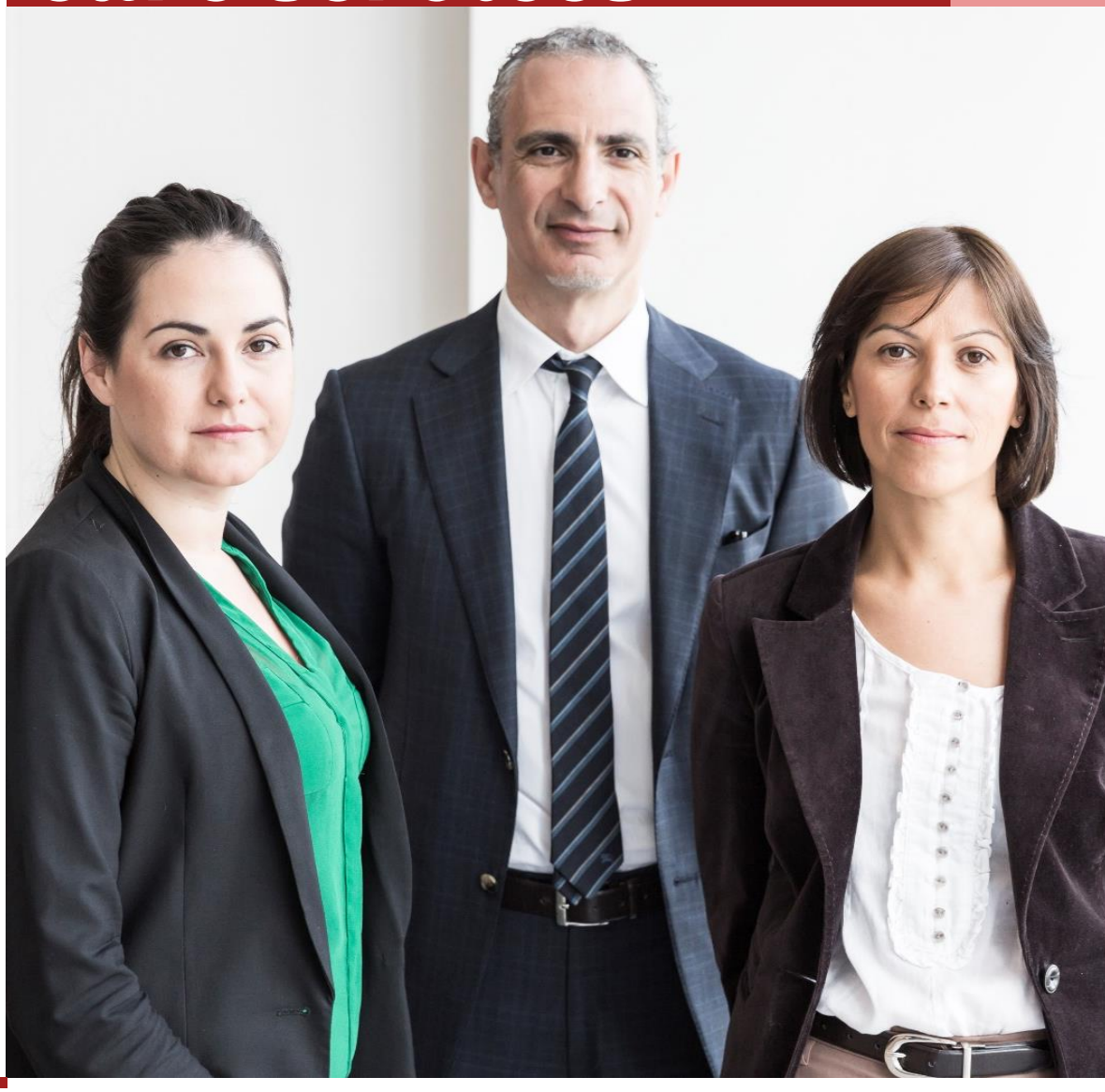
Formal cost of long-term care services

How can society meet a growing need?



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Executive summary

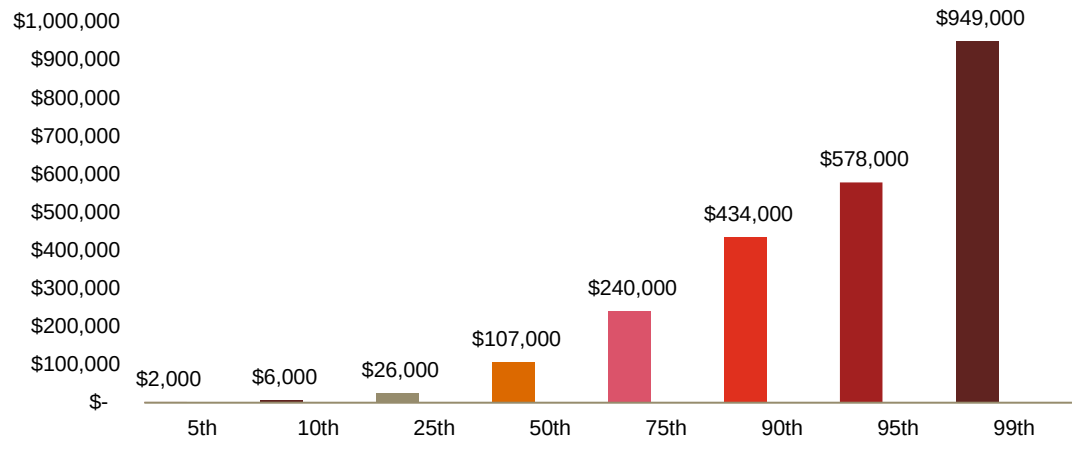
As the aged population in the US continues to grow, insurers, policymakers, and consumers need to seriously consider how to plan for and manage increasing long-term care needs. The costs of long-term care are significant and long-term care insurance remains a useful product that meets a real need. However, consumers often do not understand long-term care costs and insurers don't always offer products that meet their needs.

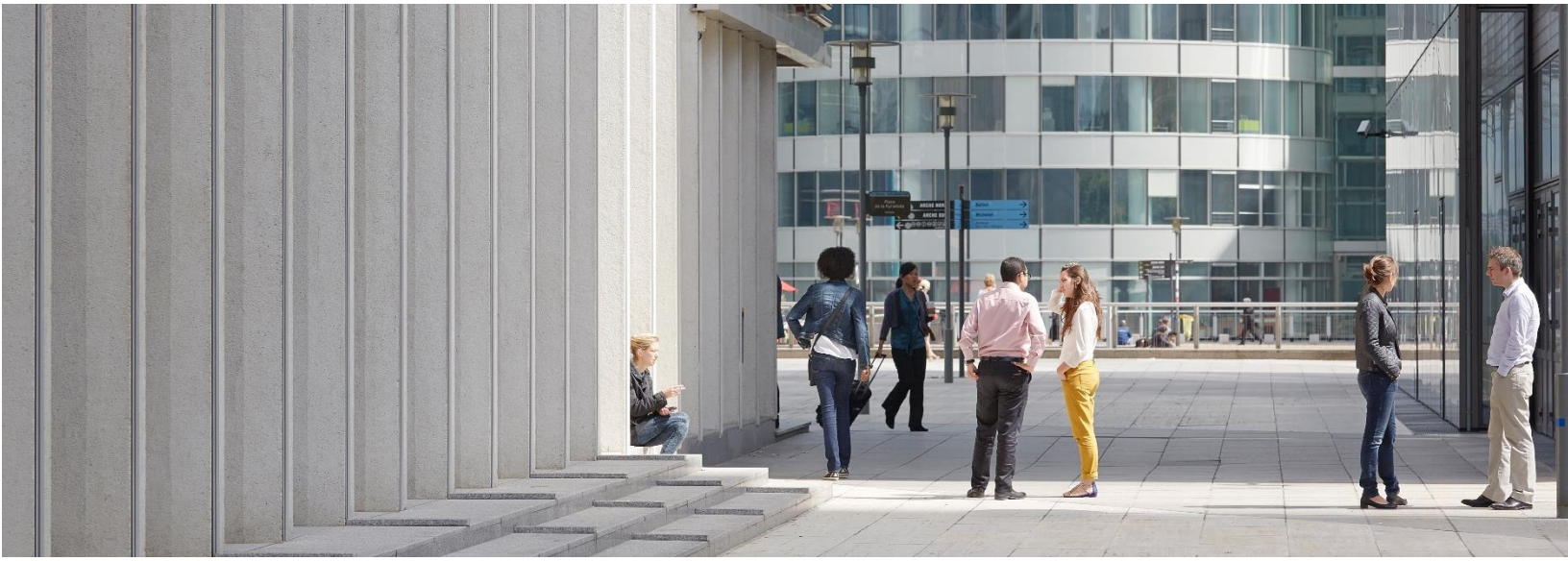
The need for long-term care services is a major issue for aging Americans and their families. Although many people know that they may need long-term care services as they age, few Americans are knowledgeable about the costs of long-term care services, which will depend on a number of factors including the disabling condition and the fees charged by service providers. Prior research studies generally have not determined the lifetime cost of long-term care based on actual payment data. In order to gain a deeper insight into the cost of long-term care, PwC recently conducted a study of data from eight long-term care insurance carriers. We analyzed claims data of over 200,000 users of LTC services to determine the nature of long-term care costs.

Our results can be helpful for individuals to make a more informed decision regarding funding of long-term care services. With the findings from this report, insurance companies may enhance their product offerings to better align with consumers' level of risk tolerance. Our results can also assist policymakers to design meaningful public funding for long-term care.

Based on our research, we estimate that the current average lifetime cost of long-term care is $172,000. This amount includes all paid services and excludes informal care. This average cost will include all costs associated with expected care for a person whose level of disability is consistent with dependence in at least two activities of daily living or has a cognitive impairment. If a person has LTC insurance, this cost would include not only the insurance claim payments but also costs of care during any deductible periods and above any policy maximum limits. This average cost varies considerably by factors such as gender, type of service, cognitive status and geographical location. The expected costs at various percentiles are shown in Figure 1.

Figure 1 - Estimated Lifetime Costs of Care by Percentile





Background

While acute care deals with diseases, infections and injuries, long-term care provides assistance to elderly and disabled persons for functional or mental limitations due to chronic conditions. Long-term care encompasses a range of services that include personal and therapeutic care at home, community centers, and assisted living and nursing facilities. The level of care intensifies as a condition becomes more disabling. Home health aides, personal assistants, therapists and nurses perform the paid long-term care services. Family members, relatives, friends and neighbors generally provide unskilled services for free.

