

John Hancock Life Insurance Company (U.S.A.)
Actuarial Memorandum for Inforce Rate Increase – Custom Care III
October 30, 2017

<u>Product Name</u>	<u>Form Number</u>	<u>Issue Date Range</u>
Custom Care III	ICC10-LTC-11	May 2011 – February 2013

This filing is being made in accordance with the requirements found in the IIPRC Standard IIPRC-LTC-I-3-RATEI (“RATE FILING STANDARDS FOR INDIVIDUAL LONG-TERM CARE INSURANCE - ISSUE AGE RATE SCHEDULES ONLY”).

These policy form rates were originally priced with a margin for moderately adverse experience in accordance with the NAIC model rate stability regulations.

1. Scope & Purpose

This memorandum consists of materials which support the development of new premium rates for the above captioned Policy series forms. The purpose of this memorandum is to demonstrate that the requirements of the Interstate Compact in regards to an in force rate increase request have been met. This rate filing is not intended to be used for any other purpose.

2. Benefit Description

A brief policy description for each of the policy forms:

ICC10-LTC-11

Individually underwritten long-term care policies that provide comprehensive long-term care coverage for care received in a nursing home or assisted care living facility, home health care, hospice care, respite care, or attendance at an Adult Day Care Center providing Adult Day Care.

Provides reimbursement of covered long-term care expenses incurred after an elected elimination period is met, up to the maximum daily/monthly amount. The benefit eligibility is determined based on the insured's cognitive impairment or their requiring physical assistance to perform two out of six activities of daily living (ADLs) of bathing, dressing, eating, toileting, transferring and maintaining continence.

Premiums are waived after the insured has met the elimination period and is receiving benefits and will continue to be waived until the insured stops receiving such benefits.

3. Renewability

All policy forms are guaranteed renewable.

4. Applicability

This filing is applicable to in force policies only, as these policy forms are no longer being sold in the market. The premium changes will apply to the base forms as well as all applicable riders.

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5. Actuarial Assumptions

[REDACTED]

6. Trend Assumptions

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

7. Marketing Method

This product was typically marketed through our traditional agency system and brokers involving a personal contact with each applicant.

8. Underwriting

These policy forms were underwritten using a medical and risk questionnaire. We also utilized Attending Physician Statement and personal interviews depending on the age of the applicant and medical conditions.

9. Premium Classes

The base policy premium rates vary by Issue age, Benefit Period, and Inflation Option, as in the initial rate filing. No new rating characteristics are being introduced as a result of this rate increase filing.

All premium factors related to the insured elected benefit design options, underwriting class or any eligible discount remain unchanged from the initial rate filing.

10. Premium Modalization Rules

Frequency	Multiple of Annual Premium
Semiannual	.52
Quarterly	.27
Monthly	.09

11. Issue Age Range

The issue age range is 18-79 for all policy forms. The average issue age for the block is 59.

12. Area Factors

Area factors are not applicable to any of the policy forms or riders.

13. Average Annual Premium

The table below summarizes the average annual premium per policy before and after the requested increase for policy form ICC10-LTC-11 based on 12/31/2016 data.

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Compact States	Average Premium	
	before the rate increase	after the rate increase
AK	2,310	2,758
AL	2,400	2,866
CO	2,540	3,033
GA	2,250	2,687
IA	2,270	2,710
ID	2,530	3,021
IL	2,400	2,866
KS	2,230	2,663
KY	2,400	2,866
LA	2,010	2,400
MA	3,050	3,642
MD	2,580	3,081
ME	2,710	3,236
MI	2,270	2,710
MN	2,200	2,627
MO	2,410	2,878
MS	2,290	2,734
NC	2,360	2,818
NE	2,290	2,734
NH	2,710	3,236
NM	2,610	3,116
OH	2,350	2,806
OK	2,420	2,889
OR	2,350	2,806
PA	2,510	2,997
RI	3,000	3,582
SC	2,110	2,519
TN	2,200	2,627
TX	2,160	2,579
UT	2,040	2,436
VA	2,570	3,069
VT	3,440	4,107
WA	2,340	2,794
WI	2,430	2,901
WV	1,850	2,209
WY	3,330	3,976
Compact Average	2,369	2,829

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Non Compact States	Average Premium	
	before the rate increase	after the rate increase
AR	2,270	2,710
AZ	2,440	2,913
CA	3,260	3,892
CT	3,380	4,036
DC	3,310	3,952
DE	2,680	3,200
FL	2,680	3,200
HI	2,570	3,069
IN	3,010	3,594
MT	2,200	2,627
ND	2,360	2,818
NJ	2,950	3,522
NV	2,680	3,200
NY	4,220	5,039
SD	2,350	2,806
OR	2,120	2,531
Non-Compact Average	3,078	3,675

14. Number of Policyholders

The table below summarizes, as of 12/31/2016, the number of policies inforce and their 2016 annualized premium that will be affected by this rate increase for policy form ICC10-LTC-11.

