October 6, 2016

Centers for Medicare & Medicaid Services
Department of Health and Human Services
Attention: CMS-9934-P
P.O. Box 8016
Baltimore, MD 21244-8016

Re: Notice of Benefit and Payment Parameters for 2018

To Whom It May Concern,

On behalf of the Risk Sharing Subcommittee and the Premium Review Work Group of the
Academy of Actuaries,[1] we would like to provide the following comments on the proposed rule
for the 2018 benefit and payment parameters.

Comments on Risk Sharing Provisions

Partial-Year Enrollment
CMS proposes changes to the 2017 risk adjustment model, initially published in February 2016,
by adding a partial-year enrollment factor.

In general, we would have significant concerns about changing the model structure after issuers
have already priced for 2017. However, in this case, we are in favor of changes to risk
adjustment because an enrollment duration factor has the potential to improve the predictive
accuracy of the risk adjustment model. In the future, refinements to the proposed approach
should be made to better fit the diverse experience of partial-year enrollees as well as the
different dynamics of the individual and small group market.

We believe that the current model underestimates cost of partial-year enrollees for reasons
outlined in our response to the *HHS-Operated Risk Adjustment Methodology* discussion paper.[2]
In that comment letter, we stated that we are in favor of a hybrid approach that reflects the
interaction of enrollment duration and condition, along with using pharmacy data to impute
diagnoses. A hybrid approach would more accurately estimate the risk of partial-year enrollees
with hierarchical condition categories (HCCs) versus those without HCCs. The current proposal
would apply a single factor to a diverse group of enrollees (e.g., all enrollees with the same

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[1] The American Academy of Actuaries is an 18,500+ member professional association whose mission is to serve the
public and the U.S. actuarial profession. For more than 50 years, the Academy has assisted public policymakers on
all levels by providing leadership, objective expertise, and actuarial advice on risk and financial security issues. The
Academy also sets qualification, practice, and professionalism standards for actuaries in the United States.
[2] Risk Sharing Subcommittee of the American Academy of Actuaries, "Letter to the Centers for Medicare &
Medicaid Services re: HHS-Operated Risk Adjustment Methodology Discussion Paper," April 22, 2016.

duration, regardless of HCC status), thereby creating more gains and losses for issuers that enroll a higher- or lower-morbidity population than the average of the market.

Also, adverse selection among partial-year enrollees is likely more prevalent in the individual market than in the small group market. Therefore, we suggest that CMS review national data to determine whether the factors should also vary by market type.

Prescription Drugs

CMS proposes to add a small number of drug classes as predictors for 2018 to impute diagnoses and indicate severity of illness. We have previously commented that including drug data could help improve the model's accuracy, improve prediction of partial-year enrollees, reduce the need for supplemental diagnosis files, and improve compensation for conditions treated with high-cost drugs.[3] The imputation/severity model proposed by CMS should improve the risk adjustment methodology along all these dimensions. The imputation of conditions will particularly help with partial-year enrollees, including partial-year enrollees in the small group market due to non-calendar plan years. The severity component will improve the model's predictive power and increase the model's ability to compensate adequately for high-cost conditions.

In our prior comments, we also outlined several considerations regarding use of drug data, including the potential incentives for issuers to change formularies and for physicians to change prescribing behavior with the goal of maximizing risk adjustment payments. This can be particularly problematic for drugs that can be used for multiple indications. CMS has taken these considerations into account in developing the proposed drug class methodology. We recommend that CMS monitor the utilization and unit cost of the drugs included in the model to ensure that inclusion in the risk adjustment methodology does not result in over-prescribing or other unintended results.

High-Cost Risk Pooling

CMS proposes to add a high-cost pooling component to the transfer formula. Although the risk adjustment model compensates for the average cost by condition, it may significantly understate the compensation necessary for the highest high-cost claimants. A high-risk pooling mechanism for extremely high-cost individuals can mitigate this. The proposed high-cost risk pooling would be done nationwide, by ACA compliant market. Claims over $2 million would be covered at a 60 percent coinsurance.[4] The cost of the pooled claims would be charged to all issuers in the market as a percent of premium. CMS estimates the cost at about 0.1 percent of premium. The plan liability risk score factors would be calibrated to exclude these claims. CMS asked for comments on these program elements as well as whether there should be a cap on the assessment to issuers.

A high-risk pooling mechanism for extremely high-cost enrollees may improve the accuracy of the risk adjustment model. It also may serve the public interest by encouraging smaller issuers to remain in the market. A small issuer may not be able to support even a moderate number of extremely high-cost enrollees because the commercial reinsurance market will not provide

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[3] Ibid.
[4] The initial parameters included in the *HHS-Operated Risk Adjustment Methodology* discussion paper were $1 million and 80 percent.

unlimited coverage for catastrophic claims, will not cover enrollees known in advance to be high risk, and may even avoid issuers who are at particular risk of high-cost claimants.

