

MEDAMERICA INSURANCE COMPANY
Address: 165 Court Street, Rochester, New York 14647

Simplicity Actuarial Memorandum

April 28, 2020

Product
Tax-Qualified Long-Term Care Policy Form

Number
SPL-336

MedAmerica Insurance Company (MedAmerica) is requesting a rate increase on the above-listed long-term care policy form(s). The company issued this policy form(s) in Maryland from October 2005 through December 2008 and is no longer marketing it in any jurisdiction.

Nationwide, MedAmerica and its affinity partners are requesting a premium rate increase that varies by issue age and inflation option, except where limited by regulatory restrictions or the limited amount of in-force business. This actuarial memorandum captures the pooled nationwide experience of the above-listed policy form(s) and similar policy forms issued nationwide by MedAmerica and its affinity partners.

As indicated in the enclosed cover letter, the company is requesting a phased-in increase in Maryland such that no policyholder will receive a rate increase of more than 15% in a single calendar year in order to comply with COMAR 31.14.01.04.A(5). The phased-in rate increase was determined to be actuarially equivalent to the nationwide request as described below in Section 2. This actuarial memorandum reflects the nationwide requested increase, except the Maryland-specific increase is reflected in Section 19 and the supplement to the actuarial memorandum.

1. Purpose of Filing

This actuarial memorandum has been prepared for the purpose of demonstrating that the rate increase discussed in Section 2 meets the minimum requirements of the applicable sections of the 2014 National Association of Insurance Commissioners (NAIC) Long-Term Care Insurance Model Regulation (Model Regulation). The enclosed supplement to the actuarial memorandum demonstrates compliance with the applicable regulatory requirements of this jurisdiction to the extent they differ from the Model Regulation, and includes other commonly requested information of this jurisdiction. It may not be suitable for other purposes.

2. Requested Rate Increase

The company is requesting a rate increase that varies by issue age and inflation option. The rate increase levels were determined to vary by issue age and inflation protection option to better align the rate increase with the adverse experience. Appendix A to this memorandum provides a description of the development of and justification for the assumptions used in this filing, which were used to analyze the adverse experience.

This rate increase request is a follow-up to three prior nationwide requests. In jurisdictions that did not allow full implementation of the prior requested increases, the company is requesting a follow-up increase to achieve an actuarially equivalent lifetime loss ratio to the prior requests. Appendix B to this memorandum provides additional details on the development of and justification for the requested rate increase, including a detailed description of how actuarial equivalence was determined and a demonstration that the requested rate increase does not recoup past losses. The table below provides the actuarially equivalent nationwide cumulative increases.

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Nationwide Cumulative Rate Increase^[1]

Issue Age	No Inflation	Auto Inflation	Issue Age	No Inflation	Auto Inflation
< 45	235%	326%	65	143%	209%
45	223	311	66	137	202
46	217	304	67	131	194
47	212	297	68	124	185
48	206	290	69	119	178
49	199	280	70	115	174
50	198	279	71	113	170
51	196	276	72	110	168
52	193	273	73	108	164
53	191	270	74	106	162
54	189	267	75	106	162
55	189	267	76	101	156
56	184	262	77	98	152
57	181	257	78	94	147
58	176	251	79	91	143
59	173	246	80	87	139
60	173	246	81	84	134
61	165	237	82	79	128
62	158	228	83	76	123
63	150	217	84	73	120
64	143	209	85	69	115

[1] Reflects the nationwide average actuarially equivalent cumulative rate increase request. Due to differences in rate increase history in each jurisdiction, the actual cumulative rate level will vary from jurisdiction to jurisdiction. The enclosed cover letter provides the jurisdiction-specific rate increase request; it also provides the average cumulative request.

The table below provides the average prior, requested, and cumulative increases by issue age band and inflation option based on the nationwide distribution of business. The enclosed cover letter provides similar information based on the jurisdiction-specific distribution.

Nationwide Average^[1] Rate Increase Request

Issue Ages	Prior Increase	Requested Increase		Cumulative Increase	
		No Inflation	Auto Inflation	No Inflation	Auto Inflation
<40	108.3%	76.9%	102.1%	235%	326%
40-44	104.4	67.6	107.7	235	326
45-49	98.4	55.9	98.5	210	294
50-54	95.8	48.8	90.4	193	273
55-59	90.7	45.5	87.0	180	256
60-64	80.5	40.6	83.1	157	229
65-69	63.5	40.2	82.4	132	197
70-74	54.7	34.9	76.2	111	169
75+	46.9	33.8	71.8	96	157
Average	85.7	43.9	89.1	157	254

[1] As of December 31, 2018 and excludes policies assumed to be paid up prior to implementation of the requested rate increase. The enclosed cover letter provides the jurisdiction-specific distribution.

While emerging experience supports a larger rate increase, the company is limiting the increase to be an actuarially equivalent follow-up to the prior requests in order to improve equity across jurisdictions. The company plans to continue to monitor experience and request additional rate increases in the future, to the extent justified. However, if it is the Department's position to only allow future rate increases if experience deteriorates from the current most-likely projections used in this filing, the company respectfully requests that the Department notify them and allow the company to revise the current rate increase request.

Upon reaching an agreement with the Department on the increase, the company will provide the proposed rate tables.

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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.

3. Description of Benefits

This product provides long-term coverage on a cash basis. The product is tax qualified and was issued on an individual basis. 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, benefit period, and elimination period were selected at issue.

At issue, the insured may have had the option to choose one of three riders providing inflation protection: simple inflation, compound inflation with no maximum, or compound inflation with a maximum of two times the original benefit amount. The simple inflation option provides for benefit levels that increase on each anniversary date by 5% of the daily 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 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 date 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 benefit period, elimination period, and inflation option are shown in Section 21.

At issue the insured may have had the option of selecting riders that provide the following types of coverage: restoration of benefits, return of premium, shortened benefit period, shared care, shared waiver, or survivorship benefit. The insured may have had the option to select a lifetime, ten-year, paid up at age 65, reduced premiums at attained age 65, or reduced premiums at attained age 70 premium payment option.

A contingent benefit upon lapse (CBUL) will be available to all insureds at the time of the rate increase.

4. Renewability

These policies are guaranteed renewable for life.

5. Applicability

This rate increase applies to all policies issued on the above-listed form(s) in this jurisdiction. The rate changes will apply to the premium of the base form and all applicable options and riders associated with the base form.

6. Actuarial Assumptions

The following assumptions are used to project the experience shown in this filing.

- a. Morbidity reflects claim costs developed using the 2014 Milliman *Long-Term Care Guidelines (Guidelines)* with adjustments for underwriting selection, an all-lives exposure basis, and four years of retrospective improvement to bring the *Guidelines* forward to 2018. The claim costs were further adjusted based on historical claim experience by attained age, duration, payment type, and coverage type, to the extent credible. These adjustment factors can be found in Exhibit A-5a of Appendix A to this memorandum.
- b. Mortality Rates reflect the 2012 Individual Annuitant Mortality (IAM) Basic table. The mortality rates were adjusted based on historical mortality experience by gender, marital status, attained age, and duration. The adjusted 2012IAM table was then brought forward to 2018 using the 2012IAM

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attained age mortality improvement scale (i.e., G2 projection scale). These adjustment factors can be found in Exhibit A-1a and A-1c of Appendix A to this memorandum.

- c. Voluntary Lapse Rates vary by policy duration (ultimate for 10+), attained age (ultimate for 65+), benefit period (lifetime or non-lifetime), inflation protection option (auto inflation or none), marital status, and premium payment option. The table below summarizes the ultimate lapse rates by key characteristics for lifetime-pay policies.

**Ultimate Lapse Rates
Lifetime-Pay Policies**

Inflation Option	Married		Single	
	Benefit Period		Benefit Period	
	Lifetime	Non-Lifetime	Lifetime	Non-Lifetime
Auto Inflation	0.5%	0.5%	0.6%	0.7%
No Inflation	0.5	0.7	0.6	0.9

The durational voluntary lapse rates were adjusted based on the following criteria for the limited-pay options:

- For the ten-pay option, a reduction of 65% of the durational lapse rates is assumed for durations one through four, a reduction of 70% of the durational lapse rates is assumed for durations five through eight, and 0% lapse thereafter.
 - For the paid up at age 65 option, a reduction of 50% of the durational lapse rates is assumed until age 55, a reduction of 75% of the durational lapse rates is assumed for ages 55 to 59, and 0% lapse thereafter.
 - For the reduced after age 65 and reduced after age 70 payment options, a reduction of 50% of the durational lapse rates is assumed until age 60 or 65, respectively, and a reduction of 75% of the durational lapse rates thereafter.
- d. Benefit Expiry Rates reflect assumed policy termination due to exhaustion of benefits on limited benefit period policies. The rates are based on the 2017 *Guidelines* with adjustments for historical benefit expiry experience and vary by gender, benefit period, and attained age as shown in the following table.

Gender	Benefit Period in Years	Attained Age ^[1]										
		<65	65	70	75	80	85	90	95	100	105	110+
Female	2	0.0%	0.0%	0.1%	0.2%	0.5%	1.6%	4.4%	8.2%	10.7%	19.0%	20.7%
	3	0.0	0.0	0.1	0.2	0.5	1.3	3.4	6.7	9.3	19.0	20.7
	4	0.0	0.0	0.1	0.1	0.3	0.9	2.5	4.8	7.1	17.0	20.7
	5	0.0	0.0	0.0	0.1	0.2	0.6	1.8	3.7	6.3	14.4	20.7
	7	0.0	0.0	0.0	0.1	0.1	0.3	0.9	2.6	3.9	8.5	20.7
	Lifetime	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Male	2	0.0	0.0	0.1	0.2	0.4	1.1	2.8	5.1	6.0	10.2	20.7
	3	0.0	0.0	0.1	0.1	0.3	0.8	1.9	3.8	4.8	9.1	20.7
	4	0.0	0.0	0.0	0.1	0.2	0.4	1.3	2.4	3.4	7.9	20.7
	5	0.0	0.0	0.0	0.1	0.1	0.3	0.8	2.1	2.9	6.8	20.7
	7	0.0	0.0	0.0	0.0	0.1	0.1	0.4	1.2	2.1	4.5	9.4
	Lifetime	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

[1] The assumption varies by attained age, but is shown every five years for display purposes.

- e. Policyholder Behavior Due to the Rate Increase. At the time of a rate increase, insureds have the option to elect a CBUL or reduced benefit options (RBO). An increase in morbidity for adverse selection due to the rate increase is assumed based on the percentage of policies that elect CBUL and RBO.

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As part of the December 2017 rate increase, landing spots (i.e., tailored benefit options) were offered to insureds. The notification letter explicitly indicated to insureds that if the landing spot was elected that future benefit reductions cannot be made. In the result of a future rate increase, the only options available to an insured would be to pay the increased premium or elect a CBUL. As a result, benefit reductions may not be available for some insureds. As a modeling simplification, no adjustments to the RBO election rates were made for insureds who previously elected the landing spot.

Insureds who elect a 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. The following table provides the CBUL and RBO election rates, reduction to premiums and benefits due to the impact of RBO elections, and increase in morbidity by requested rate increase levels for lifetime-pay policies. Limited-pay policies are assumed to not elect CBUL or RBO.

Policyholder Behavior Assumptions

Requested Increase	CBUL Election Rate	RBO Election Rate	Approximate Reduction for RBO^[1]	Morbidity Increase for Adverse Selection
0.1 – 9.9%	1%	1%	0.0%	0.4%
10.0 – 19.9	3	2	0.3	1.0
20.0 – 39.9	6	5	1.2	2.2
40.0 – 74.9	8	10	4.0	3.4
75.0 – 99.9	10	15	7.8	4.6
100.0 – 149.9	11	20	12.5	5.5
150.0 – 299.9	12	25	19.7	6.5

[1] For display purposes, the approximate reduction for RBO values reflect the midpoint of the requested increase within each range. A detailed description of the calculation can be found in Appendix A. For example, the 20.0% – 39.9% range was calculated using the formula in Appendix A and a rate increase of 30%.

- f. Interest Rate consistent with the maximum valuation interest rate applicable to the year of issue (ranges from 3.5% to 4.5% and averages 4.2%) is used to demonstrate compliance with the minimum loss ratio requirements.
- g. Annual Improvement in the mortality and morbidity assumptions is assumed for 10 years starting in 2019. Annual mortality improvement factors vary by attained age and gender based on the G2 improvement scale from the 2012IAM table. Annual morbidity improvement is assumed to be 1.0%.
- h. Expenses have not been explicitly projected for the purpose of demonstrating compliance with minimum loss ratio requirements. 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 premium are similar (i.e., commissions are not paid on the increased premium).

The above assumptions are based on the experience of the above-listed policy form(s) and similar forms issued by MedAmerica and its affinity partners, other similar business issued by MedAmerica (including its affinity partners and acquired blocks of business), industry experience, and actuarial judgment. The above assumptions are deemed reasonable for the particular policy form(s) in this filing and are considered “most likely” (without explicit margin).

In establishing the assumptions described in this section, the policy design, underwriting, and claims adjudication practices for the above-referenced policy form(s) 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.

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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.

7. Marketing Method

Agents and brokers of the company marketed this product.

8. Underwriting Description

Policies were fully underwritten. The company used 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.

9. Premiums

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

10. Issue Age Range

Issue ages are from 18 to 85.

11. Area Factors

Area factors are not used for this product.

12. Premium Modalization Rules

The following modal factors and percent distributions (based on the nationwide in-force count as of December 31, 2018) are applied to the annual premium (AP):

Premium Mode	Modal Factors	Percent Distribution
Annual	1.00*AP	46%
Semi-Annual	0.52*AP	7
Quarterly	0.26*AP	25
Monthly	0.09*AP	22

13. Reserves

Active life reserves and reserves for the election of a CBUL have not been used in the experience exhibits for this rate increase analysis for the purpose of demonstrating compliance with minimum loss ratio requirements. Claim reserves as of December 31, 2018 have been discounted to the incurral date of each respective claim and included in historical incurred claims. An incurred but not reported (IBNR) reserve balance as of December 31, 2018 has been allocated to the 2018 calendar year and included in historical incurred claims.

14. Trend Assumptions

As this is not medical insurance, an explicit medical cost trend is not included in the projections.

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15. Demonstration of Satisfaction of Loss Ratio Requirements

This filing uses pooled nationwide experience of the above-listed form(s) and similar policy forms issued nationwide by MedAmerica and its affinity partners. The pooled experience is appropriate because the products issued are identical, the marketing and distribution employed is similar, and the same company (MedAmerica) administers and manages the entire block (including underwriting and claims handling). MedAmerica has 50% to 100% of the risk of the affinity partner forms via reinsurance arrangements with each affinity partner.