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Compact States	Annual Premium	Policy Count
AK	57,791	25
AL	153,367	64
CO	851,630	335
GA	729,296	324
IA	528,476	233
ID	159,464	63
IL	902,157	376
KS	416,863	187
KY	295,502	123
LA	285,387	142
MA	1,048,831	344
MD	404,283	157
ME	181,872	67
MI	664,957	293
MN	796,674	362
MO	518,679	215
MS	407,640	178
NC	1,265,598	537
NE	246,968	108
NH	222,587	82
NM	151,584	58
OH	1,336,602	568
OK	436,006	180
OR	136,172	58
PA	924,976	368
RI	80,895	27
SC	511,921	243
TN	637,201	289
TX	2,159,912	1,002
UT	100,152	49
VA	866,723	337
VT	72,137	21
WA	796,846	340
WI	770,878	317
WV	42,488	23
WY	49,922	15
Compact Total	19,212,436	8,110

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Non Compact States	Annual Premium	Policy Count
AR	448,001	197
AZ	354,155	145
CA	5,254,461	1,610
CT	601,527	178
DC	158,901	48
DE	91,286	34
FL	1,345,548	503
HI	189,923	74
IN	3,065,637	1,017
MT	199,944	91
ND	347,251	147
NJ	876,140	297
NV	59,030	22
NY	2,019,397	479
SD	168,930	72
OR	120,859	57
Non-Compact Total	15,300,991	4,971

15. Reserves

Active Life Reserves have not been used in this rate increase demonstration. Minimum Statutory Claim reserves as of 12/31/2015 have been discounted to the date of incurral of each respective claim and included in the historical incurred claims. Incurred But Not Reported claim reserves as of 12/31/2015 have also been allocated to the calendar year of incurral and included in historic incurred claims.

16. Analysis Performed

Original Pricing Assumptions

[REDACTED]

Actual Mix of Business

The following tables show the differences in the actual mix of business versus expected for key parameters. Overall, the mix of business was very close to expected.

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Gender	Expected	Actual
M	40%	40%
F	60%	60%

Benefit Period	Expected	Actual
2	8%	7%
3	30%	32%
4	24%	20%
5	27%	25%
6	8%	14%
10	4%	3%

Inflation Option	Expected	Actual
CPI Compound	80%	74%
CPI to age 75	0%	11%
5% Compound	5%	3%
GPO	15%	13%

		Marital Status					
		Issue Age		Single		Married	
Issue Age	Expected	Actual	Expected	Actual	Expected	Actual	
40	6%	4%	22%	23%	78%	77%	
50	12%	13%	19%	17%	81%	83%	
55	24%	21%	18%	16%	82%	84%	
60	33%	30%	23%	20%	77%	80%	
65	20%	21%	27%	23%	73%	77%	
70	4%	8%	34%	31%	66%	69%	
75	1%	2%	44%	39%	56%	61%	
79	0%	0%	54%	55%	46%	45%	
Total			23%	21%	77%	79%	

		Rating Category							
		Preferred		Standard		Substandard Class 1		Substandard Class 2	
Issue Age	Expected	Actual	Expected	Actual	Expected	Actual	Expected	Actual	
40	55%	49%	39%	44%	5%	5%	1%	2%	
50	50%	42%	43%	48%	6%	8%	2%	1%	
55	46%	37%	45%	52%	7%	10%	2%	2%	
60	39%	27%	51%	59%	8%	12%	2%	3%	
65	33%	20%	56%	65%	9%	11%	2%	3%	
70	22%	15%	65%	69%	11%	14%	2%	2%	
75	11%	10%	72%	73%	14%	15%	3%	2%	
79	11%	13%	72%	70%	14%	18%	3%	0%	
Total	41%	29%	49%	58%	8%	11%	2%	2%	

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Recent Experience

As part of the inforce management of the business, the Company monitored the performance of the business by completing periodic analysis for morbidity, voluntary lapse rates, and mortality. The findings from these analyses were used in projecting the inforce business to determine the effect of experience on the projected lifetime loss ratio. The most current studies show significant unfavorable trends since the study used in the original pricing. In general claims, particularly at higher ages, continue to last longer than expected, lapses are lower than expected, and a higher percentage of claim terminations are due to recoveries (as opposed to death) than expected.