The Academy's Risk Sharing Subcommittee provides comments on the following four issues:

- *Nationwide pooling by market.* We support the concept of nationwide pooling, in general, as it helps to spread the risk in states with smaller populations and/or fewer issuers within a given state. For catastrophic claims exceeding $1 million or $2 million, the frequency is low and unpredictable at the state level. A broader nationwide pool would reduce the volatility caused by catastrophic claims, particularly among smaller issuers. The anticipated funding or assessments from issuers participating in these ACA markets should be relatively modest; as CMS pointed out, the cost for a $2 million attachment point with 60 percent coinsurance is expected to be less than 0.1 percent of the average market premium. All issuers would benefit from a level of protection against these high-dollar catastrophic claims.

- *Pooling attachment point and coinsurance amounts.* The proposal for a $2 million attachment point and 60 percent coinsurance (the percentage of claims over the attachment point that would be reimbursed to issuers) is a reasonable starting point. However, it may not provide adequate catastrophic protection to issuers that are subject to an unusually high number of catastrophic claims or extremely high-cost members that persist year over year, especially smaller issuers. We agree that issuers should retain a portion of risk beyond the attachment point to ensure that issuers continue to manage and control these claims. However, a lower attachment point, such as $1 million, and coinsurance closer to 80 percent, would provide more meaningful catastrophic coverage while maintaining a reasonable level of issuer risk. Although a $1 million attachment point/80 percent coinsurance option is more expensive, we expect the cost would be less than 1 percent of average market premium; this estimate should be validated from submitted industry or EDGE data.

- *Cap on assessments to fund the high risk pool.* An assessment that is calculated as a fixed per-member, per-month (PMPM) cost estimated to fund the high-risk pool at the chosen parameters would provide more certainty for issuers as they are pricing. However, it would create some uncertainty for issuers attracting extremely high-cost enrollees, because the published parameters may change at the time of the benefit calculation. For example, we estimate the PMPM needed to fund the high-risk pool for a $1 million attachment point and 80 percent coinsurance might be in the range of $1.75 to $2.50. Furthermore, we estimate the PMPM needed to fund the high-risk pool for a $2 million attachment point and 60 percent coinsurance might be in the range of $0.50 to $0.60. The actual PMPM assessment should be calculated from submitted industry or EDGE data. The calculated PMPM should be published in the respective notice of benefit and payment parameters so that it, along with the attachment point and coinsurance parameters, may be used in pricing. In order to provide more certainty for issuers with high-cost enrollees, the PMPM assessment could be calculated so that it would be expected to be sufficient under a moderately adverse experience scenario. In the case of excess funding in the pool with respect to the published pooling parameters, excess funds

could be returned to the assessed issuers (or charged at the lower level during the risk adjustment transfer) or used to reduce the subsequent year's assessment.

- *Potential for certain contract-related cost inflation for catastrophic or outlier claims.* We recognize that situations or organizational relationships exist that may yield provider contracting advantages to some issuers over others that could be used to obtain a disproportionate amount of reimbursement for claims eligible for pooling. One possible solution would be to reprice all claims submitted for pooling using a common repricing tool, such as Medicare fee schedules, to eliminate or reduce the opportunity for such provider contracting advantages. The expected frequency of these catastrophic claims should be low enough that the repricing effort would not be burdensome.

Predictive Ratios for Low-Cost Enrollees
CMS seeks comments on methods to address the slight under-prediction of low-cost enrollees and over-prediction of high-cost enrollees, based on the predictive ratios CMS published in the Medicare & Medicaid Research Review in 2014.[5] CMS outlined four possible methods to improve predictive ratios:

- *Create a separate set of age-sex coefficients for enrollees with and without HCCs.* This seems to be the more straight forward method for estimating more accurate age-sex coefficients. This approach also would be compatible with our suggestion that the enrollment duration factor be estimated separately for enrollees with and without HCCs.

- *Develop a constrained regress approach.* We are concerned that this approach may overestimate the risk score value for enrollees without HCCs.

- *Add dependent variables to account for non-linearities in risk for high-risk enrollees.* This method does not seem well defined.

- *Adjust the plan liability risk score (PLRS) outside of the model.* It would be more appropriate to calibrate the model to predict subgroups as accurately as possible.

It is important that the risk adjustment methodology adequately compensate for the high-cost enrollees so that there are no incentives for issuers to structure benefits or marketing to avoid them. The risk adjustment model also should not be biased against healthy enrollees. The calibration should be refined with the goal of ensuring that the risk profile of its membership is not a driving factor for issuers in structuring benefits and marketing. As CMS noted, it is important to ensure that any changes to enhance the accuracy for enrollees without HCCs do not compromise the ability of the model to compensate fairly for other subgroups, especially high-cost subgroups.

Data Timing for 2018 Recalibration
CMS currently uses three years of data to develop risk adjustment coefficients and for model recalibration. For the 2017 benefit year, the coefficients are based on the 2012–2014 MarketScan data. In the proposed rule, CMS outlines two options for the 2018 benefit year: Option A would use 2013–2015 MarketScan data, similar to the current process; Option B would use 2015–2017

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[5] https://www.cms.gov/mmrr/downloads/MMRR2014_004_03_a03.pdf

MarketScan data. The final factors would be released in early 2019, before the April 30 data submission deadline for the 2018 benefit year. The following chart depicts current and proposed processes:

Benefit Year	Data	Coefficient Announcement Dates
2016	2011–2013 MarketScan	End of February 2015
2017	2012–2014 MarketScan	End of February 2016
CMS Proposed Rule		
2018 (Option A)	2013–2015 MarketScan	Spring 2017
2018 (Option B)	2015–2017 MarketScan	Spring 2019
2019	2016 EDGE	Early 2018?