Medicaid and Medicare cover long-term care services. However, the income and asset qualifying thresholds for Medicaid restrict its access mostly to the poor and near-poor. It should be noted that much of Medicare coverage is intended for care following an acute medical episode rather than for a protracted chronic condition. Medicare limits its long-term care coverage to facility care for the first 100 days following a hospital confinement with copayments and intermittent skilled nursing and therapeutic care at home. Other than through these government programs, long-term care service costs are paid out-of-pocket or by private insurance.

There is more than a 50 percent chance that an individual at age 65 will eventually require some form of formal paid care over his or her lifetime.[i]

As an individual grows older, the likelihood of needing long-term care services increases. A number of studies estimate that there is more than a 50 percent chance that an individual at age 65 will eventually require some form of formal paid care over his or her lifetime.[i] This means the potential for long-term care should be a key consideration in retirement planning, and determining how much long-term care may cost can help individuals select the amount of long-term care insurance they need.

A rule of thumb is that financial planning should fund approximately three years of formal, long-term care[ii]. However, there is a relatively wide range of cost possibilities. Accordingly this report focuses on the distribution of costs in order for the readers to have a better appreciation of the potential true cost of long-term care.

We estimate that the current average lifetime cost of formal long-term care is ***$172,000***

Method

To our knowledge, there have not been any surveys to date about actual total spending of individuals needing long-term care. Such a survey would be time consuming because care periods can extend for many years. It would be challenging to accurately record actual expenditures over a potentially long time period for a cohort of individuals.[iii]

To estimate the cost of paid long-term care, PwC conducted a study using data from long-term care insurance claims. Insurance companies have been marketing long-term care insurance since the mid-1970s. Long-term care insurance policies cover facility care, home health care or a combination of both. Eligibility for benefits is generally based on the inability to perform activities of daily living (dressing, bathing, eating, transferring, toileting, continence, etc.) or the presence of a cognitive impairment (dementia, neurological disorder, etc.). Once benefit eligibility is established, benefit payments will commence after an elimination period is satisfied (many policies have a 90 day elimination period during which insurance will not pay and personal savings is needed to pay for care before insurance kicks in). The policy pays either a fixed amount or, more commonly, the actual charges up to a daily, weekly, or monthly maximum. Insurance coverage can be renewed indefinitely as long as premiums are paid. The maximum lifetime benefit is typically a period of time or a dollar amount. However, unlimited lifetime benefits are also available. As of December 31, 2015, there were approximately 7 million long-term care insurance policyholders, of which 270,000 were claimants.[iv]

The Society of Actuaries has periodically conducted inter-company experience studies for long-term care insurance. These studies examine various factors, including costs of claims over the years. The most recent study[v] covered 22 participating companies' experience from 2000 through 2011 and represented 80 percent of total policies in force. PwC reviewed summaries of data collected for the study and concluded that it is a reasonably good source of data to estimate the costs of long-term care. PwC requested and received data files submitted to that study from eight insurance companies, covering an estimated 72 percent of the current inforce population of the top 10 carriers.

PwC received data from the following eight insurance companies:

- CNA
- Genworth
- John Hancock
- MetLife
- New York Life
- Penn Treaty
- Prudential
- Transamerica

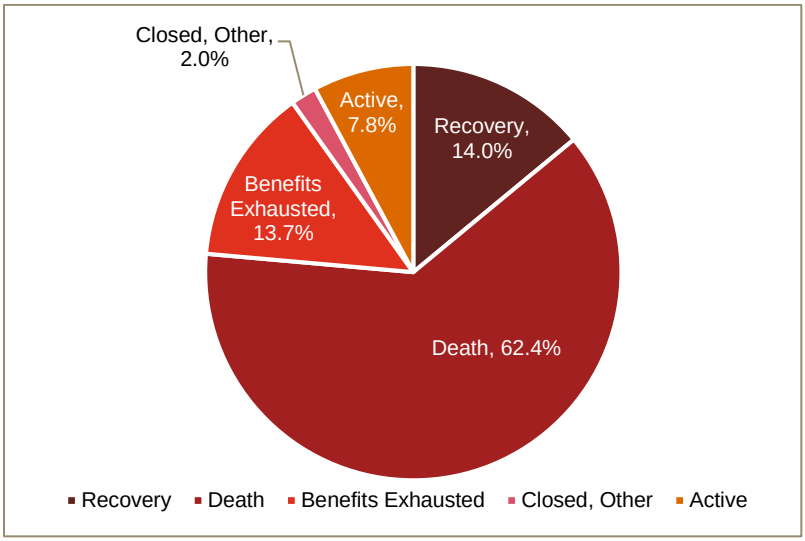
The final dataset of the study on which this report is based consists of 208,246 policies with 223,963 claims and $14.8 billion of total claim payments. Eight insurance companies covering an estimated 72 percent of the current inforce population from the top 10 carriers submitted data.

The data consisted of policy and claim information, and claim payment records from all participating companies. We also obtained additional data that was not in the original submission to the Society of Actuaries from some of the participating companies. The additional data included billed amounts for covered services, and residence state.

In order to ensure that the data from the eight companies are consistent with each other, PwC performed a series of data validation and trimming procedures, which resulted in a reduction of the number of claims in the study from the original data submissions. [vi] The final dataset consisted of 208,246 policies with 223,963 claims and $14.8 billion of claim payments. The dataset included claims that first commenced during calendar years 2000 through 2009 with payments made through 2013, 2014, or 2015 (depending on the company). The incurred date was supplied by the carriers, and, to the best of our knowledge, represented the date the claimant became benefit eligible, which was the beginning of the elimination period.

For claims that ended before the study end date, claim payments are tabulated until dates when the claimants die, recover, or their lifetime benefit maximum is exhausted. For claims that are still active at the study end date, claim payments are tabulated through that end date.

Figure 2 immediately below displays the distribution of the status of the claims at the study end date.



From the raw claim data, we made a series of adjustments to estimate the lifetime cost of paid care. We linked multiple claims from the same policyholder. We adjusted all claim payments to constant 2016 dollars. We estimated claim payments during the elimination period and the actual amounts spent in excess of the policy daily, weekly or monthly maximums. We estimated the future claim payments beyond the study end date for active claims and future claim payments for recovered claimants for claims that may occur in the future. Finally, we estimated the actual amounts spent in excess of the policy daily, weekly or monthly maximums. Descriptions of these adjustments are given below:

1. **Multiple Claims** – A policyholder can recover from a claim episode and then claim again later. In order to determine lifetime cost, all claims from a policyholder were combined to produce a lifetime estimate.

2. **Cost Inflation** – Benefit payments were made over a span of more than 10 years. To account for the cost of care inflation over that period, claim payments were inflated to 2016 using an annual inflation rate of 3.6% for facility care and 1.6% for home care. Thus, the long-term care costs in this study represent the cost of care in 2016 dollars. The inflation rates are derived from the respective Consumer Price Indices for facility care and home care.[vii]

3. **Elimination Period** – Since claims payments do not cover actual expenses incurred during the elimination period, an estimate was needed for such expenses. This estimate is the product of the number of days in the elimination period times the average claim payments over the first 30 days of payments.[viii]

4. **Uncompensated Expenses** – Policies reimburse actual charges incurred up to a daily, weekly or monthly maximum. To determine the actual expenses for care, we added an estimate of the amount of expenses not compensated by insurance using the differences between the billed amounts and the corresponding benefit maximum. These amounts are presumably paid out of pocket by the policyholder.

   We estimated these uncompensated costs from claim payment data that contained both billed amounts and actual claim payments. [ix] We calculated the average ratios of billed amount to the daily maximum of each payment by daily maximum grouping, care setting, metropolitan statistical area (MSA) and state. Each payment from the remaining data was increased using an average ratio that is appropriate for that payment.[x]

5. **Extension of Period of Care** – For lifetime cost estimates, claim payments need to be extended for active claims at the end of the payment periods and for claims that have exhausted policy benefits. For these claimants, additional out-of-pockets costs can be expected. These claims were grouped by gender and by the number of months since each claim started. The period of care was extended by applying the claim termination experience from the Society of Actuaries' 2000-2011 Long-Term Care Intercompany Study.[xi] The additional cost is the product of the additional period of care and the estimated actual payments during the last six active claim months.

6. **Future Claims from Recovered Policyholders –** At the end of the study period, 14 percent of the policyholders were in a recovered status. These policyholders may claim again in the future. We therefore imputed additional claim days to account for future claims from recovered policyholders. The additional claims days were derived by analyzing the prevalence of multiple claims within a long-term care data set with over 20 years of exposure after an initial claim incurral.[xii]