The following tables show in aggregate how our new assumptions (Expected) compare to actual experience:

Morbidity

Experience period: Inception through 9/30/2014. Duration 10+ are used for incidence, duration 5+ for claim termination, and all durations for utilization. The following charts show key experience compared to revised assumptions.

Incidence

Duration	A/E
1-3	101%
4-6	101%
7-9	99%
10+	97%
Total	98%

Claim Terminations

Benefit Period	A/E
<10 years	99%
10+ years	97%
Total	99%

Utilization

Inflation	A/E
None / GPO	98%
Simple	98%
Compound	98%
Total	98%

Voluntary Lapses

Experience period: 12/31/2009 - 12/31/2014

Duration	Lapse A/E by Amount	
	Without Inflation	With Inflation
1	100%	100%
2	103%	100%
3-5	100%	101%
6-10	99%	100%
11-15	100%	101%
16+	96%	97%
Total per inflation	100%	100%
TOTAL	100%	

Note that the lapse study removed all policies which had undergone prior rate increases except for the 2008 re-rate policies which are now allowed to re-enter the study after their first year since re-rate, provided they have not subsequently received another rate increase.

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Mortality

Experience period: 12/31/2009 - 12/31/2014

Duration	A/E by Amount
1-5	96%
6-10	96%
11+	101%
Total	99%

In addition to reviewing recent experience to the pricing assumptions, we compared the rates after the rate increase to those applicable to new business to ensure the new rates were not higher. See Section 17 for more information.

17. Requested Rate Increase

The Company is requesting an average rate increase of 19.4%. Rate increases were derived as follows:

1. The Company first determined the projected lifetime loss ratio for this form based on nationwide actual experience and projected future experience. We then determined the amount of rate increase (27.0%) that would be needed in order to revert to the lifetime loss ratio targeted in our most recent filing for the forms listed in this memo.
2. We ensured that the proposed rate increases did not result in premium rates that exceed the most recent traditional LTC rates that have been filed with the Interstate Compact for new business under the ICC12-LTC-12 policy form, adjusted for benefit differences and changes in underwriting guidelines and risk classification (this is demonstrated in **Appendix A** using ICC10-LTC-11 as an example). As this product (ICC12-LTC-12) is no longer open for new business, the most recently filed new business LTC rates for this product were adjusted to account for the average impact of the assumption updates due to the 2016 Experience Studies. An adjustment of 9.5% was applied to all rates to reflect these updates. After the application of this restriction the average rate increase for the forms listed in this memo is 27%, ranging from 19.5% to 27.0%.
3. We ensured that the resulting overall increase in rates satisfied the rate stability rule ensuring no less than an 85% loss ratio on the rate increase portion, while applying the original loss ratio on the original rate schedule (as the original loss ratio was higher than 58%). After application of this restriction, the initial flat rate increase solved for in step 1 was adjusted from 27.0% to 19.4%. The rate stability rule is demonstrated at the bottom of **Exhibit 1** where it can be seen that the sum of past and future projected incurred claims is not less than the sum of the original premium times the original loss ratio and the rate increase premium times the 85% loss ratio requirement.

As per the request of the Maryland Department of Insurance, the rate increase has been capped at 7.5% with the understanding that the Company intends to pursue additional rate increases on an annual basis until the present value of the ultimate rate increases are achieved. Due to the delayed implementation, the ultimate rate increases will be greater than the original request of 19.4%.

We looked at varying the rate increase by issue age. Loss ratio deterioration was similar for the age groupings, therefore, we did not feel it warranted varying the rate increase by issue age. The table below shows the issue age groupings reviewed and the deterioration in the loss ratio due to the change in assumptions.

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Issue Age	LR Prior to Rate Increase / Original LR
0-57	119%
58-62	121%
63+	112%

The following chart shows the breakdown of the drivers of the rate increase.