For the 2018 benefit year, Option A has the same lag time as in previous years. Data used would consist of two years of data that are the same as what was used the previous year (2013–2014), with one year of new data (replacing 2012 data with 2015 data).

Under Option B, the underlying data for all three years would be different, not just one year. And coefficients would not be finalized until after the benefit year is over. In the spring of 2018, CMS could provide interim coefficients based on 2014–2016 MarketScan data, as well as interim coefficients using 2013 and 2014 data (after pricing is done).

One advantage of Option B is that shortening the gap between the experience and projection period would improve the accuracy of the model and reduce reliance on assumptions such as trend factors. But it's not clear how much accuracy would be improved.

Option B does have some disadvantages: There are more uncertainties in modeling the risk adjustment impact when developing 2018 premiums, and there are more uncertainties in estimating risk adjustment receipts/payments for financial reporting (it would create additional retroactive adjustments to financial statements). In addition, If EDGE server data is used to replace MarketScan data in 2019, Option B appears to result in changes for 2018 only, meaning the process would have to be changed year to year, creating additional uncertainty. This would be on top of already significant changes to the risk adjustment model (e.g., prescription drugs and high-cost risk pool).

Recalibration for 2019 and Beyond Using EDGE Data
For 2019, CMS proposes recalibrating using masked, enrollee-level EDGE server data from the 2016 benefit year. In general, we agree using EDGE data would better reflect the underlying population and would theoretically result in more accurate calibration of the risk adjustment model. However, as we noted in our previous comment letter, several issues need to be considered. The individual and small group markets have different patterns of partial-year enrollment: the individual market experiences higher lapse rates and movement between markets and the small group has non-calendar plan years. The experience of cost-sharing reduction enrollees could be reviewed to determine whether the current induced demand factor is accurate. The recalibration could take into account the metal level for each enrollee rather than using each

enrollee to recalibrate all metal levels, but this may lead to inconsistencies in the results by metal level and there may not be enough enrollees in all metal levels, especially platinum, for a calibration. Finally, the calibration on individual and small group data could determine whether there are any differences in treatment cost relativities between individual/small group and the large group data in the MarketScan database.

In our previous comment letter, we also mentioned challenges in using 2016 EDGE data. First, assuming the calibration will need to be done immediately after the 2016 data submission in order to be published prior to 2019 pricing, the calibration would be occurring during the risk adjustment data validation audit process. The results of the audit will not be available at the time the coefficients are finalized. Another concern is data completeness. Some issuers may prioritize which claims to load for data submission when the deadline approaches. While these claims may not impact the risk adjustment payment transfers, complete claims are needed for a valid calibration.

CMS should also consider the impact of transitioning to the new model. Previously, three years of MarketScan data was used to recalibrate in order to promote stability of the coefficients from year to year, especially for small sample sizes. By changing from three years of MarketScan data to one year of data based on members in the non-grandfathered plans, considerations would need to be given to data credibility, particularly in small cells, and stability of data from year to year (from 2018 to 2019 as well as from 2019 to future years). It may be appropriate to consider a blending approach if transitioning to the EDGE data model, especially if there are conditions with relatively low numbers of observations in the data.

We suggest CMS perform analysis comparing the EDGE data (either 2015 or 2016 or both years) to the most recent three-year MarketScan data early in the process so health issuers can better anticipate and plan for the upcoming changes. We also suggest CMS disclose the volume of data that would be used in the comparison, that is, EDGE data versus MarketScan data. CMS should demonstrate that the new data source is reliable before implementation.

Transfer Formula Inclusion of Administrative Expenses
We have previously commented that the payment transfer could be based on a portion of state average premium—namely, the portion representing the sum of claims, claims adjustment expenses, and taxes that are calculated on premium after risk adjustment transfers. The adjustment could be accomplished by using a specified percentage of state average premiums based on data submitted by issuers on the Unified Rate Review Template (URRT) and financial reporting statements for claims adjustment expenses and relevant taxes as a percent of premium. The specified percentages could be calculated so as to vary by state or market. Some taxes (e.g., premium taxes) may be calculated on premium after risk adjustment transfers, so it would be appropriate to include provision for these taxes in the risk adjustment transfers.

Family Tiering Methodology
CMS seeks comment on whether the methodology for calculating billable member months should be altered in family tiering states, such as New York, where issuers must charge the same rate whether a family has one or more children.

We recommend no changes to the current methodology in community rated states. Dividing the sum of the risk scores for all enrollees by only the enrollees that are considered in billing is an appropriate way to account for issuers having relatively more unbillable members. A relatively higher risk score results for those issuers, and the transfer formula accounts for risk above that which can be rated as intended. While this approach increases risk scores and market average premium relative to those calculated in states where rating for more children is allowed, there is no corresponding increase in payment transfers because the resulting transfers PMPM are in turn applied to the relatively lower billable member months.

