Knights of Columbus
New Haven, Connecticut
Actuarial Memorandum - Individual A&H Rate Filing
Maryland Long Term Care Insurance Policy Forms and Riders
Maryland

1. Purpose of Filing

The purpose of this filing is to demonstrate that the anticipated lifetime loss ratio of these forms meets the minimum requirements in all states with regards to the included rate increase request. It is not intended for any other purpose.

2. Scope of Filing

This filing applies to the Long Term Care Policy Forms and Riders as shown in the 'Benefits' section. The forms were available to any Knights of Columbus (KofC) member and his spouse and were issued from 2000-2016 through a captive agent force. This is the first rate revision requested on these Policy Forms.

KofC is requesting an increase to the current premium rates of 37%. The increase will be requested in all states where there are inforce policies. The following table shows the number of inforce policies and annual premium, as well as the current and proposed average annual premium as of 12/31/2022 in your state and nationwide. Inforce counts and premiums for all states can be found in the attached Exhibit IV.

	Inforce Policies	Inforce Annual Premium	Avg. Annual Premium (Current Rates)	Avg. Annual Premium (Proposed Rates)
Maryland	1,348	$2,543,802	$1,887	$2,585
Nationwide	38,836	$61,029,653	$1,571	$2,153

This request was filed with and has been reviewed by the Multistate Actuarial LTCI Rate Review Team (MSA Team) prior to submission in individual states. The MSA has recommended the requested nationwide rate increase be fully approved. The MSA shared their advisory report with states in December 2022 / January 2023.

3. Benefits

These policies and corresponding riders cover Long Term Care expenses and have been grouped for rating purposes.

Policy Form LTC01 and Rider Forms BIR01 and NFB01: Developed in 1999, Form LTC01 provides benefits for Nursing Home Care, Assisted Living Facility, Home Health Care (including caregiver training, equipment, and respite care), Adult Day Care and Alternative Care. The policy also has provisions for Waiver of Premium. Additional benefits include care management, bed reservation, contingent nonforfeiture, and a shared care benefit. Benefits are subject to an elimination period of 30, 60, 90 or 180 days, and a benefit period of 3 years, 5 years or Lifetime. Rider BIR01 increases the policy daily benefit by 5% of the previous year's daily benefit. Policies that do not elect the inflation rider can be eligible for guaranteed purchase offers. Rider NFB01 provides a Non-forfeiture Benefit if the policy lapses after being inforce for at least three years.

Policy Form NHC01 and Rider Forms BIR01 and NFB01: Developed in 1999, Form NHC01 provides benefits for Nursing Home Care, Assisted Living Facility and Alternative Care. The policy also has provisions for Waiver of Premium. Additional benefits include care management, bed reservation, contingent nonforfeiture, and a shared care benefit. Benefits are subject to an elimination period of 30, 60, 90 or 180 days, and a benefit period of 3 years, 5 years or Lifetime. Rider BIR01 increases the policy daily benefit by 5% of the previous year's daily benefit. Policies that do not elect the inflation rider can be eligible for guaranteed purchase offers. Rider NFB01 provides a Non-forfeiture Benefit if the policy lapses after being inforce for at least three years.

4. Rate Increase Request, Reasons for and Expected Effect on Premiums

KofC is requesting a level 37% increase to the current premium rates. This increase is being requested in all states where there are inforce policies. Inforce counts and premiums for all states can be found in the attached Exhibit IV.

This rate increase is necessary because projected future experience is changed from what was anticipated when the products were priced in 1999. There are several reasons for this change in projected future experience:

- Actual policy termination rates have been lower than originally expected. The revised voluntary lapse assumptions based on emerging experience and used to project future experience consist of an ultimate lapse rate of 0.82% versus the 2% assumed at pricing. Similarly, updated mortality assumptions apply a 51% factor on the original pricing mortality assumption.
- Incurred claim lengths of stay have significantly exceeded those assumed in pricing.
- Claim incidence rates at older ages have been in excess of those expected at the time of original pricing.
- Actual portfolio investment rates have been and are projected to continue to be significantly lower than assumed in pricing.