Exhibit I provides actual and projected experience using current assumptions. Actual experience is provided from inception through 2018 and then projected on a seriatim basis for 60 years using the current assumptions described above in Section 6. The actual and projected experience is based on nationwide premiums that reflect prior rate increases filed for use between December 2012 and June 2019, which average 86% across all jurisdictions. The after increase projected experience reflects the additional increase needed to achieve the cumulative increases shown in Section 2 on a seriatim basis.

Values in Exhibit I are shown (a) before and (b) after the nationwide requested rate increase. Included are calendar year earned premiums, incurred claims, end of year lives, and annual loss ratios. As shown in Exhibit I-b, the anticipated lifetime loss ratio with the nationwide requested rate increase exceeds the minimum loss ratio required by pre-rate stability regulation.

The following table demonstrates that the nationwide lifetime loss ratios by issue age and inflation option also exceed the minimum loss ratio required by pre-rate stability regulation. The final row corresponds to that shown in Exhibit I.

**Nationwide Lifetime Loss Ratios at the Maximum Valuation Interest Rate
by Issue Age and Inflation Option**

Inflation Option	Issue Age Band	Before Increase	After Increase
All	<45	156%	115%
All	45-49	135	100
All	50-54	119	91
All	55-59	104	80
All	60-64	85	68
All	65-69	78	66
All	70-74	90	83
All	75+	76	74
No Inflation	All	82	72
Auto Inflation	All	115	87
All	All	109	85

Exhibit II provides a demonstration that the nationwide requested rate increase meets the 58%/85% test required by post-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 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 projected initial earned premium times 58%, and
4. 85% of the present value of projected premium in excess of the projected initial earned premium.

While the majority of policies subject to this rate increase are eligible for a CBUL, an alternative version of the 58%/85% test is not provided per rate stability regulation, as the original pricing lifetime loss ratio of 57% is not greater than 58%.

The projected incurred claims in Exhibit II were increased by 15% from the current assumptions described in Section 6 to reflect assumptions that include moderately adverse conditions.

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16. Actual-to-Expected Experience

The following table provides a comparison of actual and projected experience using current assumptions to that expected using original pricing assumptions. Values in the following table are shown (a) before and (b) after the nationwide requested rate increase.

Nationwide Actual and Expected Loss Ratios by Issue Age and Inflation Option

Inflation Option	Issue Age Band	Lifetime Loss Ratio			Actual-to-Expected	
		Before Increase	After Increase	Expected	Before Increase	After Increase
All	<45	130%	98%	60%	2.17	1.63
All	45-49	117	89	61	1.91	1.44
All	50-54	106	82	60	1.77	1.37
All	55-59	95	74	57	1.66	1.30
All	60-64	79	64	53	1.48	1.20
All	65-69	74	63	55	1.34	1.15
All	70-74	87	80	56	1.56	1.44
All	75+	74	72	49	1.50	1.47
No Inflation	All	77	68	49	1.58	1.41
Auto Inflation	All	102	79	59	1.72	1.33
All	All	97	77	57	1.70	1.34

Actual and projected experience in the above table is identical to that described in Exhibit I, except historical experience is accumulated at MedAmerica's actual historical earned interest rates, which average 5.2% for this block, and projected experience is discounted at MedAmerica's current most-likely interest rate assumption of 4.75%. This 4.75% rate represents MedAmerica's expectation of its long-term investment earnings rate based on the average net investment earnings rate projected for MedAmerica's 2018 cash flow testing.

Expected experience uses the actual policies sold and projects from issue on a seriatim basis using the original pricing assumptions.

Exhibit III provides a comparison of the current and original pricing assumptions that underlie the actual and expected experience described above.

17. History of Previous Rate Revisions

Please see the enclosed cover letter, which provides the jurisdiction-specific average prior rate increase and rate history for the above-listed form(s). Section 2 above describes the nationwide average prior rate increase across the pooled experience.

18. Analysis Performed to Consider a Rate Increase

The experience table in Section 16 above demonstrates that experience has been more adverse from that expected using original pricing assumptions as the A:E loss ratios exceeds 1.0. The adverse experience is due to a combination of higher morbidity, higher persistency, and lower interest.

The following table provides a comparison of actual and projected nationwide experience to that expected in pricing with respect to morbidity, mortality, lapse (combination of voluntary lapse and benefit expiry), interest, and improvement. The current and original pricing assumptions are provided in Exhibit III.

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Impact of Changing from Pricing to Current Assumptions

Scenario	Lifetime Loss Ratio (LLR)	Incremental Impact on the LLR ^[1]	Increase Needed ^[2]
Original pricing assumptions	57%	N/A	N/A
Historical experience through 2018 & projections with pricing assumptions ^[3]	55	-5%	-18%
Historical experience through 2018 & projections with pricing assumptions except for current:			
Interest	65	19	68
Interest, lapse	70	8	27
Interest, lapse, mortality	82	17	51
Interest, lapse, mortality, morbidity	101	23	72
Interest, lapse, mortality, morbidity, improvement	97	-4	-11
Historical experience through 2018 & projections with all current most-likely assumptions ^[4]	97	70	211

[1] Calculated as the ratio of the lifetime loss ratio in a given row to that in the row immediately above it less one.

[2] Shows the rate increase needed to reproduce the lifetime loss ratio in the row immediately above it. Calculated without regard to CBUL, RBO, adverse selection, and higher waiver claims due to the needed rate increase.

[3] This row reflects actual historical experience and pricing assumption projected from the valuation date, reflecting prior rate increases approved through June 26, 2019.

[4] This row is calculated in regards to the pricing lifetime loss ratio of 57%.

In 2012, a nationwide requested increase was determined such that the company was able to certify that rates would remain stable under moderately adverse experience (MAE). The company's threshold for MAE was defined as a lifetime loss ratio of 85%. To determine whether experience has deteriorated beyond this threshold, experience was restated to reflect the timing and rate level of the 2012 requested increase and projected using current most-likely assumptions. As the resulting lifetime loss ratio was 105%, the MAE threshold was crossed and additional rate increases could be considered. A comparison of the current assumptions used in this filing and the assumptions used in the 2012 nationwide request is provided in Exhibit IV.

19. Average Annual Premium in Maryland (Based on December 31, 2018 In-Force)

The number of insureds and the corresponding average annual premium that will be affected by this filing are shown in the table(s) below. The values provided in the table(s) below exclude policies assumed to be paid up prior to implementation of the requested rate increase.

Maryland – MedAmerica

Inflation Option	Number of Insureds	Before Increase Premium	After Requested Increase Premium
No Inflation	20	\$1,662	\$2,758
Auto Inflation	84	2,775	6,883
All	104	2,561	6,090

20. 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 after being filed for use by the department of insurance, but no sooner than 12 months after the prior rate increase was effective. The company will notify policyholders of the approved cumulative rate increase level at the time of implementation of the first year's rate increase. No policyholder will receive more than one increase during a 12-month period.

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21. Distribution of Business as of December 31, 2018 (Based on Nationwide In-Force Insured Count)

Issue Ages	Percent Distribution
<40	7%
40-44	8
45-49	13
50-54	22
55-59	25
60-64	16
65-69	7
70-74	2
75+	<1

Elimination Period	Percent Distribution
30-Day	21%
60-Day	13
90-Day	65
180-Day	1

Benefit Period	Percent Distribution
2-Year	10%
3-Year	33
4-Year	18
5-Year	20
7-Year	11
Lifetime	8

Inflation Option	Percent Distribution
None	23%
Simple for Life	28
Compound for Life	17
Compound with 2x Max	32

Premium Payment Option	Percent Distribution
Ten-Pay	14%
Pay to Age 65	4
Reduced at Age 70	0
Reduced at Age 65	<1
Lifetime-Pay	82

Coverage Type	Percent Distribution
Facility Only	4%
Comprehensive	95
Home Health Only	1

22. Number of Insureds and Annualized Premium (Based on December 31, 2018 In-Force)

The number of insureds and annualized premium that will be affected by this filing are shown in the tables below. The values provided in the tables below exclude policies assumed to be paid up prior to implementation of the requested rate increase.

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Maryland – MedAmerica

Inflation Option	Number of Insureds	Annualized Premium
No Inflation	20	\$33,234
Auto Inflation	84	233,130
All	104	266,364

Nationwide

Inflation Option	Issue Age Band	Number of Insureds	Annualized Premium
No Inflation	All	3,214	7,264,432
Auto Inflation	All	10,105	30,998,149
All	All	13,319	38,262,581

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23. Actuarial Certification

I am a Principal and Consulting Actuary for Milliman, Inc. and retained by MedAmerica 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 this department of insurance.

In my opinion, the rates are not excessive or unfairly discriminatory, and bear reasonable relationship to the benefits based on the loss ratio standards of this jurisdiction.

If an average one-time premium rate schedule increase of 95% is implemented in Maryland 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 (which gave consideration to policy design, underwriting, and claim adjudication) and such tests of the actuarial calculations as I considered necessary. Based on these assumptions, or statutory requirements where necessary, this 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, policy design, 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.



Missy Gordon, FSA, MAAA
Principal and Consulting Actuary

Date: April 28, 2020

Exhibit I-a
MedAmerica and Affinity Partners
Actual and Projected Experience using Current Assumptions by Calendar Year
Nationwide Experience Before Requested Rate Increase
Individual Simplicity Policy Forms

		Loss Ratio Demonstration						
		Without Interest			D End of Year Lives	With Max. Val. Interest		
		A Earned Premium	B Incurred Claims	C = B / A Incurred Loss Ratio		E Earned Premium	F Incurred Claims	G = F / E Incurred Loss Ratio
Calendar Year								
Historical Experience	2004	1,944,204	299,291	15%	3,084	3,680,681	566,604	15%
	2005	11,092,052	704,251	6%	8,665	20,094,713	1,275,843	6%
	2006	21,602,601	127,494	1%	16,065	36,847,398	221,026	1%
	2007	32,553,826	1,233,078	4%	20,864	52,445,074	1,991,993	4%
	2008	37,075,014	2,692,008	7%	21,432	57,103,216	4,251,105	7%
	2009	36,622,544	1,971,445	5%	20,617	54,108,660	2,933,713	5%
	2010	35,876,003	3,507,186	10%	20,165	50,858,403	4,999,069	10%
	2011	35,545,109	4,694,341	13%	19,804	48,353,241	6,401,410	13%
	2012	35,553,440	5,043,773	14%	19,770	46,408,337	6,649,173	14%
	2013	36,436,418	6,885,091	19%	19,561	45,601,290	8,620,047	19%
	2014	37,239,109	11,123,679	30%	18,835	44,726,422	13,401,646	30%
	2015	36,318,526	9,236,803	25%	18,266	41,856,982	10,704,267	26%
	2016	33,877,266	11,560,229	34%	17,173	37,486,652	12,816,476	34%
	2017	31,075,952	14,970,654	48%	16,172	33,027,910	15,938,163	48%
2018	31,648,756	13,956,432	44%	15,528	32,298,838	14,253,722	44%	
Projected Future Experience (60 Years)	2019	33,863,186	12,777,791	38%	14,901	33,181,038	12,515,388	38%
	2020	34,337,103	14,061,113	41%	14,646	32,303,148	13,212,931	41%
	2021	33,783,616	15,722,494	47%	14,390	30,515,160	14,173,819	46%
	2022	32,796,527	17,722,424	54%	14,123	28,443,242	15,327,826	54%
	2023	31,645,087	20,012,409	63%	13,844	26,347,947	16,606,487	63%
	2024	30,626,081	22,613,641	74%	13,552	24,482,548	18,005,354	74%
	2025	29,655,490	25,458,648	86%	13,245	22,763,794	19,451,221	85%
	2026	28,661,941	28,566,162	100%	12,925	21,127,027	20,943,713	99%
	2027	27,657,062	32,010,290	116%	12,589	19,576,949	22,521,582	115%
	2028	26,598,847	35,818,384	135%	12,237	18,081,611	24,185,994	134%
	2029	25,510,367	40,163,804	157%	11,869	16,654,956	26,032,694	156%
	2030	24,429,793	45,003,133	184%	11,481	15,318,705	28,002,002	183%
	2031	23,299,318	50,125,429	215%	11,075	14,032,755	29,942,022	213%
	2032	22,144,904	55,396,933	250%	10,651	12,811,416	31,770,945	248%
	2033	20,972,812	60,771,123	290%	10,209	11,655,490	33,467,291	287%
	2034	19,756,450	66,065,782	334%	9,751	10,547,655	34,938,477	331%
	2035	18,537,872	71,177,300	384%	9,279	9,508,614	36,149,828	380%
	2036	17,311,338	75,953,836	439%	8,795	8,531,491	37,048,767	434%
	2037	16,074,175	80,305,695	500%	8,302	7,611,978	37,624,638	494%
	2038	14,837,861	84,075,739	567%	7,802	6,752,048	37,838,893	560%
	2039	13,634,591	87,045,442	638%	7,300	5,962,584	37,635,961	631%
	2040	12,454,147	89,115,903	716%	6,798	5,234,276	37,019,672	707%
	2041	11,309,547	90,240,309	798%	6,302	4,568,461	36,017,638	788%
	2042	10,208,502	90,508,569	887%	5,814	3,963,741	34,709,124	876%
	2043	9,160,976	89,978,287	982%	5,338	3,419,210	33,154,533	970%
	2044	8,171,552	88,758,123	1,086%	4,878	2,931,913	31,425,661	1,072%
	2045	7,244,245	86,827,722	1,199%	4,436	2,498,739	29,541,667	1,182%
	2046	6,383,665	84,181,067	1,319%	4,016	2,116,884	27,524,358	1,300%
	2047	5,591,458	80,930,877	1,447%	3,620	1,782,632	25,428,412	1,426%
	2048	4,870,679	77,219,223	1,585%	3,248	1,492,977	23,316,173	1,562%
	2049	4,219,105	73,193,741	1,735%	2,902	1,243,443	21,239,671	1,708%
	2050	3,636,053	69,021,162	1,898%	2,583	1,030,348	19,248,267	1,868%
	2051	3,117,977	64,781,310	2,078%	2,290	849,536	17,361,811	2,044%
	2052	2,660,789	60,525,479	2,275%	2,023	697,073	15,588,313	2,236%
2053	2,260,697	56,238,105	2,488%	1,780	569,474	13,921,053	2,445%	
2054	1,912,214	52,022,856	2,721%	1,562	463,159	12,378,060	2,673%	
2055	1,611,473	47,867,865	2,970%	1,365	375,300	10,949,943	2,918%	
2056	1,353,005	43,774,553	3,235%	1,189	302,978	9,628,565	3,178%	
2057	1,131,906	39,695,967	3,507%	1,033	243,709	8,395,173	3,445%	
2058	943,657	35,840,318	3,798%	894	195,356	7,287,258	3,730%	
2059-2063	2,770,517	129,503,579	4,674%	2,900	518,324	23,675,313	4,568%	
2064-2068	1,008,230	64,811,375	6,428%	1,270	155,540	9,817,744	6,312%	
2069-2073	335,586	25,949,378	7,733%	499	42,935	3,281,788	7,644%	
2074-2078	103,118	8,479,163	8,223%	170	11,003	901,178	8,191%	
History		454,460,819	88,005,754	19%	256,001	604,897,817	105,024,260	17%
Future		628,593,519	2,490,312,500	396%	309,875	410,917,169	999,207,210	243%
Lifetime		1,083,054,338	2,578,318,254	238%	565,876	1,015,814,986	1,104,231,469	109%