Comments on Market Reforms

Child Age Curve
The current child age factor (0–19 = 0.635) is too low to cover the cost of children, resulting in a subsidy from adults to children. A 2013 Society of Actuaries (SOA) study compared unisex commercial (large group) age relativities to the current CMS age relativities and demonstrated the inadequacy of the child age factor.[6] The child age factors in the CMS proposed rule are an attempt to address this situation.

The current and proposed child factors by age are:

Age	Current factor	Proposed factor
0-14	0.635	0.765
15	0.635	0.833
16	0.635	0.859
17	0.635	0.885
18	0.635	0.913
19	0.635	0.941
20	0.635	0.970

Using the age distribution from the SOA study and normalizing the factors across all ages so that the average factor is 1.0, the current age curve represents an average child factor of 0.47 while the proposed age curve represents an average child factor of 0.583. This is actually a little higher than the average child factor of 0.53,[7] but that may be appropriate in light of the increased emphasis on preventive benefits required by the ACA.

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[6] Society of Actuaries, *Health Care Costs – From Birth to Death* (June 2013)
[7] Ibid.

While the proposed factors appear to eliminate the adult subsidy of child rates, the pattern of the proposed child factors differs from actual experience in two ways. First, the proposed factors do not reflect the high cost of newborns and infants, which gradually decreases during the first few years of childhood. Second, the proposed factors increase between ages 14 and 20 to grade into the age 21 factor, which was set at 1.0 in order to meet the statutory requirement that the range not exceed a 3-to-1 ratio. However, the proposed factors increase by about 9 percent from age 14 to age 15 followed by much smaller increases of about 3 percent per year through age 21. The larger increase at age 15 does not reflect the experience reported in the SOA study. A smoother pattern of increases might be more appropriate.

SHOP Tying
The SHOP tying provision was introduced to ensure that there would be sufficient issuer participation. This provision requires issuers to participate in SHOP in order to participate on the individual exchange if the issuer group has at least a 20 percent market share of the small group market in the state. To date, a very small number of small group enrollees have purchased insurance through the SHOP,[8] as the vast majority of small groups nationwide continue to obtain health insurance through captive or independent brokers. In addition, the tax credits available via the SHOP are only available to employers for two consecutive years. The elimination of tax credits may cause SHOP enrollment to decline below current levels. Therefore, it may be burdensome to continue to compel certain issuers to participate in the SHOP. This provision may also discourage issuers subject to the requirement from participating on the individual exchange.

Comments on Rate Review

According to the proposed rule, CMS states:
>   *"As stated in the Uniform Rate Review Instructions, calibration for age, geography, and tobacco use is permissible as long as the calibration is applied uniformly in the single risk pool. These calibration adjustments generally allow for the permissible rating factors under Section 2701 of the PHS Act and 45 CFR 147.102 to be applied correctly to the issuer's plans. For example, we use the term "age calibration" to refer to the adjustment to the index rate, made uniformly for all plans in the risk pool, to reflect the fact that without calibration, the plan-adjusted index rate reflects the average age of the issuer's risk pool and the uniform age rating curve does not. Therefore, age calibration is necessary in order to correctly apply the age curve and calculate the premium rates. The same rationale applies when applying geographic and tobacco rating factors to the plan-adjusted index rate.*
>
>   *To more explicitly reflect how the rating factors under 45 CFR 147.102 and the index rating methodology under 45 CFR 156.80 work together, we propose to restructure paragraph (d)(1) as paragraphs (d)(1)(i) through (iv), adding new paragraph (d)(1)(iii) to provide that the index rate must be calibrated on a market-wide basis to correspond to an age-rating factor of 1.0, in a manner specified by the Secretary in guidance. Because it is essentially an adjustment to the index rate, the calibration from the single risk pool*

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[8] Kevin Counihan, Health Insurance Marketplaces, "Update on SHOP Marketplaces for Small Businesses," July 2, 2016.

index rate to the allowable rating factors may not vary by plan; it must be made uniformly for all plans in a State and market."

The Academy's Premium Review Work Group recommends that instead of calibrating at the index rate level or the market-adjusted index rate (MAIR) level, calibration be done as part of the development of the plan-adjusted index rate (PAIR). In this way, the PAIR will reflect what has historically been called "base rates" in actuarial premium rate development terms, which can be compared across plans easily, and would reflect all rating factors of 1.0. The requirement that calibration be done on a market-wide basis, meaning that the calibration for age, geography, and tobacco is the same for all plans, would remain as is, except that the tobacco calibration would be included with age and geography calibration rather than in the AV and cost-sharing adjustment.

The reason that the calibration is better done at the PAIR level rather than at the index rate or MAIR level is because, in order to calculate the appropriate premium rates, the calibration needs to consider the pre-calibrated PAIRs. Furthermore, the calibration needs to account for rating factors that are multiplicative, such that the revenue to be collected is neither lower than required nor higher than required. This can be accomplished by the following steps and as presented in the illustrative example below. The order of the three calibrations used does not matter. For purposes of our example, the order is age, geography, and tobacco.

