

**Continental Casualty Company (CCC)**  
**ACTUARIAL MEMORANDUM**  
**March 2018**  
**Maryland**

Product Portfolio	Policy Form Series	Originally Issued	Closed to New Business
LTC 1	P1-15203	1990	1998
LTC 1	P1-16356	1990	1998
LTC 1	P1-16928	1990	1998
LTC 1	P1-16944	1990	1998
Premier/Classic	P1-18215	1993	1999
Premier/Classic	P1-18220	1993	1999
Premier/Classic	P1-18876	1993	1999
Premier/Classic	P1-18878	1993	1999
Preferred Advantage	P1-21295	1994	2004
Preferred Advantage	P1-21300	1994	2004
Preferred Advantage	P1-21305	1994	2004
Preferred Advantage	P1-21925	1994	2004
Preferred Advantage	P1-22435	1994	2004
Preferred Advantage	P1-22436	1994	2004
TQ	P1-N0022	1997	2004
TQ	P1-N0023	1997	2004
TQ	P1-N0026	1997	2004
TQ	P1-N0027	1997	2004
TQ	P1-N0030	1997	2004
TQ	P1-N0031	1997	2004
TQ	P1-N0034	1997	2004
TQ	P1-N0035	1997	2004
TQ	P1-N0066	1997	2004
TQ	P1-N0070	1997	2004

**1. Purpose and Justification of Filing**

The purpose of this memorandum is to provide actuarial information supporting CCC's request for a rate increase for non-partnership policies issued prior to your state's implementation of rate stability requirements, if applicable, under the policy forms listed in the table above. This rate filing is not intended to be used for other purposes. The rate revision is necessary to bring these policies to a more actuarially appropriate level.

The requested rate increases by product portfolio are as follows:

Product Portfolio	Rate Increase Request
LTC1	15%
Premier/Classic	15%
Preferred Advantage	15%
TQ	15%

This request is a part of a nationwide rate action requesting one-time increases of 25%, 25%, 35%, and 40% for LTC1, Premier/Classic, Preferred Advantage, and TQ, respectively. In observation of COMAR 31.14.01.04(A)(5), we are limiting the request on all product portfolios in Maryland to 15%. Since this request is less than what is being requested in other states, CCC intends to seek additional increases in future years to bring the cumulative increase to an actuarially equivalent level with the nationwide request.

Upon approval of this rate revision, CCC will communicate to policyholders their options to reduce the impact of the rate increase. These options will include increasing the elimination period, reducing the lifetime maximum, reducing the daily benefit, eliminating optional riders, and a contingent non-forfeiture option that we will be offering to all policyholders regardless of their age or rate increase amount.

Please note:

- These requested rate increase amounts are significantly less than the amount CCC can justify in total; and
- CCC will continue to monitor the experience of this block and will react according to the experience development.

## **2. Description of Benefits**

All of the forms are guaranteed renewable individual long-term care policies sold through non-captive agents. Additional details for each product portfolio are shown below.

### **LTC 1 (P1-15203-Series, P1-16356-Series, P1-16928-Series, P1-16944-Series)**

P1-15203-Series pays for care in a long term care facility when either medically necessary or due to the inability to perform two or more activities of daily living or due to cognitive impairment. Policy does not require a prior hospitalization stay to qualify for benefits. The long term care daily benefit amount is paid for each day of eligible confinement during a period of care that occurs after the elimination period and during the benefit period. The benefit periods offered were 1 year (for ages 80-84), 2 years, 4 years, 6 years or unlimited. The policy does not have an aggregate lifetime maximum but benefit periods can fully restore subject to the conditions listed in the policy. The policy includes a waiver of premium benefit, a bed reservation benefit and an alternate plan of care benefit.

*Optional Benefits:* Optional benefit riders offered: home health care rider and inflation protection rider.