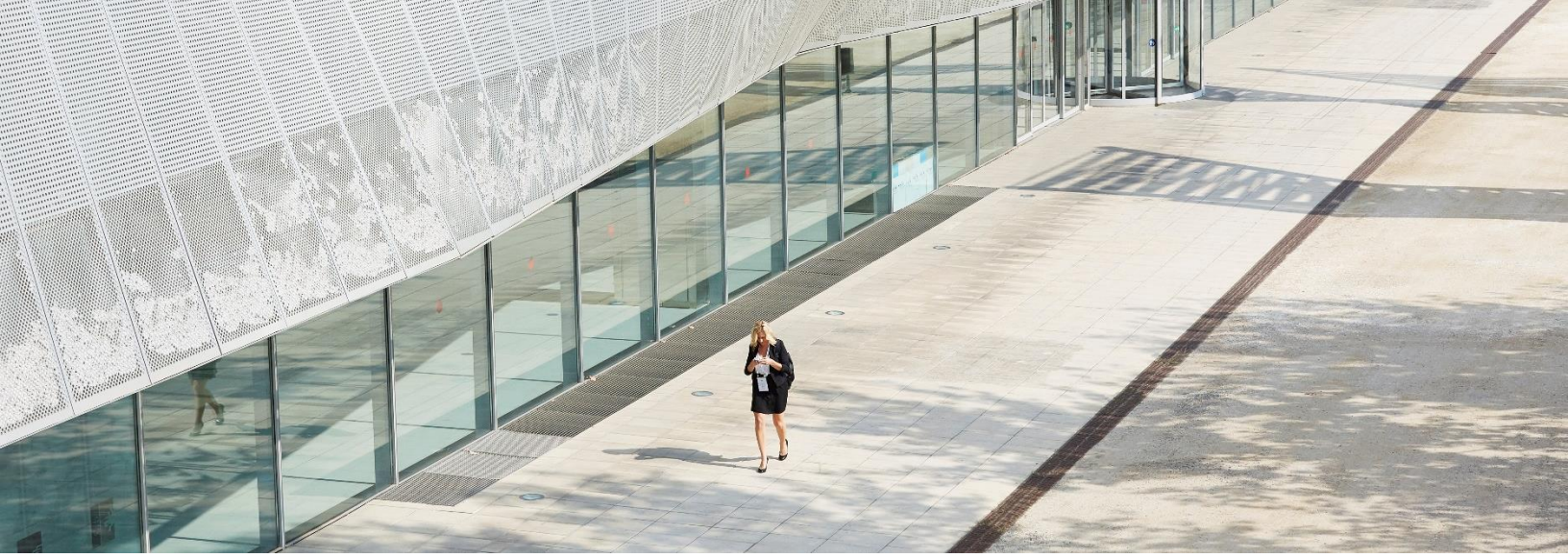
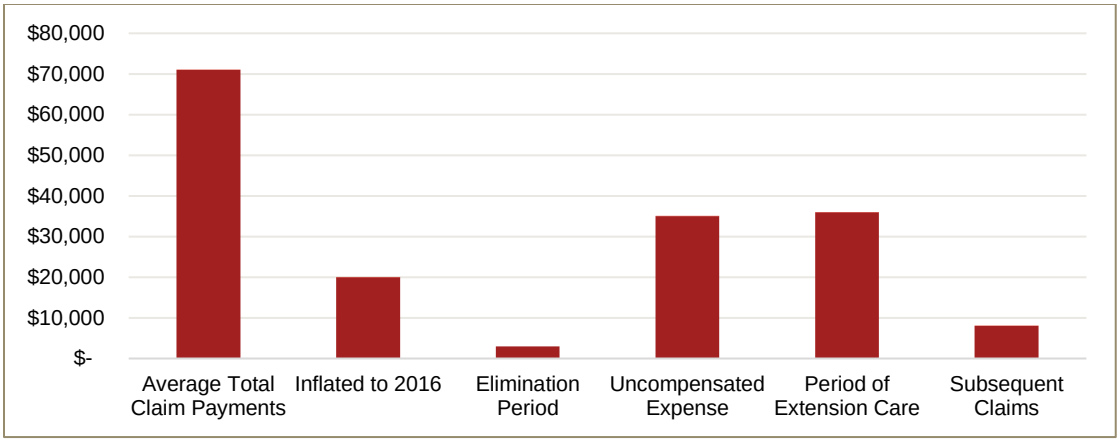


Figure 3 immediately below summarizes the value of each adjustment.



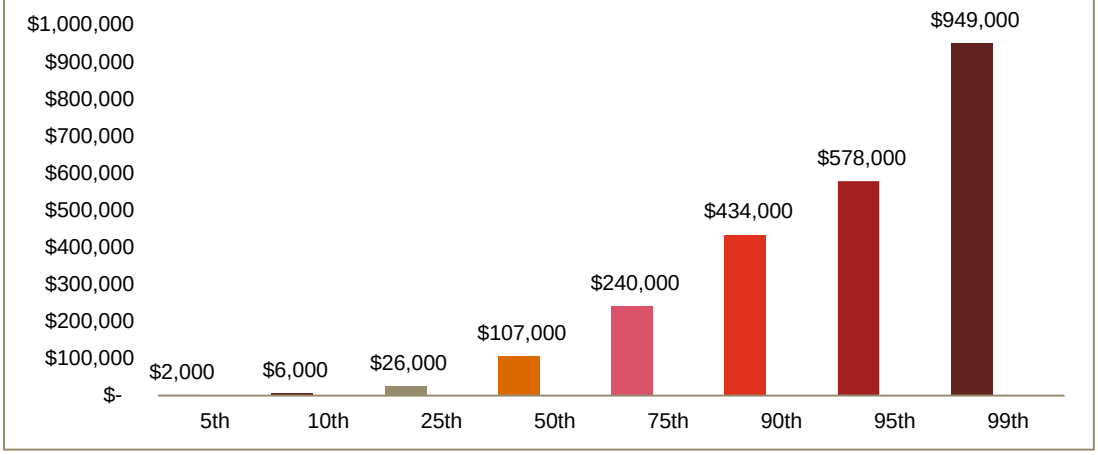
Results

The final results are the estimated costs in 2016 dollars of paid long-term care services over the lifetime of an individual who is sufficiently disabled and in need of paid care. Estimated costs are most likely paid out-of-pocket or reimbursed by private insurance. We excluded costs Medicaid or Medicare pays and costs for care provided to individuals with disability levels below insurance benefit triggers. Thus, the estimated costs do not represent the total long-term care expenditure for an individual in need of care.

a. Aggregate

The following three figures/table summarize the expected costs in various ways. We show the expected costs at various percentiles again in Figure 4.

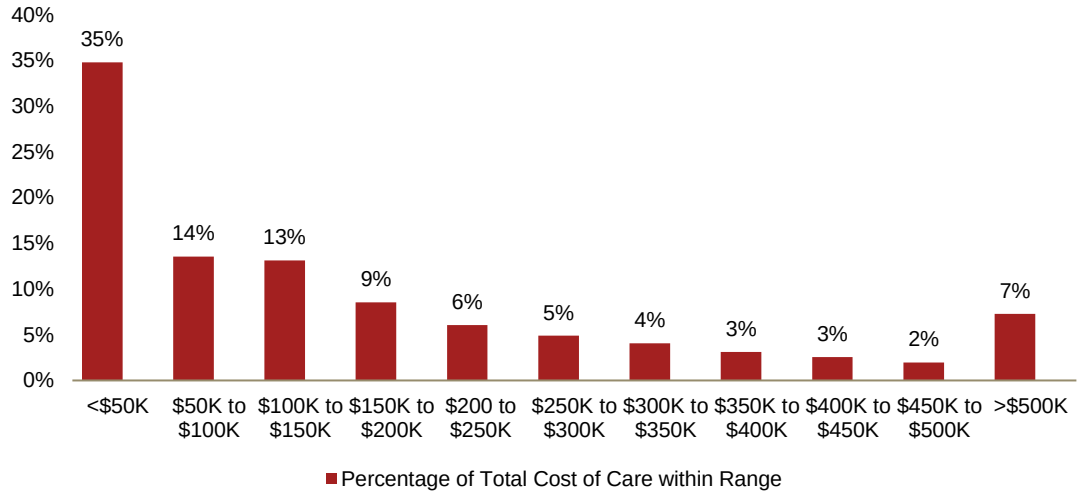
Figure 4 - Estimated Lifetime Cost of Care by Percentile



The estimated lifetime costs of care by percentile highlight the wide range of potential long-term care spending for an individual in need of services. A quarter of the time, the expected cost is less than $26,000 and another quarter of the time costs are over $240,000. There is a five percent chance that the expected cost is over $578,000.

This wide range is also evident in the distribution of claims by total cost in $50,000 bands (Figure 5). The largest cohort of policyholders incur costs less than $50,000.

Figure 5 - Cost of Formal Long-Term Care Distribution



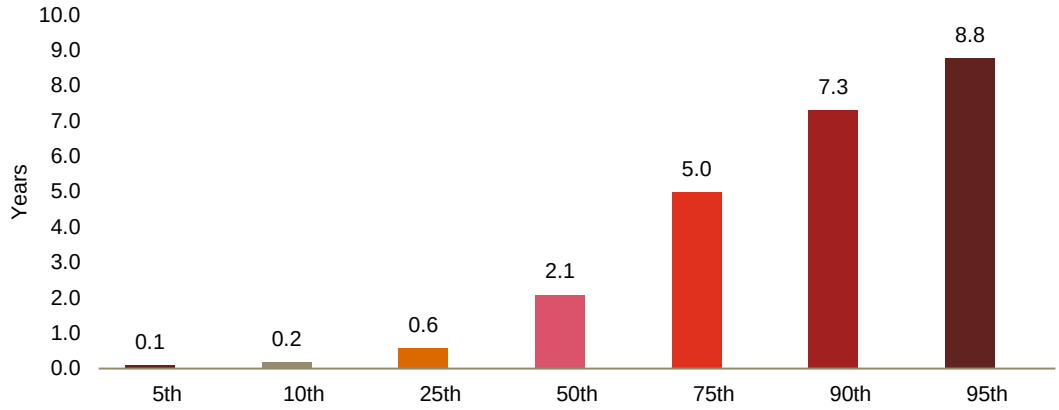
The probabilities of exceeding various thresholds are shown in Table 1:

Table 1
Probability of a Claim Exceeding Each $50,000 Cost Band

Threshold	Probability
$50,000	65%
$100,000	52%
$150,000	39%
$200,000	30%
$250,000	24%
$300,000	19%
$350,000	15%
$400,000	12%
$450,000	9%
$500,000	7%
$750,000	2%
$1,000,000	<1%

In addition to total expenditures, PwC also analyzed the data from a claim duration perspective. The average length of a claim is commonly thought to be two to three years.[xiii] Figure 6 presents the percentile distribution of total time on claim, including the imputed claim extension for claims last reported as active or exhausted.

Figure 6 - Percentiles for Claim Duration (Lifetime per Policy)
Average Claim Duration 3.1 Years



Figures 4 and 6 show that 25 percent of claimants have less than eight months of care or spend less than $26,000. In addition, the 50th percentile of 2.1 years indicates that an individual is equally likely to require paid services for a duration of less than two years and more than two years, with the average duration of care equal to 3.1 years.

The distribution of claims by years on claim is presented in Figure 7.

