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MEMO

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To: John Bertko, FSA, MAAA
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From: Bob Cosway, FSA, MAAA, Principal and Consulting Actuary
Barbara Dewey, FSA, MAAA, Consulting Actuary
Matt Schoonmaker, FSA, MAAA, Actuary

Re: **Reinsurance Program Estimates for 2019-2021**

Covered California retained Milliman, Inc. to provide estimates of the effect of various reinsurance proposals on health insurance premiums in the overall U.S. individual market. This report contains an overview of the U.S. federal legislative bills with reinsurance proposals along with estimates of the per member per month (PMPM) costs, reductions in premium levels, and total annual costs associated with various reinsurance plan designs. Our understanding is that Covered California will include our estimates of the effect of reinsurance proposals in a larger analysis that provides projections of premiums into 2019, 2020, and 2021.

OVERVIEW OF BILLS WITH REINSURANCE PROPOSALS

Our understanding is that there are multiple reinsurance proposals that have been introduced in the U.S. federal legislature in the past few months. The purpose of these proposals is to stabilize health insurance premiums in the individual market.

One bill, H.R. 4666: Premium Relief Act of 2017,¹ introduced by Ryan Costello (R-Pa.) in the House of Representatives, allocates \$10 billion per year from 2019 to 2021 for this reinsurance program and has the following preliminary reinsurance program parameters:

Attachment point: \$50,000
Maximum charge subject to reinsurance: \$350,000
Coinsurance: 75%

These program parameters can be interpreted as, assuming there are sufficient funds, that the federal government will reimburse health plans 75% of the cost between \$50,000 and \$350,000 for each individual enrolled in a health insurance plan in the individual market in a given calendar year. The table in Figure 1 shows the calculation of the reinsurance amount for a few sample patients.

¹ Available online at: <https://www.govtrack.us/congress/bills/115/hr4666/text>.

Figure 1: Sample Calculations for a Reinsurance Plan Design With a \$50,000 Attachment Point, \$350,000 Maximum Charge Subject to Reinsurance, and 75% Coinsurance

Patient Plan-Paid Annual Charges	Calculation of Reinsurance Amount	Reinsurance Amount
\$25,000	Patient has not reached the attachment point.	\$0
\$100,000	$75\% \times (\$100,000 - 50,000)$	\$37,500
\$500,000	$75\% \times (\text{MIN } [\$350,000, \$500,000] - \$50,000)$	\$225,000

Covered California provided us with estimated Qualified Health Plan (QHP) enrollment numbers for the nationwide individual market of approximately 18 million for 2016 and 17 million for 2017. Assuming enrollment in the 2019-2021 period continues to decrease at a rate of 1 million members per year, the \$10 billion per year funding for the Costello bill's reinsurance program would translate to approximately \$56 per member per month (PMPM) for the 2019 plan year. Our analysis in this report evaluates whether this funding level is sufficient for the proposed plan design, and presents alternative plan designs for consideration.

A second bill, S. 1835: Lower Premiums Through Reinsurance Act of 2017, introduced by Susan Collins (R-Maine) and Bill Nelson (D-Fla.) in the Senate, uses 1332 waivers to let states draw from a \$2.25 billion pool for their own reinsurance programs each year for two years. Using the same enrollment estimates as before, and assuming that the funding would be allocated to each state based on its exchange enrollment, the Collins bill provides approximately \$13 PMPM.

Covered California asked us to model a plan design with a \$50,000 attachment point, \$250,000 maximum charge subject to reinsurance, and 80% coinsurance.

FINDINGS

We modeled a number of different plan designs using the silver-level combined medical and pharmacy claims probability distribution (CPDs) underlying the 2019 actuarial value (AV) calculator, with observed trends from the 2016-2019 actuarial value calculators. Figure 2 shows the results of our modeling for Covered California's proposed plan design with a \$50,000 attachment point, \$250,000 maximum charge subject to reinsurance, and 80% coinsurance. The figure shows the plan design, the estimated PMPM reinsurance payments to insurers, the percentage of premium reduction due to the reinsurance payments, and the estimated total annual cost for this program.

As shown in the tables in this report, any reinsurance plan design will result in lower premiums. This, in turn, will result in a lower federal budget for advance premium tax credits (APTCs). It is not yet clear whether the funding for the proposed bills will be the stated budgets (of \$10 billion per year or \$2.25 billion per year) plus all or a portion of the related reduction in the required APTC budget or will be limited to just the stated budgets (of \$10 billion per year or \$2.25 billion per year). For the purpose of the estimated total annual costs shown in the tables in this report, we show the full amount that would be needed to fund each reinsurance plan design, regardless of the funding sources.