P1-16356-Series is identical to P1-15203-Series except that it provides a Return of Premium benefit. P1-16928-Series is a state variation of P1-15203-Series but provides for nursing home only benefits and P1-16944-Series is identical to P1-16928-Series except that it provides a Return of Premium benefit.

### **Premier/Classic (P1-18215-Series, P1-18220-Series, P1-18876-Series, P1-18878-Series)**

P1-18215-Series and P1-18220-Series: These forms provide long-term care and home health care benefits. Benefits are limited to the policy's Lifetime Maximum which is equal to the following multipliers times the daily benefit amount: 365x (ages 80-84), 730x, 1,460x, or Unlimited. Benefit eligibility requires inability to perform two or more activities of daily living or due to cognitive impairment.

*Long-Term Care Benefits:* This policy pays the Long-Term Care Daily Benefit Amount, as shown on insured's policy schedule, for each day of Long-Term Care confinement limited to the Benefit Lifetime Maximum.

*Home Health Care Benefits:* Pays 100% of the expenses incurred each day for therapist or nurse, 80% of the expenses incurred for home health aide, medical social worker or homemaker and 80% of expenses incurred each day of care for Adult Day Care or Alternate Care Facility. The total benefits payable each day for HHC benefits is limited to the daily benefit amount shown on the insured's schedule (either 100% or 50% of the Long-Term Care Daily Benefit Amount, selected at issue) and subject to the policy's Benefit Lifetime Maximum.

*Other benefits:* The policy includes a bed reservation, waiver of premium and an alternate plan of care benefit.

*Optional benefits:* inflation protection riders and benefit eligibility amendment rider.

P1-18220-Series is identical to P1-18215-Series except that it provides a ROP benefit.

P1-18876-Series & P1-18878-Series: These forms provide long-term care and home health care benefits with separate lifetime limits.

*Long-Term Care Benefits:* This policy pays the Long-Term Care Daily Benefit Amount, as shown on the insured's policy schedule, for each day of Long-Term Care confinement limited to the benefit period selected. The insured could select 2 years, 4 years, 6 years, and Unlimited for a Benefit Period if their issue age was 18-79 and 1 or 2 years if ages 80-84. The policy includes a bed reservation benefit.

*Home Health Care Benefits:* This policy has an optional Home & Community-Based Care Benefit Rider that pays 100% of the expenses incurred each day for therapist or nurse, 80% of the expenses incurred for home health aide, medical social worker or homemaker and 80% of expenses incurred each day of care for Adult Day Care or Alternate Care Facility. The total benefits payable each day for HHC benefits is limited to the daily HHC benefit amount shown on the insured's schedule limited to the benefit period selected for the HHC Rider. The Benefit Periods available were 2 years, 5 years, and Unlimited for issue ages 18-79 and 2 years for issue ages 80-84.

*Optional benefits:* Besides the home health care rider noted above, the policy offered optional inflation protection riders.

Policy P1-18878-Series is identical to P1-18876-Series except that it provides a Return of Premium benefit.

**Preferred Advantage (P1-21295-Series, P1-21300-Series, P1-21305-Series, P1-21925-Series, P1-22435-Series, P1-22436-Series)**

P1-21295-Series provides for long-term care and home health care benefits. Benefits are limited to the policy's Lifetime Maximum which is equal to the following multipliers times the daily benefit amount: 730x, 1,095x, 1,460x, 1,825x, or Unlimited. Benefit eligibility requires either medical necessity or due to the inability to perform two or more activities of daily living or due to cognitive impairment.

*Long-term Care Benefits:* For each day of stay in a facility, this policy pays the expenses incurred by the facility up to the maximum daily facility benefit (as shown on insured's schedule)

limited to the Lifetime Maximum. The policy includes a Bed Reservation Benefit limited to 21 days per calendar year. Lifetime Maximum is equal to either Unlimited or the following multipliers times the daily benefit amount: 730x, 1,095x, 1,460x, and 1,825x.