Exhibit I-b
MedAmerica and Affinity Partners
Actual and Projected Experience using Current Assumptions by Calendar Year
Nationwide Experience After Requested Rate Increase
Individual Simplicity Policy Forms

		Loss Ratio Demonstration						
		Without Interest			D End of Year Lives	With Max. Val. Interest		
		A Earned Premium	B Incurred Claims	C = B / A Incurred Loss Ratio		E Earned Premium	F Incurred Claims	G = F / E Incurred Loss Ratio
Calendar Year								
Historical Experience	2004	1,944,204	299,291	15%	3,084	3,680,681	566,604	15%
	2005	11,092,052	704,251	6%	8,665	20,094,713	1,275,843	6%
	2006	21,602,601	127,494	1%	16,065	36,847,398	221,026	1%
	2007	32,553,826	1,233,078	4%	20,864	52,445,074	1,991,993	4%
	2008	37,075,014	2,692,008	7%	21,432	57,103,216	4,251,105	7%
	2009	36,622,544	1,971,445	5%	20,617	54,108,660	2,933,713	5%
	2010	35,876,003	3,507,186	10%	20,165	50,858,403	4,999,069	10%
	2011	35,545,109	4,694,341	13%	19,804	48,353,241	6,401,410	13%
	2012	35,553,440	5,043,773	14%	19,770	46,408,337	6,649,173	14%
	2013	36,436,418	6,885,091	19%	19,561	45,601,290	8,620,047	19%
	2014	37,239,109	11,123,679	30%	18,835	44,726,422	13,401,646	30%
	2015	36,318,526	9,236,803	25%	18,266	41,856,982	10,704,267	25%
	2016	33,877,266	11,560,229	34%	17,173	37,486,652	12,816,476	34%
	2017	31,075,952	14,970,654	48%	16,172	33,027,910	15,938,163	48%
2018	31,648,756	13,956,432	44%	15,528	32,298,838	14,253,722	44%	
Projected Future Experience (60 Years)	2019	33,863,186	12,777,791	38%	14,901	33,181,038	12,515,388	38%
	2020	36,393,547	13,935,200	38%	14,199	34,237,974	13,094,644	38%
	2021	47,594,005	14,830,138	31%	13,384	43,002,951	13,369,235	31%
	2022	49,737,790	16,401,983	33%	13,111	43,156,170	14,185,584	33%
	2023	47,762,977	18,472,636	39%	12,847	39,785,653	15,328,388	39%
	2024	46,278,318	20,829,353	45%	12,575	37,012,422	16,584,197	45%
	2025	44,842,522	23,416,020	52%	12,292	34,440,752	17,890,047	52%
	2026	43,352,316	26,239,813	61%	11,995	31,976,511	19,237,532	60%
	2027	41,874,900	29,365,230	70%	11,685	29,663,247	20,659,955	70%
	2028	40,315,483	32,814,161	81%	11,360	27,429,111	22,156,724	81%
	2029	38,702,459	36,745,945	95%	11,019	25,291,260	23,816,559	94%
	2030	37,109,424	41,120,715	111%	10,661	23,293,444	25,585,328	110%
	2031	35,440,499	45,743,832	129%	10,285	21,369,139	27,323,624	128%
	2032	33,737,713	50,494,152	150%	9,893	19,542,055	28,957,848	148%
	2033	32,009,912	55,334,192	173%	9,484	17,812,876	30,471,594	171%
	2034	30,204,481	60,096,321	199%	9,060	16,148,785	31,779,723	197%
	2035	28,394,817	64,684,528	228%	8,623	14,587,128	32,850,026	225%
	2036	26,571,796	68,963,611	260%	8,175	13,117,187	33,636,471	256%
	2037	24,723,916	72,853,154	295%	7,718	11,729,343	34,130,019	291%
	2038	22,868,998	76,212,172	333%	7,255	10,427,010	34,296,495	329%
	2039	21,064,463	78,843,098	374%	6,790	9,231,041	34,085,732	369%
	2040	19,286,927	80,660,900	418%	6,325	8,123,989	33,503,196	412%
	2041	17,562,386	81,624,372	465%	5,864	7,111,179	32,574,062	458%
	2042	15,896,518	81,807,799	515%	5,411	6,188,143	31,367,111	507%
	2043	14,307,408	81,273,344	568%	4,970	5,354,804	29,940,905	559%
	2044	12,801,132	80,126,480	626%	4,543	4,606,617	28,362,642	616%
	2045	11,384,619	78,351,038	688%	4,132	3,939,373	26,649,916	677%
	2046	10,065,381	75,938,598	754%	3,742	3,349,173	24,820,954	741%
	2047	8,846,845	72,988,914	825%	3,373	2,830,806	22,924,187	810%
	2048	7,733,459	69,629,700	900%	3,028	2,379,759	21,015,297	883%
2049	6,722,570	65,995,314	982%	2,706	1,989,543	19,141,077	962%	
2050	5,814,379	62,227,053	1,070%	2,409	1,654,972	17,343,389	1,048%	
2051	5,003,821	58,400,816	1,167%	2,136	1,369,842	15,641,315	1,142%	
2052	4,285,395	54,556,529	1,273%	1,887	1,128,366	14,040,382	1,244%	
2053	3,653,710	50,685,138	1,387%	1,661	925,317	12,536,102	1,355%	
2054	3,100,892	46,880,452	1,512%	1,457	755,340	11,144,626	1,475%	
2055	2,621,343	43,133,564	1,645%	1,274	614,158	9,857,795	1,605%	
2056	2,207,185	39,443,508	1,787%	1,110	497,378	8,667,591	1,743%	
2057	1,851,235	35,763,964	1,932%	964	401,230	7,556,126	1,883%	
2058	1,546,837	32,286,592	2,087%	835	322,447	6,558,117	2,034%	
2059-2063	4,560,530	116,614,265	2,557%	2,707	859,644	21,299,459	2,478%	
2064-2068	1,668,378	58,294,431	3,494%	1,186	259,629	8,824,617	3,399%	
2069-2073	558,852	23,202,066	4,152%	466	72,182	2,930,461	4,060%	
2074-2078	173,625	7,540,654	4,343%	159	18,697	799,424	4,276%	
History		454,460,819	88,005,754	19%	256,001	604,897,817	105,024,260	17%
Future		924,496,952	2,257,599,536	244%	289,663	591,187,684	909,453,866	154%
Lifetime		1,378,957,771	2,345,605,290	170%	545,664	1,196,085,501	1,014,478,126	85%

Exhibit II
Demonstration that the Requested Cumulative Rate Increase Passes the 58%/85% Loss Ratio Minimum
MedAmerica and Affinity Partners' Combined Nationwide Experience with Prior Approved Increases
Individual Simplicity Policy Forms

1	Accumulated value of initial earned premium	573,423,238	x	58%	=	332,585,478
2a	Accumulated value of earned premium	604,897,817				
2b	Accumulated value of prior premium rate schedule increases (2a - 1)	31,474,579	x	85%	=	26,753,392
3	Present value of future projected initial earned premium	175,824,645	x	58%	=	101,978,294
4a	Present value of future projected premium	591,187,684				
4b	Present value of future projected premium in excess of the projected initial earned premiums (4a - 3)	415,363,039	x	85%	=	353,058,583
5	Lifetime Earned Premium Times Prescribed Factor: Sum of 1, 2b, 3, and 4b					814,375,748
6a	Accumulated value of incurred claims without the inclusion of active life reserves					105,024,260
6b	Present value of future projected incurred claims without the inclusion of active life reserves					1,045,871,946
7	Lifetime Incurred Claims with Rate Increase: Sum 6a and 6b					1,150,896,206
8	Test: 7 is not less than 5					Pass
<p><i>All values are accumulated or discounted at the maximum valuation interest rate for contract reserves applicable for the year of issue, which ranges from 3.5% to 4.5%. Future projected initial earned premium schedule (i.e., without the requested rate increase) reflects the assumed impact of CBUL and RBO. The future projected incurred claims (item 6b) were increased by 15% to reflect assumptions with moderately adverse experience.</i></p>						

Exhibit III
MedAmerica and Affinity Partners
Comparison of Current and Original Pricing Assumptions
Individual Simplicity Policy Forms

Current Assumptions

Original Pricing Assumptions

Mortality

Mortality rates reflect the 2012 Individual Annuitant Mortality (IAM) Basic table. The mortality rates were adjusted based on historical mortality experience by gender, marital status, attained age, and duration. The adjusted 2012IAM table was then brought forward to 2018 using the 2012IAM attained age mortality improvement scale (i.e., G2 projection scale). These adjustment factors can be found in Exhibit A-1a and A-1c of Appendix A of the actuarial memorandum.

1983 GAM Table without selection was assumed in all jurisdictions except for in California where the 1994 GAM Table was used.

Lapse Rates

Voluntary lapse rates (excludes benefit expiry) vary by policy duration (ultimate for 10+), attained age (ultimate for 65+), benefit period (lifetime or non-lifetime), inflation protection option (auto inflation or none), marital status, and premium payment option. A summary of the ultimate lapse rates by key characteristics for lifetime-pay policies can be found in Section 6 of the actuarial memorandum.

Lapse rates vary by duration, premium payment option, and issue age.

Lifetime-Pay Lapse Rates						
Duration	Issue Age Band					
	<60	60-64	65-69	70-74	75-79	80+
1	10.0%	11.0%	12.0%	12.0%	12.0%	12.0%
2	7.0%	7.0%	7.0%	6.0%	4.0%	2.0%
3	5.0%	4.0%	3.0%	3.0%	3.0%	2.0%
4	3.0%	3.0%	2.0%	2.0%	2.0%	2.0%
5	3.0%	2.0%	2.0%	2.0%	2.0%	2.0%
6+	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%

For the ten-pay option, a reduction of 65% of the durational lapse rates is assumed for durations one through four, a reduction of 70% of the durational lapse rates is assumed for durations five through eight, and 0% lapse thereafter. For the paid up at age 65 option, a reduction of 50% of the durational lapse rates is assumed until age 55, a reduction of 75% of the durational lapse rates is assumed for ages 55 to 59, and 0% lapse thereafter. For the reduced after age 65 and reduced after age 70 payment options, a reduction of 50% of the durational lapse rates is assumed until age 60 or 65, respectively, and a reduction of 75% of the durational lapse rates thereafter.

For the 10-year payment option, a reduction of 50% of these lapse rates was assumed for durations 1 to 5, and 0% lapse thereafter. For the paid up at age 65 option, a reduction of 50% of these lapse rates was assumed until age 60, and 0% lapse thereafter. For the reduced after age 65 and reduced after age 70 payment options, a reduction of 50% of these lapse rates was assumed until age 60 or 65, respectively, and a reduction of 75% of these lapse rates was assumed after the reduction of premiums.

Exhibit III
MedAmerica and Affinity Partners
Comparison of Current and Original Pricing Assumptions
Individual Simplicity Policy Forms

Current Assumptions

Original Pricing Assumptions

Benefit Expiry Rates

Benefit expiry rates reflect assumed policy termination due to exhaustion of benefits on limited benefit period policies. The rates are based on the 2017 Milliman *Long-Term Care Guidelines (Guidelines)* with adjustments for historical benefit expiry experience and vary by gender, benefit period, and attained age. A table containing the benefit expiry rates is provided in Section 6 of the actuarial memorandum.

Benefit expiry was not separated from the lapse assumption.

Morbidity

Expected claim costs are developed using the 2014 *Guidelines* with adjustments for underwriting selection, all-lives exposure basis, and four years of retrospective improvement to bring the *Guidelines* forward to 2018. The claim costs were further adjusted based on historical claim experience by attained age, duration, payment type, and coverage type, to the extent credible. These adjustment factors can be found in Exhibit A-5a of Appendix A of the actuarial memorandum.

Original expected claim costs were developed using the 2002 *Guidelines* with best-estimate (with no explicit margin) adjustments for an all-lives exposure basis. The claim costs were further adjusted based on MedAmerica's available experience at the time.

Interest Rate

The current most-likely earnings rate assumption is 4.75%. This rate represents MedAmerica's expectation of its long-term investment earnings rate based on the average net investment earnings rate projected for MedAmerica's 2018 cash flow testing.

In all jurisdictions except California, an original earnings rate assumption of 6.5% was assumed for issue ages less than 60, decreasing by 12.5 basis points for each age over 59 and less than 75. For example, at issue age 65 the assumed rate was 5.75%. For issue ages 75 and over, 4.5% was assumed. In California, 5.25% was assumed for all issue ages.

The maximum valuation interest rate applicable to the year of issue ranges from 3.5% to 4.5% and averages 4.2%.

Improvement

Annual improvement in the mortality and morbidity assumptions is assumed for 10 years starting in 2019. Annual mortality improvement factors vary by attained age and gender based on the G2 improvement scale from the 2012IAM table. Annual morbidity improvement is assumed to be 1.0%.

No mortality improvement was assumed. Morbidity improvement of 1.0% was assumed for 20 years for both females and males.

Exhibit IV
MedAmerica and Affinity Partners
Comparison of Current and 2012 Nationwide Rate Increase Assumptions
Individual Simplicity Policy Forms

Current Assumptions

2012 Nationwide Rate Increase Assumptions

Mortality

Mortality rates reflect the 2012 Individual Annuitant Mortality (IAM) Basic table. The mortality rates were adjusted based on historical mortality experience by gender, marital status, attained age, and duration. The adjusted 2012IAM table was then brought forward to 2018 using the 2012IAM attained age mortality improvement scale (i.e., G2 projection scale). These adjustment factors can be found in Exhibit A-1a and A-1c of Appendix A of the actuarial memorandum.

1994 GAM Table adjusted by gender using durational factors which reflect the impact of both mortality selection and improvement. The durational adjustment factors were developed for MAPA; MAPA's two sister companies, MAFL and MANY (MAPA, MAFL, and MANY collectively referred to as MedAmerica); and MedAmerica's affinity partners based on historical experience from inception through December 31, 2011 on all policy forms, except the recently priced FlexCare policy form.

