

**MEDAMERICA INSURANCE COMPANY**

**Address: 165 Court Street, Rochester, New York 14647**

**Simplicity ii Actuarial Memorandum**

**March 30, 2017**

Product

Tax-Qualified Long-Term Care Policy Form

Number

SPL2-336-MD

This policy form was issued in Maryland by MedAmerica Insurance Company (MedAmerica) from June 2008 through April 2014 and is no longer being marketed in any jurisdiction.

**1. Purpose of Filing**

This actuarial memorandum has been prepared for the purpose of demonstrating that the requested rate increase for the above-listed product meets the minimum requirements of your jurisdiction and demonstrating compliance with its rate stability regulation. It may not be suitable for other purposes.

**2. Description of Benefits**

This is a federally tax-qualified, individually underwritten policy form that provides comprehensive coverage on a cash basis. Riders that convert the coverage to either facility only or community only may have been available at issue. It has benefit eligibility requirements that involve activities of daily living (ADL) deficiencies or cognitive impairment. Waiver of premium is provided when certain benefits are being paid. A monthly benefit, cash benefit account, and elimination period were selected at issue.

At issue, the insured may have had the option to choose one of four riders providing inflation protection: simple inflation, compound inflation with no maximum at either 3% or 5%, or compound inflation with a maximum of two times the original benefit amount. The simple inflation option provides for benefit levels that increase each anniversary date by 5% of the monthly benefit amount chosen at issue for as long as the policy is in force. The compound inflation option with no maximum provides for benefit levels that increase on each anniversary date by 3% or 5% compounded annually for as long as the policy is in force. The compound inflation option with a maximum of two times the original benefit amount provides for benefit levels that increase on each anniversary by 5% compounded annually while the policy is in force, but limits the increase to two times the original benefit amount. The increasing benefits apply even when the insured is in claim status.

The available choices for the cash benefit account, monthly benefit, elimination period and inflation option are shown in Section 20.

At issue, the insured may have had the option of selecting additional riders that provide the following types of coverage: restoration of benefits, return of premium, shortened benefit period non-forfeiture, shared care, shared waiver, or survivorship benefit.

The insured may have had the option to select one of the following premium payment options: lifetime, 10-year, or paid up at age 65.

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A contingent benefit upon lapse (CBUL) will be available to all insureds.

**3. Renewability**

These policies are guaranteed renewable for life.

**4. Applicability**

As this policy form is no longer being sold in any jurisdiction, this filing is applicable to in-force policies only. The premium changes will apply to the base forms as well as all applicable options and riders.

**5. Actuarial Assumptions**

- a. Morbidity reflects claim costs developed using 2014 Milliman Long Term Care Guidelines. The claim costs are adjusted based on historical claim experience by attained age, duration, and coverage-type, to the extent credible.
- b. Lapse Rates vary by duration, issue age, and premium payment option. The lifetime-pay lapse rates are shown in the following table.

**Lifetime-Pay Lapse Rates**

Duration	Issue Age Band			
	<40	40-49	50-59	60+
1	17.5%	9.5%	5.5%	5.5%
2	16.5	9.0	5.0	4.5
3	12.0	6.0	4.0	3.5
4	8.0	4.5	3.0	3.0
5	7.0	4.0	3.0	2.5
6	5.0	3.0	2.5	2.0
7	3.5	3.0	2.0	1.5
8	2.0	1.5	1.5	1.5
9+	1.0	1.0	1.0	1.0

The lapse rates in the above table were adjusted for the limited-pay options based on the following criteria:

- For the ten-pay option, a reduction of 65% of the above lapse rates is assumed for durations one through four, a reduction of 70% of the above lapse rates is assumed for durations five through eight, and 0% thereafter
- For the paid up at age 65 option, a reduction of 50% of the above lapse rates is assumed until age 55, a reduction of 75% of the above lapse rates is assumed for ages 55 to 59, and 0% thereafter.

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- c. Mortality Rates reflect the 1994 Group Annuitant Mortality (GAM) Static Table with unisex durational factors. The assumed durational factors reflect the impact of both mortality selection and improvement and are shown in the following table.