Rate Stability Loss Ratio Test
Exhibit II demonstrates that the requested increase satisfies the Rate Stability 58%/85% dual loss ratio minimum test, substituting the estimated original pricing loss ratio of 68.3% (Exhibit X) for the 58% minimum loss ratio applied to initial earned premiums. The maximum increase allowable under this test would be 60.9% while the requested increase is 37%.

Blended If-Knew/Make-up Method (Minnesota Approach)
A demonstration that this request is in line with the increase indicated by the Blended If-Knew/Make-up method of review is attached as Exhibit III. The results of that demonstration are summarized in the following table:

Loss Ratio at the original premium level	84.5%
Minimum loss ratio applicable to the form	56.8%
If-knew increase	48.7%
Make-up increase	151.3%
Remaining policyholders percentage	69.8%
Blended increase	120.2%
Past rate increase	0.0%
Maximum allowable rate increase	120.2%
Adjusted for company share calculation	**97.2%**

Prospective Present Value Method (Texas Approach)
The reasons for the need for a rate increase and the unique features of this block result in the Texas PPV method not being a good fit for an approach at determining a justified rate action on this block.

The PPV approach does not account for or consider changes in the interest rate environment. While there are other assumption changes contributing to the need for an increase at this time, the lower than originally anticipated investment return rates assumed going forward are a significant contributing factor. Because the PPV approach does not account for that assumption change, it does not indicate an increase based on the aggregate of other assumption changes at this time, even though the projected lifetime loss ratio is now significantly in excess of original expectations and other measures as discussed above indicate significant justified increase amounts.

Finally, total historical incurred claims have been less than originally expected to date. This is driven by lower than expected incidence rates at younger ages, although incidence rates at older ages have been higher than expected. Revised claim incidence assumptions were developed based on these historical A/E results, and those revised tables were utilized in projecting the updated experience projections included in this filing. Therefore, while the block is currently at an average attained age such that projected calendar year loss ratios in the next 10-20 years are actually less than those that would be projected using the original claim cost assumptions, the steeper incidence rate curve in the revised assumptions results in that comparison eventually inverting, where projected loss ratios under the revised assumptions become higher than under original assumptions.

This pattern compounded with lower than originally expected termination rates results in a much heavier backloading of lifetime claims expenses than originally expected. This creates a situation where, while the Texas approach does not currently indicate an increase is necessary, in future years it will indicate an increase is necessary, and in fact the longer that rate action is delayed, a larger increase will be indicated by the method even if experience develops as projected in this filing. The following table shows the increases indicated by the Texas method now, and in 5-year increments to illustrate this result:

Time	Indicated Increase
Now	None
5 years later	5.7%
10 years later	49.2%
15 years later	149.7%

We do not believe it is in the best interest of policyholders, insurers, or states to hold off or delay rate action knowing that in future years a much larger increase will be needed on the remaining policyholders, solely due to the nature of this particular method of review. The unique aspects of this block should be taken into consideration when selecting or utilizing an approach to analyzing the need for an increase.

Other Considerations and Notes

- The projected lifetime and future loss ratio for these forms is far in excess of that expected in pricing. The currently projected lifetime loss ratio without any rate increase is 84.5% compared to our estimate of the original pricing loss ratio of 68.3%. KofC is not attempting to recoup past losses for poor experience, and the loss ratio after the proposed increase is 75.7%, still in excess of the estimated original pricing loss ratio.

- There have been no prior rate increases on these policy forms.