*Home Health Care Benefits:* This policy pays 100% of the expenses incurred each day for therapist or nurse, 80% of the expenses incurred for home health aide, medical social worker or homemaker and 80% of expenses incurred each day of care for Adult Day Care. The total benefits payable each day for HHC benefits is limited to the daily Home and Community Based Care benefit amount shown on the insured's schedule (either 100% or 50% of the Long-Term Care Daily Benefit Amount, selected at issue).

This policy also provides for a waiver of premium benefit, caregiver training benefit, medical help benefit, Alternate Care Facility benefit and Respite Care benefit.

*Optional benefits:* inflation protection riders.

Policy P1-22435-Series is identical to P1-21295 except that it provides a non-forfeiture benefit.

P1-21300-Series is similar to P1-21295-Series except that it pays 100% of expenses incurred each day for home health aide, medical social worker or homemaker or Adult Day care. P1-22436-Series is identical to P1-21300 except that it provides a non-forfeiture benefit.

P1-21305-Series is similar to the above policies except that it provides facility only coverage. Policy P1-21925-Series is identical to P1-21305 except that it provides a non-forfeiture benefit.

**TQ (P1-N0022-Series, P1-N0023-Series, P1-N0026-Series, P1-N0027-Series, P1-N0030-Series, P1-N0031-Series, P1-N0034-Series, P1-N0035-Series, P1-N0066-Series, P1-N0070-Series)**

The forms in the "TQ" policy portfolio are intended to meet the requirements of the federal tax code for favorable income tax treatment of long-term care insurance.

*Long-term Care Benefits:* For all forms, for each day of stay in a facility, this policy pays the expenses incurred by the facility up to the maximum daily facility benefit (as shown on insured's schedule) limited to the Lifetime Maximum. The policy includes a Bed Reservation Benefit limited to 21 days per calendar year. The Lifetime Maximum is equal to either Unlimited or the following multipliers times the daily benefit amount: 730x, 1,095x, 1,460x, and 1,825x.

*Home Health Care Benefits:* Form P1-N0022-Series pays 100% of the expenses incurred each day for therapist or nurse, 80% of the expenses incurred for home health aide, medical social worker or homemaker and 80% of expenses incurred each day of care for Adult Day Care. The total benefits payable each day for HC benefits is limited to the daily Home and Community Based Care benefit amount shown on the insured's schedule (either 100% or 50% of the Long-Term Care Daily Benefit Amount, selected at issue).

This policy also provides for a waiver of premium benefit, caregiver training benefit, medical help benefit, Alternate Care Facility benefit and Respite Care benefit.

*Optional benefits:* inflation protection riders.

Policy P1-N0023-Series is identical to P1-N0022 except that it provides a non-forfeiture benefit.

P1-N0026-Series is similar to P1-N0022-Series except that it pays 100% of expenses incurred each day for home health aide, medical social worker or homemaker or Adult Day care.

P1-N0027-Series is identical to P1-N0026 except that it provides a non-forfeiture benefit.

P1-N0030-Series is similar to the above policies except that it is for nursing home only benefits and does not include any home health care benefits. Policy P1-N0031-Series is identical to P1-N0030 except that it provides a non-forfeiture benefit.

P1-N0034-Series and P1-N0035-Series are Tax Qualified versions of forms P1-18876-Series and P1-18878-Series.

P1-N0066-Series is comparable to P1-N0022-Series. P1-N0070-Series is comparable to P1-N0030-Series.

### **3. Renewability**

These forms provide the insured guaranteed renewable individual long-term care coverage.

### **4. Applicability**

This filing applies to in-force insureds only, as these forms are no longer being marketed. The premium change will apply to the base forms and all riders associated with the base forms.

### **5. Actuarial Assumptions**

The actuarial assumptions used to project the future premiums and claims on a first-principles basis are described in this section. Attachment 3 provides further details of the experience studies conducted that were used to develop the actuarial assumptions. These current assumptions, developed in 2016, are CCC's best estimate expectations of future experience and do not include any provisions for adverse experience. The assumptions are consistent with the assumptions used in the company's 2016 GAAP and statutory reserve adequacy testing.