Duration	Durational Factor	
	Male	Female
1	25%	25%
2	40%	40%
3	45%	45%
4	47%	48%
5	50%	51%
6	52%	54%
7	55%	57%
8	57%	60%
9	61%	63%
10	64%	66%
11	68%	69%

Duration	Durational Factor	
	Male	Female
12	71%	72%
13	75%	75%
14	76%	77%
15	78%	80%
16	79%	82%
17	81%	84%
18	82%	86%
19	83%	89%
20	85%	91%
21+	86%	93%

Exhibit IV
MedAmerica and Affinity Partners
Comparison of Current and 2012 Nationwide Rate Increase Assumptions
Individual Simplicity Policy Forms

Current Assumptions

2012 Nationwide Rate Increase Assumptions

Lapse Rates

Voluntary lapse rates (excludes benefit expiry) vary by policy duration (ultimate for 10+), attained age (ultimate for 65+), benefit period (lifetime or non-lifetime), inflation protection option (auto inflation or none), marital status, and premium payment option. A summary of the ultimate lapse rates by key characteristics for lifetime-pay policies can be found in Section 6 of the actuarial memorandum.

For the ten-pay option, a reduction of 65% of the durational lapse rates is assumed for durations one through four, a reduction of 70% of the durational lapse rates is assumed for durations five through eight, and 0% lapse thereafter. For the paid up at age 65 option, a reduction of 50% of the durational lapse rates is assumed until age 55, a reduction of 75% of the durational lapse rates is assumed for ages 55 to 59, and 0% lapse thereafter. For the reduced after age 65 and reduced after age 70 payment options, a reduction of 50% of the durational lapse rates is assumed until age 60 or 65, respectively, and a reduction of 75% of the durational lapse rates thereafter.

Lapse rates vary by duration, premium payment option, and issue age, and were developed based on historical experience for Simplicity and Simplicity ii individual policies issued by MedAmerica and its affinity partners from inception through December 31, 2011.

Lifetime-Pay Lapse Rates				
Duration	Issue Age Band			
	<40	40-49	50-59	60+
1	16.00%	9.00%	5.50%	5.75%
2	16.00%	9.00%	4.75%	4.75%
3	11.00%	5.50%	4.00%	3.50%
4	7.00%	4.50%	3.00%	3.00%
5	5.00%	3.50%	2.75%	2.25%
6	3.00%	2.00%	2.00%	1.75%
7+	1.50%	1.50%	1.50%	1.50%

For the 10-pay option, a reduction of 50% of these lapse rates is assumed for durations 1 to 5, and 0% lapse thereafter. For the paid up at 65 option, a reduction of 50% of these lapse rates is assumed until age 60, and 0% lapse thereafter. For the reduced after 65 and reduced after 70 pay options, a reduction of 50% of these lapse rates is assumed until age 60 or 65, respectively, and a reduction of 75% of these lapse rates is assumed after the reduction of premiums.

Benefit Expiry Rates

Benefit expiry rates reflect assumed policy termination due to exhaustion of benefits on limited benefit period policies. The rates are based on the 2017 Milliman *Long-Term Care Guidelines (Guidelines)* with adjustments for historical benefit expiry experience and vary by gender, benefit period, and attained age. A table containing the benefit expiry rates is provided in Section 6 of the actuarial memorandum.

Benefit expiry was not separated from the lapse assumption.

Exhibit IV
MedAmerica and Affinity Partners
Comparison of Current and 2012 Nationwide Rate Increase Assumptions
Individual Simplicity Policy Forms

Current Assumptions

2012 Nationwide Rate Increase Assumptions

Morbidity

Expected claim costs are developed using the 2014 *Guidelines* with adjustments for underwriting selection, all-lives exposure basis, and four years of retrospective improvement to bring the *Guidelines* forward to 2018. The claim costs were further adjusted based on historical claim experience by attained age, duration, payment type, and coverage type, to the extent credible. These adjustment factors can be found in Exhibit A-5a of Appendix A of the actuarial memorandum.

Expected claim costs are the original pricing claim costs, adjusted to an all-lives exposure base. The claim costs are further adjusted based on historical claim experience on a durational basis, to the extent credible.

Interest Rate

The current most-likely earnings rate assumption is 4.75%. This rate represents MedAmerica's expectation of its long-term investment earnings rate based on the average net investment earnings rate projected for MedAmerica's 2018 cash flow testing.

The prior earnings rate assumption was 5.25%.

The maximum valuation interest rate applicable to the year of issue ranges from 3.5% to 4.5% and averages 4.2%.

Improvement

Annual improvement in the mortality and morbidity assumptions is assumed for 10 years starting in 2019. Annual mortality improvement factors vary by attained age and gender based on the G2 improvement scale from the 2012IAM table. Annual morbidity improvement is assumed to be 1.0%.

No mortality improvement was assumed; however, the ultimate mortality level was determined by assuming mortality improvement of 1.0% for males and 0.5% for females for 15 years. Embedded in the original pricing claim costs is a morbidity improvement assumption of 1.0% per year for 20 years for both females and males.

Appendix A

Development of and Justification for Current Assumptions

This appendix describes the development of and justification for the current actuarial assumptions used in this filing.

The persistency and morbidity assumptions were developed using historical experience and predictive analytics. Where actual experience was limited or did not exist, industry experience and actuarial judgment was also used. The experience used to develop these assumptions includes historical experience of MedAmerica Insurance Company (MAPA); MAPA's two sister companies, MedAmerica Insurance Company of Florida (MAFL) and MedAmerica Insurance Company of New York (MANY) (MAPA, MAFL, and MANY collectively referred to as MedAmerica); and MedAmerica's affinity partners that issued the same products. Additionally, experience on other blocks of business originally issued by MedAmerica and its affinity partners, and MedAmerica's other acquired blocks of business is also used. For persistency, policy termination experience from January 2008 through December 2017, with runout through March 2018, was used. For morbidity, claim experience from January 2004 through June 2016 was used with six months of runout.

Improvement assumptions for mortality and morbidity were developed based on individual annuitant or industry experience, along with actuarial judgment. The rate increase dependent assumptions were developed using historical experience, and actuarial judgment where experience was limited or did not exist.

The sections that follow provide more detail on the development of and justification for the current assumptions that are material to the projections in this filing.

Persistency

The policy persistency assumptions were developed based on detailed historical experience from January 2008 through December 2017, with runout through March 2018, for MedAmerica's organic (including affinity partners) and acquired business. Experience adjustment factors were developed using predictive analytics as described in the Predictive Analytics section below.

Mortality

The mortality assumption utilizes the 2012 Individual Annuitant Mortality (IAM) Basic table with experience adjustments.

Exhibit A-1 supports the mortality assumption and provides the following information by marital status, gender, policy duration, and attained age.

- Exhibit A-1a – Provides the adjustment factors that are to be applied to the 2012IAM hazard rates; the adjusted hazard rates are converted back into mortality probabilities to create the mortality assumption produced by the predictive model. Attained age adjustment factors are applicable to only policy durations 7 and later.
- Exhibit A-1b – Provides a summary of actual-to-modeled (A:M) mortality experience for all products of MedAmerica and its affinity partners, and MedAmerica's other acquired blocks of business.
 - Policy year exposure [A] reflects the length of time a covered life is exposed to the risk of death (i.e., exact exposure basis).
 - Actual deaths [B]
 - Mortality probabilities underlying actual experience [C], 2012IAM [D], and the modeled assumption [E]. The modeled mortality probabilities capture the adjustment factors from Exhibit A-1a that were produced by the predictive model. Mortality probabilities were calculated by first calculating the hazard rate of mortality, then transforming into a probability. For example, the actual mortality probability $[C] = 1 - \text{EXP}(-[B] / [A])$.
 - A:M ratios are calculated as actual mortality probabilities to the 2012IAM mortality probabilities [F] and to the modeled assumption [G]. The modeled A:M [G] provides an indication of fit. This fit will not be perfect (i.e., ratios deviate from 1.0) because the main goal is to develop an assumption that generalizes well to new data by balancing assumption complexity and fit on the historical experience.
- Exhibit A-1c – Provides an additional attained age adjustment that was developed to better align the composite termination (i.e., mortality and voluntary lapse combined) assumption with actual experience. Similar to the attained age adjustment factors in Exhibit A-1a, the additional adjustments are applicable to only policy durations 7 and later. The adjustment from Exhibit A-1c is excluded from Exhibit A-1b, but it is included with the composite termination assumptions in Exhibit A-3 described below.

Appendix A Development of and Justification for Current Assumptions

For projection purposes, the adjusted 2012IAM table is brought forward to 2018 using the G2 improvement scale.

Lifetime-Pay Voluntary Lapse Assumption

The voluntary lapse assumption reflects the 2017 cash flow testing voluntary lapse assumption with experience adjustments for attained age, benefit period (lifetime or non-lifetime), inflation protection option (auto inflation or none), marital status, and product cohort.

The attained age adjustment factors developed from the predictive model produced a U-shaped pattern (i.e., decreased and then increased) by attained age. However, the attained age adjustment factors are held constant for ages 65 and older to produce an ultimate voluntary lapse assumption that is constant rather than increasing by attained age. The adjustments are held constant after this point because an increasing attained age lapse trend is not widely used in the industry, and this increasing lapse trend may be due to miscoding a death or underreporting of deaths in the Social Security Death Master File. An additional attained age adjustment to mortality was developed (Exhibit A-1c) in order to capture these terminations (i.e., higher lapses at older attained ages) such that the combined mortality and voluntary lapse assumption better aligns with actual experience as described in Exhibit A-3 below.

The ultimate voluntary lapse probabilities are shown in Section 6 of the actuarial memorandum. These ultimate voluntary lapse probabilities are applicable for attained ages 65 and older at policy durations 10 and later. Only these ultimate voluntary lapse probabilities are material to the projections given the age of this cohort.

Exhibit A-2 supports the voluntary lapse assumption. It provides a comparison of A:M voluntary lapse experience for all products of MedAmerica and its affinity partners, and MedAmerica's other acquired blocks of business, and includes the following:

- Policy year exposure [A] reflects the length of time a covered life is exposed to the risk of lapse (i.e., exact exposure basis).
- Actual lapses [B]
- Lapse probabilities underlying actual experience [C], unadjusted [D], and the modeled assumption [E]. The modeled voluntary lapse probabilities capture the assumptions produced by the predictive model (i.e., include the U-shaped attained age adjustments) to demonstrate the fit of the predictive model. The attained-age cap is captured with the composite termination assumptions in Exhibit A-3 as described below. Lapse probabilities were calculated by first calculating the hazard rate of lapse, then transforming into a probability. For example, the actual lapse probability $[C] = 1 - \text{EXP}(-[B] / [A])$.
- A:M ratios are calculated as actual lapse probabilities to the unadjusted lapse probabilities [F] and the modeled assumption [G]. The modeled A:M [G] provides an indication of fit. This fit will not be perfect (i.e., ratios deviate from 1.0) because the main goal is to develop an assumption that generalizes well to new data by balancing assumption complexity and fit on the historical experience.

The experience underlying Exhibit A-2 reflects lifetime-pay policies for policy durations 10 and later to focus on the fit of the ultimate voluntary lapse assumption and excludes "shock" lapses. For certain policies there have been prior rate increases and thus the option to lapse with a contingent benefit (i.e., shock lapse). Additionally, some policy forms offered an optional shortened non-forfeiture benefit. Policies that elected one of these options were not counted as a voluntary lapse; however, their annual policy exposure was valued up to the date of election.

Limited-Pay Voluntary Lapse Assumption

For the limited-pay options, the voluntary lapse assumption is a function of the lifetime-pay voluntary lapse assumption and is similar to that used in original pricing. The smoothed lapse rates are a scalar of the lifetime-pay lapse rates. Less than 2% of the in-force policies have a limited-pay option that will be subject to the voluntary lapse assumption after the first five years of the projection because they will not yet be paid-up due to the length of the payment option for these policies. As a result, the impact of the limited-pay voluntary lapse assumptions on the projections is assumed to be immaterial.

For the ten-pay, paid-up at age 65, reduced after age 65, and reduced after age 70 payment options, the scalars were developed from a comparison of the lifetime-pay derived lapse rates to the limited-pay option's derived lapse rates based on MedAmerica and its affinity partners' experience on all products combined. The relationships derived

Appendix A Development of and Justification for Current Assumptions

from this analysis were used to develop the smoothed lapse assumptions as shown in Section 6 of the actuarial memorandum.

Composite Termination

Exhibit A-3 supports the composite termination (i.e., mortality and voluntary lapse combined) assumption. It provides a comparison of actual-to-expected (A:E) composite termination experience for all products of MedAmerica and its affinity partners, and MedAmerica's other acquired blocks of business, and includes the following:

- Policy year exposure [A] reflects the length of time a covered life is exposed to the risk of termination (i.e., exact exposure basis).
- Actual composite terminations [B]
- Composite termination probabilities underlying actual experience [C] and the expected assumption [D]. The expected composite termination probabilities capture all of the experience adjustments for mortality (i.e., Exhibits A-1a and A-1c) and voluntary lapse (i.e., attained age cap). Termination probabilities were calculated by first calculating the hazard rate of termination, then transforming into a probability. For example, the actual termination probability $[C] = 1 - \text{EXP}(-[B] / [A])$.
- A:E ratios are calculated as actual termination probabilities to the expected composite termination probabilities [E]. The A:E [E] provides an indication of fit. This fit will not be perfect (i.e., ratios deviate from 1.0) because the main goal is to develop an assumption that generalizes well to new data by balancing assumption complexity and fit on the historical experience.

The experience underlying Exhibit A-3 reflects lifetime-pay policies for policy durations 10 and later to focus on the fit of the ultimate composite termination assumption. It also excludes "shock" lapses as described above for Exhibit A-2.

Benefit Expiry

Benefit expiry probabilities reflect assumed policy lapses due to exhaustion of benefits based on the 2017 Milliman *Long-Term Care Guidelines (Guidelines)* with experience adjustments and vary by attained age, gender, and benefit period. Insureds with lifetime benefits do not have an expiry assumption (i.e., probability of 0%). The final benefit expiry assumptions are provided in Section 6 of the actuarial memorandum.

Exhibit A-4 supports the benefit expiry assumption. It provides a comparison of A:E benefit expiry experience for all products of MedAmerica and its affinity partners, and MedAmerica's other acquired blocks of business, and includes the following:

- Policy year exposure [A] reflects the length of time a covered life is exposed to the risk of benefit expiry (i.e., exact exposure basis).
- Actual benefit expiries [B]
- Benefit expiry probabilities underlying actual experience [C], 2017 *Guidelines* [D], and the expected assumption [E]. The expected benefit expiry probabilities capture the assumptions from Section 6 of the actuarial memorandum. Benefit expiry probabilities were calculated by first calculating the hazard rate of benefit expiry, then transforming into a probability. For example, the actual benefit expiry probability $[C] = 1 - \text{EXP}(-[B] / [A])$.
- A:E ratios are calculated as actual benefit expiry probabilities to the 2017 *Guidelines* probabilities [F] and the expected assumption [G]. The expected A:E [G] provides an indication of fit. This fit will not be perfect (i.e., ratios deviate from 1.0) because the main goal is to develop an assumption that generalizes well to new data by balancing assumption complexity and fit on the historical experience.