Figure 7 - Duration on Claim Distribution

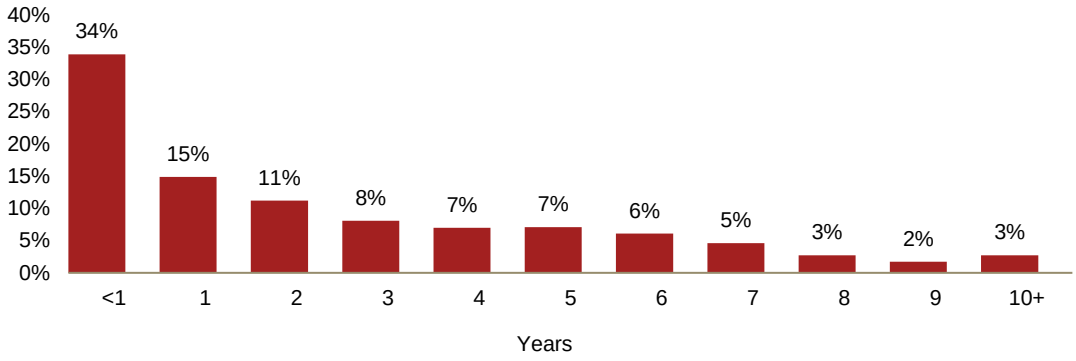
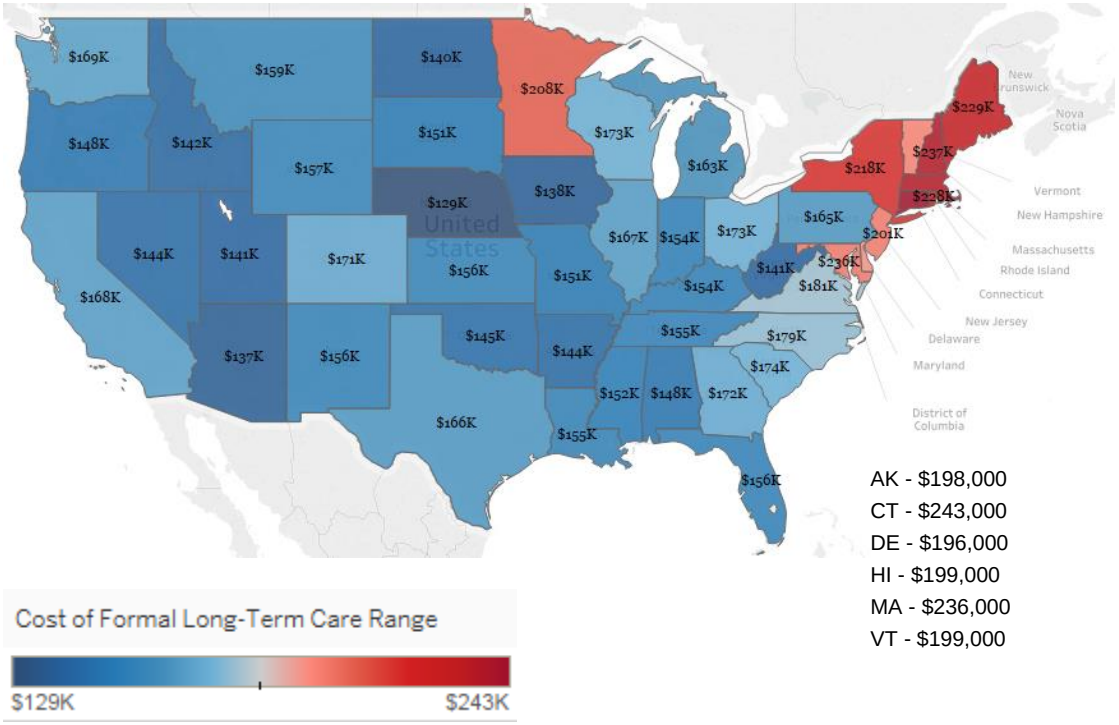


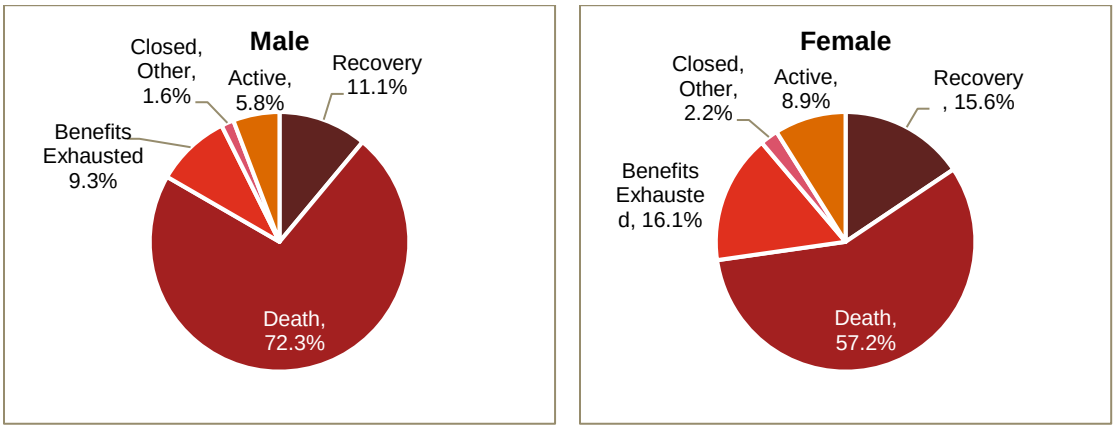
Figure 8 shows the estimated costs by state. The darker blue regions indicate lower cost states, with Nebraska the lowest at $130,000. The darker red regions indicate higher cost states, with Connecticut the highest at $244,000. In general, the Northeastern region has the higher expected cost and the Midwestern and Western regions have lower expected costs.

Figure 8 - Geographic Distribution of Expected Cost of Paid Long-term Care Services



b. By gender

The distribution of claim status at the end of the study period by gender demonstrates more men die on claim and more women recover and exhaust their benefits. Figure 9 immediately below presents the distributions by gender.



Compared to the $172,000 average expected cost of paid long-term care services for males and females combined, males have a lower average of $139,000 and females a higher one at $190,000. Similarly, males exhibit lower expenditures than the aggregate, and females higher than the aggregate at all percentiles (Figure 10).

Figure 10 - Percentiles for Cost of Formal Long-Term Care by Gender (per Policy)

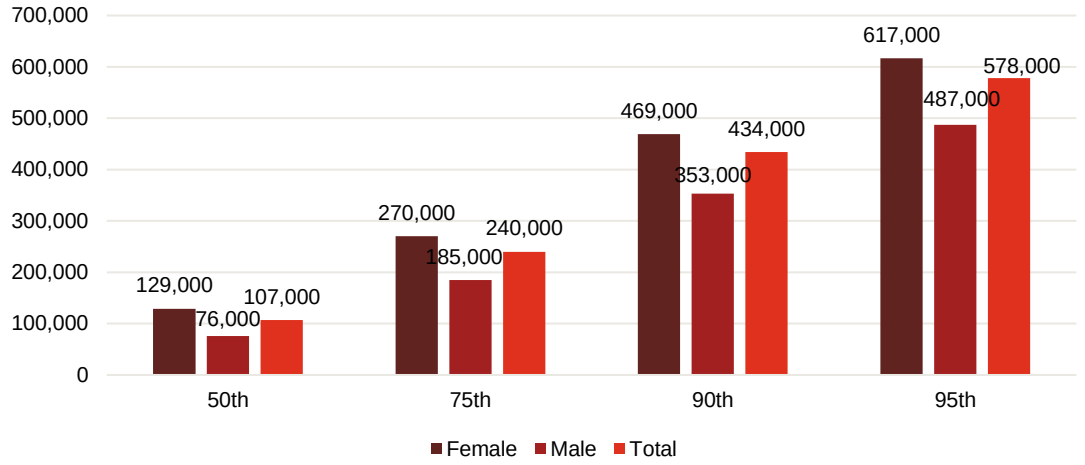
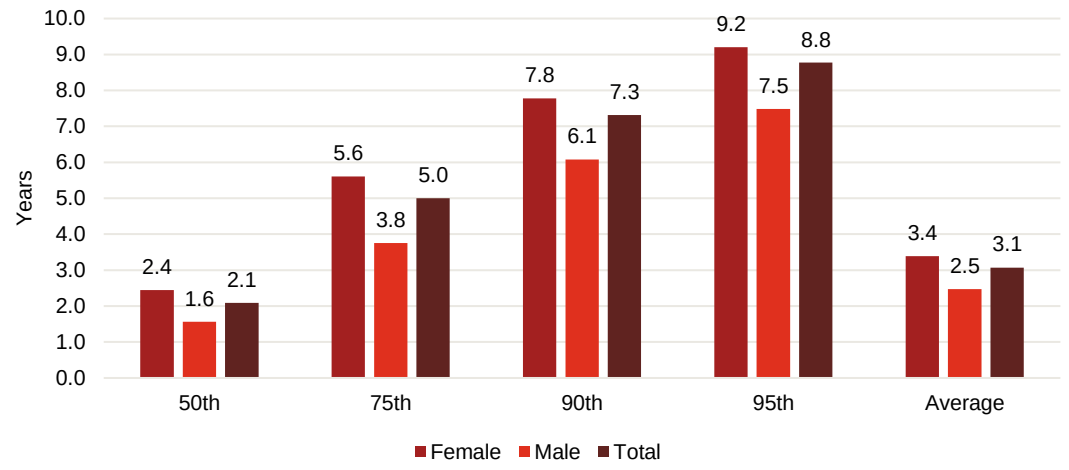


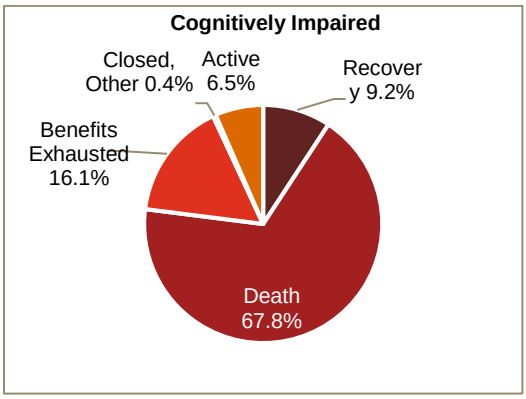
Figure 11 shows that the expected claim duration for males is lower and females is higher than the aggregate. The average duration is 2.5 years for males and 3.4 years for females.

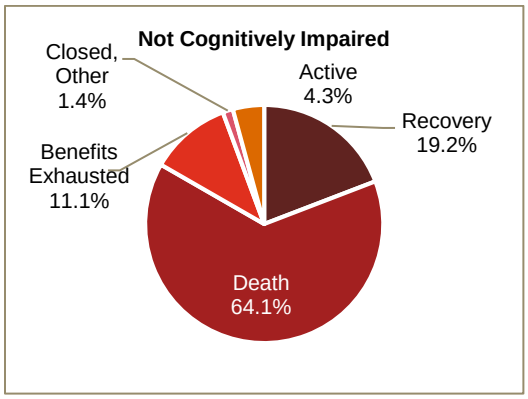
Figure 11 - Percentiles for Claim Duration by Gender (Lifetime per Policy)



c. *By cognitive status*

The distributions of claim status at the end of the study period by cognitive status is shown in Figure 12 immediately below. Claimants with cognitive impairments stay longer and do not recover as often.