Figure 2: Estimated 2019-2021 Values for Covered California’s Proposed Nationwide Reinsurance Plan Design

Reinsurance Plan Designs	Covered California’s Proposed Nationwide Reinsurance Plan Design
Attachment Point	\$50,000
Maximum Charge Subject to Reinsurance	\$250,000
Coinsurance Percentage	80%
PMPM Reinsurance Payments to Insurers Using CPDs From AV Calculator	
2019	\$81
2020	\$89
2021	\$98
Percentage Premium Reduction Using CPDs From AV Calculator	
2019	17.2%
2020	17.8%
2021	18.3%
Total Annual Nationwide Reinsurance Cost, Expressed in Billions	
2019 (assuming 15 million members)	\$14.6
2020 (assuming 14 million members)	\$15.0
2021 (assuming 13 million members)	\$15.3

Note: Values have been rounded.

Figure 2 shows that the proposed plan design is expected to result in approximately \$81 PMPM in reinsurance payments to insurers, with an estimated total annual nationwide cost of approximately \$14.6 billion for the 2019 plan year. The program cost rises to approximately \$98 PMPM in reinsurance payments to insurers, with a total annual nationwide cost of approximately \$15.3 billion for the 2021 plan year, using the underlying trend assumptions in the 2016 to 2019 actuarial value calculators.

We compared the PMPM results from Figure 2 to historical values from Covered California’s data warehouse, which indicate that the same reinsurance plan design applied to the 2016 data would result in reinsurance payments to insurers of approximately \$45 PMPM. This is directionally consistent with the higher values presented in Figure 2 because the California risk pool is thought to be healthier than the nationwide pool and the \$45 PMPM does not include an additional three to five years of trend that are included in the 2019-2021 values in Figure 2.

Figure 3 shows the results of our modeling for the transitional reinsurance program parameters that were in place for the 2014-2016 plan years. This figure provides a range of sample plan designs that have been used in the individual market in prior years, and shows how different plan designs can achieve different target annual budget amounts.

Figure 3: Estimated 2019-2021 Values Under Historical 2014-2016 Transitional Reinsurance Parameters²

Reinsurance Plan Designs	2014 Transitional Reinsurance Parameters	2015 Transitional Reinsurance Parameters	2016 Transitional Reinsurance Parameters
Attachment Point	\$45,000	\$45,000	\$90,000
Maximum Charge Subject to Reinsurance	\$250,000	\$250,000	\$250,000
Coinsurance Percentage	100%	55%	53%
PMPM Reinsurance Payments to Insurers Using CPDs From AV Calculator			
2019	\$111	\$61	\$28
2020	\$122	\$68	\$31
2021	\$134	\$74	\$33
Percentage Premium Reduction Using CPDs From AV Calculator			
2019	23.5%	13.0%	5.9%
2020	24.3%	13.4%	6.1%
2021	25.1%	13.8%	6.2%
Total Annual Nationwide Reinsurance Cost, Expressed in Billions			
2019 (assuming 15 million members)	\$20.0	\$11.0	\$5.0
2020 (assuming 14 million members)	\$20.6	\$11.3	\$5.2
2021 (assuming 13 million members)	\$20.9	\$11.6	\$5.2

Note: Values have been rounded.

We compared the results in Figure 3 to historical values that the carriers provided to Covered California as part of the 2014 to 2017 bid processes. These values are available publicly on the California Department of Managed Healthcare and California Department of Insurance rate review websites. The comparison of Figure 3 to the estimated reinsurance recoveries provided by the carriers in their bids shows that, as expected, the same plan designs are worth more in 2019 to 2021 than they were in 2014 to 2016, but that the relative value of each plan design is generally consistent with the carrier estimates.

Figures 4 to 6 show the proposed plan design from the Costello bill, which has a \$50,000 attachment point, \$350,000 maximum charge subject to reinsurance, and 75% coinsurance. The three figures also show how changes to the various levers of the reinsurance plan design could affect the estimated premium reductions and total annual budget.

Figure 4 shows how changes to the attachment point affect the estimated premium reductions and the total annual budget.

² Reinsurance payment parameters from CMS reports on the 2014-2016 benefit years. "Summary Report on Transitional Reinsurance Payments and Permanent Risk Adjustment Transfers for the 2014 Benefit Year" Revised September 17, 2015. "Amendment to the Summary Report on Transitional Reinsurance Payments and Permanent Risk Adjustment Transfers for the 2015 Benefit Year" Released December 6, 2016. "Summary Report on Transitional Reinsurance Payments and Permanent Risk Adjustment Transfers for the 2016 Benefit Year" Released June 30, 2017. Reports are available online at: <https://www.cms.gov/CCIIO/Programs-and-Initiatives/Premium-Stabilization-Programs/>.