	Rate Increase	Percent of Total Increase
Lapse	1.2%	6%
Mortality	5.9%	31%
Morbidity	12.3%	63%
Interest	0.0%	0%
Total	19.4%	100%

Appendix B1 contains the new proposed rate tables for all policy forms included with this filing. Please note that the actual rates implemented may vary slightly from those in Appendix B1 due to implementation rounding algorithms.

Exhibit 1 contains nationwide past premium and claims experience and future premium and claim projections and illustrates that the anticipated lifetime loss ratio with the requested one-time rate increase of 19.4% and the previously-stated margin for moderately adverse experience is 64.8% and 69.2% with the approved capped rate increase of 7.5%, well in excess of the minimum loss ratio of 60% as well as greater than the original pricing loss ratio of 62.2%. The lifetime loss ratio as of 12/31/2015 is calculated as the sum of accumulated past and discounted future claims divided by the sum of accumulated past and discounted future earned premium where accumulation and discounting occur at the maximum statutory valuation discount rate.

In addition, **Exhibit 1** contains the original expected loss ratio projections with the lifetime loss ratios calculated as stated above, adjusted for the following.

- Original expected loss ratios assumed all business was issued with a 4% maximum valuation rate. Some business was issued in 2013 which has a 3.5% maximum valuation rate, therefore, the loss ratio needed to be adjusted.
- For contracts with the CPI linked inflation rider, both past and future benefits were updated to reflect the impact of actual past CPI rates differing from the 3.1% original pricing assumption. In this way, the current projected benefits and the benefits projected in original pricing are based on the same level of CPI indices. This adjustment is needed to neutralize the impact on the rate increase for differences in actual past CPI from original pricing assumptions; i.e. the need for a rate increase and the level of a rate increase is not dependent on changes in the CPI levels. Adjustments will be made in both directions (i.e. when actual CPI is higher or lower than original pricing).
- Updated to reflect the actual mix of business sold

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The following table shows the impact of each of these changes on the loss ratio.

	Loss Ratio	Difference
Original Pricing Loss Ratio	64.9%	
3.5% Business Adjustment	65.6%	0.7%
Actual CPI updates	61.8%	-3.8%
Mix of Business Differences	62.2%	0.4%

Furthermore, **Exhibit 1** demonstrates that the calculated loss ratio respects the applicable post stability form requirements:

Post-stability form requirements:

The sum of the accumulated value of incurred claims without the inclusion of active life reserves, and the present value of future projected incurred claims, without the inclusion of active life reserves, will not be less than the sum of the following:

1. Accumulated value of the initial earned premium times the original assumed lifetime loss ratio (which was higher than 58%),
2. 85% of the accumulated value of prior premium rate schedule increases,
3. Present value of future projected initial earned premium times the original assumed lifetime loss ratio, and
4. 85% of the present value of future projected premium in excess of the projected initial earned premium.

18. History of Previous Rate Revisions

There have been no prior rate increases on these forms.

19. Data Credibility

Regarding the credibility of data for younger blocks of business such as Custom Care III, the Company would like to draw attention to the American Academy of Actuaries Issue Brief “*Understanding Premium Rate Increases on Private LTCI Policyholders 060216.pdf*”, which has been included with this filing. The brief provides guidance on determining the need for premium rate increases on pages 4 and 5. This guidance includes a discussion on determining assumptions used for projections, particularly in situations where experience credibility may be low. Because of the long duration nature of Long Term Care policies, claims are often not seen in early durations which leads to lower credibility in actual experience for younger groups of policies. In situations where this is the case, the Actuarial Standards of Practice require that industry data or company data for older, similar business be used to set assumptions. Specifically, the brief states the following:

“Section 3.2.1 of Actuarial Standard of Practice No. 18, Long-Term Care Insurance, requires actuaries to use alternative data sources such as public data or experience from the insurance company’s older, similar policy forms for identifying reasonable assumptions. Waiting until there is adequate claim information on each policy form could result in much larger, less affordable rate increases.”

Since Custom Care III is a younger block of business, our proposed rate increases on this form are based on our experience from this form as well as similar forms where we have over 20 years of experience. Overall, our unfavorable morbidity experience is at later durations and older attained ages, where we have significant data on our older plans and less on younger ones. With our combined data we are able to make credible decisions regarding future assumptions, in accordance with ASOP 18. Focusing solely on past experience for this product discredits our future projections and prevents us from acting on this information in a timely manner. Delaying

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rate increases until we have amassed similar experience on this particular policy form would take a considerable amount of time and would result in much higher rate increases for our customers which would be more difficult to manage and would require larger reductions in benefits in order to mitigate them. For example, if we were to delay rate increases on the Custom Care III plan for 10 years, with experience continuing as currently expected, we would require an average rate increase of 51.0% compared to the current proposed rate increase of 19.4%.