Compared to the $172,000 average expected cost of paid long-term care services for all claim types, non-cognitive claims have a lower expected average of $140,000 and cognitive claims a higher expected average at $216,000. Similarly, non-cognitive claims exhibit lower expenditures than the aggregate, and cognitive claims higher than the aggregate at all percentiles (Figure 13).

Figure 13 - Percentiles for Cost of Formal Long-Term Care by Cognitive Status (per Policy)

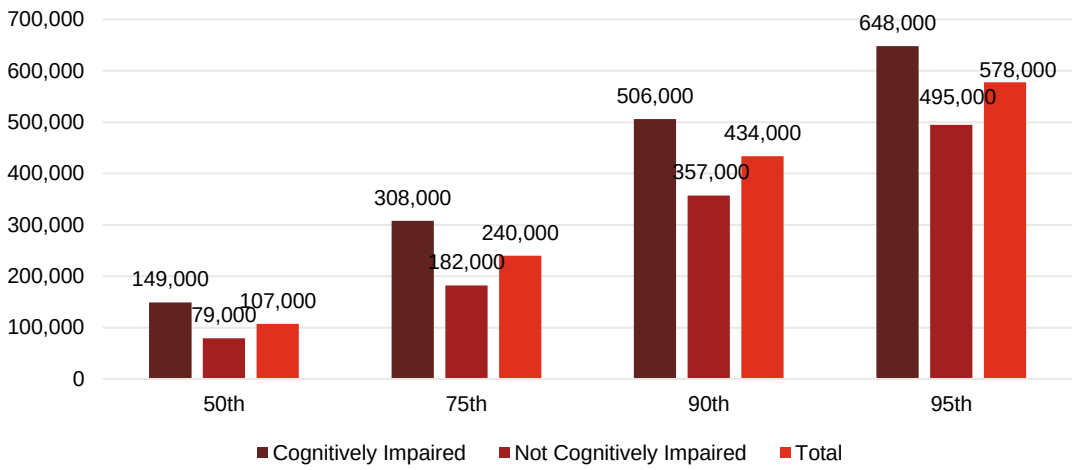
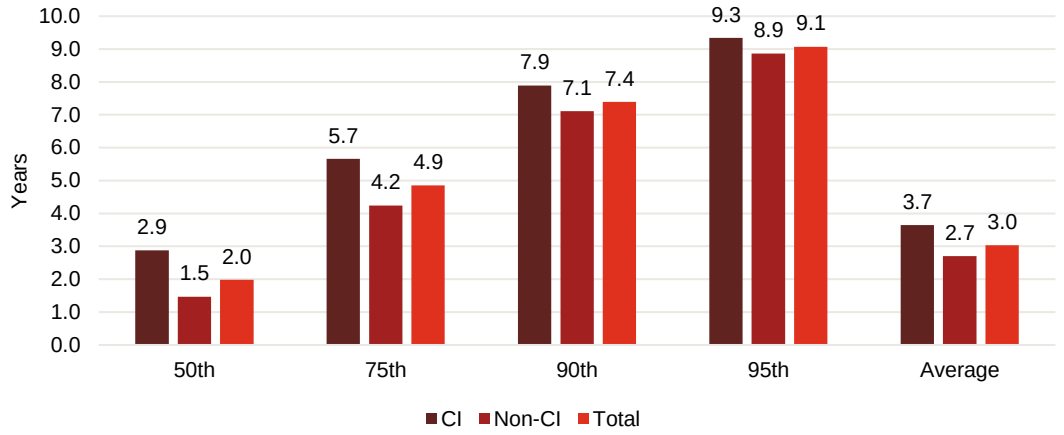


Figure 14 demonstrates that the expected claim duration for non-cognitive claims is lower and cognitive claims is higher than the aggregate. The average expected duration is 2.7 years for non-cognitive claims and 3.7 years for cognitive claims.

Figure 14 - Percentiles for Claim Duration by Cognitive Status (Lifetime per Policy) Percentiles for Claim Duration by Cognitive Status (Lifetime per Policy)



Conclusion

A personal and societal issue

The $172,000 average estimated cost of paid long-term care is a significant sum for most Americans, particularly seniors on fixed incomes. This average cost includes all costs associated with expected care for a person whose level of disability is consistent with dependence in at least two activities of daily living or has a cognitive impairment. If a person has long-term care insurance, this cost would include not only the insurance claim payments but also costs of care during any deductible periods and above any policy maximum limits.

The range of costs for those that use long-term care services is fairly wide, from the lowest 25 percent that spend less than $26,000 or have less than nine months of service to the highest seven percent that spend over $500,000. The range in costs can be attributed to a number of factors, such as disabling condition, type of service, and location of service.

The picture we paint in this report has several implications for financing of long-term care risks. The average estimated cost is a significant sum and long-term care financing should be a consideration in any personal retirement financial plan. Funding typically comes from one or more of the following four sources: personal savings, insurance, financial support from family, and Medicaid. The estimated ranges of costs of care and duration of care that we illustrate above can be useful to strike a balance between the cost of insurance and the amount of desirable coverage.

The number of people age 70 and above in 2047 will be twice as large as today. This means that the future cost of providing long-term care will be very high.

Although the industry and its products are currently in a state of flux, long-term care insurance remains a potentially large market. Based on the findings in this report, there may be renewed interest in certain existing long-term care insurance options that are beneficial to consumers.

- The shared care benefit allows an insured couple to jointly use a single pool of benefits. The shared pool can be an effective way to accommodate the tail of the cost spectrum.
- Another common option that exists in many long-term care insurance products entitles policyholders to purchase additional coverage at later dates without evidence of good health. Purchasers can target a desirable ultimate level of coverage based on the results of this study. They then can select a low initial level of coverage with a low initial premium and purchase more insurance to reach the targeted level when they can afford additional coverage.
- A high deductible catastrophic plan could be more cost effective than a low deductible plan. In terms of paid costs, the tail of the risk appears hefty, nearly $600,000 in 2016 dollars at the 95th percentile. However, the middle and upper classes could fund initial care period costs for one to three years with a portion of retirement savings. Insurance then would cover the costs of care beyond the initial period. That said, catastrophic insurance coverage is generally not available today due to regulatory restrictions that prohibit an elimination period beyond 180 days. State regulations would need to change to allow longer elimination periods of perhaps up to four years.
- Towards the other end of the cost spectrum, the $107,000 estimated median long-term care service costs suggests that long-term care insurance with limited benefits may also be viable.

Aside from retirement planning for individuals, the number of people age 70 and above in 2047 will be twice as large as today, growing from 33 million to 66 million.[xiv] From a public policy perspective, these estimates indicate that the future cost of providing long-term care services may well be very high. In simple terms, the current cost of paid care is estimated at $2.8 trillion[xv] growing to $5.6 trillion (in 2016 dollars).

Since Medicare and Medicaid are funded on a pay-as-you-go basis, their future expenditures will be borne by future workers. It follows that if population demographics remain similar to what they are today, long-term care funding for these government programs will be increasingly costly to future generations. The results in this study support the suggestion of a long-term care financing program where a public insurance program provides the front-end protection for a number of years. Medicaid will be the safety net for the poor and private catastrophic insurance will be the back-end protection for the middle class and affluent. In the discussion of potential public financing schemes, the results of this study may be useful to policymakers as they try to determine the appropriate amounts for public versus private financing.

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Endnotes

[i] *Long-Term Care Over an Uncertain Future: What Can Current Retirees Expect?* Peter Kemper, Harriet L. Komisar, Lisa Alecxih, Inquiry, Volume 42, Winter 2005/2006, page 342

[ii] Ibid.

[iii] Lifetime long-term care cost has been estimated in at least two studies. In *Long-Term Services and Supports for Older Americans: Risks and Financing* (ASPE Issue Brief, February 2016 revised, page 6), an average cost of $147,000 (in 2015 dollars and excluding public sources) was projected for individuals who turn 65 during 2015-2019. This projection was based on a model of projected future population usage of long-term care services paid by both public and private funds. In *Estimates of the Incidence, Prevalence, Duration, Intensity, and Cost of Chronic Disability among the U.S. Elderly, Eric Stallard* (North American Actuarial Journal, Volume 15, Number 1, page 57), the expected costs of purchased long-term care services was estimated to be $89,000 in 2010 dollars. The costs were estimated using data from the National Long-Term Care Surveys conducted from 1982 through 2004. As such, recent cost trends may not have been accounted for in this study.

[iv] *Long-Term Care Insurance Experience Reports for 2015*, National Association of Insurance Commissioners.

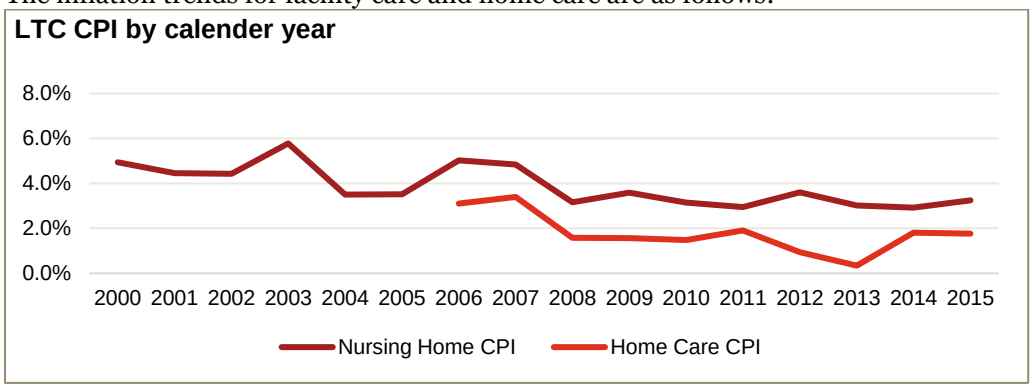
[v] *Long-Term Care Intercompany Experience Study – Aggregate Database 2000-2011 Report*, Society of Actuaries, January 2015.

[vi] The selection of claims and payment records included the following adjustments:

a. Incurred date of a claim is defined as the date when the covered person becomes benefit eligible. This date is the start of the elimination period.
b. Claims starting before 2006 and 2007 were removed for two companies, respectively, due to unreliable data prior to these dates.
c. Although all of the companies provided incurred claims through 2011, only claims with incurred dates before the end of 2009 were used. Thus all claims in the study have at least 2 years of potential claim activities. This approach allows claim payments to be stabilized and eliminates the need to adjust for transfers between care settings that typically occur during the early years of a claim. Claim payment run-out was recognized for as long as was provided in the data and was not capped.