1. Determine the pre-calibrated PAIRs as under the current instructions except without the tobacco adjustment included in the actuarial value (AV) and cost-sharing factor.
2. Calculate the age calibration factor by weighting the age factor for each member by the pre-calibrated PAIR for each member's plan.
3. For each member, multiply the PAIR by the age factor divided by the age calibration factor.
4. Calculate the geographic calibration factor by weighting the area factor for each member by the result from Step 3.
5. For each member, multiply the result from Step 3 by the area factor divided by the geographic calibration factor.
6. Calculate the tobacco calibration factor by weighting the tobacco factor for each member by the result from Step 5.
7. Apply each of these calibration factors to the pre-calibrated PAIR to determine the PAIR, which reflects all rating factors equal to 1.0.
8. For each member, determine the consumer-adjusted premium rate by multiplying the PAIR (after calibration) by each rating factor for the member's age, geography, and tobacco status.

The current and proposed methodologies for calculating the calibration factors do not reflect the impact of more comprehensive plans. Not reflecting the multiplicative effect of the rating factors in the calibration adds additional error as described below in the examples. Balancing to the revenue required based on the allowable rating factors does not create a new rating factor; rather, it allows for the appropriate calculation of premium to be determined, based on the requirements in the regulations that the rating factors be multiplicative. We would welcome the opportunity to work with CMS to develop an appropriate calibration methodology that meets the market-wide requirement and all requirements in the laws and regulations related to allowable rating factors.

The following illustrative example shows issues with the current and proposed calibration methodology. It also helps illustrate our recommendation for addressing issues associated with calibration.

The current rating rules require rates to be shown as follows:
- MAIR = index rate x 3 market adjustments
- PAIR = MAIR x 5 allowed adjustments (with tobacco calibration embedded here)
- Consumer-Adjusted Premium Rate = PAIR x age factor for member / age calibration x geographic factor for member / geographic calibration x tobacco status factor

Our example is for the small group market (thus, not including any quarterly trend adjustments) but it would work the same way for the individual market. The example has been somewhat simplified in that no reinsurance or risk adjustment payments or charges are projected, no catastrophic plans are being offered, no benefits in excess of essential health benefits (EHBs) are offered, only one network and care management methodology are used, and no induced utilization is assumed.

There are two products with one plan each: 1) a silver product and 2) a gold product.

There are two geographic areas: 1) a 1.2 relative cost area and 2) a 0.8 relative cost area.

The issuer charges a tobacco surcharge using a factor of 1.2.

There are 10 members projected, five in Area 1 and five in Area 2, from two employer groups representing the entire projected population of an issuer. Employer 1 is assumed to offer only the gold plan to its members, and Employer 2 is assumed to offer only the silver plan to its members. The projected membership is as follows:

Employer 1:							
Geographic area 1							
Gold plan			Spouse Age		Children	Children	
	Age	Tobacco	(If any)	Tobacco Status	21-25	<21	Total Members
Employee 1	60	No	60	Yes	0	0	2
Employee 1	40	No	30	No	0	1	3
Employer 2:							
Geographic area 2							
Silver plan							
Employee 1	30	No			0	4	5
							10
	Area	Factor					
	1	1.2					
	2	0.8					
Tobacco Factor:		1.2 (all ages)					

Note that there is one tobacco user projected and Employee 1 at Employer 2 has four dependent children under age 21, so rates can only be collected for three of those dependent children. Thus,

this issuer is projecting that one-tenth of its membership will be tobacco users and one-tenth will be dependent children with no revenue being charged.

In this illustrative example, the projected allowed claims for this population = $37,920.00, so the projected index rate = 37,920/(10 members for 12 months) = $316.00 PMPM.

The three market level adjustments include the following:
- Reinsurance payments and charges = 0 for a factor of 1.0
- Risk adjustment payments and charges = 0 for a factor of 1.0
- User exchange fee = $3.00 PMPM additional cost for a factor of $1 + 3/316 = 1.0095$

Therefore, the MAIR = $316.00 x 1.0 x 1.0 x 1.0095 = $319.00 under the current methodology.

Calibration under the current methodology is calculated as averages of the number of members at each age/geography/tobacco status as follows:

Calibration for Each - CCIIO Current Method			
	Age Factor	Area	Tobacco
Member 1	2.714	1.2000	1.0000
Member 2	2.714	1.2000	1.2000
Member 3	1.278	1.2000	1.0000
Member 4	1.278	1.2000	1.0000
Member 5	0.635	1.2000	1.0000
Member 6	1.135	0.8000	1.0000
Member 7	0.635	0.8000	1.0000
Member 8	0.635	0.8000	1.0000
Member 9	0.635	0.8000	1.0000
Member 10	0.000	0.8000	1.0000
	1.1659	1.0000	1.0200

This method does not reflect the weighting of the pre-calibrated PAIRs, nor does it reflect that the three allowable rating factors of age, geography, and tobacco status are multiplicative. As such, we believe this is not the best method to determine calibration.

