Date: January 16, 2015

RE: Final 2016 Actuarial Value Calculator Methodology

Introduction

Under the Essential Health Benefits, Actuarial Value, and Accreditation final rule (EHB Final Rule) that was published in the Federal Register at 78 FR 12834 on February 25, 2013, the Department of Health and Human Services (HHS) requires use of an Actuarial Value (AV) Calculator by issuers of non-grandfathered health insurance plans offered in the individual and small group markets, both inside and outside of the Affordable Insurance Exchanges (also called "Marketplaces") for the purposes of determining levels of coverage. Section 1302(d)(2)(A) of the Affordable Care Act stipulates that AV be calculated based on the provision of essential health benefits (EHB) to a standard population. The statute groups health plans into four tiers: bronze, with an AV of 60 percent; silver, with an AV of 70 percent; gold, with an AV of 80 percent; and platinum, with an AV of 90 percent. The EHB Final Rule establishes that a de minimis variation of +/- 2 percentage points of AV is allowed for each tier.[1]

The AV Calculator represents an empirical estimate of the AV calculated in a manner that provides a close approximation to the actual average spending by a wide range of consumers in a standard population. This document is meant to detail the specific methodologies used in the AV calculation.

This document is revised from the 2015 version and also updated from the draft 2016 version, released on November 21, 2014, in response to comments received. Specifically, this document incorporates updates to account for the final 2016 AV Calculator. The first part of this document provides background that includes an overview of the regulation that allows HHS to make updates to the AV Calculator as well as the updates that are incorporated into the final 2016 AV Calculator. For the second part of the document, we provide a detailed description of the development of the standard population and the AV Calculator methodology.   The first section details the data and methods used in constructing the continuance tables that are used to calculate AV in combination with the user inputs. The second section describes the AV Calculator interface and the calculation of actuarial value based on the interface and the continuance tables. The final 2016 AV Calculator is available at: http://www.cms.gov/cciio/resources/regulations-and-guidance/index.html. We note that this does not affect any 2015 plans and is only applicable for 2016 plans.

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[1] Under §156.400, the de minimis variation for cost-share reduction plans is a single percentage point.

Summary of Comments

In late 2014, we solicited comments on a draft version of this document, as well as the draft 2016 AV Calculator and the draft 2016 AV Calculator User Guide. In response to comments, we have made some edits to both the AV Calculator User Guide and Methodology documents to provide additional clarification on the operation and function of the AV Calculator, as well as some minor technical corrections to the AV Calculator.

Part I: Background

Regulatory Background

This document, along with the 2014 Actuarial Value (AV) Calculator and the 2014 AV Calculator User Guide, was originally incorporated by reference in the EHB Final Rule and comprises part of the final rule for determining actuarial value at 45 CFR 156.135. A revised version of this document for 2015, along with the 2015 AV Calculator and 2015 AV Calculator User Guide, was incorporated by reference in the final rule, *Patient Protection and Affordable Care Act; HHS Notice of Benefit and Payment Parameters for 2015* (2015 Payment Notice), published in the Federal Register at 79 FR 13744 (March 11, 2014). For 2016, this document, along with the final 2016 AV Calculator and AV Calculator User Guide, are being updated through guidance under the parameters established at 45 CFR 156.135(g).

In the 2015 Payment Notice, we finalized the following parameters for HHS to update the AV Calculator in future plan years under § 156.135(g) that may include:
1. Updates to the annual limit on cost sharing and related functions based on a projected estimate to enable the AV Calculator to comply with 45 CFR 156.130(a)(2);
2. Updates to the continuance tables to reflect more current enrollment data when HHS has determined that the enrolled population has materially changed;
3. Updates to the algorithms when HHS has determined the need to adapt the AV Calculator for use by additional plan designs or to allow the AV Calculator to accommodate potential new types of plan designs, where such adaptations can be based on actuarially sound principles and will not have a substantial effect on the AV calculations performed by the then current AV Calculator;
4. Updates to the continuance tables to reflect more current claims data no more than every 3 and no less than every 5 years and to annually trend the claims data when the trending factor is more than 5 percent different, calculated on a cumulative basis; and
5. Updates to the AV Calculator user interface when a change would be useful to a broad group of users of the AV Calculator, would not affect the function of the AV Calculator, and would be technically feasible.

As discussed in the preamble of the 2015 Payment Notice, when we update the AV Calculator annually, we will release a draft version of the AV Calculator for comment that will include a draft AV Calculator Methodology and User Guide to explain the updates. As part of the process to update the AV Calculator, we also will consult with the American Academy of Actuaries (AAA) and the National Association of Insurance Commissioners (NAIC) on needed changes and take in consideration other comments received from stakeholders.

Overview of the Updates Incorporated into the Final 2016 AV Calculator

This section details the key changes made to the AV Calculator between the final 2015 AV Calculator and the final 2016 AV Calculator. For the 2015 AV Calculator, we proposed updates to the AV Calculator that were not finalized. Instead, we finalized the 2014 AV Calculator as the 2015 AV Calculator with an updated estimated annual limitation on cost sharing to help ensure that issuers did not have to make benefit changes between year 1 and year 2. Therefore, throughout this document, references to the 2014 AV Calculator are applicable to the 2015 AV Calculator. The AV estimates produced by previous or draft versions of the AV Calculator are not valid for use for 2016. Only the final 2016 AV Calculator may be used for the 2016 plans.[2]

The updates described in this section are similar to updates proposed in the 2015 AV Calculator Methodology that were not implemented. The following is a description and explanation of these updates.

Under § 156.135(g)(1), the 2016 AV Calculator incorporates an annual limit on cost sharing based on a projected estimate to enable the AV Calculator to comply with 45 CFR 156.130(a)(2). For the 2016 AV Calculator, the projected estimates of the maximum out of pocket costs (MOOP) limit and related functions have been set at $6,850, to account for the estimated 2016 annual limitation on cost-sharing. The final 2016 annual limitation on cost sharing will be defined by the annual HHS notice of benefit and payment parameters final rule. Issuers that are required to meet AV standards must substitute the limit established in the regulation for the projected estimates stated in the final 2016 AV Calculator.

Under § 156.135(g)(2), we state that we will update the continuance tables to reflect more current enrollment data when HHS has determined that the enrolled population has materially changed. In developing the 2016 AV Calculator, we considered a variety of data source options for updating the enrollment distribution. Ultimately, we determined that current available data sources did not include complete individual and small group market enrollment for 2014. As a result, we decided not to update based on enrollment changes for 2016, but we will consider updates to the enrollment distribution for the 2017 AV Calculator.

For updates under § 156.135(3) and (5), we used the originally proposed 2015 AV Calculator updates as the basis for the 2016 AV Calculator updates. These updates, which were generally supported by stakeholders, were developed based on actuarially sound principles that would not have a substantial effect on the AV calculations performed by the then current AV Calculator or were updates to the user interface when a change would be useful to a broad group of users of the AV Calculator, would not affect the function of the AV Calculator, and would be technically feasible. Because these updates were incorporated into the proposed 2015 AV Calculator, we have already received comments on these updates and, as stated in the 2015 Payment Notice, we took these comments under consideration when we were developing the 2016 AV Calculator.

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[2] 45 CFR 156.135 states "*Calculation of AV.* Subject to paragraphs (b) and (d) of this section, to calculate the AV of a health plan, the issuer must use the AV Calculator developed and made available by HHS for the given benefit year."

A key change included in the 2016 AV Calculator is the use of effective coinsurance to determine when the MOOP limit is reached in the AV Calculator instead of the general coinsurance rate. Effective coinsurance is defined as the net impact of the plan benefit design unit cost features (copayments and coinsurance rates) expressed as an overall percentage benefit to an enrollee across all covered services. In the final 2014 and 2015 releases, the AV Calculator used the user-specified general coinsurance rate to calculate the level of spending at which an enrollee would reach the MOOP. With the effective coinsurance change, this calculation is simplified by automatically incorporating all elements of the plan benefit design into the calculation of the level of spending at which the MOOP is reached. This change, which is based on actuarially sound principles, allows the AV Calculator to apply 100 percent coinsurance for both copayment based and non-copayment based plans instead of only allowing the user to apply 100 percent coinsurance for copayment based plans. As a result, this change adds additional functionality to the AV Calculator and addresses a frequent comment that we received regarding the 2014 and 2015 AV Calculators. This effective coinsurance change is accompanied by a change in the default operation of the AV Calculator when the user leaves the copayment field blank. The 2014 and 2015 AV Calculators applied a $0 copayment to select parts of the service category if the copay field was left blank, but stakeholders commented that this feature was not intuitive to the user. To help simplify the operation of the AV Calculator for the user, the 2016 AV Calculator applies a $0 copayment for the entire service category when the field is left blank.[3] By making the effective coinsurance change, we are also able to make improvements to the algorithms in the AV Calculator to address comments received by stakeholders regarding the application of the general coinsurance rate for prescription drugs. With the effective coinsurance algorithm, the 2016 AV Calculator produces the same results when a general coinsurance rate is specified for drugs and when the same coinsurance rates are specified for individual drug tiers. Also, as part of this effective coinsurance change, an adjustment is made to the AV Calculator's algorithms to use the inpatient per day quantity in calculating the level of spending at which the MOOP is reached, rather than any limited quantity specified by limiting the number of inpatient copays. The inpatient per day quantity is the average number of inpatient days per enrollee with no upper limit on the number of inpatient days enforced. This is in contrast to a method which would impose a maximum on the number of inpatient days for a given enrollee before calculating the average number of inpatient days per enrollee. This change allows a more reliable comparison of AV for plans with and without that feature.