20. Past Losses Testing

Preventing companies from recouping past losses was the subject of a recent discussion by the NAIC in late 2013. The accepted methodology which was incorporated into the 2014 LTC Model Regulation defines past losses as actual past claims less expected past claims when determining loss ratio compliance where expected past claims are defined as the following:

Expected claims shall be calculated based on the original filing assumptions assumed until new assumptions are filed as part of a rate increase. New assumptions shall be used for all periods beyond each requested effective date of a rate increase regardless of whether or not the rate increase is approved. Expected claims are calculated for each calendar year based on the in-force during the calendar year. Expected claims shall include margins for moderately adverse experience; the margins included in the claims that were used to determine the lifetime loss ratio consistent with the original filing or as modified in any rate increase filing.

This methodology is applied in **Exhibit 1**. As there have been no prior rate actions or assumption changes, the original assumptions reflect our expected claims. At the bottom of **Exhibit 1**, past incurred claims based on original assumptions are more than the past actual incurred claims, therefore, no past losses are being recouped.

21. Proposed Effective Date

These rates will be effective on the next policy anniversary date, following at least a 90 day policyholder notification period.

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22. Actuarial Certification

I am a Fellow of the Society of Actuaries and a Member of the American Academy of Actuaries, and I meet the Academy's qualification standards for rendering this opinion and am familiar with the requirements for filing long-term care insurance premiums and filing for increases in long-term care insurance premiums. This memorandum has been prepared in conformity with all applicable Actuarial Standards of Practice, including ASOP No. 8.

The preceding Actuarial Memorandum contains:

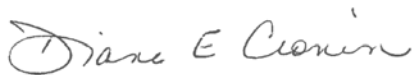
- a) the assumptions on which this certification is based;
- b) the adjustments to prior assumptions with an explanation of the reasons previous assumptions were not realized;
- c) a lifetime projection of the prior premium rate schedules and incurred claims plus future expected premiums and claims which demonstrates that the revised premium rate schedule meets the loss ratios standards and necessary details of the Interstate Compact; and
- d) disclosure of the manner, if any, in which reserves have been recognized.

In my opinion, the rate increase proposed in this filing will enhance premium adequacy, but further rate actions are necessary and we will be filing for those in the future

I have reviewed and taken into consideration the policy design and coverage provided, and our current underwriting and claims adjudication processes.

In forming my opinion, I have used actuarial assumptions and actuarial methods and such tests of the actuarial calculations as I considered necessary. Based on these assumptions or statutory requirements where necessary, the premium rate filing is in compliance with the IIPRC Standard IIPRC-LTC-I-3-RATEI (“RATE FILING STANDARDS FOR INDIVIDUAL LONG-TERM CARE INSURANCE - ISSUE AGE RATE SCHEDULES ONLY”).

The basis for contract reserves has been previously filed and there is no anticipation of any changes.



