DEPARTMENT OF HEALTH & HUMAN SERVICES
Centers for Medicare & Medicaid Services
Center for Consumer Information and Insurance Oversight
200 Independence Avenue SW
Washington, DC 20201

Date: September 15, 2022

RE: Reissued 2019 Benefit Year Department of Health and Human Services Risk Adjustment Data Validation (HHS-RADV) Results and 2020 Benefit Year HHS-RADV Results

This memo provides summary information on issuers' reissued 2019 benefit year HHS-RADV results[1] and on issuers' 2020 benefit year HHS-RADV results. The 2019 benefit year HHS-RADV results are being reissued in response to actionable discrepancies under 45 CFR 153.630(d)(2), which challenged the calculation of the 2019 benefit year error rates under the HHS-RADV error estimation methodology. In these discrepancies, a difference was observed between the error rate calculation finalized in the 2019 Payment Notice[2] and the error rate calculation described in the 2020 HHS-RADV Amendments Rule,[3] which was the methodology executed for the 2019 benefit year HHS-RADV results and described in the 2019 Benefit Year HHS-RADV Protocols.[4]

Based on these discrepancies, the 2019 benefit year HHS-RADV results are being reissued to realign the error rate calculation with the 2019 Payment Notice definition of the variable $EdgeRS_{i,e}$, which is the same methodological realignment applied to the reissued 2018 benefit year HHS-RADV results.[5] The error rate calculation for the reissued 2019 benefit year HHS-RADV results will continue to incorporate the methodological changes finalized in the 2020 HHS-RADV Amendments Rule[6] and the 2021 Payment Notice[7] that are applicable beginning with the 2019 benefit year and beyond, specifically, the Super Hierarchical Condition Category (Super HCC) policy, the sliding scale adjustment, and the negative failure rate constraint adopted in the 2020 HHS-RADV Amendments Rule, and the requirement that issuers have at least 30 HCCs in a failure rate group to be considered an outlier for that group adopted in the 2021 Payment Notice. Furthermore, in light of these discrepancies, and considering that prior to the discrepancies filed for the 2019

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[1] The 2019 Benefit Year HHS-RADV Results Memo released on February 25, 2022 (February 2022 2019 HHS-RADV Results Memo) is available at: https://www.cms.gov/files/document/2019-radv-results-memoclean2022-02-23.pdf.
[2] See HHS Notice of Benefit and Payment Parameters for 2019; Final Rule, 83 FR 16930 at 16961 – 16965 (April 17, 2018) (2019 Payment Notice).
[3] See the Amendments to the HHS-Operated Risk Adjustment Data Validation (HHS-RADV) Under the Patient Protection and Affordable Care Act's HHS-Operated Risk Adjustment Program; Final Rule; 85 FR 76979 at 76998 – 77001 (December 1, 2020) (2020 HHS-RADV Amendments Rule).
[4] The 2019 Benefit Year PPACA HHS Risk Adjustment Data Validation (HHS-RADV) Protocols (March 25, 2021) (2019 Benefit Year HHS-RADV Protocols) can be accessed at:
https://regtap.cms.gov/uploads/library/HRADV_2019__Protocols_032521_5CR_032521.pdf.
[5] The Reissuing 2018 Benefit Year HHS Risk Adjustment Data Validation (HHS-RADV) Results memo released on January 20, 2022, is available at: https://www.cms.gov/files/document/reissuing-2018-hhs-radv-results.pdf.
[6] See supra note 3.
[7] See the Patient Protection and Affordable Care Act; HHS Notice of Benefit and Payment Parameters for 2021; Notice Requirement for Non-Federal Governmental Plans; Final Rule, 85 FR 29164 at 29196 – 29198 (May 14, 2020) (2021 Payment Notice).

benefit year of HHS-RADV, the methodologies outlined in the 2019 Benefit Year HHS-RADV Protocols[8] and 2020 Benefit Year HHS-RADV Protocols[9] were identical and that 2019 and 2020 benefit year HHS-RADV error rates will be averaged,[10] CMS calculated 2020 benefit year HHS-RADV results using the same realigned methodology implemented for the reissued 2019 benefit year HHS-RADV results.

Reissuing the 2019 benefit year HHS-RADV results does not impact the error rates of zero error rate issuers, but it does impact the error rates of non-zero error rate issuers.[11] As a result, the 2019 benefit year HHS-RADV participating issuers that received non-zero error rates (roughly 19 percent of issuers) are expected to see a reduction in the magnitude of their error rates by approximately 22 percent, on average. The recalculation of error rates did not change issuers' outlier status, Super HCC failure rates, or failure rate groups (see Section 2 for further information).