The liability assumptions that are part of the annual best estimate experience studies are as follows:

- Frequency (Incidence)
- Severity (Recovery, Disabled Mortality, Utilization)
- Persistency (Healthy Mortality, Voluntary Lapse, Shock Lapse and Reduced Benefit Options (RBOs))
- Discount Rate
- Expenses

#### **Frequency**

The frequency of claim is the probability that a healthy policy will go into disabled status, also known as 'claim incidence'. The final incidence rate that gets modeled is comprised of a base incidence table with various adjustments based on benefit features, policyholder demographic information, situs of care, etc.

##### *Base Incidence Rates*

The base incidence rates are developed as part of the annual experience study and are single-dimensional tables that vary by attained age. These base incidence tables vary by the following:

- Whether the policy covers comprehensive or facility only benefits
- The situs of the claim (Nursing Home, Home Health Care, Assisted Living Facility)
- Gender

A sample table is shown below:

**Plan Type:** Comprehensive

**Gender:** Male

**Situs:** Assisted Living Facility

Attained Age	Annual Incidence Rate (%)
44 and Prior	0.0031%
45	0.0032%
46	0.0035%
47	0.0039%
...	...
55	0.0064%
56	0.0070%
57	0.0077%
...	...
65	0.0175%
66	0.0196%
67	0.0225%
...	...
75	0.1003%
76	0.1273%
77	0.1565%
...	...
85	0.6362%
86	0.7284%
87	0.8548%
...	...
95	2.1870%
96 to 120	2.4469%

*Incidence Rate Adjustment Factors*

There are a number of incidence rate adjustment factors that are developed and applied to adjust the base incidence tables for various benefit features and other variables identified during the annual experience study. The incidence rate adjustment factors are summarized in the below table:

Category	Variable/Benefit Feature	Adjustment Factor
Underwriting Class	Preferred	0.90
	Standard	1.20

	Substandard	1.23
Elimination Period	0 Days	1.20
	1-89 Days	1.00
	90+ Days	0.87
Benefit Period	Lifetime	1.20
	Non-Lifetime	0.96
Plan Type	Comprehensive	1.00
	Facility Only	0.70
Spousal Discount	Yes	0.95
	No	1.07
Product Portfolio	LTC1	1.60
	Premier/Classic	1.40
	Preferred Advantage	1.56
	TQ	1.26
Policy Duration	1	0.50
	2	0.55
	3	0.60
	4	0.65
	5	0.70
	6	0.75
	7	0.80
	8	0.85
	9	0.90
	10	0.95
	11+	1.00

*Policyholder Response to Rate Actions*

As part of the company's annual experience study, the relationship between premium rate actions and emerging new claims experience was developed into an assumption set. When a rate increase is approved in a state, the company has observed an uptick in claims in that state, which is estimated to be driven by insureds that already technically qualify for their LTC benefits, but have not yet gone on claim. This observed uptick in claims following a rate action is theorized to be driven by this subset of insureds that currently qualify for benefits going on claim to avoid paying the increased premium, since their premium rates will be waived. This phenomenon is known as 'shock morbidity'. This phenomenon is believed to be temporary in nature and that incidence rates will return to a more normalized level with anti-selection.

The below tables outline the temporary increase to incidence rates, along with the permanent anti-selection factors.

Years Since Rate Increase	Shock Morbidity Adjustment Factor
0	100%
1	110%
2	105%
3	105%
4+	100%

Rate Increase	Anti-Selection Factor
0%	0.0%
5%	0.2%
10%	0.8%
15%	1.4%
20%	1.9%
25%	2.5%
30%	3.1%
35%	3.7%
40%	4.3%
45%	4.9%
50%	5.6%
55%	6.2%
60%	6.8%
65%	7.5%
70%	8.1%
75%	8.8%
80%	9.5%
85%	10.1%
90%	10.8%
95%	11.5%
100%	12.2%
...	...