**Durational Mortality Adjustment Factors**

<b>Duration</b>	<b>Factor</b>	<b>Duration</b>	<b>Factor</b>
1	0.25	13	0.63
2	0.35	14	0.64
3	0.42	15	0.66
4	0.44	16	0.67
5	0.45	17	0.69
6	0.47	18	0.70
7	0.48	19	0.73
8	0.50	20	0.75
9	0.53	21	0.78
10	0.55	22	0.80
11	0.58	23	0.83
12	0.60	24+	0.85

- d. Policyholder Behavior Due to the Rate Increase. At the time of the rate increase, policyholders have the option to elect a CBUL or reduced benefit options (RBO). Based on the cumulative rate increase level, for issue ages less than 65, 4% of in-force lifetime pay policies are assumed to elect CBUL. Policyholders who elect CBUL are modeled as a lapse (i.e., the CBUL benefit is not modeled), which results in a slightly lower lifetime loss ratio than if the CBUL benefit had been modeled. No increase in morbidity is assumed for adverse selection.
- e. Interest Rate of 4.50% is used for accumulating and discounting earned premiums and incurred claims in the calculation of cumulative loss ratios. This rate is supported by the average net investment earnings rate projected in MedAmerica’s cash flow testing in 2016.
- f. Improvement for the mortality and morbidity assumptions was assumed for 15 years. For mortality improvement, levels of 0.5% and 1.0% are assumed beginning in calendar year 2016 for females and males, respectively. For the morbidity improvement, 1.0% is assumed beginning in calendar year 2016.
- g. Expenses have not been explicitly projected. Originally filed expense assumptions are assumed to remain appropriate, except that reductions are made to the renewal commission rates so that the total commissions paid before and after any increase in premiums are similar (i.e., commissions are not paid on the increased premium).

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The above assumptions are based on the experience of MedAmerica Insurance Company, MedAmerica Insurance Company of New York and MedAmerica Insurance Company of Florida (MedAmerica Companies) that issued the same products, industry experience and judgment. The morbidity assumptions are based on the nationwide claim experience through December 31, 2014 of the particular policy forms in this filing. In developing the persistency assumptions, policy termination experience through March 31, 2015 was used. The above assumptions are deemed reasonable for the particular policy form in this filing. The assumptions used in this filing are considered best-estimate and do not reflect moderately adverse conditions.

In establishing the assumptions described in this section, the policy design, underwriting, and claims adjudication practices for the above-referenced policy form were taken into consideration. Appendix A to this memorandum provides a description of the development of and justification for the assumptions used in this filing.

The company is not currently marketing long-term care products. As a result, the requirement to reflect on any assumptions that deviate from those used for pricing other forms currently available for sale is not applicable.

**6. Marketing Method**

This policy form was marketed in Maryland by agents and brokers of MedAmerica.

**7. Underwriting Description**

These policies were fully underwritten with the use of various underwriting tools in addition to the application, which may have included medical records, an attending physician's statement, prescription screen, telephone interview, and/or face-to-face assessment. Employer sponsored groups were eligible for reduced underwriting for actively at work employees age 65 and less.

**8. Premiums**

Premiums are unisex and payable for life unless the insured selected a limited premium payment option. The premiums may vary by issue age, pool of money, initial monthly benefit, community care level, elimination period, inflation option, premium payment option, medical underwriting, marital status, employer sponsored/multi-life discounts, and the selection of any riders.

**9. Issue Age Range**

Issue ages are from 18 to 85.

**10. Area Factors**

Area factors are not used for this product.

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**11. Premium Modalization Rules**

The following modal factors and nationwide percent distributions (based on in-force count as of December 31, 2015 of the MedAmerica Companies) are applied to the annual premium (AP):

<b>Premium Mode</b>	<b>Modal Factors</b>	<b>Percent Distribution</b>
Annual	1.0000*AP	39%
Semi-Annual	0.5150*AP	4%
Quarterly	0.2600*AP	17%
Monthly	0.0900*AP	39%
Bi-weekly	0.0415*AP	1%

**12. Reserves**

Active life reserves and reserves for the election of a CBUL have not been used in this rate increase analysis. Claim reserves as of December 31, 2015 have been discounted to the incurral date of each respective claim and included in historical incurred claims. A best estimate of the incurred but not reported (IBNR) reserve balance as of December 31, 2015 has been allocated to the 2015 calendar year of incurral and included in historic incurred claims.

**13. Trend Assumptions**

An explicit medical cost trend is not included in the projections.

**14. Actual to Expected Experience**

Exhibit I provides a comparison of (a) actual and projected experience using current assumptions and (b) expected experience using original pricing assumptions. Included are calendar year earned premiums, incurred claims, annual loss ratios, cumulative loss ratios, and the ratio of actual-to-expected (A:E) loss ratios. Exhibit II provides the same information as Exhibit I, but split by issue age based on the groupings in the rate increase request. Exhibit III provides the same information as Exhibit I, but based on MedAmerica’s Maryland-specific experience. Maryland-specific experience is not considered fully credible, but is being provided as generally requested. Values in Exhibits I through III are shown both before and after the follow-up request to achieve the cumulative rate increases by issue age band shown in Section 17 below.

Actual experience is provided from inception through 2015 and then projected on a seriatim basis for 60 years using the current best-estimate assumptions described above in section 5.