- This rate increase is solely intended to bring premiums to a level that supports the revised projected experience for years 2022 and forward. Exhibit V shows a comparison of the proposed rates for the policy forms in this block to the new business rates for policies currently issued by KofC. Currently sold policies were introduced in 2014 and use gender-distinct premium rates so Exhibit V uses an estimated blended unisex rate for comparing to the proposed rates on the affected forms. The proposed increase will bring the rates on inforce policies closer to the levels of the rates on the currently sold policy forms, but rates will still remain below the corresponding new business rates at all ages on policies with automatic inflation options and all but the highest issue ages on policies without an automatic inflation benefit.

- KofC voluntarily added $22.2 mm to active life LTC reserves for year end 2020 to reflect updated mortality and valuation interest rates.

Implementation Notes

The increase will become effective as of the next policy anniversary date for each affected policy. We will notify policyholders 95 days in advance of their next policy anniversary date before implementing the rate increase.

KofC intends to offer reduced benefit options to policyholders that can help mitigate the cost of the increase for those who cannot afford the full requested amount. Most policyholders will receive pre-programmed downgrade offers in the rate increase notification letter that would allow them to reduce their premium rate by choosing to increase their elimination period or decrease their benefit period or daily benefit amount.

Policyholders will also be informed that they may call in to our customer service line to discuss other downgrade options as well if they would like to lower their premium rate.

KofC will be providing a contingent non-forfeiture benefit to all policyholders regardless of whether their policy covers this benefit. This non-forfeiture benefit would be in the form of a shortened benefit maximum amount/period equal to the amount of premium the policyholder paid in over the lifetime of the policy should the policyholder lapse coverage within 120 days following the effective date of the rate increase. This benefit will not be reduced by prior claims, although the maximum non-forfeiture benefit will be limited to the remaining maximum benefit amount under the policy.

5. Rate Justification Standard - Minimum Loss Ratio

This filing demonstrates that both the projected future loss ratio and the anticipated lifetime loss ratio are higher than the minimum loss ratio required for long term care policy forms.

Furthermore, Exhibit II demonstrates that the requested increase satisfies the 58/85 loss ratio minimum test, substituting the estimated original pricing loss ratio of 68.3% for the 58% minimum loss ratio applied to initial earned premiums.

6. Rate Increase History

This is the first rate increase request submitted on these policy forms.

7. Projection Assumptions

The following table shows the assumptions that were used in order to generate the present value of future premium and claims and their loss ratio and how they compare to the corresponding assumptions from original pricing.

Assumption	**Current Filing**	**Original Pricing**
Interest	Valuation rate of 3.5%	Earned interest rate of 6.25%
Lapse	Updated voluntary lapse rates 41% of pricing: Year 1: 3.27% Year 2: 2.45% Year 3: 1.63% Year 4: 1.23% Year 5+: 0.82% Note that all inforce policies are in the ultimate durations 5+.	Voluntary Lapse rates based on Policy Duration: Year 1: 8% Year 2: 6% Year 3: 4% Year 4: 3% Year 5+: 2%
Policy Terminations due to Claim Incidence	Claim Incidence Rates added to baseline lapse and mortality rates to determine total decrements out of active life status	N/A

Mortality	Baseline blended adjusted pricing mortality with the following factors applied (in addition to the Male/Female factors from pricing): 23% in years 1-5, 33% in years 6-10, and 51% for years 11 and on.	1975-1980 Basic Ultimate Mortality Table blended 50/50 Male/Female with the following factors: Male: 86.31% Female: 80.55%
Morbidity	Adjustments to Pricing Claim Costs as follows: Utilization Rate Factor: 72.6% Length of Stay Factor: 268.5% Incidence Rate Adjustments based on Attained Age and Policy Duration. Generally reduced incidence rates at attained ages < 90 and increased at attained ages 90+, and extended the durational selection period from 7 year to 20 years.	Institutional benefits rates based upon the 1985 and 1995 National Nursing Home Surveys with adjustments. Home and Community benefits rates based upon the 1989 and 1994 National Long-Term Care Survey of disabled elders in the Community. Further adjustments to the source data were made to reflect the selection effects of underwriting and the non-duplication of benefits with other payment sources.
Rate Increase	Level 37% Increase Assumed Implementation % by Year: 2022: 25% 2023: 60% 2024: 80% 2025: 100%	N/A
Shock Lapse	None	N/A