*Incidence Improvement*

An incidence improvement factor is applied to the incidence rates to reflect studies that examine the improvement of population morbidity over time, with consideration for specific company experience. The incidence improvement factor is 1.3% per year for 15 years, beginning 1/1/2012.



### *Dynamic Validation & Model Calibration*

In order to ensure incidence assumptions appropriately replicate historical experience from the Company's IBNR models, a dynamic validation was performed by modeling best-estimate assumptions with inforce liability data as of December 31, 2011. Incidence calibration was performed at the time to ensure an appropriate model fit with historical experience from the dynamic validation analysis, along with ensuring the starting point of the projection is reasonable compared to recently observed trends.

### **Severity**

In the projection system, the severity of claim is the associated length and cost of a claim once a policy becomes disabled (or is already disabled). The severity of a claim is driven by three key assumptions:

- Recovery Rates
- Utilization Rates
- Disabled Life Mortality Rates

A further breakdown of these three components is described below.

#### *Recovery Rates*

Once a policyholder is on claim, there is an associated probability that the policyholder will recover back in to a 'healthy' status prior to death or exhausting benefits. This is the recovery rate assumption in the projection model that is developed as part of the annual experience study. The recovery tables are two-dimensional that vary by age of disability and disability duration. The first five years of the tables contain monthly rates and are annual thereafter. The recovery tables vary by the following:

- Benefit period (lifetime vs non-lifetime)
- Whether or not there are restoration of benefits
- The situs of the claim (Nursing Home, Home Health Care, Assisted Living Facility)
- Diagnosis of the claim (for policies currently on claim)

Policies that are currently in claim status have a known situs of care, so the recovery rates will be different than a policy currently in healthy status, since the future claim situs is unknown.

A sample table is shown below for sample ages of disablement (rates shown are on a monthly basis):

**Policyholder Status:** Disabled

**Benefit Period:** Lifetime

**Restoration of Benefits:** No

**Situs:** Assisted Living Facility (current, since policy is disabled)

**Diagnosis:** Dementia & Parkinson's

Disability Month	Disablement Age			
	65	75	85	95
1	0.10%	0.07%	0.04%	0.04%
2	0.16%	0.11%	0.07%	0.07%

3	0.18%	0.12%	0.07%	0.08%
4	0.17%	0.11%	0.07%	0.07%
5	0.20%	0.14%	0.08%	0.09%
6	0.18%	0.12%	0.07%	0.08%
7	0.20%	0.14%	0.08%	0.09%
8	0.19%	0.13%	0.08%	0.08%
9	0.14%	0.10%	0.06%	0.06%
10	0.12%	0.09%	0.05%	0.05%
11	0.12%	0.08%	0.05%	0.05%
12	0.11%	0.08%	0.04%	0.05%
...	...	...	...	...

*Utilization Rates*

Utilization rate tables are developed as part of the annual experience study and represent the anticipated percentage of the available daily benefit that gets used. The utilization tables are two-dimensional that vary by age of disability and disability duration. The first five years of the tables contain monthly rates and are annual thereafter. The utilization tables vary by the following:

- Benefit period (lifetime vs non-lifetime)
- The situs of the claim (Nursing Home, Home Health Care, Assisted Living Facility)
- Inflation type (simple, compound, none)
- Home health care percentage
- Payment type (indemnity vs reimbursement)
- Diagnosis of the claim (for policies currently on claim)

Policies that are currently in claim status have a known situs of care, so the utilization rates will be different than a policy currently in healthy status, since the future claim situs is unknown.