Expected experience was projected on a seriatim basis from issue using the original pricing assumptions and the actual mix of policies sold.

Exhibit IV provides a comparison of the current and original pricing assumptions.

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The experience in Exhibits I and II reflects pooled nationwide experience of the MedAmerica Companies, across the above-referenced form and similar nationwide forms.

**15. History of Previous Rate Revisions**

In Maryland, one prior rate increase has been filed and implemented on this policy form. In December 2015, the Administration filed a flat 15% rate increase which was implemented in April 2016.

As part of this rate increase process, an increase has been or is expected to be requested in all jurisdictions. In certain jurisdictions, the requested rate increase may be limited due to regulatory restrictions.

Currently, this rate increase request has been submitted in 46 of the 48 jurisdictions with Simplicity ii business in force. Of the 46 jurisdictions in which a rate increase has been submitted thus far, 38 have reached a decision regarding the request. Of these 38 jurisdictions, 21 have approved the full rate increase request, and 17 have approved a portion of the original request. The average amount approved to date is 21% across these 38 jurisdictions. In any jurisdictions where the full rate increase request has not been approved, MedAmerica anticipates submitting additional rate increase filings until the full amount of the original request is achieved.

**16. Analysis Performed to Consider a Rate Increase**

This rate increase request is a follow-up to the 2015 rate increase request. At the time of the 2015, request, an analysis of the business was performed, as described below, which confirmed that a rate increase could be considered.

The product was priced such that the premium rates were sufficient to cover any of four moderately adverse scenarios. The following table provides the lifetime loss ratio using the original pricing assumptions (shown in Exhibit IV), the four moderately adverse scenarios defined in original pricing, and the assumed mix of policies sold.

<b>Moderately Adverse Scenario</b>	<b>Loss Ratio</b>
A. Claims experience up to 30% in excess of expectation	70%
B. Voluntary lapse as low as 10% of the rates assumed in pricing	67%
C. Discount rates as low as 175 basis points less than assumed in pricing	69%
D. Mortality rates as low as 65% of 1994 GAM Tables	69%

As the product was priced to cover any of the above scenarios, the most adverse scenario defines the threshold that must be crossed before the company may consider a rate increase, which is 70%.

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The analysis performed at the time of the 2015 rate increase request confirmed that the lifetime loss ratio using current assumptions exceeded this threshold, indicating that experience has been more than moderately adverse and so a rate increase could be considered.

Exhibit V provides a comparison of actual and projected nationwide experience to that expected in pricing with respect to morbidity, mortality, lapse, and interest. These experience and projections are the same as those underlying the analysis performed for the 2015 rate increase request (i.e., based on experience through 2014).

**17. Requested Rate Increase and Demonstration of Satisfaction of Loss Ratio Requirements**

Nationwide, the company originally requested a rate increase that varied by issue age and ranged from 0% to 33%. The rate increase was determined by issue age to better align the rate increase with the adverse experience and to protect older insureds. The original rate request was determined in such a way that the company is sharing in the cost of the rate increase with consumers and is not attempting to recoup past losses or lost revenue. In Maryland, if the requested rate increase were allowed to vary by issue age, the average across all issue ages would be 25% based on the distribution of business in force as of December 31, 2014, as shown in the following table.

<b>Issue Ages</b>	<b>Original Nationwide Request</b>	<b>Before Increase Premium<sup>[1]</sup></b>	<b>After Increase Premium<sup>[2]</sup></b>	<b>After Flat 25% Increase</b>
<40	33%	461	614	577
40-44	32	968	1,277	1,210
45-49	32	1,200	1,584	1,500
50-54	29	1,367	1,763	1,708
55-59	26	2,612	3,291	3,265
60-64	22	3,422	4,174	4,277
65-69	17	2,766	3,236	3,458
70-74	13	6,285	7,102	7,856
75+	0	6,439	6,439	8,049
All Ages	25 <sup>[3]</sup>	1,801	2,422	2,422

[1] Before increase premiums do not reflect the prior 15% rate increase filed in Maryland in January 2016.

[2] Based on Nationwide Request

[3] Based on the distribution of MedAmerica business in force in Maryland as of December 31, 2014

We understand that under Insurance Article Sections 18-116 the Administration will not consider a rate increase that varies by issue age. Therefore, MedAmerica is pursuing a flat cumulative 25% rate

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increase on the above –listed form in order to certify that no future premium rate increases are anticipated under MAE.

The current request of 9% is being sought in order to achieve a cumulative rate increase equal to the original request.

As discussed in the original rate request, company management has indicated that if the rate increase shown in the table above is approved, no future rate increases are anticipated unless experience deteriorates beyond a 72% lifetime loss ratio. This is equivalent to defining moderately adverse experience (MAE) as a 15% increase in the *future* (2015+) loss ratio due to any combination of deterioration in the experience from that expected in the original 2015 filing. The projection in this filing uses updated assumptions that show some deterioration in the block since the 2015 filing, further illustrating the need for this increase.