The following steps are taken to calculate the PAIR:
1. AV and cost-sharing adjustment, which includes an adjustment for tobacco of 1.02 in this example.
2. Provider network and care management factor, which in this case is also 1.0, because there is only one network and one care management method.
3. Benefits in addition to EHBs, which in this case is zero.
4. Administrative and distribution costs, which in our example is 10 percent of premium (note that the user exchange fee has already been included in the MAIR.)
5. Catastrophic plan adjustment, which in this case is 1.0, because this issuer is not offering a catastrophic plan, because it is not available for group business.

Therefore, the PAIR for each plan using the current methodology is calculated as noted in the table below:

Plan Adjusted Index Rate (prior to calibration except for tobacco)					
	Weighted Average	Gold Plan	Silver Plan	Source	
A. Member months		60	60	Assumption	
B. Market Adjusted Index Rate		$319.00	$319.00	Calculated above	
Plan-level adjustments:					
C. AV and cost sharing		0.7769	0.6798	simplified for example- apply 80% and 70% to allowed amounts; includes tobacco adjustment	
D. Provider network		1.0	1.0	Assumption	
E. Benefits in addition to EHB		None	None	Assumption	
F. Administrative costs		10%	10%	Assumption	
G. Catastrophic		None	None	None offered by this company	
H. Plan Adjusted Index Rate	$258.17	$275.38	$240.96	(B)x(C)x(D)/(1-(F))	

Because the PAIR equals the average premium rate for non-tobacco users, the monthly premium expected to be collected for this projected population under this example is ($275.38 x 5 members + $240.96 x 5 members) x tobacco calibration of 1.02 = $2,633.33.

A basic principle of rating is that the revenue collected should be enough to cover projected paid claims (that is allowed claims less member cost share) plus administrative expenses, including taxes and fees and a reasonable profit margin. Rates resulting in less revenue than this would be inadequate, and rates resulting in more revenue would be excessive.

Under the current methodology, the next step after the PAIR is calculated is to develop the age calibration and the geographic calibration such that appropriate consumer adjusted premium rates are determined. Based on the current methodology, using the factors above, the consumer adjusted premiums rates would be as follows:

Consumer Adjusted Premium Rate									
	(A) Pre-Calibrated Plan Adjusted Index Rate	(B) Age Calibration	(C) Area Calibration	(D)=(A)/(B)/(C) Calibrated PAIR	(E) Age Factor	(F) Area Factor	(G) Tobacco Factor	(H)=(D)x(E)x(F)x(G) Consumer Adjusted Premium Rate	
Member 1	$275.38	1.1659	1.0000	$236.20	2.714	1.200	1.000	$769.24	
Member 2	$275.38	1.1659	1.0000	$236.20	2.714	1.200	1.200	$923.09	
Member 3	$275.38	1.1659	1.0000	$236.20	1.278	1.200	1.000	$362.23	
Member 4	$275.38	1.1659	1.0000	$236.20	1.278	1.200	1.000	$362.23	
Member 5	$275.38	1.1659	1.0000	$236.20	0.635	1.200	1.000	$179.98	
Member 6	$240.96	1.1659	1.0000	$206.67	1.135	0.800	1.000	$187.66	
Member 7	$240.96	1.1659	1.0000	$206.67	0.635	0.800	1.000	$104.99	
Member 8	$240.96	1.1659	1.0000	$206.67	0.635	0.800	1.000	$104.99	
Member 9	$240.96	1.1659	1.0000	$206.67	0.635	0.800	1.000	$104.99	
Member 10	$240.96	1.1659	1.0000	$206.67	0	0.800	1.000	$0.00	
Total								$3,099.41	
Amount actually needed								$2,633.33	
							Ratio:	1.177	too high

As can be seen in this example, using the current calibration methodology results in projected revenue being collected at 17.7 percent too high. Other examples could show rates being too low, as well.

Changing the calibration to occur at the MAIR level using the same calibration methodology, as proposed in the 2018 NBPP, does not correct this problem, as the example below shows.