Figure 4: Estimated 2019-2021 Values for Costello-Proposed Plan Design With Variations on Attachment Point

Reinsurance Plan Designs	Costello-Proposed Plan Design	Costello Plan Attachment Point Variant #1	Costello Plan Attachment Point Variant #2	Costello Plan Attachment Point Variant #3
<i>Attachment Point</i>	<i>\$50,000</i>	<i>\$65,000</i>	<i>\$70,000</i>	<i>\$75,000</i>
Maximum Charge Subject to Reinsurance	\$350,000	\$350,000	\$350,000	\$350,000
Coinsurance Percentage	75%	75%	75%	75%
PMPM Reinsurance Payments to Insurers Using CPDs From AV Calculator				
2019	\$82	\$62	\$56	\$54
2020	\$91	\$70	\$63	\$58
2021	\$100	\$79	\$72	\$66
Percentage Premium Reduction Using CPDs From AV Calculator				
2019	17.4%	13.1%	11.9%	11.4%
2020	18.1%	14.0%	12.6%	11.6%
2021	18.8%	14.8%	13.5%	12.2%
Total Annual Nationwide Reinsurance Cost, Expressed in Billions				
2019 (assuming 15 million members)	\$14.8	\$11.1	\$10.1	\$9.7
2020 (assuming 14 million members)	\$15.3	\$11.8	\$10.7	\$9.8
2021 (assuming 13 million members)	\$15.7	\$12.4	\$11.3	\$10.2

Note: Values have been rounded.

Figure 5 shows how changes to the maximum charge amount affect the estimated premium reductions and the total annual budget.

Figure 5: Estimated 2019-2021 Values for Costello-Proposed Plan Design With Variations on Maximum Charge Amount

Reinsurance Plan Designs	Costello-Proposed Plan Design	Costello Plan Maximum Charge Variant #1	Costello Plan Maximum Charge Variant #2	Costello Plan Maximum Charge Variant #3
Attachment Point	\$50,000	\$50,000	\$50,000	\$50,000
<i>Maximum Charge Subject to Reinsurance</i>	<i>\$350,000</i>	<i>\$300,000</i>	<i>\$250,000</i>	<i>\$200,000</i>
Coinsurance Percentage	75%	75%	75%	75%
PMPM Reinsurance Payments to Insurers Using CPDs From AV Calculator				
2019	\$82	\$79	\$76	\$69
2020	\$91	\$88	\$84	\$76
2021	\$100	\$97	\$92	\$85
Percentage Premium Reduction Using CPDs From AV Calculator				
2019	17.4%	16.8%	16.1%	14.7%
2020	18.1%	17.4%	16.7%	15.2%
2021	18.8%	18.2%	17.2%	15.8%
Total Annual Nationwide Reinsurance Cost, Expressed in Billions				
2019 (assuming 15 million members)	\$14.8	\$14.3	\$13.7	\$12.5
2020 (assuming 14 million members)	\$15.3	\$14.7	\$14.1	\$12.8
2021 (assuming 13 million members)	\$15.7	\$15.2	\$14.4	\$13.2

Note: Values have been rounded.

Figure 6 shows how changes to the coinsurance amount affect the estimated premium reductions and the total annual budget.

Figure 6: Estimated 2019-2021 Values for Costello-Proposed Plan Design With Variations on Coinsurance Amount

Reinsurance Plan Designs	Costello-Proposed Plan Design	Costello Plan Coinsurance Variant #1	Costello Plan Coinsurance Variant #2	Costello Plan Coinsurance Variant #3
Attachment Point	\$50,000	\$50,000	\$50,000	\$50,000
Maximum Charge Subject to Reinsurance	\$350,000	\$350,000	\$350,000	\$350,000
<i>Coinsurance Percentage</i>	<i>75%</i>	<i>70%</i>	<i>60%</i>	<i>50%</i>
PMPM Reinsurance Payments to Insurers Using CPDs From AV Calculator				
2019	\$82	\$77	\$66	\$55
2020	\$91	\$85	\$73	\$61
2021	\$100	\$94	\$80	\$67
Percentage Premium Reduction Using CPDs From AV Calculator				
2019	17.4%	16.3%	13.9%	11.6%
2020	18.1%	16.9%	14.5%	12.1%
2021	18.8%	17.5%	15.0%	12.5%
Total Annual Nationwide Reinsurance Cost, Expressed in Billions				
2019 (assuming 15 million members)	\$14.8	\$13.8	\$11.8	\$9.9
2020 (assuming 14 million members)	\$15.3	\$14.2	\$12.2	\$10.2
2021 (assuming 13 million members)	\$15.7	\$14.6	\$12.5	\$10.4

Note: Values have been rounded.