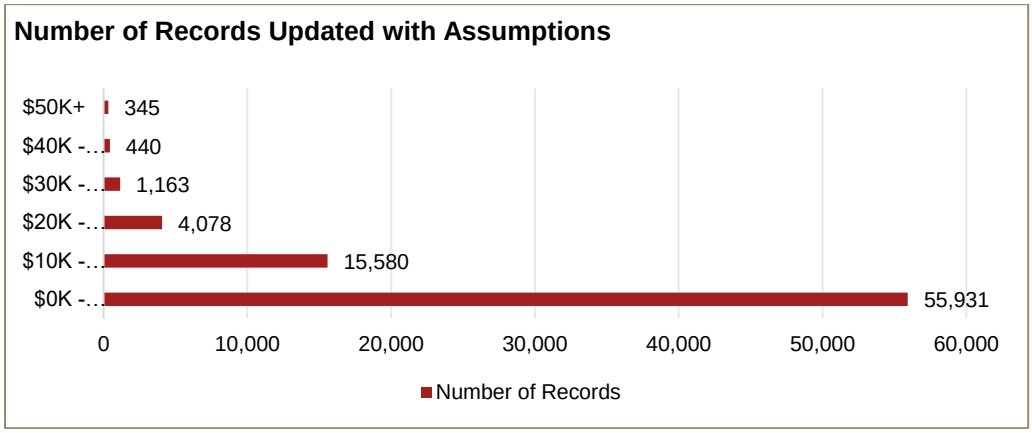
[vii] The following indices from U.S. Bureau of Labor Statistics were used: *Consumer Price Index – All Urban Consumers Series Id: CUUR0000SEMD02 and CUUR0000SEMD03*. The annual inflation rates were determined from the CPI compounded annual rates 1996 – 2015 for facility care and 2005 – 2015 for home care. Inflation adjustment was applied to each claim payment from the mid-point of service period for that payment to July 1, 2016.

The inflation trends for facility care and home care are as follows:

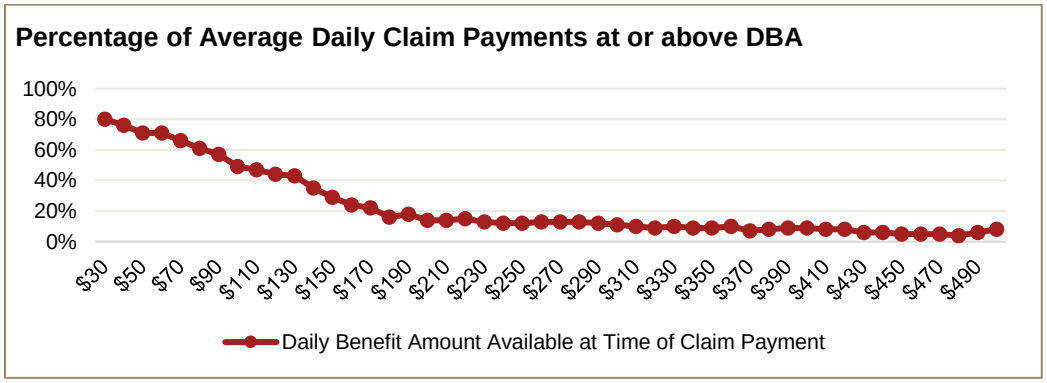


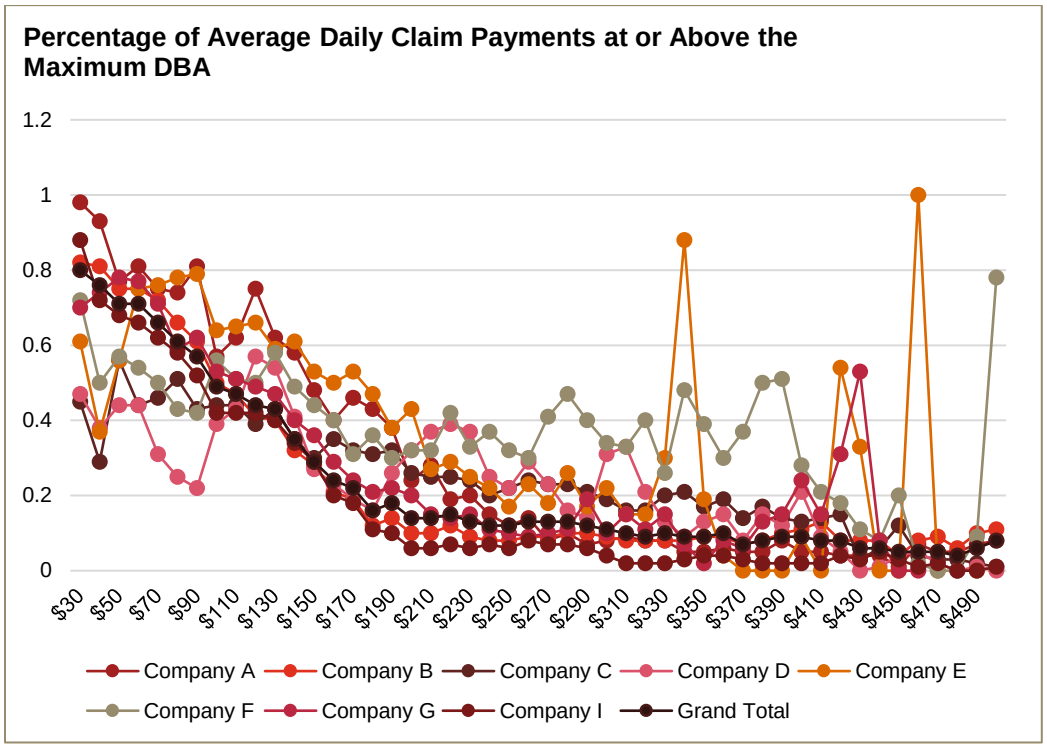
viii The length of the elimination period is the shorter of the elimination period of the policy or the period from the incurred date to the starting date of the first service. The payment rate is the daily average of the payments covering at least the first 30 calendar days of benefits or the average daily payment rate if total benefits cover less than 30 calendar days.

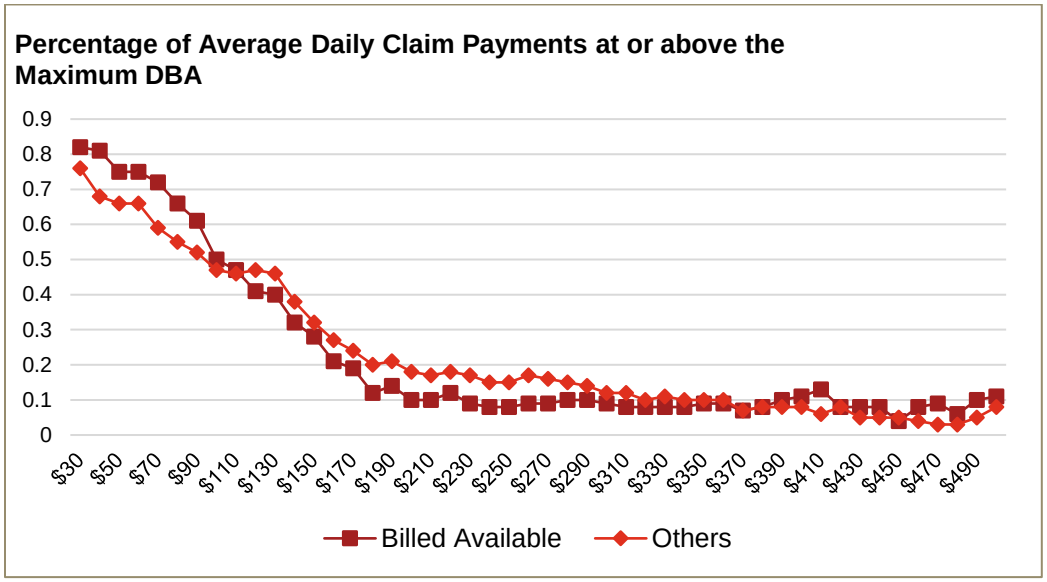
The distribution of policies by estimated payment amount during the elimination period is as follows:



ix Based on a comparison of the distribution of daily benefit amounts, we found the excess of billed amounts over the benefit maximum are representative of the uncompensated amounts for the data without billed amounts.