In response to the proposed 2015 AV Calculator, we found that commenters were supportive of the change to the effective coinsurance rate. However, a small number of plans may experience larger shifts in AV when applying 100 percent coinsurance in the final 2014 and 2015 Calculators versus the final 2016 AV Calculator. This unintuitive behavior can occur when a user may have mistakenly used 100 percent coinsurance in the final 2014 or 2015 AV Calculators for a plan benefit design that was not sufficiently copayment based to be deemed a copayment only plan. The 2016 AV Calculator algorithm eliminates this source of user error.

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[3] The exception to this operation is for Primary Care and Specialist Office Visits that have special cost-share provisions for their component parts for X-ray services being performed in the office setting. In these cases, the copayment field being left blank or being set at $0 is applied differently to take into account whether the component part is being included with no cost-sharing.

We also received a comment requesting additional information on how entering certain plan designs in different ways into the AV Calculator could yield slightly different AVs. The implementation of the effective coinsurance feature means that user inputs affect AV dynamically. The utilization of effective coinsurance implies that subjecting a benefit to the general coinsurance may give a different AV versus using a specific coinsurance for individual benefits. Although in both cases the effective coinsurance rate is identical, when subjecting a service to the general coinsurance the effective coinsurance rate is used whereas when subjecting a service to a user-provided specific coinsurance the user-provided rate is used. This may result in slight variation in AVs for what appears to be the same benefit design.

The dynamic interaction between user-inputs and effective coinsurance can cause fractional shifts in AV in unexpected directions in cases where a service has a large proportion of the utilization in the deductible range; this is especially true of primary care and specialist office visits. This interaction is caused by an increase in the effective coinsurance rate causing the MOOP to be achieved at a later point of spending, an increase in the level of spending at which the deductible is met due to greater coverage of service in the deductible range, or an increased overall MOOP because of fewer copays occurring during the deductible range. Similarly, large shifts in user-provided coinsurance rates for services with a large proportion of overall utilization can cause shifts in AV in unexpected directions due to the increase in effective coinsurance rate causing the MOOP to be achieved at a later point of spending; this interaction is especially true of inpatient hospital and emergency room services. The utilization of effective coinsurance allows for an accurate representation of user inputs during the coinsurance range.   As noted in the final 2016 AV Calculator User Guide, designating a "Coinsurance, if Different" rate is for cases where the coinsurance rate is in fact different from the general coinsurance rate of the plan.

To allow more plan designs to use the AV Calculator, we also added functionality to the 2016 AV Calculator in several areas. First, for plans with separate medical/drug deductibles and separate medical/drug MOOPs, the 2016 AV Calculator supports MOOPs between the individual separate deductible and the MOOP limit, even if the MOOP entered is lower than the sum of the separate medical and drug deductibles. The 2016 AV Calculator also allows plans with separate medical and drug deductibles and combined MOOPs to have MOOPs lower than the sum of the medical and drug deductibles. If the sum of the medical and drug deductibles is greater than the combined MOOP, the AV Calculator assumes that the full medical deductible is satisfied and adjusts the effective drug deductible if needed. Both of these changes were made based on comments received from stakeholders that wanted more flexibility in inputting the key cost-sharing parameters of plan designs into the AV Calculator. For clarification, we also added an error message when the MOOP equals the deductibles and there is a coinsurance rate below 100 percent. Because there is no coinsurance range in the AV Calculator when the deductibles equal the MOOP, these types of plans should reflect only 100 percent coinsurance since there is no coinsurance rate being applied. Also, as clarification, copays are applied normally during the deductible range for these plans if the user indicates such a benefit structure in the plan benefit design. A feature was also added to allow services to be applied to the deductible first, and then copayments. This feature was added based on comments received to allow more flexibility in the application of copayments in the AV Calculator.

Additionally, certain other minor modifications were made to the 2016 AV Calculator. These modifications included a change to the calculation of the per-member-per-year benefit at the level of spending at which MOOP is reached in the case of a separate medical/drug deductible and combined MOOP to no longer calculate the drug benefit as exclusive from medical benefit. This modification is intended to address a frequent comment that we receive regarding the operation of the drug deductible. This change aligned the calculation of the benefit after a deductible has been met with the calculation done in the case of combined deductibles. The purpose of this modification is to simplify the calculation with fewer steps and thereby reduce the potential for improper interaction with the algorithms to allow more plans designs to use the AV Calculator. Other modifications included treating skilled nursing facility benefits below $10,000 in total allowed charges as $0 to avoid fluctuations in AV due to erratic utilization patterns, and to prevent improper interaction with the algorithms in the AV Calculator.

In response to these changes that were included in the proposed 2015 AV Calculator, several commenters noted concerns about the application of the cap on the service unit costs and we received a comment regarding switching between metal tiers. In the case that a copayment is being applied with the remainder of the service unit cost applying to the deductible, the copayment being applied to raise the level of spending at which the deductible is met is now being limited to the total service unit cost. This modification in the 2016 AV Calculator aligns this treatment of copays with the case where the remainder of the service unit cost net of copays is a benefit to the enrollee and was previously incorporated in the 2014 and 2015 AV Calculators. Additionally, the copayment for services with zero utilization at the point at which the effective coinsurance is calculated will now be limited to the mean service unit cost of the entire distribution allowing for more accurate calculation of AVs involving services with low utilization and zero deductible plans. We also received comments on the proposed 2015 AV Calculator regarding slightly inconsistent results when automatically switching between metal tiers. This was being caused by incorrectly retaining the variable containing the level of spending at which MOOP is met between iterations and has been fixed for the 2016 AV Calculator.

We also included a few updates in the 2016 AV Calculator from the proposed 2015 AV Calculator to assist users, including changing the AV output from one decimal place to two decimal places to match the Plans and Benefits Template that uses an integrated version of the AV Calculator. The purpose of this change is to help reduce user confusion when comparing templates and understanding the results of the AV Calculator. This change does not affect the estimates produced by the AV Calculator. Although the displayed total is rounded to the nearest hundredth, only the exact point estimate produced by the AV Calculator determines whether or not a plan is within the de minimis variation permitted for a given metal tier. A feature was also added for users to save their AV calculation output with a customizable prefix tab. The feature is intended to assist users and save them time in developing their AV calculations. A pop-up window is included in the 2016 AV Calculator for users inputting cost-sharing reduction (CSR) plans to direct users to select the CSR metal tier level. This feature was added to make this selection more intuitive to the user. Updates to the User Guide and pop-up boxes are included in the 2016 AV Calculator to assist users in understanding the functionality of the AV Calculator and to help provide technical assistance in inputting different types of plan designs. Lastly, we unlocked the AV Calculator in response to comments received about the proposed 2015 AV

Calculator. This allows users to view the source code for the AV Calculator algorithm as has been the case for both the final 2014 and 2015 AV Calculators. Note that the workbook structure is also unlocked so that users may make copies of output tabs. However, users should not move or copy the original "AV Calculator" tab, as doing so will result in calculation errors for subsequent runs. This added functionality should only be used after reviewing the relevant instructions contained in the 2016 AV Calculator User Guide. Additionally, users should not reveal hidden rows in the "AV Calculator" tab. Doing so invalidates the AV estimates produced by the AV Calculator due to the potential introduction of calculation errors.

In response to the proposed 2015 AV Calculator, commenters were generally supportive of the above updates to the algorithms based on HHS's determination for the need to adapt the AV Calculator for use by additional plan designs or to allow the AV Calculator to accommodate potential new types of plan designs, as well as the above updates to the user interface. All of the above updates under § 156.135(g)(3) were implemented with the intention to not have a substantial effect on the AV calculations performed by the then current AV Calculator. In addition to the updates that we made, we also received a variety of comments and stakeholder feedback on additional changes to better improve the algorithms and the user interface. While we considered these comments, we did not implement these changes in the 2016 AV Calculator due to our desire to limit the changes between the 2016 version and 2015 version of the AV Calculator. Specifically, we found that several of the algorithm recommendations where either too complex to implement or would require a claims data refresh to implement. For the user interface recommendations, we were concerned that some of the recommendations might be confusing for certain groups of AV Calculator users. Regardless, we intend to take these comments under consideration in developing future versions of the AV Calculator.

We received similar comments regarding the draft 2016 AV Calculator. Specifically, we received comments regarding when the data is refreshed in the AV Calculator in future years, recommendations for updates to the user interface, and comments about the process for future updates. As a result of the comments received on the draft 2016 AV Calculator, we made some technical corrections in the final 2016 AV Calculator. These technical corrections included two changes to the x-ray portion of the effective coinsurance calculation. We removed a double-counting of the unclassified portion of x-rays from the effective coinsurance algorithm in the cases where the x-ray services are split into primary care and specialty components. Additionally, the draft 2016 AV Calculator was not counting the unclassified portion of x-rays when x-rays were not subject to a coinsurance or copay and either primary care or specialist visits were not subject to a coinsurance. This has been corrected by no longer splitting the x-rays into its component parts when x-rays are not subject to a coinsurance because this qualifies as a "special cost-sharing provision" per the User Guide's instructions.

We also corrected a runtime error by preventing the calculator from dividing by zero in a specific case where the effective coinsurance was arbitrarily close to one and corrected two proration variable references in the HSA portion of the code. Because our technical corrections were limited, most plans will not see an AV impact between the draft and final versions of the 2016 AV Calculator and of those plans that are impacted, the AV change should be relatively minor. We also note that the May 16, 2014 FAQs clarify that issuers must always use an actuarially

justifiable process when inputting their plan designs into the AV Calculator[4] and that the AV Calculator is intended to establish a comparison tool and was not developed for pricing purposes.