The experience underlying Exhibit A-4 excludes lifetime benefit periods because benefit expiry is not applicable. It also excludes ages less than 65 because the assumed benefit expiry assumption is 0% and actual experience reflects less than 2% of actual expiries. The experience underlying Exhibit A-4 reflects policy durations 7 and later.

Appendix A Development of and Justification for Current Assumptions

Morbidity

The claim costs were developed using the 2014 *Guidelines* with experience adjustment factors based on all products of MedAmerica, its affinity partners, and any acquired business from January 2004 through June 2016, with runout through December 2016. The experience adjustment factors were developed using predictive analytics as described in the Predictive Analytics section below.

- Exhibit A-5a – provides the adjustment factors that are to be applied to the 2014 *Guidelines* claim costs for the Simplicity and Simplicity ii individual policy forms.
- Exhibit A-5b – provides a summary of A:E experience for the Simplicity and Simplicity ii individual policy forms.
 - Exposure [A] reflects the length of time a covered life is in force (i.e., an exact exposure basis).
 - Actual incurred claim counts [B] and dollars [C] are based on historical claim experience from inception through June 2016, with runout through December 2016. Actual incurred claim dollars were valued as paid claims plus claim reserves. Paid claims and claim reserves were discounted to the year of incurral.
 - 2014 *Guidelines* incurred claims [D] are valued as the 2014 *Guidelines* claim costs multiplied by actual all-lives exposure. The claim costs vary by gender, attained age, policy duration, benefit period, elimination period, payment type, level of home care coverage, inflation type, and coverage type (comprehensive/facility only/home health care only). Policy design, claims adjudication, and degree of underwriting were considered in developing the claim costs.
 - Expected incurred claims [E] are calculated by applying each applicable adjustment from Exhibit A-5a to the 2014 *Guidelines* incurred claims [D].
 - A:E ratios are calculated as actual incurred claims to the 2014 *Guidelines* incurred claims [F] and expected incurred claims [G]. The expected A:E [G] provides an indication of fit. This fit will not be perfect (i.e., ratios deviate from 1.0) because the main goal is to develop an assumption that generalizes well to new data by balancing assumption complexity and fit on the historical experience.
- Exhibit A-5c – provides information similar to Exhibit A-5b, except provides the experience for all products of MedAmerica and its affinity partners, and MedAmerica's other acquired blocks of business.

Prior to developing the experience adjustment factors, the 2014 *Guidelines* were adjusted for an assumed level of morbidity improvement. The 2014 *Guidelines* claim costs reflect morbidity improvement such that they are as of calendar year 2014. We assume this improvement has also occurred in the actual historical experience. Therefore, a backward or forward projection of morbidity improvement was applied to the expected claim costs on a seriatim basis based on the calendar year in which a given policy's duration fell. An annual improvement level of 1.0% was used in the backward or forward projections.

For projection purposes, the 2014 *Guidelines* are brought forward to 2018 using 1% improvement.

Prospective Improvement

For projected mortality improvement, the G2 improvement scale from the 2012IAM mortality table was used. The G2 improvement scale varies by attained age and gender. It is applied beginning in the first projection year and continues for 10 projection years.

For projected morbidity improvement, a level of 1.0% is assumed for 10 years beginning January 1, 2019. This assumption is set based on the underlying morbidity improvement from the 2014 *Guidelines*. This level is also reasonable based on the Society of Actuaries (SOA) July 2016 study, *Long Term Care Morbidity Improvement Study: Estimates for the Non-Insured U.S. Elderly Population Based on the National Long Term Care Survey 1984-2004*. This study reported population annual morbidity improvement of 2.3% for unisex, 2.5% for males, and 2.1% for females. The SOA July 2016 study uses population data, so it is uncertain how well these findings will translate to an insured population. The SOA June 2011 study, *Global Mortality Improvement Experience and Projection Techniques*, suggests that an annuitant cohort has more mortality improvement over the general population, so it is possible that this could be true for morbidity as well. Based on these studies, a reasonable range for morbidity improvement is between 0.0% to 2.5% for males and 0.0% to 2.1% for females for 10 to 20 years.

Appendix A
Development of and Justification for Current Assumptions

Rate Increase Dependent Assumptions

At the time of a rate increase, insureds have options to elect a contingent benefit upon lapse (CBUL) or reduced benefit options (RBO). Adverse selection is assumed relative to CBUL and RBO elections. These insured behavior assumptions are provided in Section 6 of the actuarial memorandum. These assumptions are based on MedAmerica and its affinity partners, and MedAmerica's acquired business's combined actual CBUL and RBO election rate experience and actuarial judgment—particularly at the higher rate increase magnitudes where limited experience exists.

Contingent Benefit Upon Lapse Election

The assumed CBUL election rate is based on the requested rate increase and is applied on a seriatim basis. No CBUL elections are assumed for limited-pay policies.

Reduced Benefit Options

We assume that those electing RBO will reduce their benefits so that premiums after the increase are closer to those before the increase. We assume that the percent reduction in premium corresponds to an equivalent percent reduction in claims. We assume an RBO election rate based on the requested rate increase and it is applied on a seriatim basis. No RBO elections are assumed for limited-pay policies.

The reduction to premium and claims then varies based on the level of the rate increase and can then be determined as follows:

Reduction to premium and claims due to the election of RBO
= $1 - (\text{Average premium level after the rate increase with RBO election} / \text{Premium level after the full rate increase without any RBO election})$, where

Average premium level after the rate increase with RBO election
= weighted average premium level of those assumed to elect RBO with those assumed to accept the full rate increase

Adverse Selection

The adverse selection assumption is a function of the CBUL and RBO election rates, such that the relative increase to morbidity due to adverse selection varies by the rate increase's magnitude. The increase to morbidity due to adverse selection was developed from the following formula and actuarial judgment. We assume that at the time of the rate increase, insureds that elect a CBUL will be selective in that their relative morbidity is 25% lower than that of the remaining pool. Similarly, we assume that at the time of the rate increase, insureds that elect an RBO will be selective in that their relative morbidity is 12.5% lower than that of the remaining pool.

$\text{PoolMorb} = \text{AdvSelMorb} \times (1 - \text{CBUL} - \text{RBO}) + [(1 - 25\%) \times \text{AdvSelMorb}] \times \text{CBUL} + [(1 - 12.5\%) \times \text{AdvSelMorb}] \times \text{RBO}$, where

PoolMorb = morbidity of the pool before the rate increase = 1.0
AdvSelMorb = adverse morbidity of the remaining pool after the rate increase due to selective lapses
CBUL = percentage of insureds that elect CBUL
RBO = percentage of insureds that elect RBO

Solving the above for the adverse selection component results in the following formula:

$\text{Adverse Selection} = 1 / (1 - 25\% \times \text{CBUL} - 12.5\% \times \text{RBO})$

Predictive Analytics

In developing the persistency and morbidity experience adjustment factors, predictive analytics was employed in the form of a penalized generalized linear model (GLM).

A penalized GLM is similar to a traditional GLM. The only difference is that it adds an additional constraint that penalizes the size of the model's coefficients in order to control overfitting the model to the historical data. This penalty placed on the coefficients can be seen as a credibility lever, which controls how much weight is given to the company's actual experience. A high penalty would give no weight to the data, leaving the benchmark assumption

Appendix A

Development of and Justification for Current Assumptions

(i.e., the 2014 *Guidelines* for morbidity) unadjusted. No penalty would give full weight to the company's actual data potentially making large adjustments to the benchmark, which could be overfitting the actual experience. When using a penalized GLM, it is important to choose a penalty that gives the right amount of weight to the actual data to avoid underfitting or overfitting the experience.

A standard approach for choosing such a penalty is to use a k -fold cross-validation to test a series of penalty values. A k -fold cross-validation splits the data into k subsets and iteratively trains and tests the model independently on each subset of the data. This process gives an estimation of how well a model will generalize to new data that was not used to develop the assumption. Through the k -fold cross-validation we evaluated the impact the penalty had on the model's generalizability by testing a range of 100 penalties. We selected a penalty to balance minimizing the k -fold cross-validation prediction error with the generalizability of the model. This allows for a statistically robust and automated process to determine the amount of weight to give actual experience versus the benchmark assumption.

**Exhibit A-1a
Mortality Hazard Rate Adjustment Factors
All Products**

Attained Age	Gender		Marital Status		Duration	Factor
	Male	Female	Married	Single		
<55	0.99	1.00	0.99	1.01	1	0.81
55	0.97	0.99	0.97	1.01	2	0.70
56	0.97	0.98	0.95	1.01	3	0.63
57	0.95	0.97	0.93	1.02	4	0.59
58	0.93	0.96	0.91	1.02	5	0.56
59	0.91	0.93	0.89	1.02	6	0.66
60	0.89	0.89	0.88	1.01	7	0.75
61	0.85	0.86	0.85	1.00	8	0.81
62	0.85	0.86	0.84	1.00	9	0.84
63	0.84	0.85	0.82	1.00	10	0.86
64	0.84	0.84	0.81	1.01	11	0.90
65	0.87	0.84	0.81	1.01	12	0.92
66	0.88	0.85	0.81	1.01	13	0.93
67	0.87	0.82	0.81	1.00	14	0.96
68	0.91	0.82	0.82	1.01	15	0.98
69	0.95	0.85	0.84	1.02	16	0.98
70	0.97	0.85	0.85	1.02	17	0.98
71	0.99	0.84	0.86	1.03	18	0.98
72	1.02	0.85	0.87	1.04	19	0.98
73	1.03	0.85	0.89	1.03	20+	0.98
74	1.04	0.85	0.90	1.04		
75	1.05	0.86	0.91	1.04		
76	1.08	0.87	0.92	1.04		
77	1.11	0.92	0.94	1.07		
78	1.09	0.94	0.95	1.05		
79	1.08	0.94	0.95	1.02		
80	1.09	0.93	0.96	1.04		
81	1.10	0.95	0.97	1.04		
82	1.08	0.93	0.96	1.04		
83	1.08	0.91	0.95	1.04		
84	1.03	0.89	0.96	1.02		
85	1.06	0.92	0.99	1.02		
86	1.04	0.93	0.99	1.01		
87	1.04	0.90	1.00	0.99		
88	1.07	0.90	1.00	0.99		
89	1.13	0.94	0.99	1.01		
90	1.09	0.95	0.99	1.02		
91	1.07	0.96	1.00	1.02		
92	1.09	1.00	1.01	1.03		
93	1.06	1.01	1.02	1.03		
94	1.03	1.00	1.01	1.03		
95	1.01	1.00	0.99	1.04		
96	1.01	1.01	0.99	1.05		
97	1.00	1.02	0.99	1.05		
98	1.00	1.04	0.99	1.05		
99	0.99	1.04	1.00	1.04		
100	0.99	1.03	1.00	1.03		
101	0.99	1.02	1.00	1.02		
102	0.98	1.01	0.99	1.01		
103	0.99	1.01	0.99	1.00		
104+	0.99	1.00	1.00	1.01		

Exhibit A-1b
Actual-to-Modeled Mortality Experience 2008-2017
Policy Durations 7+
All Products

Policy or Policyholder Characteristic	Policy Year Exposure [A]	Actual		Mortality Probability		Actual-to-Modeled Mortality Probability	
		Deaths [B]	Probability [C]	2012IAM [D]	Modeled [E]	2012IAM [F] = [C] / [D]	Modeled [G] = [C] / [E]
Marital Status							
Married	386,931	5,992	1.5%	1.8%	1.6%	0.86	0.99
Single	392,172	9,243	2.3%	2.4%	2.3%	0.97	1.00
Gender							
Female	452,361	7,931	1.7%	2.0%	1.7%	0.88	0.99
Male	326,742	7,304	2.2%	2.3%	2.2%	0.98	1.00
Policy Duration							
7-9	204,938	1,429	0.7%	1.0%	0.7%	0.70	0.97
10-14	315,361	4,614	1.5%	1.7%	1.5%	0.87	0.99
15-19	172,971	5,090	2.9%	2.9%	2.9%	1.00	1.01
20-24	69,899	3,138	4.4%	4.3%	4.4%	1.03	1.00
25+	15,933	964	5.9%	5.7%	5.9%	1.03	0.99
Attained Age							
<65	278,751	776	0.3%	0.4%	0.3%	0.71	0.95
65-69	121,892	789	0.6%	0.9%	0.7%	0.70	0.98
70-74	121,461	1,396	1.1%	1.4%	1.2%	0.80	0.99
75-79	111,354	2,505	2.2%	2.4%	2.2%	0.93	1.00
80-84	84,877	3,624	4.2%	4.3%	4.2%	0.97	1.00
85+	60,768	6,145	9.6%	9.5%	9.6%	1.01	1.00
Total	779,103	15,235	1.9%	2.1%	1.9%	0.93	1.00

**Exhibit A-1c
 Composite Termination Attained Age Mortality Adjustment
 For Policy Durations 7+
 All Products**

Attained Age	Adjustment	Attained Age	Adjustment
<55	1.00	75	1.02
55	1.00	76	1.02
56	1.00	77	1.03
57	1.00	78	1.03
58	1.00	79	1.03
59	1.00	80	1.03
60	1.00	81	1.04
61	1.00	82	1.04
62	1.00	83	1.04
63	1.00	84	1.04
64	1.00	85	1.05
65	1.00	86	1.05
66	1.00	87	1.06
67	1.00	88	1.06
68	1.00	89	1.06
69	1.00	90	1.06
70	1.00	91	1.07
71	1.01	92	1.07
72	1.01	93	1.07
73	1.01	94	1.07
74	1.01	95+	1.07

Exhibit A-2
Actual-to-Modeled Voluntary Lapse Experience 2008-2017
Lifetime-Pay for Policy Durations 10+
All Products

Policy or Policyholder Characteristic	Policy Year Exposure [A]	Actual		Lapse Probability		Actual-to-Modeled Lapse Probability	
		Lapses [B]	Probability [C]	Unadjusted [D]	Modeled [E]	Unadjusted [F] = [C] / [D]	Modeled [G] = [C] / [E]
Marital Status							
Married	226,840	1,757	0.8%	1.0%	0.8%	0.76	0.98
Single	252,968	2,338	0.9%	0.9%	0.9%	1.02	1.01
Benefit Period							
Non-Lifetime	343,952	3,341	1.0%	1.0%	1.0%	0.95	1.01
Lifetime	135,856	754	0.6%	0.8%	0.6%	0.68	0.95
Inflation							
None	177,263	2,052	1.2%	1.0%	1.1%	1.13	1.01
Auto	302,544	2,043	0.7%	0.9%	0.7%	0.73	0.98
Cohort^[1]							
Simplicity Individual	34,774	314	0.9%	0.6%	0.7%	1.50	1.30
Attained Age							
<65	113,757	1,078	0.9%	0.9%	0.8%	1.01	1.14
65-69	67,892	376	0.6%	0.9%	0.6%	0.59	0.91
70-74	79,255	523	0.7%	1.0%	0.7%	0.68	0.92
75-79	88,328	649	0.7%	1.0%	0.8%	0.74	0.93
80-84	74,228	677	0.9%	1.0%	0.9%	0.94	0.96
85+	56,348	792	1.4%	1.0%	1.4%	1.45	1.01
Total	479,808	4,095	0.8%	1.0%	0.9%	0.89	1.00

[1] Series characteristic captures the experience of Simplicity Individual policies only, while other characteristics capture the pooled experience of products of MedAmerica, its affinity partners, and MedAmerica's acquired blocks of business.