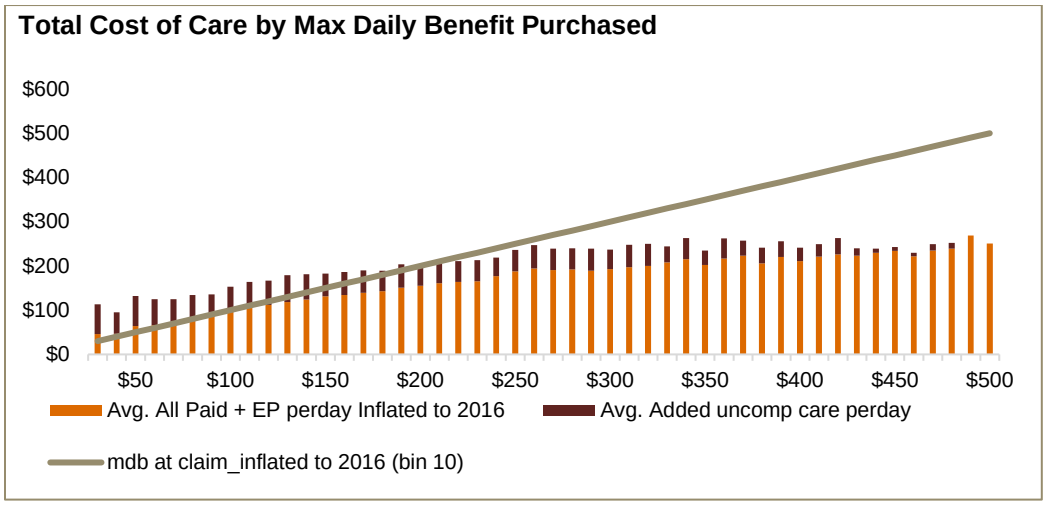




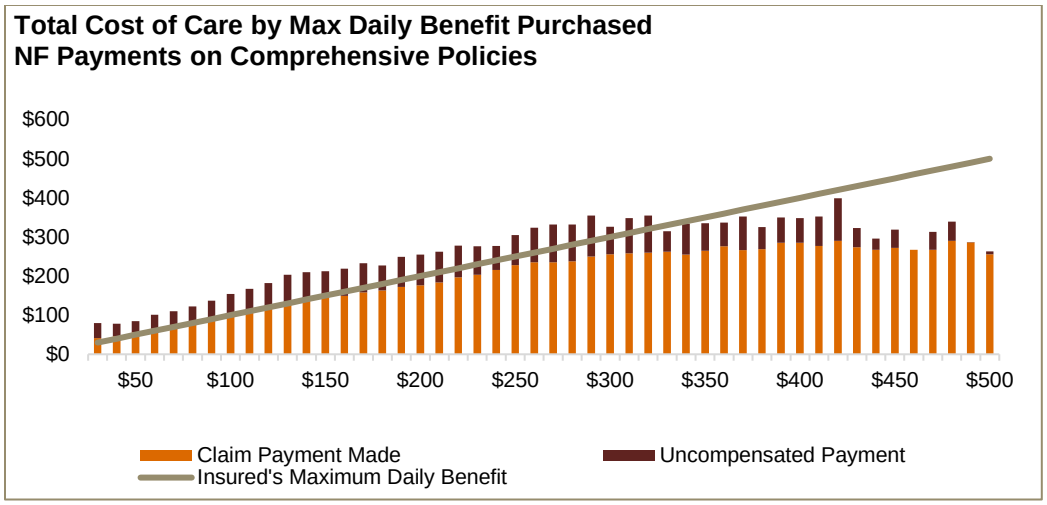


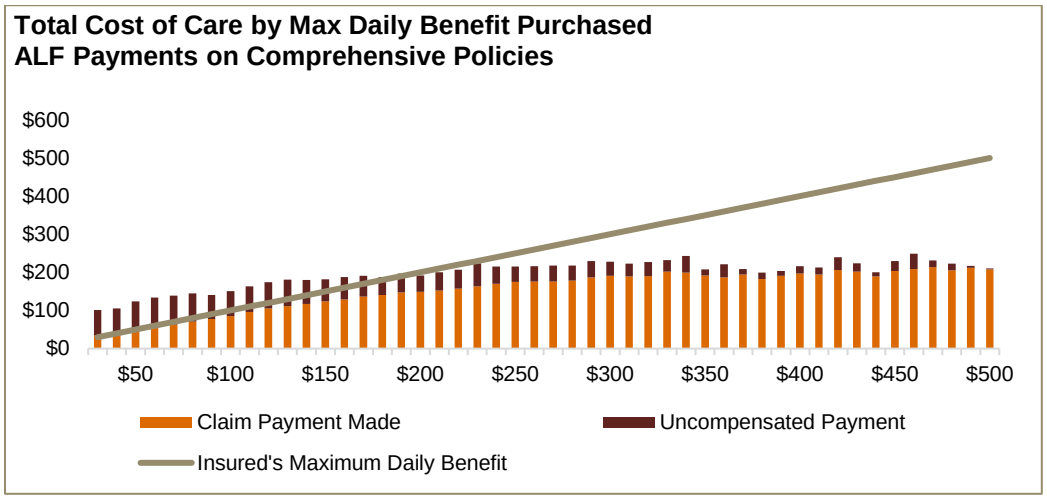
x In recognition of the differences in expense levels by geographical area, payments for each care setting are segmented into incremental $50 daily maximum bins by MSA and state. The average excess of billed amount over the daily benefit maximum is calculated for each bin. If the number of payments in a bin was deemed credible, such average was applied to the corresponding payments without billed amounts in the same $50 daily benefit maximum increment and MSA bin. If it is not credible, then the average excess in the state where the MSA is located was applied. If the number of payments in an incremental daily benefit maximum bin is not credible for a state, then the nationwide average was applied.

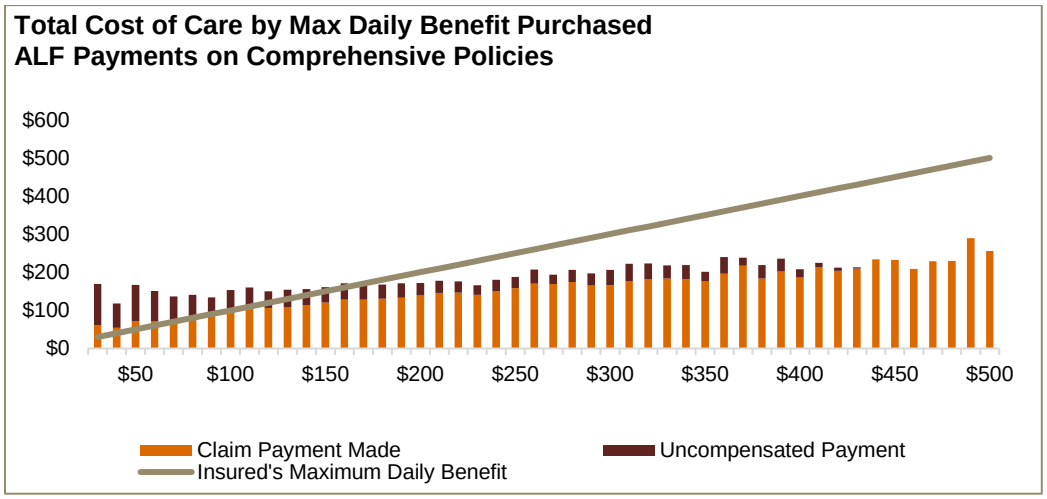
The resulting proportions of estimated uncompensated expenses to the total estimated expenses by daily benefit maximum is as follows:



The following charts show the proportions by care setting for comprehensive policies:

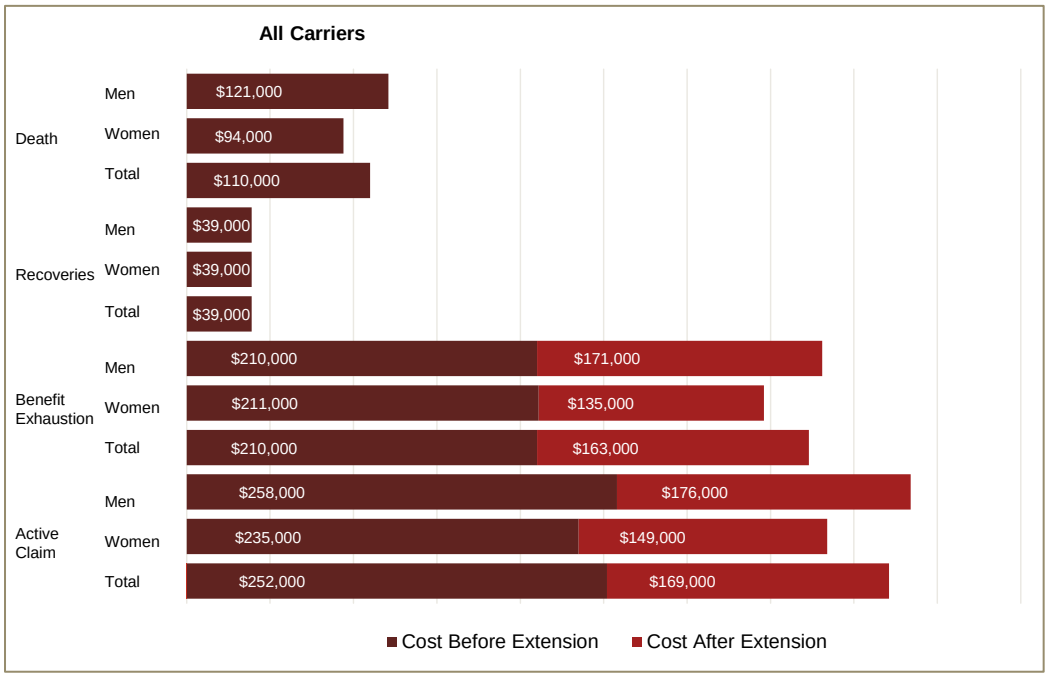




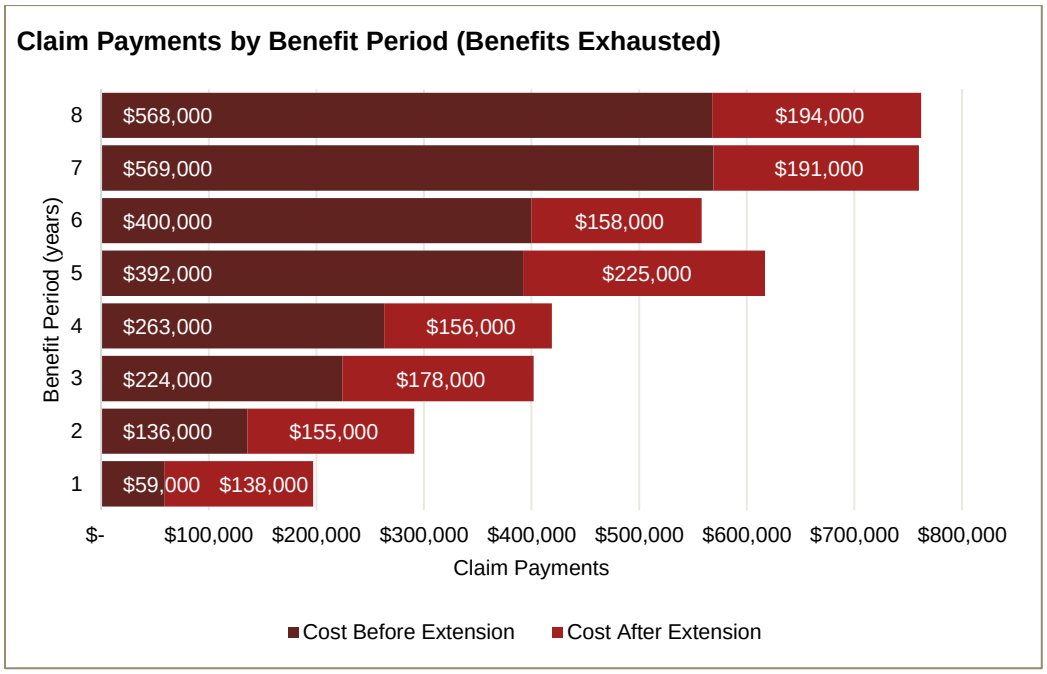


xi The amount of expenses during the extended period of care was assumed to be the average payments during the last 6 months of claim prior to the last known service date. As all active claims have at least 2 years of claim payments (see endnote vi,c), it is reasonable to assume that there is no transition between care settings during the extended period.