The proposed rate schedules are enclosed with this filing. The rates implemented may vary slightly due to rounding algorithms.

As the company is not currently marketing new business, the required statement that the renewal premium rate schedules are not greater than the new business premium rate schedules is not applicable.

Exhibit VI provides a demonstration that the requested rate increase meets the 58%/85% test required by rate stability regulation. This exhibit shows that the sum of the accumulated value of incurred claims without the inclusion of active life reserves, and the present value of future projected incurred claims, without the inclusion of active life reserves, will not be less than the sum of the following:

1. Accumulated value of the initial earned premium times 58%,
2. 85% of the accumulated value of prior premium rate schedule increases,
3. Present value of future projected initial earned premium times 58%, and
4. 85% of the present value of future projected premium in excess of the projected initial earned premium.

The future projected incurred claims were increased by 15% from the best-estimate projections in Exhibit I to reflect assumptions that include moderately adverse conditions. A 15% increase in future incurred claims was determined as one scenario that results in a lifetime loss ratio of 72% (which is MedAmerica's threshold for MAE as described above). It is among many possible alternative adverse experience scenarios, but considered one of the simplest since it involves only one assumption shift.

Present and accumulated values in Exhibit VI are determined at the maximum valuation interest rate for contract reserves applicable for the year of issue, which ranges from 3.5% to 4.0% depending on year of issue and averages 3.9%.



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**18. Average Annual Premium in Maryland (Annualized Premium Based on December 31, 2015 In-Force)**

<b>Issue Ages</b>	<b>In-Force Count</b>	<b>Before Increase Premium <sup>[1]</sup></b>	<b>After Cumulative Increase Premium</b>
<40	33	\$555	\$605
40-44	21	1,150	1,253
45-49	24	1,467	1,599
50-54	33	1,562	1,703
55-59	30	3,180	3,466
60-64	29	3,984	4,343
65-69	7	3,181	3,467
70-74	2	7,228	7,878
75+	1	7,405	8,071
<b>All Ages</b>	<b>180</b>	<b>2,135</b>	<b>2,327</b>

*[1] Before increase premiums reflect the prior increases by issue age band approved in Maryland in December 2015.*

**19. Proposed Effective Date**

This rate increase will apply to policies on their next premium payment date following at least a 60-day policyholder notification period following approval, but no sooner than 12 months after the prior rate increase was implemented.

**20. Nationwide Distribution of Business as of December 31, 2015 (based on in-force insured count)**

<b>Issue Ages</b>	<b>Percent Distribution</b>
<40	15%
40-44	8%
45-49	13%
50-54	19%
55-59	20%
60-64	15%
65-69	7%
70-74	2%
75+	1%

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<b>Elimination Period</b>	<b>Percent Distribution</b>
30 days	13%
60 days	8%
90 days	78%
180 days	1%

<b>Cash Benefit Account Amount</b>	<b>Percent Distribution</b>
\$100,000	29%
\$200,000	31%
\$300,000	21%
\$500,000	12%
\$1,000,000	7%

<b>Inflation Option</b>	<b>Percent Distribution</b>
None	38%
3% Compound No Max	32%
5% Compound No Max	10%
5% Compound 2X	20%

<b>Premium Payment Option</b>	<b>Percent Distribution</b>
Lifetime	91%
10-Year	7%
To Age 65	2%

<b>Coverage Type</b>	<b>Percent Distribution</b>
Nursing Home Only	1%
Comprehensive	98%
Home Care Only	1%

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**21. Number of Insureds and Annualized Premium**

Based on the in-force count as of December 31, 2015 of MedAmerica in this jurisdiction, the number of insured and annualized premium that will be affected by this increase are:

Jurisdiction	Number of Insureds	Annualized Premium <sup>[1]</sup>
Maryland	180	\$334,156
Nationwide	18,025	\$35,197,878

[1] Annualized premiums reflect all rate increases implemented in Maryland and nationwide as of December 31, 2015.

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**22. Actuarial Certification**

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 Plan Entities" 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.

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. If the requested premium rate schedule increase is implemented and the underlying assumptions, with moderately adverse conditions reflected, are realized, no further premium rate schedule increases are anticipated.

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.

I have relied on data and information provided by MedAmerica to develop this memorandum, including but not limited to management's view of when a rate change may be considered, underwriting and claim adjudication process, seriatim in-force data, claim data, and the company's long-term earnings rate. 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.



Todd M. Moltumyr, ASA, MAAA  
TriPlus Services, Inc.

Date: March 30, 2017