These assumptions, other than the proposed rate increase and implementation schedule, are consistent with those developed by Knights of Columbus and used in the year-end 2021 asset adequacy testing and AG51 memorandum. While a variety of interest rate scenarios are applied in asset adequacy, for the purposes of this filing, cash flows are accumulated and projected at the prevailing valuation interest rate of 3.5%.

8. Past Experience
Exhibit I shows the past experience for the business. The experience is through December 31, 2021 and is based on nationwide experience. The accumulated value of past earned premium is $1,086,116,534 and the accumulated value of past incurred claims is $330,441,509. This results in a loss ratio of 30.4%.

9. Projected Future Experience
The future experience has been generated for 50 years using the business in force as of year-end 2021 and is also presented in Exhibit I. Adjustments have been made to the experience by applying the termination rates and rate increase assumptions as shown in the Projection Assumptions section. The rate increase of 37% requested within this filing is then applied to that premium stream using the phase-in implementation percentages shown above resulting in the Revised Earned Premium in the Projected Experience W/ Rate Increase section.

The present value of future earned premium after the requested increase is $796,532,039 and the present value of future incurred claims is $1,095,084,257. This results in a loss ratio of 137.5%.

<u>10. Anticipated Lifetime Loss Ratio</u>
The anticipated lifetime loss ratio is defined as the sum of the present value of past and projected incurred claims divided by the sum the present value of past and future earned premium. These values, including the requested rate increase as shown in Exhibit I, are summarized below:

Experience Period	Earned Premium	Incurred Claims	Loss Ratio
Past Years	1,086,116,534	330,441,509	30.4%
Projected Future	796,532,039	1,095,084,257	137.5%
Anticipated Lifetime	1,882,648,573	1,425,525,766	75.7%

Exhibit II further demonstrates that the requested increase satisfies the 58/85 loss ratio minimum test, substituting the estimated original pricing loss ratio of 68.3% for the 58% minimum loss ratio applied to initial earned premiums.

<u>11. Actuarial Certification</u>
I am a consulting actuary with Davies Life and Health. and retained by Knights of Columbus to render an opinion with regard to long-term care insurance rates. I am 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 requirements for filing long-term care insurance premiums and rate increases.

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

I hereby certify that, to the best of my knowledge and judgment, this rate submission is in compliance with the applicable laws and regulations of this jurisdiction and the rules of the department of insurance.

This rate increase request utilizes best estimate assumptions. If the requested premium rate schedule increase is implemented and the underlying best estimate assumptions are realized, no further premium rate schedule increases are anticipated. If moderately adverse conditions had been utilized instead of best estimate assumptions, a larger increase would have been necessary.

In my opinion, the rates have been calculated in a manner that complies with accepted actuarial practices, are uniformly applied to all policies within each issue age rate class, are not excessive or unfairly discriminatory, and bear reasonable relationship to the benefits based on the loss ratio standards of this jurisdiction.

I have relied on data and information provided by Knights of Columbus to develop this memorandum, including but not limited to projection assumptions and projections of future experience, management’s view of when a rate change may be considered, policy design, underwriting and claim adjudication process and claim data. I have not audited or independently verified the data and information provided but have reviewed it for reasonableness. The basis for contract reserves has been previously filed and there is no anticipation of any changes.

In forming my opinion, I have used actuarial assumptions and actuarial methods and such tests of the actuarial calculations as I considered necessary. Based on these assumptions, or statutory requirements where necessary, the premium rate filing is in compliance with the loss ratio standards of this jurisdiction.

Todd Moltumyr, ASA, MAAA
Vice President