov/daltcp/reports/2011/class/appK.htm</a>
	<a href="http://aspe.hhs.gov/daltcp/reports/2011/class/appK.pdf">http://aspe.hhs.gov/daltcp/reports/2011/class/appK.pdf</a>
APPENDIX L: In-Depth Description of ARC Model	[62 PDF pages]
	<a href="http://aspe.hhs.gov/daltcp/reports/2011/class/appL.htm">http://aspe.hhs.gov/daltcp/reports/2011/class/appL.htm</a>
	<a href="http://aspe.hhs.gov/daltcp/reports/2011/class/appL.pdf">http://aspe.hhs.gov/daltcp/reports/2011/class/appL.pdf</a>
APPENDIX M: In-Depth Description of Avalere Health Model	[23 PDF pages]
	<a href="http://aspe.hhs.gov/daltcp/reports/2011/class/appM.htm">http://aspe.hhs.gov/daltcp/reports/2011/class/appM.htm</a>
	<a href="http://aspe.hhs.gov/daltcp/reports/2011/class/appM.pdf">http://aspe.hhs.gov/daltcp/reports/2011/class/appM.pdf</a>
APPENDIX N: September 22, 2010 Technical Experts Meeting	[37 PDF pages]
Full Appendix	<a href="http://aspe.hhs.gov/daltcp/reports/2011/class/appN.htm">http://aspe.hhs.gov/daltcp/reports/2011/class/appN.htm</a>
	<a href="http://aspe.hhs.gov/daltcp/reports/2011/class/appN.pdf">http://aspe.hhs.gov/daltcp/reports/2011/class/appN.pdf</a>
Na: Agenda, List of Participants, and Speaker Bios	<a href="http://aspe.hhs.gov/daltcp/reports/2011/class/appNa.pdf">http://aspe.hhs.gov/daltcp/reports/2011/class/appNa.pdf</a>
Nb: Presentation Entitled "Actuarial Research Corporation's Long Term Care Insurance Model"	<a href="http://aspe.hhs.gov/daltcp/reports/2011/class/appNb.pdf">http://aspe.hhs.gov/daltcp/reports/2011/class/appNb.pdf</a>
Nc: Presentation Entitled "The Long-Term Care Policy Simulator Model"	<a href="http://aspe.hhs.gov/daltcp/reports/2011/class/appNc.pdf">http://aspe.hhs.gov/daltcp/reports/2011/class/appNc.pdf</a>
Nd: Presentation Entitled "Comments on 'The Long-Term Care Policy Simulator Model'"	<a href="http://aspe.hhs.gov/daltcp/reports/2011/class/appNd.pdf">http://aspe.hhs.gov/daltcp/reports/2011/class/appNd.pdf</a>
APPENDIX O: Actuarial Report on the Development of CLASS Benefit Plans	[47 PDF pages]
	<a href="http://aspe.hhs.gov/daltcp/reports/2011/class/appO.htm">http://aspe.hhs.gov/daltcp/reports/2011/class/appO.htm</a>
	<a href="http://aspe.hhs.gov/daltcp/reports/2011/class/appO.pdf">http://aspe.hhs.gov/daltcp/reports/2011/class/appO.pdf</a>

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

[46 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.htm>

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