Finally, one of the new updates in the 2016 AV Calculator, which was not in the proposed 2015 AV Calculator, is an update to the trend in the claims data in the AV Calculator to account for 2015 and 2016. Under § 156.135(g)(4), we state that we will consider annually trending the claims data when the trending factor is more than 5 percent different, calculated on a cumulative basis. Specifically, the underlying continuance tables for the 2016 AV Calculator have been updated to account for the claim costs being trended forward an additional two years from the final 2015 AV Calculator, which was based on estimated 2014 claim costs, at a rate of 6.5 percent per annum. We developed the trend factor based on an analysis of aggregated premium rate data collected through the Unified Rate Review Templates (URRT) for 2014 and 2015. These data were representative of the individual and small group market and accounted for other actuarial adjustments, such as the impact of transitional reinsurance. This 6.5 percent trend estimate reflects the projected claims distribution changes to the standard population that would be enrolled in metal level plans, and was estimated specifically for use with the AV calculator only. We believe this estimate is consistent with current industry estimates. However, we note that some available data, particularly for broader employer-sponsored coverage, have shown slower growth in total medical expenditures. We sought comment on whether such estimates are applicable in this context, and on whether there are other published data or projections that could be taken into consideration for estimates for future years. In response to the draft 2016 AV Calculator, the comments generally agreed with the trending rate being applied in the AV Calculator to account for 2015 and 2016. We also received comments for future consideration regarding the trending factor and the updating of the claims data. This change in the trend estimate affects all current AVs in the 2016 AV Calculator.

Based on comments and updates detailed in this Section, we have updated the rest of this document and the User Guide in accordance with the final 2016 AV Calculator methodologies and operations.

Part II: AV Calculator's Methodology and Operation

Data Sources and Methods

This section describes the data and methods used to create the building blocks of the AV Calculator, including the development of the standard population. The inputs for AV calculation are information on utilization, cost-sharing and total costs for health services for a standard population of health plan enrollees resembling those that were likely to be covered by individual and small group market health insurance in 2014; the standard population developed for 2014 is not modified for the 2016 AV Calculator. This information is used to create a series of continuance tables that describe the distribution of claims spending for a population of health insurance users that we refer to as the standard population. The standard population is the basis for these continuance tables from a utilization perspective.

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[4] See Frequently Asked Questions on Health Insurance Market Reforms and Marketplace Standards (Question 3) http://www.cms.gov/CCIIO/Resources/Fact-Sheets-and-FAQs/Downloads/Final-Master-FAQs-5-16-14.pdf.

Because spending is affected by plan design through induced demand, the claims data are used to develop four sets of continuance tables, based on bronze, silver, gold and platinum plan designs. The AV Calculator estimates the actuarial value of a plan design based on the aggregated data contained in the four sets of continuance tables representing each plan's metal tier.

The remainder of this document outlines the process for creating and using each of these components in turn. The first section describes the large national claims database that is used as the basis to develop the standard population. In addition, preliminary adjustments to that database are described in the first section. The second section explains the process for adjusting and supplementing the claims data in the national database to better estimate the individual and small group markets in 2014 to develop the standard population. The third section describes the methodology for using the claims database to develop the continuance tables. Finally, the last section details the process for accounting for spending and utilization of certain EHB that are poorly represented in the database.

<u>National Database</u>

To provide information on utilization and cost sharing for a standard population of enrollees, HHS began with claims data from the Health Intelligence Company, LLC (HIC) database for calendar year 2010. This commercial database includes detailed enrollment and claims information for individuals who are members of several regional insurers and covers over 54 million individuals enrolled in individual and group health plans. A database including enrollees in small group plans is desirable because 83 percent[5] of small group plans do not offer multiple choices of plans, reducing selection bias between plans. Including claims in the small group market permits the continuance tables to be based on induced demand assumptions that reflect plan design options available in 2014, particularly the bronze and silver options that are described in 45 CFR 156.140. In addition, large group health plans tend to have gold and platinum level benefit generosity, and data on these plans offer information about gold and platinum plan design options. As described below, several adjustments were made to this data to more closely represent the expected population of enrollees in 2014 and these adjustments are included in the 2016 AV Calculator.

Since descriptions of the plan benefit design characteristics were not included in the database, cost sharing variables, including copayments, coinsurance and deductibles from the claims data were used to infer the member and plan shares of the total spending that is reflected in the database, as described below.[6] The data contains spending, demographic and enrollment information at the member level, including age, sex, family structure, presence of a pre-existing condition, enrollment, spending, and number of claims. Enrollees are grouped into Product Client Contracts (PCCs) defined by plan type (for example, PPO, HMO, indemnity, etc.) and benefit design for a given contract or plan group. The AV Calculator treats each PCC as a separate health plan, since each PCC represents a uniform benefit structure under a contract or

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[5] http://ehbs.kff.org/pdf/2012/8345.pdf (Table 4.1).
[6] The AV Calculator does not incorporate information from Individual Market plans because these data could not be used to infer plan design.

plan group. However, in practice a regional health plan may operate multiple PCCs. All cost data in the database are trended forward to 2016; two years of additional trending is incorporated into the 2016 AV Calculator compared to the 2014 and 2015 AV Calculators.

Spending and claims information is provided in the database both for total services and for each of the following medical and drug service categories:

- Emergency Room Services
- All Inpatient Hospital Services (including Mental Health and Substance Use Disorder Services)
- Primary Care Visit to Treat an Injury or Illness (excluding Preventive Well Baby, Preventive, and X-rays[7])
- Specialist Visit
- Mental/Behavioral Health and Substance Abuse Disorder Outpatient Services
- Imaging (CT/PET Scans, MRIs)
- Rehabilitative Speech Therapy
- Rehabilitative Occupational and Rehabilitative Physical Therapy
- Preventive Care/Screening/Immunization
- Laboratory Outpatient and Professional Services
- X-rays and Diagnostic Imaging
- Skilled Nursing Facility (SNF)
- Outpatient Facility Fee (e.g., Ambulatory Surgery Center)
- Outpatient Surgery Physician/Surgical Services
- Drug Categories
  - Generics
  - Preferred Brand Drugs
  - Non-Preferred Brand Drugs
  - Specialty Drugs (High Cost)

With the exception of preventive care, the claims database defines which services fall into each category. In addition, the database provides a breakdown of whether a service and associated cost is considered part of Outpatient Surgery Physician/Surgical Services or Outpatient Facility Fees for the following service categories: Mental Health and Substance Use Disorder, Advanced

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[7] If special cost-share provisions are indicated for Primary Care and/or Specialist Office Visits, certain office visits will be split into their component parts only if those office visits include services that do not have special cost-sharing provisions (not having special cost-sharing provisions is defined as being Subject to Deductible, Subject to Coinsurance, with no special coinsurance rate and no copayment). This is applicable to X-rays, and the component parts are Primary Care Office Visit and Specialist Office Visit. For example, if Primary Care office visits are not subject to the deductible and have a $20 copayment, but X-rays are subject to the deductible and general coinsurance, a Primary Care office visit that includes an X-ray will be split into two services, a Primary Care office visit and an X-ray.

Imaging, Rehabilitative Speech Therapy, Occupational and Physical Therapy, Diagnostic Laboratory, and Unclassified (medical). In the development of the continuance tables based on the standard population, we relied on this aspect of the database to account for separate copayments and cost sharing payments applying to the professional and facility components of services.

Preventive care is defined, and claims are categorized, using the CPT code list from the US Preventive Services Task Force. The services defined as preventive care correspond to the preventive services covered without cost sharing under section 2713 of the Affordable Care Act.

To prepare the data for use in the continuance tables, several enrollment restrictions are applied to ensure that the data represent a full year of utilization experience for enrollees. The full data include 39,184,536 enrollees and 767,517 PPO/POS (point of service) plans. Restricting to group PPO/POS with drug coverage and at least 50 enrollees brings the count down to 15,243,652 enrollees and 61,647 plans. In the absence of plan benefit design information directly from the plans that submitted data to this commercial database, the cost-sharing parameters that apply to individuals are inferred from the spending data to aid in the construction of the continuance tables. To ensure that the imputation procedure can be applied effectively, plans with utilization data that are likely incomplete are excluded. Specifically, to be included, plans with more than 50 members must be PPO/POS plans with positive drug enrollment in at least one month, and plans with over 1,000 members must additionally have at least one claim with a maternity DRG. Moreover, all plans must have at least one member with over $5,000 in spending. For plans that meet these requirements, the 90th percentile of positive deductibles that are at least $250 lower than the amount of total spending for all enrollees within a PCC is set as the plan deductible, and the 90th percentile of beneficiary spending above $1,000 over all enrollees within a PCC is set as the plan MOOP limit. The coinsurance rate is estimated by examining the coinsurance variable on claims for plan members with spending between the deductible and the MOOP. Spending data are also used to impute copayments for several services including in-patient (IP) services, emergency room (ER) services, primary care office visits, specialist office visits, and four tiers of prescription drugs: generics, preferred brand drugs, non-preferred brand drugs, and specialty high-cost drugs.

To prepare the data for use in the continuance tables, additional restrictions are made to exclude implausible plan designs. Plans with zero spending for all enrollees and plans with imputed coinsurance rates that fall outside the range of 0-100 percent are dropped. Additionally, plan-demographic group combinations with negative realized actuarial value are dropped. Enrollees with unspecified sex are also excluded. The resulting database consisting of 12,553,043 enrollees and 46,359 plans is used to construct the continuance tables, subject to the additional adjustments identified in the next two sections of this document.

As previously mentioned, the 2016 AV Calculator does not include new enrollment data in the continuance tables and only applies the population adjustments that were made to develop the standard population for the 2014 AV Calculator. However, the claims costs in the 2016 AV Calculator are trended forward an additional two years at a rate of 6.5 percent per year from the 2014 AV Calculator based upon review of 2014 and 2015 URRT data available as of August 2014.