In tandem with the release of this memo, on September 15, 2022, CMS is also releasing updated issuer-specific 2019 benefit year HHS-RADV results and reports, along with issuer-specific 2020 benefit year HHS-RADV results and reports, in the Audit Tool. Please note that as described in this memo, these reports and the reissued 2019 benefit year HHS-RADV results supersede and replace the previously released 2019 benefit year HHS-RADV results, as well as the sections described below from the February 2022 2019 HHS-RADV Results Memo.[12] This memo also serves as the 2020 Benefit Year HHS-RADV Results Memo.

As finalized in the 2020 HHS-RADV Amendments Rule, the reissued 2019 benefit year HHS-RADV error rates will be averaged with the 2020 benefit year HHS-RADV error rates and applied to the 2020 benefit year plan liability risk scores and risk adjustment transfers.[13,14] This approach will result in one HHS-RADV adjustment to the 2020 benefit year plan liability risk scores and risk adjustment transfers, reflecting the average value of each issuer's reissued 2019 benefit year HHS-RADV error rates and 2020 benefit years' HHS-RADV error rates.[15]

To aid issuers in understanding their HHS-RADV results, this memo contains an overview of the realigned methodology, which was applied to calculate the reissued 2019 benefit year HHS-RADV results and the 2020

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[8] See supra note 4.

[9] The 2020 Benefit Year PPACA HHS Risk Adjustment Data Validation (HHS-RADV) Protocols (June 4, 2021) (2020 Benefit Year HHS-RADV Protocols) can be accessed at:
https://regtap.cms.gov/uploads/library/2020_RADV_Protocols__042921_5CR_060421.pdf.

[10] See the 2020 HHS-RADV Amendments Rule, 85 FR at 77002 – 77005.

[11] For issuers exiting all markets in the state following the 2019 benefit year, HHS will continue to adjust only for positive error rate outliers and apply positive error rate outlier issuers' HHS-RADV results to the risk scores and transfers for the benefit year being audited. See the HHS Notice of Benefit and Payment Parameters for 2020; Final Rule, 84 FR 17454 at 17503-17504 (April 25, 2019) (2020 Payment Notice). The transitional average error rate approach is not applicable because exiting issuers who participated in 2019 HHS-RADV would not have 2020 benefit year risk scores or transfers to adjust. See the 2020 HHS-RADV Amendments Rule, 85 FR at 77002-77005. There were no exiting issuers with positive error rates in 2019 benefit year HHS-RADV, in either the original or reissued results. Thus, there will be no adjustments to 2019 benefit year risk adjustment risk scores or transfers as a result of the reissued 2019 benefit year HHS-RADV results.

[12] See supra note 1.

[13] The 2020 HHS-RADV Amendments Rule finalized the transitional average error rate approach for the 2019 and 2020 benefit years. As mentioned above, the reissued 2019 benefit year HHS-RADV results supersede and replace the previously released 2019 benefit year HHS-RADV results. Thus, the reissued 2019 benefit year error rates will be the applicable 2019 benefit year HHS-RADV error rates used in the transitional average error rate approach. See supra note 10.

[14] See supra note 11.

[15] See supra note 10.

benefit year HHS-RADV results, an overview of the components remaining unchanged in the methodological realignment of the reissued 2019 benefit year HHS-RADV results, a summary of key findings from the averaged reissued 2019 benefit year HHS-RADV results and 2020 benefit year HHS-RADV results, an overview of the reissued 2019 benefit year HHS-RADV reports and the 2020 benefit year HHS-RADV reports, and information to assist issuers in understanding their results.[16]

1. Overview of the Methodological Realignment for the Reissued of 2019 Benefit Year HHS-RADV Results and the 2020 Benefit Year HHS-RADV Results

In response to the aforementioned discrepancies, CMS is reissuing the 2019 benefit year HHS-RADV results to apply the realigned definition of the EDGE risk score variable $EdgeRS_{i,e}$ consistent with the definition applied in the reissued 2018 benefit year HHS-RADV results.[17] This methodological realignment focuses only on the portions of the enrollee EDGE risk score associated with HCCs to conform with the definition of the variable $EdgeRS_{i,e}$ in the 2019 Payment Notice.[18] This calculation differs from how CMS calculated error rates for the original 2019 benefit year HHS-RADV results released in February 2022, which applied the error rate to the entire enrollee EDGE risk score, including portions of the enrollee EDGE risk score not associated with HCCs.[19] The 2020 benefit year HHS-RADV error rate results also reflect the application of this methodological realignment.