Diane Cronin, FSA, MAAA
Actuary
John Hancock Life Insurance Company

**Exhibit 1: Nationwide Loss Ratio Exhibit
Custom Care III/Core Care (LTC-11)**

Calendar Year	Original Assumptions			Before Proposed Increase			Historical & Projected Experience With Proposed One-Time Rate Increase			With Approved Rate Increase Capped at 7.5%		
	Incurred Claims	Earned Premium	Incurred Loss Ratio	Incurred Claims	Earned Premium	Incurred Loss Ratio	Incurred Claims	Earned Premium	Incurred Loss Ratio	Incurred Claims	Earned Premium	Incurred Loss Ratio
2001	-	-	-	-	113	0%	-	113	0%	-	113	0%
2002	-	-	-	-	2,176	0%	-	2,176	0%	-	2,176	0%
2003	-	-	-	-	2,176	0%	-	2,176	0%	-	2,176	0%
2004	-	-	-	-	2,176	0%	-	2,176	0%	-	2,176	0%
2005	-	-	-	-	2,176	0%	-	2,176	0%	-	2,176	0%
2006	-	-	-	-	2,176	0%	-	2,176	0%	-	2,176	0%
2007	-	-	-	-	7,989	0%	-	7,989	0%	-	7,989	0%
2008	-	-	-	-	10,936	0%	-	10,936	0%	-	10,936	0%
2009	-	-	-	-	14,804	0%	-	14,804	0%	-	14,804	0%
2010	-	-	-	-	21,272	0%	-	21,272	0%	-	21,272	0%
2011	37,920	2,497,781	2%	134,924	2,527,838	5%	134,924	2,527,838	5%	134,924	2,527,838	5%
2012	310,107	19,508,205	2%	-	19,395,324	0%	-	19,395,324	0%	-	19,395,324	0%
2013	649,207	28,392,418	2%	11,011	27,846,812	0%	11,011	27,846,812	0%	11,011	27,846,812	0%
2014	1,022,897	29,354,578	3%	759,707	28,968,670	3%	759,707	28,968,670	3%	759,707	28,968,670	3%
2015	1,455,248	29,415,667	5%	1,172,136	28,966,072	4%	1,172,136	28,966,072	4%	1,172,136	28,966,072	4%
2016	1,938,189	28,933,611	7%	1,757,516	28,369,520	6%	1,757,516	28,369,520	6%	1,757,516	28,369,520	6%
2017	2,408,130	28,481,102	8%	2,240,406	27,839,029	8%	2,238,592	28,273,684	8%	2,238,034	27,986,221	8%
2018	3,034,463	28,017,206	11%	2,842,729	27,353,301	10%	2,825,902	31,390,261	9%	2,815,962	28,718,187	10%
2019	3,822,978	27,531,678	14%	3,605,651	26,890,360	13%	3,584,450	31,660,218	11%	3,566,485	28,502,437	13%
2020	4,683,242	27,014,490	17%	4,438,380	26,434,708	17%	4,416,088	31,123,742	14%	4,391,639	28,019,469	16%
2021	5,596,973	26,458,633	21%	5,445,459	25,959,909	21%	5,420,721	30,564,722	18%	5,389,122	27,516,206	20%
2022	6,479,980	25,858,708	25%	6,550,738	25,441,289	26%	6,522,960	29,954,109	22%	6,483,731	26,966,495	24%
2023	7,558,450	25,211,093	30%	7,699,737	24,865,692	31%	7,668,474	29,276,411	26%	7,621,513	26,356,391	29%
2024	8,865,301	24,515,234	36%	8,979,569	24,243,063	37%	8,942,726	28,543,339	31%	8,888,195	25,696,435	35%
2025	10,274,058	23,771,855	43%	10,582,924	23,586,868	45%	10,536,074	27,770,747	38%	10,473,910	25,000,900	42%
2026	11,725,076	22,985,160	51%	12,375,824	22,906,219	54%	12,317,391	26,969,364	46%	12,246,932	24,279,447	50%
2027	13,113,819	22,159,706	59%	14,342,273	22,198,485	65%	14,270,470	26,136,091	55%	14,191,322	23,529,285	60%
2028	14,829,732	21,303,640	70%	16,416,380	21,459,068	77%	16,329,796	25,265,514	65%	16,241,901	22,745,539	71%
2029	16,876,182	20,418,371	83%	18,631,949	20,683,006	90%	18,528,474	24,351,793	76%	18,431,911	21,922,952	84%
2030	18,912,376	19,498,410	97%	21,291,639	19,844,253	107%	21,163,731	23,364,260	91%	21,059,311	21,033,916	100%