Exhibit A-3
Actual-to-Expected Composite^[1] Termination Experience 2008-2017
Lifetime-Pay for Policy Durations 10+
All Products

Policy or Policyholder Characteristic	Policy Year Exposure [A]	Actual		Expected Termination Probability ^[1] [D]	Actual-to-Expected Termination Probability ^[1] [E] = [C] / [D]
		Terminations [B]	Probability [C]		
Marital Status					
Married	226,840	6,737	2.9%	2.9%	1.00
Single	252,968	10,430	4.0%	3.9%	1.03
Gender					
Female	291,631	9,451	3.2%	3.2%	1.01
Male	188,176	7,716	4.0%	3.9%	1.03
Benefit Period					
Non-Lifetime	343,952	13,461	3.8%	3.8%	1.02
Lifetime	135,856	3,706	2.7%	2.6%	1.03
Inflation					
None	177,263	9,333	5.1%	4.9%	1.05
Auto	302,544	7,834	2.6%	2.6%	0.99
Cohort^[2]					
Simplicity Individual	34,774	604	1.7%	1.6%	1.11
Policy Duration					
10-14	256,833	6,828	2.6%	2.5%	1.07
15-19	145,062	5,757	3.9%	3.9%	0.99
20-24	62,763	3,496	5.4%	5.4%	1.00
25+	15,150	1,086	6.9%	7.1%	0.98
Attained Age					
<65	113,757	1,466	1.3%	1.2%	1.11
65-69	67,892	883	1.3%	1.3%	0.99
70-74	79,255	1,488	1.9%	1.9%	1.00
75-79	88,328	2,733	3.0%	3.0%	1.01
80-84	74,228	3,966	5.2%	5.1%	1.02
85+	56,348	6,631	11.1%	10.9%	1.01
Total	479,808	17,167	3.5%	3.4%	1.02

[1] Combination of mortality and voluntary lapse

[2] Series characteristic captures the experience of Simplicity Individual policies only, while other characteristics capture the pooled experience of products of MedAmerica, its affinity partners, and MedAmerica's acquired blocks of business.

Exhibit A-4
Actual-to-Expected Benefit Expiry Experience 2008-2017
Policy Durations 7+
All Products

Policy or Policyholder Characteristic	Policy Year Exposure ^[1] [A]	Actual		Benefit Expiry Probability		Actual-to-Expected Benefit Expiry	
		Benefit Expiry [B]	Probability [C]	2017 Guidelines [D]	Expected ^[2] [E]	2017 Guidelines [F] = [C] / [D]	Expected ^[2] [G] = [C] / [E]
Gender							
Female	226,513	1,317	0.6%	0.5%	0.6%	1.07	1.02
Male	162,541	445	0.3%	0.3%	0.3%	0.99	0.97
Benefit Period							
1 Year	21,879	139	0.6%	0.7%	0.7%	0.91	0.88
2 Year	59,932	533	0.9%	0.7%	0.8%	1.20	1.13
3 Year	181,848	722	0.4%	0.4%	0.4%	0.96	0.93
4 Year	52,938	188	0.4%	0.3%	0.4%	1.05	0.99
5 Year	66,951	175	0.3%	0.2%	0.2%	1.19	1.12
6 Year	4,677	5	0.1%	0.0%	0.0%	2.92	2.80
10 Year	830	0	0.0%	0.0%	0.0%	0.00	0.00
Attained Age							
<75	186,976	86	0.0%	0.1%	0.1%	0.64	0.83
75-79	85,088	145	0.2%	0.2%	0.2%	0.73	0.90
80-84	66,442	376	0.6%	0.6%	0.6%	1.01	1.01
85-89	36,785	544	1.5%	1.3%	1.5%	1.10	0.99
90-94	11,698	466	3.9%	3.0%	3.7%	1.30	1.06
95+	2,066	145	6.8%	5.6%	6.3%	1.22	1.07
Total	389,054	1,762	0.5%	0.4%	0.5%	1.05	1.00

[1] Experience excludes lifetime benefit periods and ages less than 65

[2] Expected = Rates in Section 6 of the actuarial memorandum

**Exhibit A-5a
MedAmerica and Affinity Partners
Morbidity Adjustment Factors
Simplicity and Simplicity ii Individual Policy Forms Combined**

Duration	Product-Specific Adjustment Factor
1	1.04
2	1.02
3	1.13
4	1.14
5	1.15
6	1.17
7	1.22
8	1.10
9	1.15
10	1.21
11	1.18
12	1.13
13	1.13
14	1.07
15	1.02
16	0.99
17	1.00
18	1.00
19	1.00
20+	1.00

Attained Age	Product-Specific and Payment Type Adjustment Factor
<55	1.07
55	1.07
56	1.07
57	1.11
58	1.13
59	1.06
60	1.01
61	0.99
62	0.89
63	0.86
64	0.96
65	0.89
66	0.95
67	1.00
68	0.97
69	0.86
70	0.94
71	0.83
72	0.84
73	0.86
74	0.91
75	0.84
76	0.89
77	0.91
78	0.98
79	1.03
80	1.11
81	1.15
82	1.15
83	1.12
84	1.11
85	1.08
86	1.06
87	1.06
88	1.08
89	1.07
90	1.09
91	1.09
92	1.07
93	1.04
94	1.03
95	1.01
96	1.00
97	1.01
98	1.01
99	1.01
100	1.01
101+	1.01

Attained Age	Non-MANY Adjustment Factor	MANY Adjustment Factor
<55	1.07	0.97
55	1.07	0.97
56	1.07	0.97
57	1.06	0.97
58	0.99	1.00
59	0.95	1.04
60	0.89	1.09
61	0.89	1.11
62	0.88	1.09
63	0.94	1.00
64	1.00	0.91
65	1.00	0.85
66	1.09	0.81
67	1.17	0.82
68	1.25	0.81
69	1.26	0.86
70	1.28	0.88
71	1.13	0.87
72	1.09	0.90
73	1.03	0.92
74	1.03	0.94
75	0.99	0.98
76	1.00	1.09
77	0.97	1.07
78	0.97	1.13
79	0.97	1.15
80	1.02	1.15
81	1.08	1.07
82	1.12	1.09
83	1.13	1.12
84	1.11	1.07
85	1.08	1.07
86	1.05	1.09
87	1.03	1.13
88	1.02	1.09
89	1.05	1.11
90	1.05	1.13
91	1.05	1.11
92	1.05	1.04
93	1.04	1.03
94	1.00	1.00
95	1.00	0.97
96	0.98	0.96
97	0.97	0.98
98	0.98	0.98
99	0.99	0.99
100	0.99	1.00
101+	1.00	1.01

Coverage Type	Adjustment Factor
Comprehensive	0.90
Nursing Home Only	1.03
Home Care Only	1.10

Exhibit A-5b
MedAmerica and Affinity Partners
Actual-to-Expected Morbidity Experience through June 30, 2016 with Claim Runout
Simplicity and Simplicity ii Individual Policy Forms Combined

Policy or Policyholder Characteristic	Exposure [A]	Actual Incurred Claims		Incurred Claims		Actual-to-Expected Incurred Claims		
		Count [B]	Dollars [C]	2014 Guidelines [D]	Expected [E]	2014 Guidelines [F] = [C] / [D]	Expected [G] = [C] / [E]	
Company								
MANY	48,397	115	15,570,334	13,270,764	13,160,675	1.17	1.18	
Non-MANY	259,930	417	44,774,910	40,902,387	43,745,275	1.09	1.02	
Coverage Type								
Comprehensive	298,026	493	56,547,192	50,145,485	51,885,236	1.13	1.09	
Nursing Home Only	9,404	37	3,586,363	3,804,858	4,737,342	0.94	0.76	
Home Care Only	897	2	211,689	222,808	283,372	0.95	0.75	
Attained Age								
< 60	182,869	95	11,103,522	8,772,488	9,948,689	1.27	1.12	
60 - 69	97,417	178	22,603,019	19,454,500	19,266,007	1.16	1.17	
70 - 79	25,456	160	16,481,293	18,599,710	18,243,680	0.89	0.90	
80 - 89	2,540	92	9,265,766	6,942,450	8,955,759	1.33	1.03	
90 +	44	7	891,643	404,002	491,815	2.21	1.81	
Policy Duration								
< 7	228,630	234	24,258,019	22,061,563	22,723,069	1.10	1.07	
7 - 10	71,139	239	29,087,141	25,977,943	27,577,008	1.12	1.05	
11 - 15	8,558	59	7,000,084	6,133,644	6,605,874	1.14	1.06	
16 - 20	-	-	-	-	-	-	-	
21 +	-	-	-	-	-	-	-	
Total	308,326	532	60,345,244	54,173,150	56,905,951	1.11	1.06	

Exhibit A-5c
MedAmerica, Affinity Partners, and Acquired Business
Actual-to-Expected Morbidity Experience through June 30, 2016 with Claim Runout
All Products

Policy or Policyholder Characteristic	Exposure [A]	Actual Incurred Claims		Incurred Claims		Actual-to-Expected Incurred Claims	
		Count [B]	Dollars [C]	2014 Guidelines [D]	Expected [E]	2014 Guidelines [F] = [C] / [D]	Expected [G] = [C] / [E]
Company							
MANY	270,246	2,805	271,128,738	246,835,001	267,034,032	1.10	1.02
Non-MANY	989,369	8,495	659,578,863	642,889,811	661,215,211	1.03	1.00
Coverage Type							
Comprehensive	1,136,716	8,789	756,597,258	749,849,298	758,592,612	1.01	1.00
Nursing Home Only	106,185	2,145	154,205,174	127,829,789	153,061,713	1.21	1.01
Home Care Only	16,715	366	19,905,169	12,045,724	16,594,918	1.65	1.20
Attained Age							
< 60	453,624	244	33,805,437	30,149,268	30,328,735	1.12	1.11
60 - 69	360,462	666	78,589,161	88,054,403	75,788,341	0.89	1.04
70 - 79	291,092	2,748	262,147,876	268,144,812	267,494,038	0.98	0.98
80 - 89	138,826	5,979	465,876,836	417,634,186	464,847,833	1.12	1.00
90 +	15,611	1,663	90,288,290	85,742,142	89,790,297	1.05	1.01
Policy Duration							
< 7	497,039	823	75,787,355	82,648,988	79,201,077	0.92	0.96
7 - 10	307,411	1,867	174,015,180	164,578,241	170,058,801	1.06	1.02
11 - 15	278,526	3,765	317,411,016	297,015,693	316,181,994	1.07	1.00
16 - 20	129,643	3,188	245,115,546	230,142,856	242,291,028	1.07	1.01
21 +	46,996	1,657	118,378,503	115,339,033	120,516,343	1.03	0.98
Total	1,259,615	11,300	930,707,601	889,724,811	928,249,243	1.05	1.00

Appendix B
Justification for and Development of the Requested Rate Increase

This appendix provides details on the development of the current rate increase requests as well as demonstrations of how the requested rate increases are not recouping past losses.

Actuarial Equivalent Rate Increase Development

This rate increase request is a follow-up to three prior nationwide requests for the Simplicity policy forms. Table B-1 provides the average originally requested rate increases by inflation protection option (none vs. auto). In jurisdictions that did not allow full implementation of the prior requested increases, the company is requesting a follow-up increase to achieve an actuarially equivalent lifetime loss ratio to the prior requests.

Table B-1
Originally Requested Nationwide Rate Increases
Simplicity Policy Forms

Inflation Option	2012 Request	2015 Request	2017 Request	Cumulative Request
No Inflation	29.6%	72.6%	0.0%	124%
Auto Inflation	37.9	75.7	25.0	203
All ^[1]	36.3	75.1	20.4	187

[1] Average as of December 31, 2018 and excludes policies assumed to be paid up prior to implementation of the requested rate increase.

Exhibit B-1 provides the lifetime loss ratio that would have been achieved if all jurisdictions had implemented the originally requested rate increases. This exhibit is similar to Exhibit I-b except that it reflects premiums that have been restated to assume implementation of the originally requested rate increases shown in Table B-1 and is split by inflation protection option. Table B-2 summarizes the lifetime loss ratios from Exhibit B-1, which are the targets for determining actuarial equivalence.

Table B-2
Target Lifetime Loss Ratio for Actuarial Equivalence
Simplicity Policy Forms

Inflation Option	Lifetime Loss Ratio
No Inflation	72%
Auto Inflation	87

The average nationwide requested rate increases shown in Section 2 were developed to produce a lifetime loss ratio that is equivalent to that in Table B-2. This equivalence is demonstrated by comparing the after increase lifetime loss ratios from Section 15 to those in Table B-2.

The requested rate increases in this jurisdiction, shown in the enclosed cover letter, were developed to produce lifetime loss ratios that are equivalent to those in Table B-2. This equivalence is demonstrated by comparing the lifetime loss ratios from Exhibit B-2 to those in Table B-2. Exhibit B-2 provides similar information as Exhibit B-1 except that premiums have been restated to reflect the actual rate increases implemented in this jurisdiction and the requested rate increase shown in the cover letter.

While emerging experience supports a larger rate increase, the company is limiting the increase to be an actuarially equivalent follow-up to the prior requests in order to improve equity across jurisdictions. The company plans to continue to monitor experience and request additional rate increases in the future, to the extent justified. However, if it is the Department's position to only allow future rate increases if experience deteriorates from current best estimates, the company respectfully requests that the Department notify them and allow the company to revise the current rate increase request.

Demonstrations the Requested Increase does not Recoup Past Losses

A number of methods exist to quantify or demonstrate whether an increase may be recouping past losses and offer the following for consideration.

Capped Historical Incurred Claims

The 2014 Long-Term Care Model Regulation (Model Regulation) contemplates recouping past losses in Section 20.1.C for newly issued policies. Specifically, recouping past losses is limited by not allowing past actual claims in excess of expected claims by calendar year in the minimum loss ratio test (Section 20.1.C(2)).

Appendix B
Justification for and Development of the Requested Rate Increase

While Section 20.1.C is not applicable to these policies, to demonstrate that the nationwide rate increase request is not recouping past losses we capped actual historical claims by those expected in pricing by calendar year in demonstrating compliance with the applicable minimum loss ratio requirements for these policies. Expected claims are calculated as earned premium multiplied by expected loss ratio for each calendar year.