III. Proposed 2018 NBPP						
Market Adjusted Index Rate prior to Calibration	$319.00	(From above)				
Calibration for Age	1.1659	(From above)				
Calibration for Geography	1.0000	(From above)				
Calibration for Tobacco	1.0200	(From above)				
Market Adjusted Index Rate (after Calibration)	$268.24					
Plan Adjusted Index Rate						
	Weighted Average	Gold Plan	Silver Plan	Source		
A. Member months		60	60	Assumption		
B. Calibrated Market Adjusted Index Rate		$268.24	$268.24	From above		
Plan-level adjustments:						
C. AV and cost sharing		0.7925	0.6934	No longer includes tobacco adjustment		
D. Provider network		1.0	1.0	Assumption		
E. Benefits in addition to EHB		None	None	Assumption		
F. Administrative costs		10%	10%	Assumption		
G. Catastrophic		None	None	None offered by this company		
H. Plan Adjusted Index Rate	$221.43	$236.20	$206.67	Matches Calibrated PAIR under current method		
Consumer Adjusted Premium Rate						
	(A)	(B)	(C)	(D)	(E)=(A)x(B)x(C)x(D)	
	Plan Adjusted Index Rate	Age Factor	Area Factor	Tobacco Factor	Consumer Adjusted Premium Rate	
Member 1	$236.20	2.714	1.2000	1.000	$769.24	
Member 2	$236.20	2.714	1.2000	1.200	$923.09	
Member 3	$236.20	1.278	1.2000	1.000	$362.23	
Member 4	$236.20	1.278	1.2000	1.000	$362.23	
Member 5	$236.20	0.635	1.2000	1.000	$179.98	
Member 6	$206.67	1.135	0.8000	1.000	$187.66	
Member 7	$206.67	0.635	0.8000	1.000	$104.99	
Member 8	$206.67	0.635	0.8000	1.000	$104.99	
Member 9	$206.67	0.635	0.8000	1.000	$104.99	
Member 10	$206.67	0	0.8000	1.000	$0.00	
Total					$3,099.41	
Amount actually needed					$2,633.33	
				Ratio:	1.177	too high

Either way, you get the same result using the current method of calibration.

To correct the calibration, we recommend not including the tobacco adjustment as part of the plan AV value, as currently required, and developing a pre-calibrated PAIR as follows:

IV. Correcting for Calibration Error					
Market Adjusted Index Rate (not calibrated)	$319.00				
	Weighted Average	Gold Plan	Silver Plan	Source	
A. Member months		60	60	Assumption	
B. Market Adjusted Index Rate		$319.00	$319.00	Calculated above	
Plan-level adjustments:					
C. AV and cost sharing		0.7925	0.6934	No longer includes tobacco adjustment	
D. Provider network		1.0000	1.0000	Assumption	
E. Benefits in addition to EHB		None	None	Assumption	
F. Administrative costs*		0.1000	0.1000	Assumption	
G. Catastrophic		None	None	None offered by this company	
H. Pre-Calibrated Plan Adjusted Index Rate	$263.33	$280.89	$245.78	(B)x(C)x(D)/(1-(F))	

The order of calibration when done using the recommended approach described below does not matter. In this illustrative example, we start with the age calibration, followed by the geographic calibration, and then the tobacco calibration. The age calibration is determined by multiplying each member's age factor from the standard age curve by each member's pre-calibrated PAIR. This amount is summed and divided by the sum of the pre-calibrated PAIR to get a weighted average age factor of 1.2031, as shown below. The weighted average age factor of 1.2031 is the calibration factor used in the development of the consumer-adjusted premium rate.

	(A) Pre-Calibrated Plan Adjusted Index Rate	(B) Age Factor	(C) Age Calibration
Member 1	$280.89	2.714	1.2031
Member 2	$280.89	2.714	1.2031
Member 3	$280.89	1.278	1.2031
Member 4	$280.89	1.278	1.2031
Member 5	$280.89	0.635	1.2031
Member 6	$245.78	1.135	1.2031
Member 7	$245.78	0.635	1.2031
Member 8	$245.78	0.635	1.2031
Member 9	$245.78	0.635	1.2031
Member 10	$245.78	0.000	1.2031
Total	$2,633.33		
Weighted Average Factor:		1.2031	
		$=\sum(A)x(B)/(\sum A)$	

In this example, calibration for geographic area is done after the age calibration, but must account for the age calibration, as these allowable rating factors are multiplicative. Not to account for the effect of the age factors and calibration would not result in an appropriate premium. Here, the geographic calibration is determined by multiplying the PAIR by each

member's age factor divided by the age calibration, multiplied by the area factor. That amount is summed and divided by the sum of the PAIR times the age factors divided by the age calibration (which in this case is the same as the sum of the PAIR due to the way age calibration was performed).

	(A) Pre-Calibrated Plan Adjusted Index Rate	(B) Age Factor	(C) Age Calibration	(D)=(A)x(B)/(C) Interim Step for age calibration	(E) Area Factor	(F) Area Calibration
Member 1	$280.89	2.714	1.2031	$633.64	1.2000	1.1057
Member 2	$280.89	2.714	1.2031	$633.64	1.2000	1.1057
Member 3	$280.89	1.278	1.2031	298.38	1.2000	1.1057
Member 4	$280.89	1.278	1.2031	298.38	1.2000	1.1057
Member 5	$280.89	0.635	1.2031	148.25	1.2000	1.1057
Member 6	$245.78	1.135	1.2031	$231.87	0.8000	1.1057
Member 7	$245.78	0.635	1.2031	$129.72	0.8000	1.1057
Member 8	$245.78	0.635	1.2031	$129.72	0.8000	1.1057
Member 9	$245.78	0.635	1.2031	$129.72	0.8000	1.1057
Member 10	$245.78	0.000	1.2031	$0.00	0.8000	1.1057
Total	$2,633.33			$2,633.33		
Weighted Average Factor:		1.2031			1.1057	
		$=\sum(A)x(B)/(\sum A)$			$=\sum(D)x(E)/(\sum D)$	

Then finally, the tobacco calibration is done in a similar manner, reflecting the effect of each of the previous factors, such that the total revenue remains unchanged due to the application of the rating factors and calibration.