A sample table is shown below for sample ages of disablement (rates shown are on a monthly basis):

**Policyholder Status:** Disabled  
**Benefit Period:** Non-Lifetime  
**Inflation Type:** Compound  
**Home Health Care Percentage:** N/A (since policy is disabled)  
**Situs:** Assisted Living Facility (current, since policy is disabled)  
**Payment Type:** Reimbursement  
**Diagnosis:** Other

Disability Month	Disablement Age			
	65	75	85	95
1	47.60%	48.90%	50.12%	50.52%
2	47.77%	49.07%	50.30%	50.70%
3	47.93%	49.24%	50.47%	50.87%
4	48.10%	49.41%	50.65%	51.05%

5	48.26%	49.58%	50.82%	51.22%
6	48.43%	49.75%	51.00%	51.40%
7	48.59%	49.92%	51.17%	51.57%
8	48.76%	50.09%	51.34%	51.75%
9	48.92%	50.26%	51.52%	51.93%
10	49.09%	50.43%	51.69%	52.10%
11	49.25%	50.60%	51.87%	52.28%
12	49.42%	50.77%	52.04%	52.45%
...	...	...	...	...

### *Disabled Life Mortality Rates*

Once an insured is on claim, there is an associated probability that the insured will decrement due to death, which influences the overall length of a claim. Generally, the probability of death from a currently disabled insured is greater than the probability associated with a currently healthy insured, so separate assumptions are developed and modeled. The disabled life mortality assumptions are developed as part of the annual experience study. The disabled life mortality rates are two-dimensional tables that vary by age of disability and disability duration. Similar to the other severity assumptions, the first five years of the tables contain monthly rates and are annual thereafter. The disabled life mortality tables vary by the following:

- Benefit period (lifetime vs non-lifetime)
- The situs of the claim (Nursing Home, Home Health Care, Assisted Living Facility)
- Gender
- Diagnosis of the claim (for policies currently on claim)

Policies that are currently in claim status have a known situs of care, so the disabled life mortality rates will be different than a policy currently in healthy status, since the future claim situs is unknown.

A sample table is shown below for sample ages of disablement (rates shown are on a monthly basis):

**Policyholder Status:** Disabled

**Benefit Period:** Lifetime

**Gender:** Male

**Situs:** Nursing Home (current, since policy is disabled)

**Diagnosis:** Dementia & Parkinson's

Disability Month	Disablement Age			
	65	75	85	95
1	2.69%	3.95%	4.49%	5.33%
2	3.45%	5.06%	5.75%	6.82%
3	3.28%	4.82%	5.48%	6.50%
4	3.34%	4.90%	5.57%	6.61%
5	3.07%	4.50%	5.12%	6.08%
6	2.80%	4.11%	4.67%	5.54%
7-12	1.53%	3.40%	3.86%	4.58%

13-24	1.58%	2.26%	2.60%	3.21%
25-36	1.64%	2.31%	2.69%	3.52%
37-48	1.71%	2.35%	2.77%	3.85%
49-60	1.53%	2.36%	2.81%	4.18%
...	...	...	...	...

**Persistency**

In the projection system, the persistency assumptions are the probability that an individual will remain an inforce policyholder. The persistency of a claim is driven by three key assumptions:

- Voluntary Lapse Rates
- Shock Lapse Rates
- Healthy Life Mortality Rates
- Healthy Life Mortality Improvement

A further breakdown of these three components is described below.

*Voluntary Lapse Rates*

The voluntary lapse assumption is developed as part of the annual experience study and reflects the probability associated with an insured voluntarily canceling their policy. The voluntary lapse rates differ from shock lapse rates in that the policy cancelation is not due to a rate increase notification. The voluntary lapse assumption varies by policy duration. The voluntary lapse rate table is shown below:

Policy Duration	Lapse Rate
1	6.00%
2	4.00%
3	3.00%
4	2.50%
5	2.00%
6	1.75%
7	1.50%
8	1.25%
9	1.00%
10+	0.75%

*Shock Lapse*

A shock lapse assumption is used for all products due to this rate increase, based on internal experience studies. These rates are to appropriately increase insured lapse behavior following a premium rate increase. The impact of an insured electing a reduced benefit option (RBO) is considered in addition to a full shock lapse.