These revisions impact multiple steps in the error rate calculation. The following subsections describe the changes made to realign the HHS-RADV error estimation methodology with the definition of $EdgeRS_{i,e}$ expressed in the 2019 Payment Notice. In addition, to help clarify the distinctions between the methodologies, the notations for the terms used to describe the applicable methodology in this document have been updated to distinguish between the usage of similar terms with different definitions. A comparison of these notations is displayed in Appendix E.

Beyond the realigned definition of $EdgeRS_{i,e}$, the methodology applied to the reissued 2019 benefit year HHS-RADV results and the 2020 benefit year HHS-RADV results includes the HHS-RADV refinements proposed and finalized in the 2020 HHS-RADV Amendments Rule[20] and the 2021 Payment Notice[21] that are applicable beginning with the 2019 benefit year; as such, reissued 2019 benefit year HHS-RADV error rates and 2020 benefit year HHS-RADV error rates incorporate the following key elements:

- Error estimation uses the Super HCC group failure rate approach defined in the 2020 HHS-RADV Amendments Rule.[22] Under this approach, CMS aggregates HCCs that share an HCC coefficient

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[16] Issuers who participated in 2019 or 2020 benefit year HHS-RADV will also receive reissued issuer-specific and enrollee-level results in the Audit Tool at the same time this memo is released. Issuers received the 2019 benefit year issuer specific demographic and enrollment (D&E) letters and reports, as well as 2019 benefit year issuer specific prescription drug (RXC) letters in the Audit Tool, at the same time as the 2020 benefit year HHS-RADV D&E and RXC results, in July 2022. The 2019 benefit year D&E and RXC reports remain unchanged by the reissued 2019 benefit year HHS-RADV results.

[17] See supra note 5.

[18] Ibid. Also see the 2019 Payment Notice, 83 FR at 16963 – 16964 (the variable $EdgeRS_{i,e}$ is defined as "the risk score for EDGE HCCs of enrollee e of issuer i").

[19] See, e.g., Section 11.3.3.3 (Calculate Error Rates to Adjust Issuers' PLRS) of the 2019 Benefit Year HHS-RADV Protocols (March 25, 2021), which can be accessed at: https://regtap.cms.gov/uploads/library/HRADV_2019__Protocols_032521_5CR_032521.pdf. Also see the 2020 HHS-RADV Amendments Rule, 85 FR at 77000.

[20] See supra note 3

[21] See supra note 7.

[22] See 85 FR at 76984-76990.

estimation group in the adult risk adjustment models into Super HCCs.[23] The resulting Super HCCs, both those composed of a single HCC and those composed of the aggregate frequencies of HCCs that share an HCC coefficient estimation group in the adult risk adjustment models, are then sorted into low, medium, and high failure rate groups based on each Super HCC's failure rate as determined from the results of all issuers' initial validation audit (IVA) results (or second validation audit (SVA) results if there was insufficient pairwise means agreement between the issuer's SVA and IVA results).[24]

- Only issuers with 30 or more HCCs in a failure rate group where the issuer's HCC group failure rate is outside of that failure rate group's confidence interval are identified as outliers for that failure rate group and receive an adjustment to the IVA-sampled enrollees' risk scores with EDGE HCCs in that group (or to the SVA-sampled enrollees' risk scores with EDGE HCCs in that group if there was insufficient pairwise means agreement).[25]

- CMS uses a 1.645 standard deviation cutoff to define a 90 percent confidence interval for outlier identification.[26] To calculate the adjustment to the enrollees' risk scores, CMS calculates and applies a sliding scale adjustment for outliers with failure rates between 1.645 and 3 standard deviations from the mean on both sides of the confidence interval.[27,28] For outlier issuers with failure rates more than 3 standard deviations from the mean, CMS calculates the adjustment as the difference between the issuer's failure rate group and the weighted mean failure rate for the failure rate group.