	(A) Pre-Calibrated Plan Adjusted Index Rate	(B) Age Factor	(C) Age Calibration	(D)=(A)x(B)/(C) Interim Step for age calibration	(E) Area Factor	(F) Area Calibration	(G)=(D)x(E)/(F) Interim Step for age and area calibration	(H) Tobacco Factor	(I) Tobacco Calibration	(J)=(G)x(H)/(I) Consumer Adjusted Premium Rate
Member 1	$280.89	2.714	1.2031	$633.64	1.2000	1.1057	$687.71	1.0000	1.0522	$653.57
Member 2	$280.89	2.714	1.2031	$633.64	1.2000	1.1057	$687.71	1.2000	1.0522	$784.28
Member 3	$280.89	1.278	1.2031	298.38	1.2000	1.1057	$323.83	1.0000	1.0522	$307.76
Member 4	$280.89	1.278	1.2031	298.38	1.2000	1.1057	$323.83	1.0000	1.0522	$307.76
Member 5	$280.89	0.635	1.2031	148.25	1.2000	1.1057	$160.90	1.0000	1.0522	$152.92
Member 6	$245.78	1.135	1.2031	$231.87	0.8000	1.1057	$167.77	1.0000	1.0522	$159.44
Member 7	$245.78	0.635	1.2031	$129.72	0.8000	1.1057	$93.86	1.0000	1.0522	$89.20
Member 8	$245.78	0.635	1.2031	$129.72	0.8000	1.1057	$93.86	1.0000	1.0522	$89.20
Member 9	$245.78	0.635	1.2031	$129.72	0.8000	1.1057	$93.86	1.0000	1.0522	$89.20
Member 10	$245.78	0.000	1.2031	$0.00	0.8000	1.1057	$0.00	1.0000	1.0522	$0.00
Total	$2,633.33			$2,633.33			$2,633.33			$2,633.33
Weighted Average Factor:		1.2031			1.1057				1.0522	Matches revenue that should be collected.
		$=\sum(A)x(B)/(\sum A)$			$=\sum(D)x(E)/(\sum D)$				$=\sum(G)x(H)/(\sum G)$	

Note: It doesn't matter which item is used first in the calibration process, as long as you don't change the required revenue.

Thus, we recommend developing calibration using this method, applying it to the pre-calibrated PAIR to calculated calibrated PAIRs (all at factors = 1.0), and then the rating would be as follows:

Calibrated Plan Adjusted Index Rate				
	Weighted Average	Gold Plan	Silver Plan	Source
A. Member months		60	60	Assumption
B. Market Adjusted Index Rate		$319.00	$319.00	From above
Plan-level adjustments:				
C. AV and cost sharing		0.792476	0.693417	apply 80% and 70% only to allowed amounts
D. Provider network		1.0	1.0	Assumption
E. Benefits in addition to EHB		None	None	Assumption
F. Administrative costs*		10%	10%	
G. Catastrophic		None	None	None offered by this company
H. Plan Adjusted Index Rate prior to Calibration	$263.33	$280.89	$245.78	
I. Calibration for Age		1.2031	1.2031	see calculation above-note uniform values
J. Calibration for Geography		1.1057	1.1057	
K. Calibration for Tobacco		1.0522	1.0522	
L. Calibration Adjusted PAIR at 1.0 factors	$188.14	$200.68	$175.59	

Note that each of the calibration factors is applied to each plan in a uniform, market-based method.

Premium Rates					
	(A)	(B)	(C)	(D)	(E) = (A)x(B)x(C)x(D)
	Calibrated PAIR	Age Factor	Area Factor	Tobacco Factor	Premium Rate
Member 1	$200.68	2.7140	1.2000	1.0000	$653.57
Member 2	$200.68	2.7140	1.2000	1.2000	$784.28
Member 3	$200.68	1.2780	1.2000	1.0000	$307.76
Member 4	$200.68	1.2780	1.2000	1.0000	$307.76
Member 5	$200.68	0.6350	1.2000	1.0000	$152.92
Member 6	$175.59	1.1350	0.8000	1.0000	$159.44
Member 7	$175.59	0.6350	0.8000	1.0000	$89.20
Member 8	$175.59	0.6350	0.8000	1.0000	$89.20
Member 9	$175.59	0.6350	0.8000	1.0000	$89.20
Member 10	$175.59	0.0000	0.8000	1.0000	$0.00
Total monthly premium rate					$2,633.33
Monthly revenue needed					$2,633.33
Ratio					1.0000

Our recommended approach eliminates errors caused by the current calibration methodology, is applied on a market wide basis (same factors for all plans), and results in plan adjusted index rates that are calibrated to rating factors of 1.0 for all three rating factors.

<center>*****</center>

We appreciate the opportunity to provide these comments and would welcome the opportunity to discuss them with you in more detail. If you have any questions or would like to discuss further, please contact Heather Jerbi, the Academy's assistant director of public policy, at 202-785-7869 or Jerbi@actuary.org.

Sincerely,

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