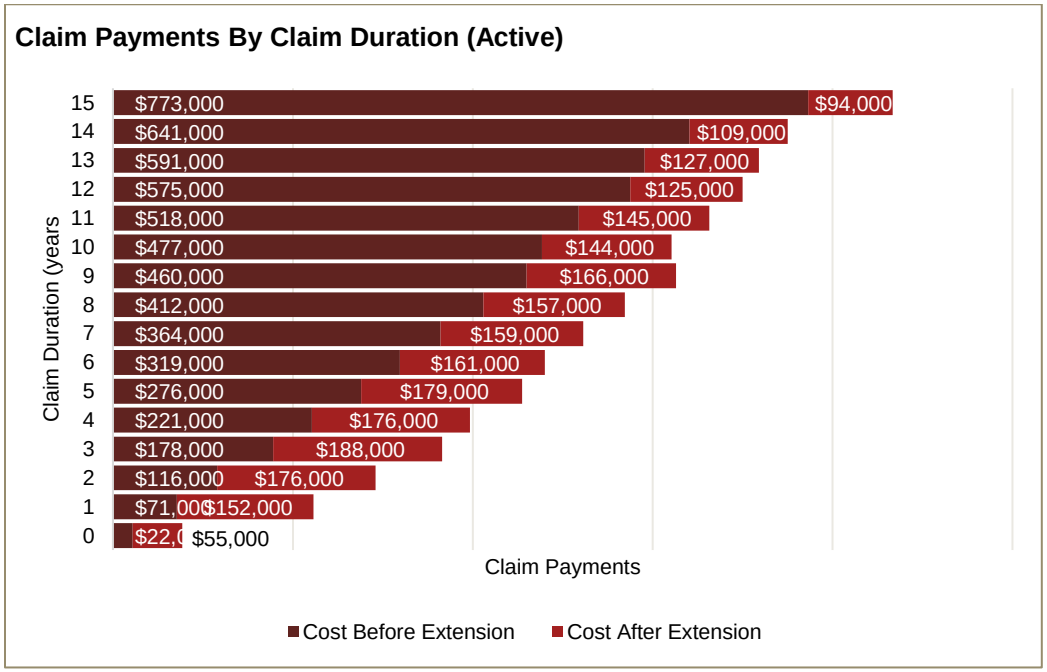
The additional expenses as a result of the extension of the payment period by last claim status is as follows:



For claims with benefits exhausted, the additional expenses due to the extension beyond the policy benefit maximum are shown below:

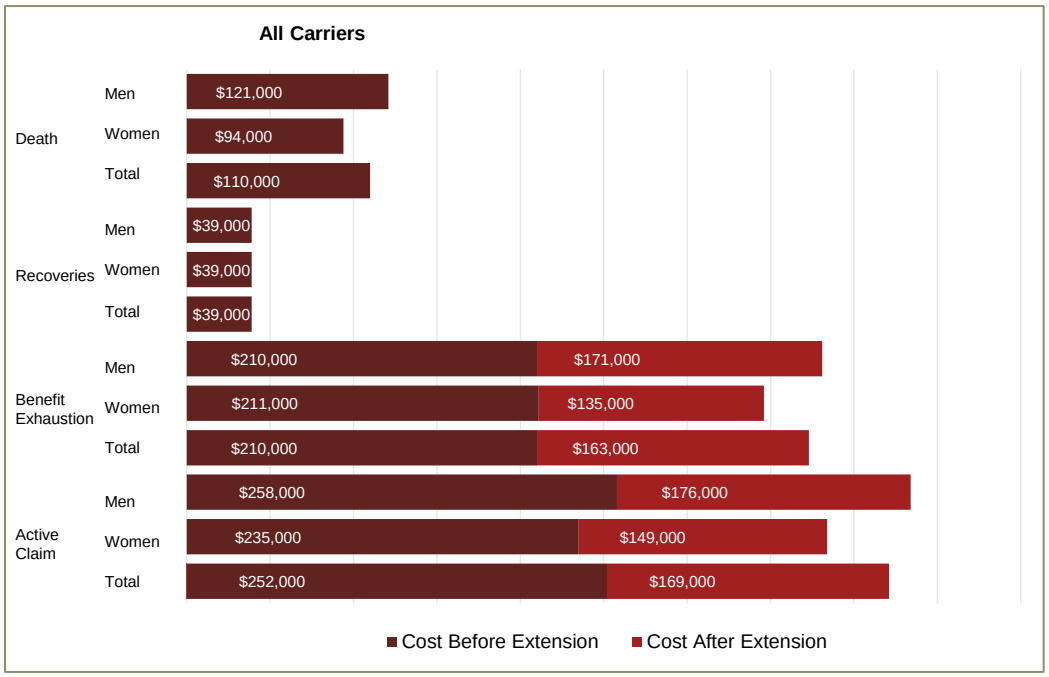


For active claims, the additional expense due to the extension beyond the end of the study period are as follows:

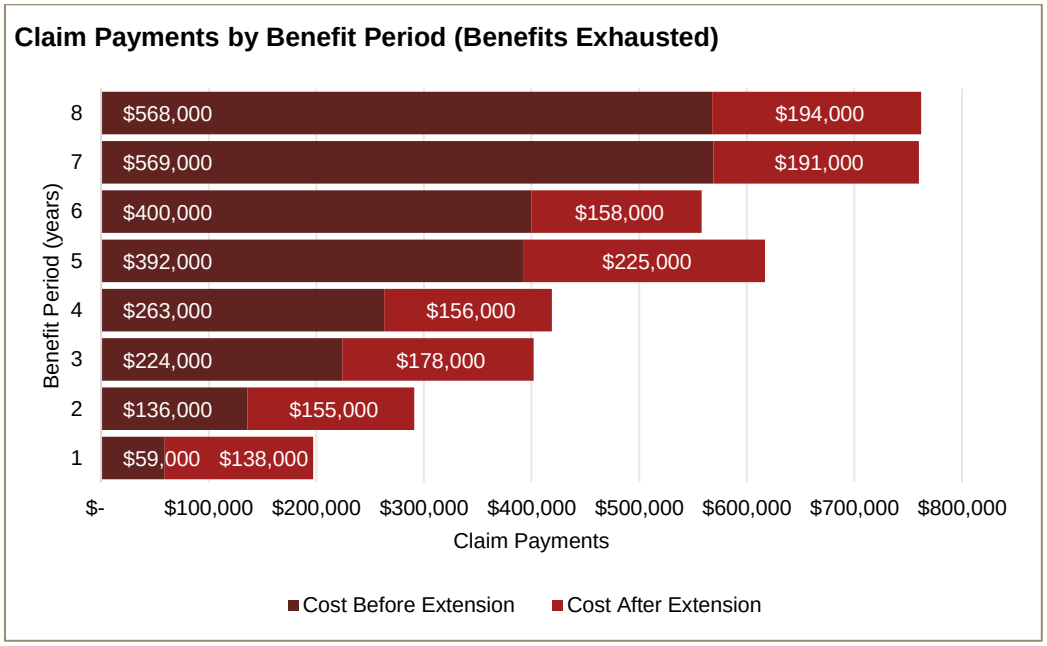


The amount of expenses during the extended period care was assumed to be the average payments during the last six months of claim prior to the last known service date. As all active claims have at least two years of claim payments (see endnote 4c), it is reasonable to assume that there is no transition between care settings during the extended period.

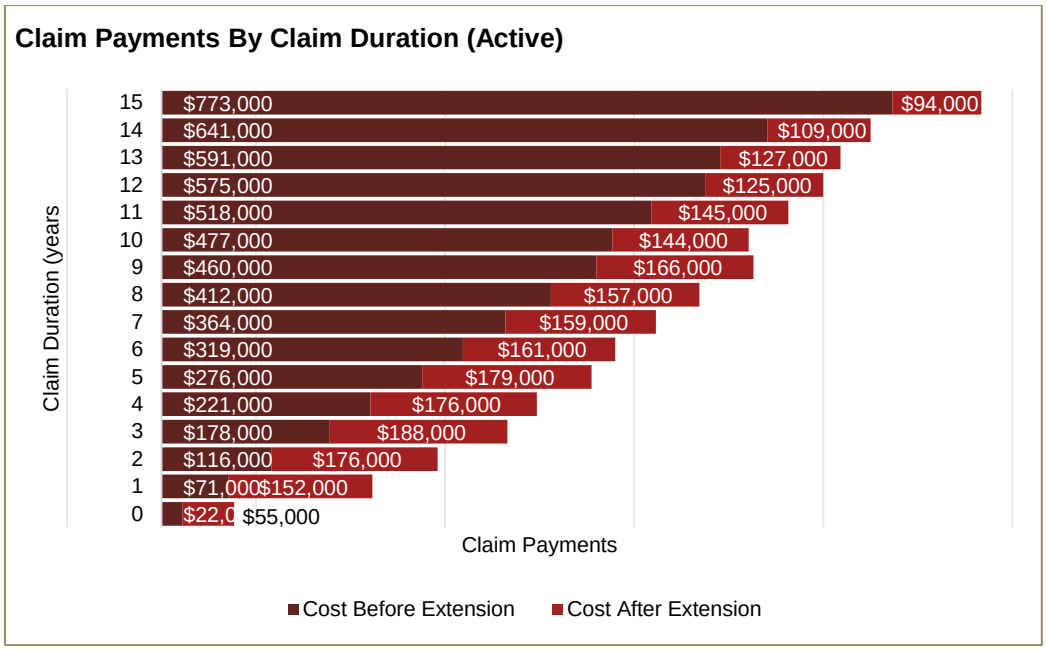
The additional expenses as a result of the extension of the payment period by last claim status is as follows:



For claims with benefits exhausted, the additional expenses due to the extension beyond the policy benefit maximum are shown below:



For active claims, the additional expense due to the extension beyond the end of the study period are as follows:



[xii] We reviewed activities of a group of claims incurred during 1992 and 1993 over a period of 20 years and determined that approximately 12 percent of total claims are from policyholders who have recovered previously. The corresponding proportion was only 7 percent for the Cost of Care data set, which includes at most eleven years of data after a claim incurral. We also observed that these subsequent claims are approximately 15 percent shorter than the average claim duration. This adjustment added roughly 12,000 claims and $1.8 billion to the study data set.

[xiii] For example, see Society of Actuaries' 2000-2011 Long-Term Care Intercompany Study.

[xiv] *Population Projection by Age*, 2010 Census, U.S. Census Bureau.

[xv] 33,000,000 elderly times $172,000 divided by two, assuming only half of the elderly would need paid long-term services and supports.