- For negative error rate outlier issuers with a negative group failure rate, CMS constrains the issuer's failure group failure rate to zero for purposes of calculating the adjustments to enrollees' risk scores, which contribute to the development of the issuer's risk score error rate.[29,30]

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[23] These Super HCC groupings will apply to all HHS-RADV sample enrollees, regardless of the risk adjustment models to which they are subject. This policy was modified beginning with the 2021 benefit year to apply HCC coefficient estimation groups to enrollees according to the risk adjustment model to which they are subject, except where child and adult groups have identical definitions. See the Patient Protection and Affordable Care Act; HHS Notice of Benefit and Payment Parameters for 2023; Final Rule, 87 FR 29164 at 27254 – 27255 (May 6, 2022) (2023 Payment Notice).

[24] See Section 11.3.3.3 (Calculate Error Rates to Adjust Issuers' PLRS) in the 2019 Benefit Year HHS-RADV Protocols and the 2020 Benefit Year HHS-RADV Protocols for information on the calculation of issuers' HCC group failure rates and error rates, including how those rates apply to newly identified HCCs by the IVA (or SVA as applicable) that are not reflected in the enrollee metrics. The 2019 Benefit Year HHS-RADV Protocols (March 25, 2021) can be accessed at: https://regtap.cms.gov/uploads/library/HRADV_2019__Protocols_032521_5CR_032521.pdf and the 2020 Benefit Year HHS-RADV Protocols (June 4, 2021) can be accessed at: https://regtap.cms.gov/uploads/library/2020_RADV_Protocols__042921_5CR_060421.pdf.

[25] Issuers with fewer than 30 HCCs in a failure rate group continue to be included in the calculation of national metrics. In addition, these issuers may still be considered outliers in other HCC groups in which they have 30 or more HCCs. See the 2021 Payment Notice, 85 FR at 29196-29198.

[26] See the 2020 HHS-RADV Amendments Rule, 85 FR at 76990-76994.

[27] See the 2020 HHS-RADV Amendments Rule, 85 FR at 76991-76992.

[28] The 90 percent confidence interval (CI) is also denoted as the inner CI. Beginning with the 2019 benefit year of HHS-RADV, a 99.7 percent confidence interval (three standard deviations from the mean) is also used and is denoted as the outer CI. See supra note 27.

[29] See the 2020 HHS-RADV Amendments Rule, 85 FR at 76994-76998.

[30] This policy was expanded to apply to both negative and positive error rate outliers, beginning with the 2021 benefit year. See the 2023 Payment Notice, 87 FR at 27208-27393.

The realigned methodology, terms, and definitions described in this document supersede the steps in the error estimation methodology described in Section 11.3.3.3 (Calculate Error Rates to Adjust Issuers' PLRS) of the 2019 Benefit Year HHS-RADV Protocols[31] and the 2020 Benefit Year HHS-RADV Protocols.[32]

1.1 Realigned Definition of EDGE Risk Score for the Reissued 2019 Benefit Year HHS-RADV Results and the 2020 Benefit Year HHS-RADV Results

The realigned definition for the EDGE risk score ($HccEdgeRS_{i,e}$) refers to the risk score only from enrollees' HCCs as reported on the issuer's EDGE server, as opposed to the total risk score of the enrollee as reported on the issuer's EDGE server (denoted as $EdgeRS_{i,e}$ in the 2019 Benefit Year HHS-RADV Protocols and the 2020 Benefit Year HHS-RADV Protocols, and referred to as $TotalEdgeRS_{i,e}$ in this document), which incorporates the non-HCC-associated portion of the risk score, such as prescription drug factors (if applicable), demographic factors, severe illness interaction factors (if applicable), and enrollment duration factors (if applicable).[33] As such, under the realigned error rate calculation, enrollees without HCCs[34] have an EDGE risk score ($HccEdgeRS_{i,e}$) value of zero (0), as opposed to a total EDGE risk score value incorporating the applicable CSR, prescription drug, demographic, severe illness interaction factors, and enrollment duration factors as implemented in original 2019 benefit year HHS-RADV results released in February 2022.

The realigned definition of the EDGE risk score impacts the calculation of the enrollee adjusted risk score. The 2019 Benefit Year and 2020 Benefit Year HHS-RADV Protocols formula for enrollee adjusted risk score[35,36] was:

$$AdjRS_{i,e} = TotalEdgeRS_{i,e} * (1 - Enrollee\ Adjustment_{i,e})$$

where:

- $AdjRS_{i,e}$ is the adjusted value of the total risk score for a sampled enrollee e of issuer i.
- $TotalEdgeRS_{i,e}$ is the EDGE value of the total risk score for sampled enrollee e of issuer i

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[31] See supra note 4.