Standard Population Development and Adjustment from Primary Claims Data

The claims data, excluding the populations and plans noted above, provide the raw material for developing a standard population based on the expected enrollment in individual plans for the years 2014 and beyond. Utilization and spending in this data did not necessarily represent utilization and spending in the population expected to participate in the individual and small group markets. Further adjustment is therefore necessary to reflect the expected enrollment in plans required to use the AV Calculator. We anticipated that the standard population should be composed of the following:

Newly insured individuals: Most uninsured individuals were eligible to enroll in the individual or small group markets beginning in 2014. Because the data in the commercial database represent a population insured under group policies with guaranteed issue, utilization in this group was likely to adequately represent utilization among the newly insured. However, it was possible that there was pent-up demand for health services in this group due to their prior lack of insurance. The AV Calculator is intended for multiple years of use and pent-up demand (to whatever extent it occurs) is likely to greatly diminish over time. The continuance tables therefore do not incorporate any adjustment for additional utilization due to pent-up demand in this group.

Individuals in the status quo individual market: After January 1, 2014, utilization in the group of enrollees in the individual market was likely to be comparable to enrollees in the database, so no adjustments in addition to those noted above are incorporated to account for this group.

Individuals in the small group market: The database consists of individuals with group coverage, and we expected the small group population after January 1, 2014 to be very similar. Therefore, no adjustments in addition to those noted above are incorporated to account for this group.

Individuals moving out of employer coverage: If individuals move from employer coverage to the individual market, their utilization was likely to be comparable to enrollees in the database, so there are no adjustments in addition to those noted above to account for this group.

Individuals with Medicaid eligibility for part of the year: During the course of a year, some individuals enrolled in Medicaid may become ineligible due to income and may enroll in the individual or small group markets. Utilization in this group was likely to be similar to that among enrollees in the group market because the ability to move up out of Medicaid income levels and into employment likely indicates better health status than that of the average Medicaid beneficiary. Therefore, no adjustments are incorporated to account for this group.

High risk individuals: As of December 2011, a maximum of about 220,000 people were enrolled in state high risk pools (HRPs) before HRPs started winding down, while in June 2013 about 100,000 were enrolled in the federally-administered or state-administered Pre-existing

Condition Insurance Plans (PCIP).[8] Average spending for individuals in both the HRPs and the PCIP was substantially higher than spending for enrollees in the claims database. Individuals in state high-risk pools have average spending of about $10,900 per year, based on 2010 annual state high-risk pool expenses reported by the National Conference of State Legislatures (NCSL)[9] and most have annual spending that consistently exceeds their plan's MOOP. While states have the flexibility to keep high risk pools open beyond 2014, the continuance tables include adjustments to the existing utilization data to account for both of these populations as described in the following section.

Constructing Continuance Tables

Continuance tables summarize the claims experience and utilization of the standard population and are therefore the key input to calculating actuarial value. Specifically, a continuance table describes the distribution of claims spending for a population of health insurance users who face a particular benefit structure. The set of continuance tables underlying the AV Calculator reflect the standard population developed by the Secretary to implement section 1302(d) of the Affordable Care Act. The continuance tables themselves, as a representation of the standard population and not the standard population itself, are a component of the rules for determining actuarial value under the EHB Final Rule and are available at: http://www.cms.gov/cciio/resources/regulations-and-guidance/index.html.

The continuance tables rank enrollees by allowed total charges (after any provider discounts but before any member cost-sharing) and group them by ranges of spending. These ranges of spending define the rows of the continuance table. The data are then used to calculate the number of enrollees with total spending falling within each range, the cumulative average cost in the range for all enrollees, and the average cost for all enrollees whose total spending falls within the range. For each service type listed above, the columns of the continuance table display the average cost of spending on that service type that is attributed to cumulative enrollees in each range[10] and the average frequency of the service type per enrollee.

To construct the continuance tables from the underlying utilization data, enrollees are separated into groups based on common plan enrollment, sex, and age bracket, and each group is assigned to a metal level based on the estimated actuarial value of the plan. Separate continuance tables are created based on the utilization of enrollees in the same metal tier, sex, and age bracket.

Because continuance tables are constructed for plan designs with similar actuarial values, the tables must account for changes in utilization induced by plan design. To account for this induced demand, each continuance table reflects utilization of individuals from the claims

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[8] The June 2013 PCIP enrollment data by state is available on the Centers for Medicare and Medicaid Services' website: http://www.cms.gov/CCIIO/Resources/Fact-Sheets-and-FAQs/Downloads/pcip-expenditures-6-30-2013.pdf.

[9] NCSL annual spending data by state is available on the organization's website: http://www.ncsl.org/issues-research/health/high-risk-pools-for-health-coverage.aspx.

[10] As described in the overview of changes above, a change was made in the draft 2016 AV calculator on this issue. SNF benefits below $10,000 are recorded as $0 to avoid implausible fluctuations in AV due to erratic utilization patterns.

database in plans with actuarial values in each of the four metal tiers. That is, each plan in the database is assigned an actuarial value based on the service utilization and plan payments for enrollee groups in that plan, and enrollees are grouped by these values into the metal tiers. The continuance tables for each metal tier are based on utilization data from enrollees in the claims database with estimated actuarial values within +/- 5 percentage points of the target actuarial value for each metal tier.

To estimate actuarial value for each plan, the realized actuarial value of the imputed benefit characteristics is calculated for groups of enrollees by age, sex, and spending bracket; the spending brackets are $0 to $250, $250 to $500, $500 to $1,500, $1,500 to $5,000, $5,000 to $15,000, $15,000 to $25,000, and $25,000 and over. Nonlinear least squares regressions, a statistical technique, are used to develop models estimating actuarial value based on the imputed cost shares in each of the spending brackets.

The utilization data are then used to create continuance tables for each sex/age group and each metal tier. Only utilization data from enrollees with exactly 12 months of enrollment or newborns are used in the continuance tables in order to represent a consumer's view of what cost-sharing to expect in a full 12 months of eligibility. The continuance tables for bronze and silver plans are based on utilization of enrollees in PPO/POS plans with between 50 and 250 enrollees with estimated actuarial values in the bronze and silver range.[11] Utilization data from all group plans with more than 50 enrollees and estimated actuarial values in the gold and platinum range is used to construct continuance tables for gold and platinum plans.

To produce a single continuance table for each metal tier, each of the separate continuance tables representing age/sex groups for a given metal tier are assembled into a single metal-level-specific continuance table, with each sex/age-group cell weighted by expected individual market participation in the corresponding metal tier for enrollees with those characteristics.[12] Expected market participation for each sex/age group was estimated by a model developed by HHS to predict 2014 insurance enrollment. The model estimates market enrollment in a manner that incorporates the effects of policy choices and accounts for the behavior of individuals and employers. The model was developed with reference to existing models such as those of the Congressional Budget Office and the Office of the Actuary, to characterize medical expenditures and enrollment choices across the 2014 marketplace. The model is made up of integrated modules which predict the number and characteristics of enrollees and their medical spending. The outputs of the model, especially the estimated enrollment and expenditure distributions, were used to analyze estimated enrollment in the 2014 marketplace. For a continuance table representing a particular metal tier, the HHS model predicts the share that each age/sex group represents of the full enrollee population at that metal tier.

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[11] Because the bronze and silver tables use only enrollees in plans with between 50 and 250 enrollees, the overall means are distorted due to random observations of extreme spending above the 99th percentile. To account for this distortion, enrollees above $45,000 in total allowed spending were combined between the two continuance tables, with the average proportion and utilization rates being applied for all buckets above $45,000 for both bronze and silver tables. A further ad hoc adjustment of reducing bronze spending by 4 percent for all enrollees below the $45,000 cut-off rate is made to emulate the difference in mean spending observed in the full empirical HIC distributions.

[12] We expect that small group participation is similar to individual market participation in terms of age and sex distribution.

Separate continuance tables for medical services and prescription drugs underlie the AV Calculator to accommodate the input of benefit structures with separate deductibles for these types of spending. To estimate costs for a plan with a separate drug benefit, the continuance table must include only non-drug claims to determine actuarial value for the medical portion of the plan. To produce a single AV for this type of plan, the plan-covered spending on drugs and medical services are added together and divided by total spending.

Because enrollees in the group market reflected in the continuance tables do not fully represent the population expected to enroll in the individual and small group markets in 2016 (including the Exchanges), the continuance tables are adjusted to include spending by enrollees in both the federal and state-administered PCIP and the state HRPs. As explained above, PCIP and HRP enrollees generally have spending far above the individual market average, and most exceed the MOOP; however we have only average claims for this population. To adjust for the presence of these individuals, first the incremental spending for all PCIP enrollees is averaged across all market enrollees, including PCIP, by dividing the increment of expected spending for all PCIP members above the expected spending for the standard population by the expected individual market population in 2014. An analogous calculation is made for HRP enrollees.

Second, both of these per-member-per-year amounts are added to the average-cost-per-member column in the final row of each combined continuance table, which represents the average cost over all enrollees. This step adjusts the continuance tables to reflect that spending by PCIP and HRP enrollees is expected to increase average total spending for enrollees that are reflected in the standard population and the continuance tables.

Third, a weighted portion of the per-member-per-year costs for PCIP and HRP enrollees is added to the average-cost-per-enrollee column of each row of the continuance table. The weight for each row is chosen so that the median of the distribution of medical spending for PCIP and HRP enrollees is equal to that of ER spending, and the median of drug spending is equal to that of generic drug spending. For the combined medical and drug continuance tables, the weight of each row is chosen so that the median of the combined distribution for PCIP and HRP enrollees is equal to that of ER spending. ER spending was chosen for this process because the distribution of ER spending in the claims database was the most closely aligned of all spending types to the observed distribution of spending among PCIP/HRP enrollees. This step spreads spending for PCIP and HRP enrollees across the distribution of enrollee spending in accordance with observed distributions of spending for high-risk enrollees relative to MOOP. It is important to note that incorporating spending for PCIP and HRP enrollees creates a gap in the continuance tables between the average-cost-per-enrollee derived from the national claims database and the data used in the AV calculation, which is the sum of the weighted portion of the per-member-per-year costs for PCIP and HRP enrollees and the average-cost-per-enrollee from the claims database that is used in the calculation.