2031	20,643,857	18,543,902	111%	23,856,215	18,982,804	126%	23,706,729	22,350,006	106%	23,593,519	20,120,823	117%
2032	21,990,047	17,558,234	125%	26,260,544	18,103,178	145%	26,092,196	21,314,351	122%	25,969,906	19,188,463	135%
2033	23,605,490	16,544,640	143%	28,524,567	17,180,287	166%	28,337,362	20,227,756	140%	28,207,194	18,210,245	155%
2034	25,426,844	15,504,469	164%	30,592,396	16,217,894	189%	30,386,830	19,094,652	159%	30,250,164	17,190,157	176%
2035	27,033,518	14,442,001	187%	32,204,276	15,171,608	212%	31,982,082	17,862,774	179%	31,841,773	16,081,146	198%
2036	28,227,800	13,366,042	211%	33,785,867	14,117,270	239%	33,547,243	16,621,415	202%	33,403,429	14,963,600	223%
2037	28,121,939	12,288,373	229%	35,410,553	13,063,301	271%	35,153,442	15,380,492	229%	35,007,015	13,846,446	253%
2038	28,304,222	11,232,658	252%	36,650,511	12,009,568	305%	36,377,509	14,139,846	257%	36,230,180	12,729,542	285%
2039	28,876,178	10,210,713	283%	37,313,397	10,961,644	340%	37,029,300	12,906,039	287%	36,883,085	11,618,795	317%
2040	29,215,590	9,228,495	317%	36,374,068	9,820,281	370%	36,091,775	11,562,219	312%	35,952,522	10,409,007	345%
2041	29,129,320	8,293,000	351%	35,482,272	8,752,058	405%	35,201,552	10,304,513	342%	35,068,995	9,276,743	378%
2042	27,522,162	7,409,114	371%	34,920,051	7,786,376	448%	34,637,196	9,167,537	378%	34,510,779	8,253,170	418%
2043	26,328,764	6,582,414	400%	34,076,794	6,899,969	494%	33,795,011	8,123,898	416%	33,675,180	7,313,623	460%
2044	25,612,239	5,813,265	441%	32,863,890	6,078,954	541%	32,586,697	7,157,249	455%	32,474,469	6,443,387	504%
2045	24,709,743	5,102,373	484%	30,088,513	5,195,380	579%	29,828,624	6,116,946	488%	29,729,620	5,506,843	540%
2046	23,572,549	4,451,211	530%	27,618,987	4,440,365	622%	27,375,452	5,228,005	524%	27,287,627	4,706,565	580%
2047	21,330,391	3,859,451	553%	25,768,130	3,804,054	677%	25,535,447	4,478,824	570%	25,456,863	4,032,107	631%
2048	19,411,210	3,327,218	583%	23,954,369	3,273,436	732%	23,734,825	3,854,084	616%	23,663,759	3,469,679	682%
2049	17,946,210	2,850,928	629%	22,159,538	2,801,853	791%	21,953,005	3,298,851	665%	21,889,375	2,969,824	737%
2050	16,448,691	2,427,430	678%	19,636,474	2,274,663	863%	19,447,277	2,678,146	726%	19,394,683	2,411,029	804%
2051	14,912,132	2,054,148	726%	17,469,344	1,864,098	937%	17,296,593	2,194,755	788%	17,252,525	1,975,851	873%
2052	12,900,342	1,727,566	747%	15,649,821	1,539,978	1016%	15,491,812	1,813,142	854%	15,454,328	1,632,300	947%
2053	11,229,192	1,444,664	777%	13,843,066	1,291,394	1072%	13,702,864	1,520,464	901%	13,669,975	1,368,813	999%
Values as of 12/31/2015 (discounted at maximum statutory valuation rates)												
Past :	3,613,972	117,301,862	3.1%	2,131,965	115,832,949	1.8%	2,131,965	115,832,949	1.8%	2,131,965	115,832,949	1.8%
Future :	300,746,375	371,881,040	80.9%	351,956,888	371,242,571	94.8%	349,492,243	427,206,144	81.8%	348,015,593	390,157,408	89.2%
Lifetime :	304,360,346	489,182,902	62.2%	354,088,853	487,075,520	72.7%	351,624,208	543,039,093	64.8%	350,147,558	505,990,357	69.2%