[32] See supra note 9.

[33] The risk adjustment Cost-Sharing Reduction (CSR) factors operate differently in the calculation of an enrollee's risk score than other components. The CSR factors are neither an HCC-associated, nor a non-HCC-associated component of the enrollee-level EDGE risk score. Instead, they are a multiplier applied to the combination of the HCC and non-HCC components of the risk score, and therefore, modify all of the applicable components of the enrollee's risk score, rather than serving as a component themselves. For more information on how CSR factors are incorporated into the risk score calculation, see, e.g., Chapter 3: HHS RA Methodology of the Risk Adjustment (RA): Comprehensive Overview Computer Based Training (CBT) - Text Only available at: https://regtap.cms.gov/uploads/library/RA_ComprehensiveOverview_textonly_070021_5CR_071221.pdf. Also see HHS Notice of Benefit and Payment Parameters for 2014; Final Rule, 78 FR 15409 (April 30, 2013) (2014 Payment Notice) and https://www.cms.gov/mmrr/Downloads/MMRR2014_004_03_a03.pdf.

[34] In the methodological realignment for the reissuance of 2019 benefit year HHS-RADV results and the calculation of 2020 benefit year HHS-RADV results, adult enrollees with only RXCs have an HCC-associated EDGE risk score value of zero (0) and do not have an impact on the error rate calculation. Infant enrollees without HCCs and the default Maturity-Severity interaction AGE1_X_SEVERITY1 also have an HCC-associated EDGE risk score value of zero (0) and do not have an impact on the error rate calculation.

[35] As defined in Section 11.3.3.3 (Calculate Error Rates to Adjust Issuer' PLRS) of the 2019 Benefit Year HHS-RADV Protocols and the 2020 Benefit Year HHS-RADV Protocols and as calculated in the original 2019 benefit year HHS-RADV results released in February 2022. See supra notes 4 and 9.

[36] In the 2019 Benefit Year HHS-RADV Protocols and the 2020 Benefit Year HHS-RADV Protocols, the total risk score of the enrollee as reported on the issuer's EDGE server was denoted as $EdgeRS_{i,e}$. See supra notes 4 and 9. In this document this variable is referred to as $TotalEdgeRS_{i,e}$. See Appendix E for additional detail.

(including non-HCC-associated components of the risk score calculation).

- *Enrollee Adjustment*$_{i,e}$ is the calculated adjustment factor to adjust sampled enrollee *e* of issuer *i*'s sample risk score.

For the reissued 2019 benefit year HHS-RADV results and the 2020 benefit year HHS-RADV results, CMS calculated enrollees' adjusted risk scores using only the HCC-associated portion of the EDGE risk score, as noted in the realigned formula noted below:

$$HccAdjRS_{i,e} = HccEdgeRS_{i,e} * (1 - Enrollee\ Adjustment_{i,e})$$

where:

- *HccAdjRS*$_{i,e}$ is the adjusted value of the HCC-associated portion of the risk score for sampled enrollee *e* at issuer *i*.
- *HccEdgeRS*$_{i,e}$ is the EDGE value of the HCC-associated portion of the risk score for sampled enrollee *e* of issuer *i* (that is, the risk score only from enrollee's HCCs on EDGE).
- *Enrollee Adjustment*$_{i,e}$ is the calculated adjustment factor to adjust sampled enrollee *e* of issuer *i*'s sample risk score[37]

1.2 Realigned Error Rate Calculation & Application of Error Rates to Issuers' Plan Liability Risk Scores (PLRS) for the Reissued 2019 Benefit Year HHS-RADV Results and the 2020 Benefit Year HHS-RADV Results

For the reissued 2019 benefit year HHS-RADV results and the 2020 benefit year HHS-RADV results, CMS calculated the extrapolation of the issuer's error rate using only the HCC-associated EDGE risk score and HCC-associated enrollee adjusted risk score, which includes only enrollees with HCCs and is consistent with the realigned definition for the EDGE risk score.