Essential Health Benefits Generally Not Represented in Current Policies

Certain EHB that must be covered under the definition of EHB in the EHB Final Rule are relatively uncommon among the insured population reflected in the 2010 claims database that was used to develop the standard population and the continuance tables. These EHB services

include pediatric oral and vision and habilitative services. The continuance tables incorporate a number of assumptions and additional data sources to ensure the AV Calculator will account for these benefits.

Pediatric oral services must be covered by all EHB- benchmark plans. The continuance tables incorporate assumed utilization of pediatric dental visits based on estimates from an analysis performed for the National Association of Dental Plans (NADP). The NADP estimated per-child per month cost for preventive services is annualized and then multiplied by the expected participation rate of children in the exchange based on the Affordable Care Act Health Insurance Model (ACAHIM) Market Enrollment model. Spending for these services is incorporated into the continuance tables using a similar method to that described above for incorporating PCIP and HRP spending. First, the per-member-per-year spending is added to the average-cost-per-member column in the final row of each combined continuance table, which represents the average cost over all enrollees. This accounts for the increase in average per-member spending for these services. Next, a weighted portion of the per-member-per-year cost is added to the average-cost-per-enrollee column of each row of the continuance table, with the weight proportional to the ratio of the spending limit for that row to the highest cumulative-average-cost-per-enrollee listed in the continuance table.[13] This spreads the cost for pediatric dental services across the spending distribution but puts the bulk of those costs in the highest spending brackets, under the assumption that enrollees who spend more on all services are likely to spend more on pediatric oral services.

Pediatric vision services must also be covered by all EHB benchmark plans. Spending for these services is incorporated into the continuance tables by the same method for pediatric dental services using a cost estimate from a public employee health plan.

Generally, habilitative services are intended to create and/or maintain function. Given the transitional nature of the approach to habilitation services in the EHB Final Rule and that the utilization of these services is assumed to be low across the entire enrollee population, at this time the continuance tables do not incorporate any additional adjustments for these services.

The AV Calculator Interface

This section describes the AV Calculator interface and how inputs into the AV Calculator are used to determine AV. The inputs for the AV Calculator were based on the 10 broad categories of EHB and determined through a combination of consultation with actuarial experts and testing the magnitude of the effect of parameters on the calculated actuarial value as well as comments received. The AV Calculator is designed to produce a summarized AV rounded to the nearest hundredth of a percentage point based on the continuance tables described above and the cost sharing inputs described below.

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[13] For example, assume that the highest cumulative average cost per enrollee is $10,000. If the spending limit for a row of the continuance table is $1,000, the weight is proportional to 1,000/10,000.

<u>Plan Benefit Features Allowed as Inputs</u>

Plan design structures are characterized by cost-sharing features that determine the division of expenses between the plan and the insured. The ratio of the share of total allowed costs paid by the plan relative to the total allowed costs of covered services is the AV of the plan. No summary calculator could capture every single potential plan variation, nor are they necessary for an accurate calculation of AV. However, empirically, the vast majority of the variation between the AVs of health plans is captured by a finite number of variables, and the AV Calculator focuses on accurately determining plan actuarial values based on this set of key plan characteristics. Therefore, the AV Calculator includes only these key characteristics that have a significant effect on actuarial value.

The user inputs a combination of metal tier and cost-sharing features, and the AV Calculator uses these inputs and the continuance tables to produce an AV for the health plan. The metal tier input allows the AV Calculator to account for induced demand by using the set of continuance tables for that specified metal tier. This is necessary to take into account the differences in utilization that are based on generosity of the health plan (i.e. induced utilization).

Deductibles, general rates for coinsurance, and MOOPs generally have a significant effect on utilization and the share of plan-covered expenses. The AV Calculator allows the user to specify either an integrated deductible that applies to both medical and drug expenses or separate deductibles for each type of spending. Similarly, if a plan design has separate medical and drug MOOP spending limits, the user may specify either an integrated MOOP or separate MOOPs for medical and drug spending. The user may also specify different coinsurance rates for medical and drug spending.

The AV Calculator allows the user to specify coinsurance rates and copayments for the medical services listed on pages 10-11 of this document, along with the deductible, general coinsurance, and out-of-pocket maximum. In addition the AV Calculator allows the user to specify whether services are subject to deductible or subject to coinsurance, and whether any copayments apply only after the deductible is met.

The AV Calculator does not allow the user to subject recommended preventive care to a copayment or deductible because the Affordable Care Act directs that these services be covered by the plan at 100 percent.[14]

The AV Calculator also allows users to specify other plan details. For inpatient and skilled nursing facility services, the default option is that copayments and coinsurance costs apply per stay, but these may be applied at the per day level by choosing the corresponding options. If inpatient copayment costs are applied per day, the user may specify that these copayments only apply for a set number of days chosen by the user, ranging from the first one to ten days in the hospital. Users may also specify that cost sharing for primary care visits only applies after a set

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[14] For the purposes of the AV calculator, preventive care means the services required to be covered without cost sharing under Section 2713 of the Public Health Service Act and its implementing regulations. *See* 45 C.F.R. § 147.130.

number of visits chosen by the user, ranging from one to ten visits. Alternatively, users may specify that the deductible or coinsurance does not apply to primary care services until after a set number of visits, ranging from one to ten visits; during this initial set of visits, the enrollee pays a per-visit primary care copayment. Users may specify cost-sharing for four tiers of prescription drugs: generics,[15] preferred brand drugs, non-preferred brand drugs, and specialty high-cost drugs. Additionally, the user may specify that for specialty tier drugs, the enrollee pays the lesser of either the specialty drug coinsurance or a set dollar limit chosen by the user. The AV Calculator also incorporates health savings accounts (HSAs) and health reimbursement arrangements (HRAs) that are integrated with group health plans if the amounts may only be used for cost-sharing; to use this option the user must include an annual amount contributed by the employer or in the case of HRAs, the amount first made available (sometimes referred to in this document as "HRA contributions").

Plans typically apply very different cost-sharing structures to in-network and out-of-network utilization. However, our empirical analysis of the claims database and other analyses by the American Academy of Actuaries indicate that relatively little utilization actually occurs out of network in terms of total dollars. In testing of the AV Calculator, AVs, including and excluding out-of-network spending, differed by less than one percent. In addition, 45 CFR 156.130(c) requires in-network costs apply to the MOOP. For standard plans with in-network and out-of-network tiers, the AV Calculator therefore produces estimates of actuarial value based only on in-network utilization and allows the user to specify only in-network cost-sharing parameters. This is consistent with §156.135(b)(4).

The 2016 AV Calculator can accommodate plans utilizing a multi-tiered network with up to two tiers. Users may input separate cost-sharing parameters—such as deductibles, coinsurance rates, MOOPs, and schedules for service-specific copayments and coinsurance—and specify the share of utilization that occurs within each tier. The resulting actuarial value is a blend of the AV for the two tiers.

Calculating Actuarial Value

AV is the anticipated covered medical spending for EHB coverage (as defined in §156.110(a)) paid by a health plan for a standard population, computed in accordance with the plan's cost-sharing, and divided by the total anticipated allowed charges for EHB coverage provided to a standard population. It is reflected as the percentage and basically means the value of the total expenditures for EHB that are covered by the plan. The denominator of this calculation is simply the average allowed cost of all services for the standard population in the year for a specified metal tier; the numerator is calculated as the share of average allowed cost covered by the plan, using the cost-sharing parameters specified.

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[15] From a technical perspective, it is important to note that the generic drug category in the claims data base includes maintenance drugs. To address the fact that not all maintenance drugs are generics and that some of those drugs are high cost, we have revised the definition of the generic drug category to only include maintenance drugs that cost less than $50 per prescription.

The remainder of this section describes each step in the calculation of actuarial value for the various plan structures that may be specified by the user. Before proceeding with the calculation, the AV Calculator checks that the user has specified the necessary deductibles, coinsurance, and MOOPs consistent with the choice of integrated or separate deductibles and MOOPs for medical and drug expenses. The AV Calculator also checks that the deductible is less than the MOOP and that the MOOP (or sum of the MOOPs, for plans with separate medical and drug MOOPs) is less than $6,850[16], and calculates a floor on the level of spending at which the MOOP will apply. Per the § 156.135(g)(1), the AV uses an estimated MOOP limit and the actual MOOP will be finalized in the annual HHS notice of benefit and payment parameters. Plan designs must not exceed the annual MOOP limit that is established in regulation regardless of the limit included in the AV Calculator. For plans with separate medical and drug components, if the sum of the medical and drug deductibles is greater than the combined MOOP, the AV Calculator assumes that the full medical deductible is satisfied and adjusts the effective drug deductible if needed.[17] The AV Calculator flags results obtained using this method. Additionally, if the effective coinsurance (i.e., the coinsurance after adjusting the level of plan-covered spending to account for copayments) based on user inputs is 100 percent, the MOOP and deductible are set equal to each other for AV calculations.

If the user's chosen inputs for deductible and MOOP are not exactly equal to the spending thresholds used in constructing the continuance table, the values are pro-rated using linear interpolation. For instance, if a user enters a $150 deductible, then the AV Calculator estimates the amount of spending below the deductible by interpolating between the average cost per enrollee that occurs below the $100 threshold on the continuance table and the average cost per enrollee that occurs below the $200 threshold on the continuance table. In this case, if the average cost per enrollee at the $100 threshold was $85 and the average cost per enrollee at the $200 threshold was $185, the interpolated average cost per enrollee would be $135 (halfway between $85 and $185).