Table B-3 and Exhibit B-3 reflect nationwide experience with the capped historical incurred claims and demonstrate compliance with the applicable minimum loss ratio requirements for the pre- and post-rate stability regulation (Model Regulation Sections 19 and 20), respectively. Values in Table B-3 and Exhibit B-3 are accumulated and discounted at the maximum valuation interest rate applicable to the year of issue.

Table B-3
Nationwide Lifetime Loss Ratios with Capped Historical Incurred Claims
at the Maximum Valuation Interest Rate by Inflation Option

Inflation Option	Before Increase	After Increase
No Inflation	73	64
Auto Inflation	114	86
All	106	83

HATF Discussion and Lifetime Premium Equivalence

One approach that was considered by the NAIC Health Actuarial Task Force (HATF) during discussions for the development of the Model Regulation was that past losses should be defined as past premium inadequacies given current, updated information. A company would demonstrate this approach by restating premiums to the proposed rate level from inception and demonstrating compliance with minimum loss ratio tests.

This approach was determined by HATF to not be a realistic method to define past losses because in reality there is no opportunity for the company to have perfect knowledge from policy inception and this approach greatly expands the risk on the product. Ultimately, HATF settled on the approach that past losses should be defined as any excess of actual past claims over expected claims, which led to the approach outlined in Section 20.1.C of the Model Regulation and described above. For additional background on HATF's review of methods of defining past losses please see the article 'Recouping Past LTC Losses' in the April 2017 issue of the Society of Actuaries Long-Term Care Section newsletter, Long-Term Care News.

While it is not appropriate to use this restrictive method of restating premiums to the proposed rate level from inception to determine the rate increase, we can use it to confirm that current policyholders are not paying more over their lifetime than what they would have if the company had perfect knowledge.

With perfect knowledge, the company would have charged 114% higher rates from issue to reproduce the original pricing loss ratio of 57%. To avoid recouping premium on past policies that will not receive the rate increase, we compare lifetime premiums on a present value basis for the subset of policies that are in-force with lifetime-pay. These policies would have paid \$729 million in the history and \$1,194 million over the lifetime if the company had perfect knowledge and charged 114% higher premiums from issue. In contrast, the actual premium paid by these policies has been \$365 million in the history and is projected to be \$908 million over the lifetime including the requested rate increase. Therefore, these in-force policies will pay less over their lifetime than what they would have paid if the company had perfect knowledge at issue.

Table B-4 below provides a summary of the present value of lifetime premiums under the scenario discussed above by inflation protection option.

Appendix B
Justification for and Development of the Requested Rate Increase

Table B-4
Lifetime Premium Equivalence
In-force Policies

Inflation Option	Original Pricing Loss Ratios	Increase Needed from Inception	Present Value of Lifetime Premium (Millions) with:	
			Perfect Knowledge at Issue ^[1]	Actual History and Requested Increase in Future
No Inflation	49%	92%	\$209	\$156
Auto Inflation	59	118	982	752
All	57	114	1,194	908

[1] The increase needed from inception is calculated for each indicated cohort for all lives while the present value of premium is calculated based on lifetime-pay policies currently in force. The difference results in the sum of the inflation options not tying to the total.

Exhibit B-1a
MedAmerica and Affinity Partners
Actual and Projected Experience using Current Assumptions by Calendar Year
Nationwide Experience Restated to Assume Implementation of the Originally Requested Rate Increases
Individual Simplicity Policy Forms with No Inflation

		Loss Ratio Demonstration						
		Without Interest			D End of Year Lives	With Max. Val. Interest		
		A Earned Premium	B Incurred Claims	C = B / A Incurred Loss Ratio		E Earned Premium	F Incurred Claims	G = F / E Incurred Loss Ratio
Calendar Year								
Historical Experience	2004	533,140	299,291	56%	925	1,009,316	566,604	56%
	2005	2,834,822	685,374	24%	2,593	5,135,653	1,241,645	24%
	2006	5,011,872	61,408	1%	4,509	8,574,801	106,458	1%
	2007	6,835,579	1,123,397	16%	5,524	11,062,669	1,815,981	16%
	2008	7,408,396	734,238	10%	5,416	11,463,648	1,160,863	10%
	2009	7,144,569	767,152	11%	5,166	10,603,781	1,154,829	11%
	2010	6,902,749	1,064,788	15%	4,955	9,827,064	1,518,542	15%
	2011	6,821,397	2,737,621	40%	4,855	9,312,653	3,751,836	40%
	2012	6,810,018	2,636,553	39%	4,809	8,915,220	3,452,818	39%
	2013	6,835,265	2,901,342	42%	4,720	8,576,425	3,648,070	43%
	2014	7,454,568	4,192,451	56%	4,511	8,970,662	5,031,370	56%
	2015	7,771,920	4,537,371	58%	4,317	8,973,708	5,261,488	59%
	2016	7,077,578	4,293,499	61%	4,003	7,842,728	4,765,251	61%
2017	6,809,639	5,154,680	76%	3,710	7,243,397	5,495,896	76%	
2018	9,046,069	3,928,042	43%	3,517	9,234,299	4,012,185	43%	
Projected Future Experience (60 Years)	2019	8,970,663	3,661,023	41%	3,434	8,788,031	3,585,261	41%
	2020	8,667,314	3,856,058	44%	3,349	8,148,832	3,621,643	44%
	2021	8,348,072	4,099,257	49%	3,261	7,532,781	3,692,309	49%
	2022	8,023,183	4,401,171	55%	3,170	6,948,566	3,801,964	55%
	2023	7,698,016	4,723,816	61%	3,076	6,398,807	3,914,081	61%
	2024	7,359,478	5,065,291	69%	2,979	5,871,665	4,026,080	69%
	2025	7,030,505	5,391,666	77%	2,879	5,384,453	4,111,327	76%
	2026	6,698,614	5,717,210	85%	2,777	4,925,048	4,182,492	85%
	2027	6,364,189	6,040,290	95%	2,672	4,492,256	4,239,490	94%
	2028	6,021,515	6,368,097	106%	2,565	4,080,867	4,288,647	105%
	2029	5,685,474	6,708,565	118%	2,456	3,699,578	4,335,911	117%
	2030	5,350,164	7,083,733	132%	2,345	3,342,849	4,394,367	131%
	2031	5,012,532	7,433,137	148%	2,231	3,007,552	4,426,099	147%
	2032	4,682,101	7,751,592	166%	2,117	2,697,879	4,431,002	164%
	2033	4,357,086	8,022,021	184%	2,001	2,411,225	4,402,859	183%
	2034	4,032,514	8,237,884	204%	1,885	2,143,425	4,341,204	203%
	2035	3,718,112	8,382,416	225%	1,769	1,898,304	4,241,599	223%
	2036	3,412,698	8,461,478	248%	1,654	1,673,669	4,111,346	246%
	2037	3,115,815	8,464,305	272%	1,541	1,467,868	3,949,517	269%
	2038	2,832,149	8,411,943	297%	1,431	1,281,730	3,769,490	294%
	2039	2,561,208	8,288,545	324%	1,323	1,113,542	3,567,161	320%
	2040	2,304,196	8,084,653	351%	1,219	962,454	3,341,655	347%
	2041	2,062,623	7,808,026	379%	1,119	827,706	3,099,983	375%
	2042	1,837,255	7,489,291	408%	1,023	708,309	2,855,748	403%
	2043	1,628,727	7,140,450	438%	933	603,249	2,614,709	433%
	2044	1,436,966	6,770,468	471%	847	511,310	2,380,441	466%
	2045	1,262,203	6,381,985	506%	767	431,471	2,154,023	499%
	2046	1,103,682	5,985,215	542%	692	362,441	1,938,982	535%
	2047	960,855	5,584,565	581%	622	303,112	1,736,104	573%
	2048	832,771	5,170,213	621%	558	252,353	1,542,265	611%
	2049	718,206	4,759,442	663%	499	209,062	1,361,945	651%
	2050	617,389	4,361,375	706%	445	172,610	1,196,946	693%
	2051	528,654	3,974,059	752%	396	141,949	1,045,973	737%
2052	450,975	3,603,824	799%	351	116,291	909,745	782%	
2053	383,269	3,260,678	851%	310	94,910	789,453	832%	
2054	324,479	2,937,326	905%	273	77,160	682,110	884%	
2055	273,727	2,633,019	962%	240	62,503	586,583	938%	
2056	230,094	2,344,965	1,019%	211	50,451	501,322	994%	
2057	192,747	2,072,774	1,075%	184	40,584	425,353	1,048%	
2058	160,886	1,822,506	1,133%	161	32,532	359,050	1,104%	
2059-2063	473,428	6,057,775	1,280%	533	86,309	1,072,153	1,242%	
2064-2068	174,010	2,689,707	1,546%	246	26,156	392,873	1,502%	
2069-2073	62,287	1,068,038	1,715%	104	7,832	130,083	1,661%	
2074-2078	25,147	424,715	1,689%	40	2,673	43,647	1,633%	
History		95,297,580	35,117,205	37%	63,530	126,746,023	42,983,836	34%
Future		137,985,978	238,994,568	173%	62,686	93,392,354	116,594,995	125%
Lifetime		233,283,559	274,111,773	118%	126,216	220,138,378	159,578,831	72%

Exhibit B-1b
MedAmerica and Affinity Partners
Actual and Projected Experience using Current Assumptions by Calendar Year
Nationwide Experience Restated to Assume Implementation of the Originally Requested Rate Increases
Individual Simplicity Policy Forms with Auto Inflation

		Loss Ratio Demonstration						
		Without Interest			D End of Year Lives	With Max. Val. Interest		
		A Earned Premium	B Incurred Claims	C = B / A Incurred Loss Ratio		E Earned Premium	F Incurred Claims	G = F / E Incurred Loss Ratio
Calendar Year								
Historical Experience	2004	1,411,065	0	0%	2,159	2,671,365	0	0%
	2005	8,257,230	18,877	0%	6,072	14,959,060	34,199	0%
	2006	16,590,729	66,086	0%	11,556	28,272,597	114,568	0%
	2007	25,718,247	109,681	0%	15,340	41,382,406	176,012	0%
	2008	29,666,618	1,957,770	7%	16,016	45,639,568	3,090,242	7%
	2009	29,477,975	1,204,293	4%	15,451	43,504,878	1,778,885	4%
	2010	28,973,254	2,442,398	8%	15,210	41,031,339	3,480,527	8%
	2011	28,723,712	1,956,719	7%	14,949	39,040,588	2,649,574	7%
	2012	28,743,422	2,407,221	8%	14,961	37,493,117	3,196,355	9%
	2013	29,276,188	3,983,749	14%	14,841	36,617,826	4,971,977	14%
	2014	33,575,688	6,931,228	21%	14,324	40,293,873	8,370,276	21%
	2015	35,908,611	4,699,433	13%	13,949	41,363,153	5,442,779	13%
	2016	32,146,116	7,266,730	23%	13,170	35,555,013	8,051,225	23%
	2017	29,952,744	9,815,974	33%	12,462	31,826,949	10,442,268	33%
2018	41,799,698	10,028,390	24%	12,011	42,655,346	10,241,537	24%	
Projected Future Experience (60 Years)	2019	48,059,327	9,471,975	20%	11,575	47,095,886	9,278,058	20%
	2020	47,342,699	10,653,603	23%	11,410	44,552,443	10,012,775	22%
	2021	46,213,601	12,107,975	26%	11,240	41,764,753	10,918,458	26%
	2022	44,949,815	13,857,215	31%	11,061	39,011,781	11,989,298	31%
	2023	43,226,371	15,880,746	37%	10,874	36,019,295	13,183,535	37%
	2024	41,968,078	18,207,860	43%	10,675	33,579,650	14,504,002	43%
	2025	40,821,826	20,797,347	51%	10,466	31,367,935	15,897,377	51%
	2026	39,623,391	23,655,635	60%	10,245	29,241,607	17,351,946	59%
	2027	38,426,354	26,858,359	70%	10,010	27,235,952	18,906,230	69%
	2028	37,154,882	30,425,605	82%	9,763	25,294,044	20,554,827	81%
	2029	35,817,901	34,523,627	96%	9,500	23,421,210	22,387,926	96%
	2030	34,483,019	39,089,179	113%	9,220	21,659,312	24,333,856	112%
	2031	33,071,171	43,963,308	133%	8,924	19,954,273	26,273,196	132%
	2032	31,609,292	49,015,297	155%	8,611	18,322,213	28,123,340	153%
	2033	30,107,426	54,213,296	180%	8,281	16,766,389	29,868,123	178%
	2034	28,526,883	59,379,046	208%	7,936	15,263,231	31,414,514	206%
	2035	26,922,731	64,421,014	239%	7,575	13,841,420	32,730,575	236%
	2036	25,290,402	69,177,584	274%	7,202	12,494,398	33,755,414	270%
	2037	23,622,900	73,567,802	311%	6,818	11,216,017	34,479,430	307%
	2038	21,933,674	77,414,631	353%	6,425	10,008,871	34,852,294	348%
	2039	20,275,289	80,508,624	397%	6,026	8,892,867	34,820,553	392%
	2040	18,629,536	82,761,855	444%	5,625	7,854,154	34,390,767	438%
	2041	17,020,497	84,120,272	494%	5,224	6,898,273	33,584,817	487%
	2042	15,455,720	84,649,037	548%	4,828	6,022,516	32,471,402	539%
	2043	13,952,936	84,397,449	605%	4,439	5,227,609	31,107,163	595%
	2044	12,519,920	83,467,488	667%	4,061	4,510,436	29,561,514	655%
	2045	11,164,586	81,839,158	733%	3,697	3,867,827	27,853,865	720%
	2046	9,895,976	79,497,218	803%	3,349	3,297,001	26,002,912	789%
	2047	8,718,936	76,550,285	878%	3,019	2,793,710	24,062,628	861%
	2048	7,639,013	73,154,506	958%	2,709	2,354,180	22,099,860	939%
	2049	6,655,376	69,444,711	1,043%	2,421	1,972,796	20,163,300	1,022%
	2050	5,767,773	65,579,038	1,137%	2,153	1,644,545	18,300,298	1,113%
2051	4,973,006	61,637,973	1,239%	1,908	1,363,960	16,531,378	1,212%	
2052	4,266,524	57,669,015	1,352%	1,684	1,125,679	14,864,298	1,320%	
2053	3,643,587	53,649,263	1,472%	1,481	924,779	13,291,529	1,437%	
2054	3,097,126	49,691,437	1,604%	1,297	756,208	11,834,098	1,565%	
2055	2,621,771	45,780,995	1,746%	1,132	615,818	10,482,678	1,702%	
2056	2,210,270	41,919,657	1,897%	985	499,424	9,229,804	1,848%	
2057	1,855,820	38,060,350	2,051%	854	403,381	8,057,416	1,997%	
2058	1,552,117	34,407,236	2,217%	738	324,529	7,002,909	2,158%	
2059-2063	4,583,534	124,811,919	2,723%	2,380	866,853	22,835,864	2,634%	
2064-2068	1,677,479	62,746,581	3,741%	1,028	261,989	9,510,234	3,630%	
2069-2073	557,541	25,081,125	4,499%	396	72,255	3,173,509	4,392%	
2074-2078	167,333	8,100,554	4,841%	130	18,069	861,507	4,768%	
History		400,221,296	52,888,549	13%	192,471	522,307,079	62,040,423	12%
Future		898,073,407	2,296,206,851	256%	249,377	580,679,537	902,909,480	155%
Lifetime		1,298,294,704	2,349,095,399	181%	441,848	1,102,986,615	964,949,904	87%