It is not yet clear whether the funding for the Costello bill's proposed reinsurance program would be \$10 billion per year plus all or a portion of the related reduction in the required APTC budget, or would be limited to just \$10 billion per year. If the funding for Costello's proposed reinsurance program is \$10 billion per year plus the funds reallocated from the lower APTC payments, then the proposed plan design may be achievable. If the funding is limited to \$10 billion per year, a review of Figures 4 to 6 concludes that the Costello bill would likely need a leaner reinsurance plan design to meet the \$10 billion target costs or a larger budget in order to offer the stated reinsurance plan design.

A comparison of the proposed Collins bill's total annual budget to the total annual costs in Figures 2 to 6 above shows that implementing the Collins bill would require a lean reinsurance plan design, possibly similar to the plan design in place in the 2016 plan year.

DATA SOURCES AND METHODOLOGY

We estimated the value of each reinsurance plan design using the CPDs underlying the actuarial value calculator (AV calculator) provided by the U.S. Department of Health and Human Services (HHS). The AV calculator contains a number of CPDs, including separate CPDs for each metallic level and separate CPDs for medical, pharmacy, and combined plan designs. For the purpose of the calculations shown in this report, we used the silver-level CPD for medical and pharmacy combined.

For each plan design, we calculated the PMPM reinsurance payments to insurers and estimated the percentage premium reduction using the CPDs from the 2019 plan year. We trended the 2019 CPD to 2020 and 2021 using observed trends from the 2016 to 2019 AV calculators, then applied the reinsurance parameters to estimate the reinsurance PMPMs. We assumed a paid-to-allowed ratio of 87% and a non-benefit expense percentage of 12% of premiums. For the purpose of the calculations provided in this report, we have assumed that the reinsurance would not affect the non-benefit expenses when expressed as a percentage of premium.

We compared the results to three separate sources to assess the reasonableness of the results. First, we compared the estimated reinsurance recoveries calculated using the silver-level combined medical and pharmacy CPD from the 2019 AV calculator to the estimated reinsurance recoveries calculated using observed 2016 costs from Covered California's data warehouse. Then we compared the estimated values of the 2014-2016 reinsurance plan designs using the silver-level combined medical and pharmacy CPD from the 2019 AV calculator to observed carrier-reported experience from Covered California carrier rate filings provided on the California Department of Managed Healthcare and California Department of Insurance rate review websites. Finally, we compared the estimated premium reductions to the same values estimated using the Milliman Health Cost Guidelines™ commercial CPDs. All three reasonableness checks support the decision to use the CPD from the 2019 AV calculator as the basis for the calculations shown in this report.

Covered California provided us with estimated QHP enrollment numbers for the U.S. individual market of approximately 18 million for 2016 and 17 million for 2017. As a simplified but still reasonable assumption, we have assumed that enrollment in the 2019-2021 period continues to decrease at a rate of 1 million members per year. We used these enrollment estimates to convert the PMPM reinsurance payments to insurers to total annual nationwide budgets for each reinsurance plan design.

LIMITATIONS

The information contained in this report has been prepared for Covered California for the purpose of estimating the effect of various reinsurance proposals on health insurance premiums in the overall U.S. individual market. The information contained within the report may not be appropriate for other purposes.

It is our understanding that the information contained in this report will be released publicly. Any distribution of the information should be in its entirety. Summaries of this report, such as a standalone executive summary or section, must still cite the full report. Any user of the data must possess a certain level of expertise in actuarial science and healthcare modeling so as not to misinterpret the information presented.

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In compiling this report we relied upon data and information from various sources, as documented within the report. We have not audited or verified the data and information other than reviewing it for general reasonableness. Whenever the underlying data or information is inaccurate, incomplete, or misleading, the results of our analysis may likewise be inaccurate or incomplete. The results of the financial analysis are estimates based upon chosen assumptions. Actual experience will differ from these estimates.

Differences between our projections and actual amounts depend on the extent to which future experience conforms to the assumptions made for this analysis. It is certain that actual experience will not conform exactly to the assumptions used in this analysis. Actual amounts will differ from projected amounts to the extent that actual experience deviates from expected experience.

The services provided for this project were performed under the signed Agreement Number 15-C-074 between Milliman and Covered California signed May 10, 2016.

Guidelines issued by the American Academy of Actuaries require actuaries to include their professional qualifications in all actuarial communications. The authors of this report are members of the American Academy of Actuaries and meet the qualification standards for performing the analyses contained herein.