Step 1: Set Metal Tier

The user enters the desired metal tier for the calculation, and the AV Calculator selects the corresponding continuance tables for use in all remaining steps of the calculation.

Step 2: Calculate Average Expenses over all Enrollees

The denominator of the AV calculation is the average cost over all enrollees for a plan of the specified metal level, found in the final row of the corresponding continuance table in the column for average cost.[18]

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[16] The 2016 AV calculator allows for a MOOP up to $6,850.

[17] The AV Calculator selects the average cost at the combined MOOP from the combined continuance table and the average cost at the medical deductible from the medical continuance table. If the difference between them is less than the average cost at the drug deductible, then the AV Calculator adjusts the drug deductible so that average cost at the drug deductible equals the difference. Otherwise, the drug deductible remains at the value specified by the user.

[18] It is important to note that incorporating spending for PCIP and HRP enrollees creates a gap between the average-cost-per-enrollee derived from the national claims database and the data used in the AV calculation, as it is the sum

Step 3: Calculate Expenses Covered by Employer Contributions to HSA and HRA, if Applicable

Section 156.135(c) provides that, for plans other than those in the individual market that at the time of purchase are offered in conjunction with an HSA or with integrated HRAs that may be used only for cost-sharing, annual employer contributions to HSAs or amounts newly made available under such HRAs for the current year are counted towards the total anticipated medical spending of the standard population that is paid by the health plan. When the HSA or HRA Employer Contribution box is checked and the entered annual contribution amount is positive, because the value of a contribution to this type of HSA or HRA can affect expected utilization, the AV Calculator treats the actuarial average spending of the employer contributions as covered "first-dollar" spending for covered EHB services, as if the annual contribution amount is applied at the very beginning of an enrollee's spending in a benefit year.

Specifically, the AV Calculator uses the continuance table for combined expenses to identify the average cost per enrollee at the annual HSA or HRA contribution amount. If the annual contribution amount falls between two spending thresholds in the continuance table, this amount is pro-rated as described in the previous section. The pro-rated amount is plan-covered expenses and is included in the numerator. Next, the AV Calculator identifies any plan-covered benefits obtained in the deductible stage and subtracts them from the numerator, to avoid double-counting when these benefits are included in the numerator during the regular benefit calculation steps described in Step 4: Calculate Plan-Covered Expenses for Spending Below Deductible Amount below. At the conclusion of these steps, plan-covered expenses in the numerator include average costs at the annual HSA or HRA contribution amount less any plan-covered expenses in the deductible stage below the HSA or HRA contribution amount.

We note that while the AV Calculator cannot accommodate situations in which the employer contribution to certain types of HSA and HRA exceeds the deductible, such contributions can still be accommodated by using the alternative methods for AV calculation pursuant to §156.135(b).

Step 4: Calculate Plan-Covered Expenses for Spending Below Deductible Amount

The AV Calculator next computes any plan-covered expenses for spending below the amount of the deductible for each benefit type and includes these expenses in the numerator. The computation process depends on whether the plan includes separate medical and drug deductibles or a combined deductible. For plans with a combined ("integrated") deductible, the AV Calculator computes the deductible portion of the benefit in the same way for both medical and drug benefit types. For plans with separate deductibles, the AV Calculator computes the deductible portion of the benefit separately for medical and drug benefit types. This section first describes the computation process that applies to plans with combined deductibles and to

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of the weighted portion of the per-member-per-year costs for PCIP and HRP enrollees and the average-cost-per-enrollee from the claims database that is used in the calculation.

medical benefits in plans with separate deductibles, and then describes the computation for drug benefit types in plans with separate deductibles.

For plans with a combined deductible, the AV Calculator computes plan-covered expenses in the deductible range for all medical and drug benefit types listed in the AV Calculator, relying on the continuance table for combined expenses. For plans with separate deductibles, the AV Calculator uses only medical benefit types and utilizes the continuance table for medical expenses. The process for calculating plan-covered expenses for a given benefit type varies depending on whether the benefit type is subject to the deductible or to a copayment as follows:

- If the benefit type is subject to neither deductible nor copayment, the plan covers all spending on that benefit type below the deductible. The AV Calculator identifies the average cost of that benefit listed in the row of the continuance table corresponding to spending at the plan deductible (which may be pro-rated, if necessary). This is total per-member spending for this benefit in the relevant range, all of which is included in plan-covered expenses.

- If the benefit type is subject to copayment but not deductible, the plan covers all spending on that benefit type in this range, less enrollee copayments. The AV Calculator identifies the average cost of that benefit, as above. Next, the AV Calculator divides this amount by the benefit type frequency to estimate the per-service cost. Subtracting the copayment for the benefit type from the per-service cost produces plan-covered expenses per service for this benefit type. The AV Calculator multiplies this result by the benefit type frequency to produce total plan-covered expenses for the benefit type. This is added to the total plan covered expenses. The AV Calculator may use one of several variations on this process to compute plan-covered spending, depending on whether the user selects options that affect how the AV Calculator applies copays or general cost-sharing requirements.[19] In this instance, the AV Calculator computes plan-covered spending based on the average spending and frequency for each benefit type at the deductible level.

- If the benefit type is subject to the deductible and subject to the copayments applying only after deductible, all spending on that benefit type in the

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[19] Variations on the process include the following: (a) If the user limits IP copayments to a set number of days, the AV calculator compares the IP frequency at the Annual HSA Contribution Amount to the set number of days. If the IP frequency is less than or equal to the set number of days, the calculation proceeds normally. However, if the IP frequency is greater than the set number of days, the AV calculator multiplies the set number of days by the copayment and subtracts the resulting total copayment spending from the average cost of the benefit to compute plan-covered spending. (b) If the user selects the option restricting primary care cost sharing to care after a set number of visits, the AV calculator first determines whether or not the primary care frequency at the Annual HSA Contribution Amount exceeds the set number of visits. If the frequency is less than or equal to the set number of visits, the copayment does not apply and the plan-covered spending equals the full value of average cost for that service. However, if the frequency is greater than the set number of visits, the AV calculator subtracts the set number of visits from the frequency and multiplies the result by the copayment to obtain total enrollee copayment spending. The AV calculator then subtracts total enrollee copayment spending from the average cost for that service to compute total plan-covered spending.

deductible range is applied towards the deductible and then, copayments are applied.

- If the benefit type is subject to deductible and the user has entered a copayment rate applying during the deductible, then the difference between the benefit's service unit cost and the copayment amount indicated applies towards the deductible. This increases the total amount of per member spending required before the deductible is met.

- If the benefit type is not subject to deductible, is not subject to coinsurance rate and the copayment field is left blank, no cost sharing for the beneficiary is applied to the benefit.

- If the benefit type is subject to deductible and is among a subset of benefit types (mental health and substance abuse, advanced imaging, rehabilitative speech therapy, occupational and physical therapy, and diagnostic laboratory), is not subject to a copayment, and if outpatient professional and/or facility services are not subject to the deductible, the AV Calculator follows the process described in the first two bullets for the outpatient professional and outpatient facility portions of the service category. The AV Calculator determines whether to follow the process described in the first or second bullet for the outpatient professional and outpatient facility portions based on the deductible and copayment requirements for those two benefit types.

- For X-ray and diagnostic imaging, if they are subject to deductible, not subject to a copayment rate, and if primary care and/or specialist office visit benefits are not subject to deductible, the AV Calculator applies the steps laid out in the first two bullets to the primary care and specialist portions of those service categories. The AV Calculator determines whether to follow the process described in the first or second bullet for the primary care and specialist portions based on the deductible and copayment requirements for those two benefit types.

- For primary care services, if the user specifies that the deductible and/or coinsurance applies only after a set number of visits with copayments, the AV Calculator compares the set number of copayment visits to the frequency of visits when total average spending is equal to the deductible. If the frequency of visits is less than or equal to the set number of copayment visits, then the AV Calculator uses the process described in the second bullet to compute plan-covered expenses. However, if the frequency of visits exceeds the set number of copayment visits, the AV Calculator computes the per-service cost for spending at the deductible using the process described in the second bullet. The AV Calculator then computes total plan-covered spending at the deductible by multiplying this per-service cost by the set number of copayment visits and subtracting from the result the set number of copayment visits multiplied by the copayment amount.

- If a medical benefit type is subject to a copayment in the deductible range and coinsurance rate in the coinsurance range, the AV Calculator applies the above rules to the user-provided copay rate for expenditures in the deductible range, and uses the provided coinsurance rate for expenditures during the

coinsurance range. For prescription drugs a separate coinsurance rate is not directly supported; however, a plan with a copayment in the deductible range and a coinsurance rate in the coinsurance range can be created by both specifying a copayment and allowing the prescription drug category to be subject to the general drug coinsurance rate.

To calculate plan-covered expenses up to the amount of the deductible for drugs in plans with separate medical and drug deductibles, the AV Calculator relies on the continuance tables for the plan metal tier that are constructed from drug claims. For each drug benefit type, the AV Calculator identifies the average cost for that benefit listed in the row of the continuance table that corresponds to the plan drug deductible (which may be pro-rated, if necessary). If the benefit type is not subject to either deductible or copayment, the AV Calculator adds this per-member spending amount to the total plan-covered expenses in full. If the benefit type is subject to copayment but not deductible, the AV Calculator divides average cost for that benefit by the frequency for the benefit type to estimate the per-service cost. The AV Calculator next subtracts the copayment for the benefit type from the per-service cost and multiplies the resulting value by the benefit-type frequency to produce total plan-covered expenses for the benefit type. Copayments are set equal to the service unit costs and if the copayment is greater than the service unit cost, the AV Calculator only account for the cost up to the service unit costs. This is a clarification on what the 2014 AV Calculator was doing and is not a change to the 2016 AV Calculator. This result is added to the total plan-covered expenses.