Exhibit B-2a
MedAmerica and Affinity Partners
Actual and Projected Experience using Current Assumptions by Calendar Year
Nationwide Experience Restated to Reflect Maryland-Specific Rate Increase History and Request
Individual Simplicity Policy Forms with No Inflation

		Loss Ratio Demonstration						
		Without Interest			D End of Year Lives	With Max. Val. Interest		
	Calendar Year	A Earned Premium	B Incurred Claims	C = B / A Incurred Loss Ratio		E Earned Premium	F Incurred Claims	G = F / E Incurred Loss Ratio
Historical Experience	2004	533,140	299,291	56%	925	1,009,316	566,604	56%
	2005	2,834,822	685,374	24%	2,593	5,135,653	1,241,645	24%
	2006	5,011,872	61,408	1%	4,509	8,574,801	106,458	1%
	2007	6,835,579	1,123,397	16%	5,524	11,062,669	1,815,981	16%
	2008	7,408,396	734,238	10%	5,416	11,463,648	1,160,863	10%
	2009	7,144,569	767,152	11%	5,166	10,603,781	1,154,829	11%
	2010	6,902,749	1,064,788	15%	4,955	9,827,064	1,518,542	15%
	2011	6,821,397	2,737,621	40%	4,855	9,312,653	3,751,836	40%
	2012	6,810,018	2,636,553	39%	4,809	8,915,220	3,452,818	39%
	2013	6,835,265	2,901,342	42%	4,720	8,576,425	3,648,070	43%
	2014	6,646,364	4,192,451	63%	4,511	8,000,116	5,031,370	63%
	2015	6,921,931	4,537,371	66%	4,317	7,993,233	5,261,488	66%
	2016	7,072,693	4,293,499	61%	4,003	7,837,864	4,765,251	61%
2017	6,370,083	5,154,680	81%	3,710	6,775,693	5,495,896	81%	
2018	5,653,664	3,928,042	69%	3,517	5,771,296	4,012,185	70%	
Projected Future Experience (60 Years)	2019	5,484,441	3,493,644	64%	3,251	5,372,770	3,421,335	64%
	2020	5,865,564	3,616,721	62%	3,168	5,514,744	3,396,862	62%
	2021	6,063,785	3,720,474	61%	2,870	5,471,493	3,351,067	61%
	2022	6,288,540	3,864,771	61%	2,791	5,446,498	3,338,629	61%
	2023	6,906,457	4,193,539	61%	2,709	5,741,166	3,474,757	61%
	2024	7,350,869	4,536,828	62%	2,625	5,865,051	3,606,106	61%
	2025	7,292,125	4,842,203	66%	2,538	5,584,759	3,692,399	66%
	2026	6,912,893	5,128,155	74%	2,448	5,082,626	3,751,608	74%
	2027	6,533,195	5,411,896	83%	2,357	4,611,691	3,798,466	82%
	2028	6,147,614	5,699,936	93%	2,264	4,166,582	3,838,668	92%
	2029	5,771,472	6,000,059	104%	2,169	3,755,917	3,877,946	103%
	2030	5,399,016	6,331,434	117%	2,071	3,373,870	3,927,597	116%
	2031	5,027,436	6,640,286	132%	1,972	3,017,100	3,953,864	131%
	2032	4,666,674	6,922,391	148%	1,872	2,689,690	3,956,831	147%
	2033	4,315,071	7,162,032	166%	1,770	2,388,753	3,930,628	165%
	2034	3,967,699	7,353,301	185%	1,669	2,109,813	3,874,774	184%
	2035	3,634,288	7,482,021	206%	1,567	1,856,385	3,785,682	204%
	2036	3,313,584	7,553,694	228%	1,467	1,625,958	3,669,924	226%
	2037	3,004,987	7,558,232	252%	1,367	1,416,552	3,526,378	249%
	2038	2,712,952	7,514,024	277%	1,270	1,228,663	3,366,745	274%
	2039	2,436,713	7,407,299	304%	1,175	1,060,261	3,187,511	301%
	2040	2,177,162	7,229,236	332%	1,084	910,197	2,987,703	328%
	2041	1,935,456	6,985,600	361%	995	777,430	2,773,101	357%
	2042	1,712,005	6,704,487	392%	911	660,721	2,556,149	387%
	2043	1,507,103	6,396,233	424%	831	558,844	2,341,861	419%
	2044	1,320,324	6,068,821	460%	755	470,390	2,133,445	454%
	2045	1,151,582	5,724,412	497%	684	394,184	1,931,812	490%
	2046	999,837	5,372,338	537%	618	328,811	1,740,183	529%
	2047	864,274	5,015,995	580%	556	273,064	1,559,115	571%
	2048	743,723	4,646,424	625%	499	225,738	1,385,796	614%
	2049	636,774	4,278,949	672%	446	185,681	1,224,235	659%
	2050	543,502	3,922,168	722%	398	152,231	1,076,208	707%
	2051	462,110	3,574,190	773%	354	124,319	940,545	757%
2052	391,482	3,241,551	828%	314	101,149	818,116	809%	
2053	330,462	2,933,324	888%	278	81,998	710,018	866%	
2054	277,942	2,642,638	951%	245	66,228	613,511	926%	
2055	233,008	2,368,788	1,017%	215	53,313	527,570	990%	
2056	194,711	2,109,914	1,084%	189	42,778	450,947	1,054%	
2057	162,210	1,865,407	1,150%	165	34,220	382,693	1,118%	
2058	134,713	1,640,558	1,218%	144	27,290	323,110	1,184%	
2059-2063		392,339	5,460,561	1,392%	478	71,650	966,093	1,348%
2064-2068		142,605	2,448,449	1,717%	221	21,451	357,455	1,666%
2069-2073		50,945	985,350	1,934%	94	6,407	119,904	1,871%
2074-2078		20,617	393,234	1,907%	36	2,191	40,345	1,841%
History		89,802,541	35,117,205	39%	63,530	120,859,432	42,983,836	36%
Future		125,480,261	214,441,565	171%	55,898	82,950,632	104,687,694	126%
Lifetime		215,282,802	249,558,770	116%	119,428	203,810,064	147,671,530	72%

Exhibit B-2b
MedAmerica and Affinity Partners
Actual and Projected Experience using Current Assumptions by Calendar Year
Nationwide Experience Restated to Reflect Maryland-Specific Rate Increase History and Request
Individual Simplicity Policy Forms with Auto Inflation

		Loss Ratio Demonstration						
		Without Interest			D End of Year Lives	With Max. Val. Interest		
		A Earned Premium	B Incurred Claims	C = B / A Incurred Loss Ratio		E Earned Premium	F Incurred Claims	G = F / E Incurred Loss Ratio
Historical Experience	2004	1,411,065	0	0%	2,159	2,671,365	0	0%
	2005	8,257,230	18,877	0%	6,072	14,959,060	34,199	0%
	2006	16,590,729	66,086	0%	11,556	28,272,597	114,568	0%
	2007	25,718,247	109,681	0%	15,340	41,382,406	176,012	0%
	2008	29,666,618	1,957,770	7%	16,016	45,639,568	3,090,242	7%
	2009	29,477,975	1,204,293	4%	15,451	43,504,878	1,778,885	4%
	2010	28,973,254	2,442,398	8%	15,210	41,031,339	3,480,527	8%
	2011	28,723,712	1,956,719	7%	14,949	39,040,588	2,649,574	7%
	2012	28,743,422	2,407,221	8%	14,961	37,493,117	3,196,355	9%
	2013	29,276,188	3,983,749	14%	14,841	36,617,826	4,971,977	14%
	2014	28,689,160	6,931,228	24%	14,324	34,439,927	8,370,276	24%
	2015	29,636,492	4,699,433	16%	13,949	34,141,005	5,442,779	16%
	2016	29,859,275	7,266,730	24%	13,170	33,027,430	8,051,225	24%
	2017	26,025,835	9,815,974	38%	12,462	27,653,216	10,442,268	38%
2018	23,219,539	10,028,390	43%	12,011	23,694,506	10,241,537	43%	
Projected Future Experience (60 Years)	2019	22,831,468	9,121,513	40%	11,278	22,374,053	8,934,748	40%
	2020	24,590,502	10,128,765	41%	11,110	23,142,244	9,519,548	41%
	2021	24,302,420	10,603,608	44%	9,998	21,963,535	9,561,622	44%
	2022	24,058,093	11,238,604	47%	9,842	20,884,102	9,723,984	47%
	2023	26,427,405	12,970,001	49%	9,678	22,024,825	10,767,664	49%
	2024	29,412,846	14,982,570	51%	9,504	23,538,136	11,935,579	51%
	2025	32,818,004	17,252,760	53%	9,321	25,223,348	13,189,038	52%
	2026	36,537,122	19,794,259	54%	9,127	26,971,254	14,521,093	54%
	2027	39,147,073	22,623,048	58%	8,921	27,753,361	15,926,810	57%
	2028	39,038,888	25,682,089	66%	8,704	26,581,703	17,352,374	65%
	2029	37,525,303	29,147,568	78%	8,473	24,543,253	18,904,079	77%
	2030	36,022,942	33,011,699	92%	8,227	22,632,595	20,553,150	91%
	2031	34,439,566	37,145,137	108%	7,967	20,786,300	22,201,407	107%
	2032	32,808,850	41,436,526	126%	7,691	19,024,203	23,777,858	125%
	2033	31,143,656	45,864,524	147%	7,401	17,350,333	25,271,440	146%
	2034	29,398,556	50,274,688	171%	7,096	15,736,603	26,600,700	169%
	2035	27,639,400	54,592,097	198%	6,777	14,216,946	27,739,456	195%
	2036	25,860,698	58,683,469	227%	6,447	12,783,204	28,637,181	224%
	2037	24,053,676	62,479,194	260%	6,107	11,427,576	29,284,598	256%
	2038	22,233,308	65,823,690	296%	5,760	10,152,467	29,635,821	292%
	2039	20,460,686	68,541,291	335%	5,406	8,980,813	29,646,087	330%
	2040	18,712,261	70,558,972	377%	5,050	7,895,326	29,321,008	371%
	2041	17,014,476	71,828,037	422%	4,694	6,901,799	28,677,451	416%
	2042	15,373,742	72,386,109	471%	4,341	5,996,216	27,766,814	463%
	2043	13,808,553	72,278,632	523%	3,995	5,178,787	26,638,998	514%
	2044	12,325,556	71,593,121	581%	3,658	4,445,295	25,353,600	570%
	2045	10,931,676	70,311,881	643%	3,333	3,791,611	23,927,200	631%
	2046	9,635,336	68,415,077	710%	3,021	3,214,227	22,373,824	696%
	2047	8,440,226	65,997,768	782%	2,726	2,708,053	20,740,626	766%
	2048	7,351,222	63,193,433	860%	2,448	2,268,736	19,085,071	841%
	2049	6,365,984	60,112,933	944%	2,189	1,889,878	17,447,488	923%
	2050	5,483,246	56,882,966	1,037%	1,949	1,565,921	15,866,576	1,013%
	2051	4,698,501	53,572,260	1,140%	1,728	1,290,835	14,360,553	1,113%
	2052	4,005,971	50,213,920	1,253%	1,526	1,058,790	12,934,780	1,222%
2053	3,400,008	46,789,514	1,376%	1,343	864,530	11,584,218	1,340%	
2054	2,872,456	43,397,179	1,511%	1,177	702,672	10,327,729	1,470%	
2055	2,417,342	40,030,590	1,656%	1,028	568,896	9,159,271	1,610%	
2056	2,026,519	36,693,074	1,811%	895	458,803	8,073,171	1,760%	
2057	1,692,558	33,342,124	1,970%	776	368,623	7,053,538	1,913%	
2058	1,408,650	30,164,260	2,141%	671	295,115	6,135,139	2,079%	
2059-2063	4,118,036	109,577,052	2,661%	2,166	780,471	20,039,137	2,568%	
2064-2068	1,490,553	55,183,983	3,702%	937	233,162	8,366,234	3,588%	
2069-2073	494,182	21,971,665	4,446%	361	64,115	2,780,369	4,337%	
2074-2078	148,414	7,073,153	4,766%	119	16,039	751,708	4,687%	
History		364,268,741	52,888,549	15%	192,471	483,568,829	62,040,423	13%
Future		774,965,929	1,972,964,802	255%	224,964	470,648,757	772,448,741	164%
Lifetime		1,139,234,669	2,025,853,350	178%	417,435	954,217,586	834,489,164	87%

Exhibit B-3
Demonstration that the Requested Cumulative Rate Increase Passes the 58%/85% Loss Ratio Minimum
MedAmerica and Affinity Partners' Combined Nationwide Experience with Prior Approved Increases and Capped Historical Incurred Claims
Individual Simplicity Policy Forms

1	Accumulated value of initial earned premium	573,423,238	x	58%	=	332,585,478
2a	Accumulated value of earned premium	604,897,817				
2b	Accumulated value of prior premium rate schedule increases (2a - 1)	31,474,579	x	85%	=	26,753,392
3	Present value of future projected initial earned premium	175,824,645	x	58%	=	101,978,294
4a	Present value of future projected premium	591,187,684				
4b	Present value of future projected premium in excess of the projected initial earned premiums (4a - 3)	415,363,039	x	85%	=	353,058,583
5	Lifetime Earned Premium Times Prescribed Factor: Sum of 1, 2b, 3, and 4b					814,375,748
6a	Accumulated value of incurred claims without the inclusion of active life reserves					80,700,211
6b	Present value of future projected incurred claims without the inclusion of active life reserves					1,045,871,946
7	Lifetime Incurred Claims with Rate Increase: Sum 6a and 6b					1,126,572,157
8	Test: 7 is not less than 5					Pass
<p><i>All values are accumulated or discounted at the maximum valuation interest rate for contract reserves applicable for the year of issue, which ranges from 3.5% to 4.5%.</i></p> <p><i>Future projected initial earned premium schedule (i.e., without the requested rate increase) reflects the assumed impact of CBUL and RBO.</i></p> <p><i>The future projected incurred claims (item 6b) were increased by 15% to reflect assumptions with moderately adverse experience.</i></p>						