Total Incurred Claims exceed Total Initial Premiums x max(58%, Original Pricing Loss Ratio) + Increased Premiums x max(85%, Original Pricing Loss Ratio)

Accum Value of Past Incurred Claims =	2,131,965	Accum Value of Past Initial Prm x 62.2% =	72,069,069
Present Value of Future Incurred Claims =	348,015,593	Present Value of Future Initial Prm x 62.2% =	228,232,691
Total =	350,147,558	Accum Value of Prior Increases x 85.0% =	-
		Present Value of Future Increases x 85.0% =	19,831,022
		Total =	320,132,782

Total Incurred Claims exceed Total Initial Premiums x max(60%, Original Pricing Loss Ratio) + Increased Premiums x max(80%, Original Pricing Loss Ratio)

Accum Value of Past Incurred Claims =	2,131,965	Accum Value of Past Initial Prm x 62.2% =	72,069,069
Present Value of Future Incurred Claims =	348,015,593	Present Value of Future Initial Prm x 62.2% =	228,232,691
Total =	350,147,558	Accum Value of Prior Increases x 80.0% =	-
		Present Value of Future Increases x 80.0% =	18,664,492
		Total =	318,966,252

Appendix B1
John Hancock Life Insurance Company (U.S.A.)
ICC10-LTC-11

*Premiums to be used only with those
that have not previously elected an inflation decrease option*

Standard rates per \$10 of Daily Coverage
90 Day Elimination Period

Age	5% Compound Inflation					
	Benefit Period					
	2 Years	3 Years	4 Years	5 Years	6 Years	10 Years
18-29	174.15	212.85	231.13	244.03	251.55	331.10
30	182.75	222.53	244.03	256.93	263.38	348.30
31	183.83	223.60	245.10	258.00	264.45	350.45
32	184.90	224.68	246.18	259.08	265.53	352.60
33	184.90	225.75	248.33	261.23	266.60	353.68
34	185.98	226.83	250.48	262.30	267.68	355.83
35	187.05	227.90	251.55	263.38	268.75	357.98
36	188.13	228.98	252.63	264.45	269.83	360.13
37	189.20	230.05	253.70	265.53	271.98	361.20
38	190.28	232.20	254.78	267.68	273.05	363.35
39	192.43	233.28	255.85	268.75	275.20	364.43
40	193.50	234.35	256.93	269.83	276.28	367.65
41	194.58	235.43	258.00	270.90	277.35	369.80
42	195.65	236.50	259.08	271.98	279.50	370.88
43	196.73	237.58	260.15	273.05	280.58	371.95
44	197.80	238.65	262.30	274.13	281.65	374.10
45	198.88	239.73	263.38	275.20	282.73	375.18
46	199.95	240.80	263.38	275.20	282.73	377.33
47	201.03	241.88	264.45	276.28	283.80	380.55
48	202.10	241.88	265.53	276.28	283.80	382.70
49	203.18	242.95	265.53	277.35	284.88	384.85
50	204.25	244.03	266.60	279.50	285.95	388.08
51	206.40	246.18	269.83	281.65	289.18	391.30
52	207.48	250.48	273.05	284.88	292.40	395.60
53	209.63	252.63	276.28	288.10	295.63	399.90
54	211.78	255.85	279.50	291.33	298.85	404.20
55	213.93	259.08	282.73	294.55	302.08	407.43
56	217.15	263.38	288.10	299.93	307.45	416.03
57	222.53	268.75	293.48	305.30	314.98	424.63
58	226.83	273.05	298.85	312.83	320.35	434.30
59	231.13	279.50	303.15	318.20	326.80	443.98
60	235.43	284.88	309.60	323.58	332.18	452.58
61	245.10	296.70	323.58	338.63	347.23	473.00
62	255.85	309.60	338.63	352.60	361.20	494.50
63	266.60	322.50	352.60	367.65	377.33	516.00
64	279.50	335.40	368.73	382.70	392.38	538.58
65	291.33	350.45	384.85	399.90	409.58	562.23
66	304.23	368.73	403.13	421.40	435.38	586.95
67	319.28	385.93	422.48	443.98	462.25	613.83
68	333.25	406.35	442.90	468.70	490.20	640.70
69	349.38	426.78	464.40	494.50	521.38	669.73
70	365.50	448.28	486.98	522.45	552.55	698.75
71	399.90	479.45	529.98	567.60	603.08	754.65
72	436.45	512.78	576.20	619.20	656.83	814.85
73	475.15	550.40	626.73	674.03	715.95	879.35
74	519.23	588.03	681.55	734.23	781.53	949.23
75	566.53	628.88	741.75	799.80	851.40	1025.55
76	603.08	688.00	812.70	879.35	934.18	1122.30
77	639.63	753.58	889.03	967.50	1024.48	1228.73
78	678.33	824.53	973.95	1063.18	1122.30	1344.83
79	721.33	901.93	1065.33	1169.60	1230.88	1470.60
80	1135.20					
81	1202.93					
82	1274.95					
83	1351.28					
84	1432.98					
85	1517.90					
86	1609.28					
87	1710.33					
88	1817.83					
89	1931.78					
90	2053.25					
91+						

Rates shown below the line apply only to attained age GPO or GIO purchases, Shared Care 2-year purchases on exhaustion of benefits, and/or Family Care purchases