At the conclusion of these steps, plan-covered expenses in the numerator include all plan-covered expenses for spending up to the amount corresponding to the deductible. The AV Calculator also tracks the average cost per enrollee at the amount of the deductible, which is used in later steps. For plans with an integrated deductible, this is the average cost per enrollee at a level of spending equal to the deductible, listed in the corresponding row of the combined continuance table. For plans with separate deductibles, this is the sum of the average cost per enrollee at spending equal to the medical deductible, listed in the corresponding row of the medical continuance table, and the average cost per enrollee at spending equal to the drug deductible, listed in the corresponding row of the drug continuance table. For plans with separate medical and drug deductibles, the AV Calculator uses the drug-claim continuance table to track the average cost per enrollee corresponding to the plan drug deductible (which may be pro-rated); this value is also used in later steps.

Step 5: Determine Applicable Spending Level for MOOP

To identify the spending level at which an enrollee will reach the MOOP, the AV Calculator first determines a modified MOOP that takes into consideration benefit types excluded from coinsurance. It examines each medical and drug benefit type and if a benefit has a copayment, the AV Calculator multiplies this copayment by the average frequency at the deductible for the benefit type. The resulting value, which represents the amount of copayment an enrollee pays for that benefit type at the deductible, is subtracted from the MOOP to obtain the amount that an enrollee would have to pay in coinsurance for the remaining service types before reaching the MOOP limit. The AV Calculator may use one of several variations on this process to compute the amount of copayment an enrollee pays for each benefit type, depending on whether the user selects options that affect how the AV Calculator applies copayments or general cost-sharing

requirements. In this instance, the AV Calculator computes total copayment spending based on the average spending and frequency for each benefit type at the deductible level. Additionally, if the user specifies that primary care services are subject to copayments for a set number of visits before the deductible and/or coinsurance applies, the AV Calculator subtracts from the MOOP the lesser of the following two amounts: either the frequency of primary care visits at the deductible multiplied by the copayment amount or the set number of copayment visits multiplied by the copayment amount. For inpatient treatment, the AV Calculator calculates the spending level at which an enrollee will reach the MOOP in the same way regardless of the user-specified maximum number of days charging copayments. As is described in the Overview of Changes section above, the effective coinsurance is calculated using the unrestricted quantity of inpatient days. As a result, the spending levels at which the MOOP is reached will be comparable regardless of the different maximum numbers of days with copayments.

If the benefit type is subject to coinsurance and is among a subset of benefit types that have both a professional and facility component (mental health, substance abuse, imaging, rehabilitative speech therapy, occupational therapy, physical therapy, and laboratory), and if outpatient professional and/or facility services are not subject to coinsurance, the AV Calculator applies the process described in the prior paragraph to the outpatient professional and facility portions of the service category. To do so, the AV Calculator relies on the effective coinsurance and copayment requirements for outpatient professional and outpatient facility services.

Similarly, for X-ray, if they are subject to coinsurance and if primary care and/or specialist office visit benefits are not subject to coinsurance, the AV Calculator applies the process described in the first paragraph of this section to the primary care and specialist portions of the service category. To do so, the AV Calculator relies on the effective coinsurance and copayment requirements for primary care and specialist office visits.

Upon completion of these adjustments, the resulting "modified MOOP" represents the amount that an enrollee would have to pay in coinsurance for all remaining service types before reaching the MOOP limit. If the plan has separate MOOPs for medical and drug spending, the AV Calculator carries out the above steps separately for medical and drug benefit types and their corresponding MOOPs, producing a modified MOOP for medical spending and a modified MOOP for drug spending.

Next, the AV Calculator computes the spending level at which the modified MOOP will apply. To do so, the AV Calculator subtracts the deductible from the modified MOOP and divides the resulting value by one minus the effective coinsurance rate, or the percentage of costs borne by the enrollee for services subject to coinsurance after accounting for copayments; it then adds the deductible to this value to calculate the total amount of spending at which out-of-pocket costs paid by the enrollee reach the modified MOOP. The AV Calculator matches this amount to the appropriate row in the combined continuance table to obtain the average cost per enrollee at the modified MOOP limit. For plans with separate MOOPs, the AV Calculator performs this process separately for medical and drug benefits and their corresponding deductibles, modified MOOPs, and continuance tables to obtain separate average cost estimates for medical and drug spending at the relevant modified MOOP.

This estimate of the spending level at which the modified MOOP applies is then compared to the estimate of the spending level for plan designs with deductibles that are immediately lower than the plan design under consideration. If the AV Calculator's estimates of AV are found to be sensitive to the estimate of the spending level at which the modified MOOP applies, a floor to this level is calculated at the actuarial function's local minimum value, so that the spending level at which the modified MOOP applies is consistent across plans in the same deductible range. Additionally, in the event that the deductible is greater than $1,000, this process repeats finding the actuarial function's local minimum around a plan with a deductible $1,000 lower than the plan design under consideration. This ensures that the calculated floor to the level at which the modified MOOP applies remains appropriate. While adding calculation time, this method allows for an accurate determination of the point at which the modified MOOP applies without distorting the features of the AV Calculator and its underlying calculations.

Step 6: Calculate Plan-Covered Expenses for Spending Between the Deductible and the MOOP

To calculate expenses covered by the plan in the coinsurance range (that is, the plan's spending for services when spending is between the amount corresponding to the deductible and the amount corresponding to the modified MOOP), the AV Calculator examines each of the medical and drug benefits listed in the AV Calculator to determine whether they are subject to coinsurance and copayment. The computation for each benefit type depends on the coinsurance and copayment requirements applying to that type. First, the AV Calculator computes plan-covered expenses for benefits not subject to the overall plan coinsurance rate or benefits subject to the overall plan coinsurance rate within set limits. Second, the AV Calculator computes the average cost per enrollee at the modified MOOP adjusted for costs for all services not subject to the overall plan coinsurance rate. Finally, this adjusted average cost is used to compute plan-covered expenses for benefits subject to the overall plan coinsurance rate. The narrower the range between the deductible and the MOOP, as in the case for bronze plans, the smaller the role this computation plays in the overall actuarial value of the plan.

The AV Calculator computes plan-covered expenses for benefits not subject to the overall plan coinsurance rate and benefits subject to a restricted form of the plan coinsurance rate as follows:
- For each benefit type that is subject to coinsurance at a coinsurance rate different from the overall plan coinsurance rate, the AV Calculator subtracts the average cost of that benefit corresponding to spending at the deductible from the average cost of that benefit corresponding to spending at the modified MOOP to obtain the average costs for that benefit that are attributed to spending in the range between the deductible and the modified MOOP. Multiplying this average cost by the benefit's coinsurance rate produces plan-covered expenses for this benefit in the range, which are included in the numerator.[20]

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[20] If specialty high-cost drugs are subject to coinsurance at a coinsurance rate different from the overall plan coinsurance rate and if the user selects the option to limit the amount of beneficiary cost sharing on specialty high-cost drugs, the AV Calculator compares this specialty-drug spending limit to the beneficiary cost-sharing amount under the specialty-drug coinsurance rate. To compute this latter value, the AV calculator multiplies the average

- For each benefit type subject to copayment but not coinsurance, the AV Calculator divides average cost at spending at the deductible for that benefit by the frequency for that benefit type to estimate the per-service cost at that spending level. The AV Calculator then subtracts the benefit copayment from the per-service cost and multiplies the result by the benefit frequency to produce plan-covered spending for the benefit corresponding to spending at the deductible. Next, the AV Calculator follows a similar process to calculate plan-covered spending for the benefit corresponding to spending at the modified MOOP. Finally, the AV Calculator subtracts plan-covered spending at the deductible from plan-covered spending at the modified MOOP and adds the resulting value to the total plan-covered spending. The AV Calculator may use one of several variations on this process, similar to those described above in the section on HSAs and HRAs, to compute plan-covered spending, depending on whether the user selects options that affect how the AV Calculator applies copayments or general cost-sharing requirements. In this instance, the AV Calculator computes plan-covered spending at the deductible level based on the average spending and frequency for each benefit type at the deductible level, and it follows an analogous process to compute plan-covered spending at the modified MOOP level.

- If the benefit type is subject to coinsurance and is among a subset of benefit types (mental health and substance abuse, advanced imaging, rehabilitative speech therapy, occupational and physical therapy, and diagnostic laboratory), and if outpatient professional and/or facility services are not subject to coinsurance, the AV Calculator applies the process described in the first two bullets to the outpatient professional and outpatient facility portions of the service category. The AV Calculator determines whether to follow the process described in the first or second bullet for the outpatient professional and outpatient facility portions based on the coinsurance and copayment requirements for those two benefit types.

- For X-ray, diagnostic imaging, if they are subject to coinsurance and if primary care and/or specialist office visit benefits are not subject to coinsurance, the AV Calculator applies the steps laid out in the first two bullets to the primary care and specialist portions of those service categories. The AV Calculator determines whether to follow the process described in the first or second bullet for the primary care and specialist portions based on the coinsurance and copayment requirements for those two benefit types.

- For specialty high-cost drugs, if they are subject to the plan coinsurance rate and if the user selects the option to limit the amount of beneficiary cost

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cost for the benefit in the range between the deductible and the MOOP by one minus the specialty-drug coinsurance rate. If the beneficiary cost-sharing amount is less than or equal to the specialty-drug spending limit, the calculation proceeds as described above. However, if the beneficiary cost-sharing amount exceeds the specialty-drug spending limit, the AV calculator computes plan-covered spending in the range between the deductible and the modified MOOP by subtracting the specialty-drug spending limit from the average cost of the specialty drug benefit in this range.

sharing on those drugs, the AV Calculator follows a process analogous to that described above to determine whether the beneficiary cost-sharing amount for spending between the deductible and the modified MOOP exceeds the specialty-drug spending limit. If the beneficiary cost-sharing amount is less than or equal to the specialty-drug spending limit, the AV Calculator treats the benefit as subject to plan coinsurance and incorporates it into the numerator using the process described below. However, if the beneficiary cost-sharing amount exceeds the specialty-drug spending limit, the AV Calculator computes plan-covered spending by subtracting the spending limit from the average cost for that benefit between the deductible and the modified MOOP.