Rate Increase	Shock Lapse Rate	Reduced Benefit Option (RBO)	Additional Lapse due to Shock and RBO
0%	0.00%	0.00%	0.00%
5%	0.44%	0.10%	0.50%
10%	1.56%	0.34%	1.90%
15%	2.69%	0.57%	3.20%
20%	3.81%	0.81%	4.60%
25%	4.93%	1.05%	5.90%
30%	6.06%	1.29%	7.30%
35%	7.18%	1.52%	8.60%
40%	8.31%	1.76%	9.90%
45%	9.43%	2.00%	11.20%
50%	10.56%	2.23%	12.60%
55%	11.68%	2.47%	13.90%
60%	12.80%	2.71%	15.20%
65%	13.93%	2.95%	16.50%
70%	15.05%	3.18%	17.80%
75%	16.18%	3.42%	19.00%
80%	17.30%	3.66%	20.30%
85%	18.43%	3.89%	21.60%
90%	19.55%	4.13%	22.90%
95%	20.67%	4.37%	24.10%
100%	21.80%	4.61%	25.40%
...	...	...	...

*Healthy Life Mortality Rates*

The healthy life mortality assumption is the probability of death associated with currently healthy policyholders and is developed as part of the annual experience study. The base healthy life mortality tables are one-dimensional tables based on the 2012 Individual Annuitant Mortality (IAM) tables, which vary based on gender and attained age. There are additional multipliers to these base tables based on CCC's experience as follows:

Gender	Adjustment Factors
Male	75.0%
Female	60.0%

*Healthy Life Mortality Improvement*

A healthy life mortality improvement factor is applied to the base healthy mortality table to reflect studies that examine the improvement of population mortality over time. The healthy life mortality improvement factor is 0.8% per year for 15 years, beginning 1/1/2012.

### **Discount Rate**

The inforce premium-weighted average maximum statutory valuation interest rate for contract reserves is used to accumulate past actual experience and discount future experience.

### **Expenses**

This filing is based on loss ratios and expense levels have not been considered. Commissions are not paid on rate increase premium.

### **6. Marketing Method**

These policies were sold through non-captive agents.

### **7. Underwriting Description**

These policy forms were fully underwritten with the use of various tools in addition to the application which may have included medical records, an attending physician's statement, telephone interviews, and/or face-to-face assessments.

### **8. Premiums**

Premiums are unisex, level, and payable for life unless the insured selected a limited pay option. The premiums may vary by issue age, elimination period, benefit period / lifetime maximum, initial daily benefit amount, level of home health care coverage, inflation protection option, premium mode, underwriting class, marital status, and the selection of any other options or riders.

### **9. Modal Premium Factors**

The following modal factors remain unchanged and are applied to the annual premium to obtain the modal premium.

<b>Payment Mode</b>	<b>Modal Factor</b>	<b>Nationwide Distribution at 12/31/2016</b>
Annual	1.00	62.4%
Semi-Annual	0.52	8.8%
Quarterly	0.27	12.2%
Monthly	0.09	16.5%

### **10. Issue Age Range**

Nationwide issue ages range from 18 to 84.

### **11. Area Factors**

Area factors are not used for these products.

## **12. Average Annualized Premium**

The average annualized premium for the policy forms subject to the rate increase request both prior to the impact of the requested rate increase, and after, are provided in Attachment 1 to this memorandum.

## **13. Number of Policyholders**

The current number of policyholders as of December 31, 2016 can be found in Attachment 1.

## **14. Distribution of Business**

The historical experience reflects the actual distribution of policies during the experience period. We used the current distribution of business as of December 31, 2016 to project future experience. Attachment 2 contains the distribution of the inforce policies by key demographic and benefit characteristics.

## **15. Claim Liability and Reserves**

Active life reserves have not been used in this rate increase analysis. Claim reserves as of December 31, 2016 have been discounted to the incurral date of each respective claim and included in historical incurred claims. Incurred but not reported reserve balances and terminated but not reported reserve balances as of December 31, 2016 have been allocated to a calendar year of incurral and included in historical incurred claims.