- For primary care, if the benefit is subject to plan or benefit-specific coinsurance and if the user selects the option to begin cost sharing after a set number of visits, the AV Calculator compares the set number of visits to the frequency for primary care at the modified MOOP. If the set number of visits is less than or equal to the frequency at the modified MOOP, then plan-covered spending equals the difference between the average cost of services at the modified MOOP and the average cost of services at the deductible. However, if the set number of visits is greater than the frequency at the modified MOOP, the AV Calculator computes the beneficiary cost-sharing amount by subtracting the set number of visits from the frequency and multiplying the result by the coinsurance rate. The AV Calculator then computes plan-covered spending by subtracting the beneficiary cost-sharing amount from the difference between the average cost of services at the modified MOOP and the average cost of services at the deductible.[21]

At the completion of these steps, the numerator includes plan-covered expenses in the range of spending between the MOOP and deductible for all services except those that are subject to the plan's overall coinsurance rate.

Next, to account for spending on services already considered in this step, the AV Calculator subtracts the sum of the average cost for each of those services from average cost per enrollee for spending at the modified MOOP to obtain adjusted average cost at the modified MOOP. Finally, the process for computing plan-covered expenses in the coinsurance range for the remaining benefit types depends on both whether the plan has integrated or separate deductibles and whether the deductible or deductibles equal the MOOP. If the plan has an integrated deductible, plan-covered expenses for services not already considered in this step (i.e., services subject to the overall plan coinsurance rate) are equal to the coinsurance rate multiplied by spending on these remaining services. This spending is calculated as the difference between

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[21] The AV calculator follows a similar process if primary care services are subject to coinsurance and the user specifies that cost-sharing only applies after a set number of visits with copayments. If the set number of copayment visits is less than or equal to the frequency for primary care at the modified MOOP, the AV calculator computes plan-covered spending in this range using the process described above but subtracting the copayment amount multiplied by the frequency for primary care at the modified MOOP. Similarly, if the set number of copayment visits exceeds the frequency at the modified MOOP, the AV Calculator computes plan-covered spending in this range as described above but contracting the copayment amount multiplied by the copayment visit limit.

average cost at the level corresponding to the modified MOOP, adjusted as described above for spending on services already considered in this step, and average cost at the level corresponding to the deductible.

If the plan has separate medical and drug deductibles, the remaining plan-covered expenses in this range have two components. The first component, for medical spending, is equal to the coinsurance rate multiplied by spending on medical services in the range between the modified MOOP and deductible. This spending is calculated as the difference between average cost at the level corresponding to the modified MOOP, adjusted as described above for spending on services already considered in this step, and average cost for drug benefits subject to the plan's overall coinsurance rate at spending corresponding to the modified MOOP, less the difference between average cost at the deductible and average cost for all drug benefits at the deductible. That is, the AV Calculator adjusts both the modified MOOP and the deductible for costs attributed to drugs so that spending on medical services can be considered separately. The second component, for drug spending, is calculated in a parallel manner, and is equal to the drug coinsurance rate multiplied by drug spending in the range between the modified MOOP and deductible. This spending is computed as the difference between average cost for drug benefits subject to the plan's overall coinsurance rate at spending corresponding to the modified MOOP and average cost for all drug benefits at the deductible. Again, the AV Calculator adjusts both the modified MOOP and the deductible for costs attributed to medical services so that spending on prescription drugs can be considered separately.

If the medical deductible for a plan with separate deductibles is equal to the MOOP, the AV Calculator computes the medical component using a coinsurance rate equal to one, because all medical expenses in this range are covered by the plan. If the drug deductible is equal to the MOOP, the AV Calculator computes the drug component using a drug coinsurance rate equal to one, because all drug expenses in this range are covered by the plan.

For plans with separate MOOPs for medical and drug spending, the AV Calculator uses a variation of the process described above: calculating plan-covered expenses separately for medical and drug spending falling between the corresponding separate deductibles and modified MOOPs. This variation is described below. First, for benefits not subject to the overall plan coinsurance rate or benefits subject to a restricted form of the plan coinsurance rate, the AV Calculator uses the same process as described above to calculate spending between the deductible and the modified MOOP, but it uses the medical deductible and modified MOOP for calculations involving medical benefits and the drug deductible and modified MOOP for drug benefits. At the conclusion of this step, the numerator includes plan-covered expenses in the range of spending between each benefit type's corresponding MOOP and deductible for all services except those that are subject to the plan's overall unrestricted coinsurance rate.

Second, the AV Calculator subtracts the sum of the average cost of medical services not subject to the unrestricted plan coinsurance rate from the average cost per enrollee at the modified medical MOOP, and performs a corresponding calculation for drug services not subject to the unrestricted plan coinsurance rate. This step adjusts the average costs for medical and drug benefits at the corresponding modified MOOPs to account for spending on benefits not subject to the unrestricted plan coinsurance rate.

Finally, for benefits subject to the plan coinsurance rate without restriction, the AV Calculator uses a similar process as described above to calculate spending between the deductible and the MOOP; however, this step relies on the separate medical and drug deductibles and modified MOOPs to calculate spending for medical and drug benefits. As in the above process, the AV Calculator computes spending separately for medical and drug benefits. However, it is unnecessary to adjust the deductible and modified MOOP to account for spending in the other benefit type due to the separate medical and drug deductibles and modified MOOPs.

At the conclusion of this step, the numerator includes plan-covered expenses for all spending below the MOOP (or MOOPs).

Step 7: Calculate Plan-Covered Expenses for Spending Above the MOOP

The plan covers all expenses for spending on covered benefits above the MOOP. To calculate the amount of this spending, the AV Calculator computes the difference between average cost over all enrollees and average cost at the modified MOOP, and includes the full amount in the numerator. If the plan has separate MOOPs for medical and drug spending, the AV Calculator computes the difference between the average cost for medical benefits over all enrollees and the average cost for medical benefits at the modified medical MOOP and performs a corresponding calculation for drug benefits; the full amount for both benefit types is included in the numerator. At the conclusion of this step, the numerator includes plan-covered expenses over the full range of spending.

Step 8: Apply Network Blending, if Applicable

If the plan is a blended network/POS plan, the AV Calculator multiplies the numerator calculated in step 7 by the portion of total claims cost specified by the user as anticipated to be used in the first tier. The result becomes the preliminary numerator. The AV Calculator then repeats steps 3 through 7, utilizing the information about the deductible, coinsurance rate, MOOP and benefit-specific deductible, coinsurance, and copayment requirements contained in the Tier 2 columns of the AV Calculator to calculate a secondary numerator. This secondary numerator is then multiplied by the portion of total claims cost specified by the user to reflect utilization of the second tier network. Once this process is complete, the AV Calculator adds the preliminary and secondary numerators to produce the new final numerator. In order to guarantee that the change in AV is due to a change in cost-sharing requirements, please note that when calculating for CSR plan variations, these percentages cannot vary from the percentages used for the standard silver plan.

Step 9: Calculate AV and Corresponding Metal Tier

In the final step, the AV Calculator computes the final actuarial value amount, classifies the plan by metal tier, and determines whether the metal tier matches the desired metal tier input by the user.

To compute the actuarial value, the AV Calculator divides the numerator by the denominator. If the actuarial value is outside of these ranges, the AV Calculator outputs the actuarial value and the message "Error: Result is outside of +/- 2 percent de minimis variation."

The AV Calculator compares the observed metal tier to the user's desired metal tier. If the desired metal tier matches the observed metal tier, the AV Calculator outputs the actuarial value, metal tier, and the message, "Calculation Successful." If the plan does not match the desired metal tier, the AV Calculator provides the user the option to reset the "Desired Metal Tier" parameter to the observed metal tier and rerun the actuarial value calculation. If the user declines, the AV Calculator outputs the actuarial value, the metal tier, and the message, "Calculation resolved without matching metal tiers."

Additionally, users may select the option to determine whether the plan design satisfies the Affordable Care Act CSR requirements for enrollees falling below 250 percent of the Federal Poverty Level (FPL) under section 1402(a) through (c) of the Affordable Care Act. Under the final rule to implement section 1402, issuers of qualified health plans must provide plan variations to eligible lower-income enrollees, who have enrolled in silver qualified health plans in the individual market through the Exchange.[22] These plan variations must have reduced cost sharing and meet specified AV levels depending on the enrollee's household income. To use the AV Calculator to verify the AV of a plan variation, users should select the indicator that the plan meets the CSR standard, and select the intended type of CSR plan. The below table provides information on which metal tier should be chosen to align with the expected utilization for each plan variation. Please note that the metal tier continuance tables indicated below should be used regardless of any error message prompting the use of a different continuance table.

Household Income	Silver Plan Variation AV	Desired Metal Tier
100-150% of FPL	Plan Variation 94%	Platinum
150-200% of FPL	Plan Variation 87%	Gold
200-250% of FPL	Plan Variation 73%	Silver

After the other information has been entered, and the AV is calculated, the AV Calculator will produce an additional output message, which describes whether the plan satisfies the AV requirements for enrollees at a particular percentage of FPL.

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[22] "Patient Protection and Affordable Care Act; HHS Notice of Benefit and Payment Parameters for 2014," 78 FR 15410 (March 11, 2013), codified at 45 CFR 156.420.