## **16. Trend Assumptions**

As this is not medical insurance, we have not included any explicit medical cost trends in the projections.

## **17. Experience - Past and Future**

Earned premiums and incurred claims projected through 2076 are developed from a first-principles actuarial model representing actual contracts in-force as of December 31, 2016. The assumptions described in Section 5 above are used to project earned premiums and incurred claims.

Historical results reflect earned premium by calendar year with claims captured by incurral year. That is, incurred claims for a calendar year represent all payments through December 31, 2016 for a claim incurred in a particular calendar year plus any claim reserve held as of December 31, 2016. Incurred claims also include IBNR and TBNR held as of December 31, 2016.

Attachment 4 presents nationwide experience through December 31, 2016 for all forms affected by this rate increase to ensure maximum credibility. Attachment 5 presents experience of your state through December 31, 2016.

Annual loss ratios are calculated, with and without interest, as incurred claims divided by earned premiums.

A lifetime loss ratio as of December 31, 2016 is calculated as the sum of accumulated past experience and discounted future experience where accumulation and discounting occur at the

inforce premium-weighted average maximum statutory valuation interest rate for contract reserves.

### **Definition of Approved Rate Increases**

For clarity, the earned premium from rate increases presented in Attachment 4 reflects prior premium rate increase(s) approved by your state with the rate increases applied to all policies nationwide. Attachment 4 includes separate exhibits for projections with and without the requested rate increase.

### **18. History of Rate Adjustments**

See Attachment 1 for a history of rate increases on inforce policyholders with these policy forms in your state.

### **19. Analysis Performed to Consider a Rate Increase**

The initial premium schedules were based on pricing assumptions believed to be appropriate, given industry experience available when the initial rate schedules were developed. Attachment 3 contains comparisons of the pricing assumptions (expected) to actual experience. Further comparisons of our new assumptions to actual experience are also provided.

### **20. Requested Rate Increase and Demonstration of Satisfaction of Requirements**

CCC is requesting a 15% rate increase for all product portfolios as described in Section 1. Corresponding rate schedules reflecting these increases are included with this filing. Although this request is significantly less than CCC can justify, we are limiting our rate increase request at this time. CCC will continue to monitor the experience of this block.

Note that the actual rates implemented may vary slightly from those filed due to implementation rounding algorithms.

Satisfaction of minimum required loss ratio requirements is demonstrated in Attachment 1. This approach shows that with the requested rate increase the expected lifetime loss ratio exceeds the minimum loss ratio requirement.

### **21. Proposed Effective Date**

The rate increase will apply to policies on their next premium due date following a notification period at least as long as required by your state following approval. No insured will receive more than one rate increase in a 12-month period.

### **22. Actuarial Certification**

I am an Associate of the Society of Actuaries and a Member of the American Academy of Actuaries. I meet the Academy's qualification standards to render this actuarial opinion and am familiar with the filing requirements for long-term care insurance premium and rate increases.

This memorandum has been prepared in conformity with all applicable Actuarial Standards of Practice including Actuarial Standard of Practice No. 8, "Regulatory Filings for Health Benefits, Accident and Health Insurance, and Entities Providing Health Benefits" and Actuarial Standard of Practice No. 18, "Long-Term Care Insurance".



I certify that, to the best of my knowledge, this rate filing is in compliance with the applicable laws and rules of your state. In my opinion, the rates are not unfairly discriminatory and the gross premiums are not excessive and bear reasonable relationship to the benefits.



Louis Scarim, ASA, MAAA

March 28, 2018

Date

**23. Attachment Listing**

- Attachment 1: State Specific Information
- Attachment 2: Distribution of the Inforce Policies
- Attachment 3: Experience Analysis and Assumption Setting
- Attachment 4: Nationwide Experience Projections
- Attachment 5: State Specific Experience Projections