In the original 2019 benefit year HHS-RADV results released in February 2022, error rates were calculated using the following formula from the 2019 HHS-RADV Protocols,[38] which is identical to the formula in the 2020 HHS-RADV Protocols,[39]:

$$ErrorRate_i = 1 - \frac{\sum_e(w_{i,e} * AdjRS_{i,e})}{\sum_e(w_{i,e} * TotalEdgeRS_{i,e})}$$

where:

- $w_{i,e}$ is the stratum weight, calculated as the number of enrollees in enrollee *e*'s stratum in the whole population for issuer *i*, divided by number of sampled enrollees in enrollee *e*'s stratum for issuer *i*
- *TotalEdgeRS*$_{i,e}$ is the weighted average across all plans for all enrollment periods of the sum of enrollee *e*'s risk adjustment model coefficients for that enrollment period at issuer *i* as recorded on EDGE. This value includes all applicable benefit year risk score components, including HCC and

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[37] As defined in Section 11.3.3.3 (Calculate Error Rates to Adjust Issuers' PLRS) of the 2019 Benefit Year HHS-RADV Protocols and of the 2020 Benefit Year HHS-RADV Protocols and as calculated in the original 2019 benefit year HHS-RADV results released in February 2022, the enrollee adjustment factor (*Enrollee Adjustment*$_{i,e}$) was calculated as the weighted average of all HCCs' associated Group Adjustment Factor(s), where the weight is assigned as the risk score component contributed by the single HCC. The risk score component contributed by the single HCC only considers an enrollee's HCCs and the metal level of their plan.
[38] See supra note 35.
[39] Ibid.

non-HCC components, and is weighted by the length of the enrollee's enrollment periods, and takes the metal level and CSRs of each enrollment period plan into account. This enrollee-level overall value is provided to CMS from the EDGE server reports directly and is not calculated during the HHS-RADV process.

For the reissued 2019 benefit year HHS-RADV results and the 2020 benefit year HHS-RADV results, CMS calculated issuers' error rates according to the realigned error rate formula noted below

$$HccER_i = 1 - \frac{\sum_e(w_{i,e} * HccAdjRS_{i,e})}{\sum_e(w_{i,e} * HccEdgeRS_{i,e})}$$

Because enrollees without HCCs[40] will have $HccEdgeRS_{i,e}$ and $HccAdjRS_{i,e}$ values of zero (0), they will not contribute to the $HccER_i$ value either positively or negatively. This lack of contribution to the $HccER_i$ is therefore equivalent to an exclusion of these enrollees from the $HccER_i$.

As defined above, the $HccER_i$ value under the realigned formula describes the proportion of only the HCC-related components of the risk score that are believed to be in error, as reflected by the medical record review. Therefore, before applying the $HccER_i$ to the issuer's PLRS, the value must be scaled to appropriately reflect the proportion of the total EDGE risk score that would be in error with the $HccER_i$ value applied only to the HCC portion of the PLRS. To accomplish this, consistent with the methodological realignment applied to the reissued 2018 benefit year results, CMS calculated an HCC-associated PLRS weight ($HccPLRSweight_i$) to estimate how much of the total EDGE PLRS is HCC-related in the issuer population based on the issuer's sample. This calculation is noted below:

$$HccPLRSweight_i = \frac{\sum_e(w_{i,e} * HccEdgeRS_{i,e})}{\sum_e(w_{i,e} * TotalEdgeRS_{i,e})}$$

In contrast to their role in the $HccER_i$ value, enrollees without HCCs will have an impact on the HCC-associated PLRS weight value via their inclusion in the denominator of this calculation. This inclusion reflects their role in the value of the issuer's total PLRS and is necessary for the appropriate scaling of the $HccER_i$ to apply to the issuer's total PLRS.

For the reissued 2019 benefit year HHS-RADV results and the 2020 HHS-RADV benefit year results, CMS then calculated a total error rate ($TotalER_i$) by multiplying the HCC-associated error rate by the HCC-associated PLRS weight, as noted below:

$$TotalER_i = HccER_i * HccPLRSWeight_i$$

Consistent with the 2020 HHS-RADV Amendments Rule policy transitioning to a concurrent, rather than prospective, application of HHS-RADV results,[41,42] CMS then averaged the reissued 2019 benefit year HHS-RADV error rates and the 2020 benefit year HHS-RADV error rates and will adjust issuers' 2020 PLRS by applying the issuer's average total error rate to the issuer's total 2020 PLRS to produce the adjusted 2020

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[40] This includes adult enrollees with only RXCs. In the realigned methodology applied to the reissued 2019 benefit year HHS-RADV results and the 2020 benefit year HHS-RADV results, enrollees with only RXCs also have an HCC-associated EDGE risk score value of zero (0) and do not have an impact on the error rate calculation.
[41] See supra note 10.
[42] See supra note 11.

PLRS according to the following formula:

$$AdjPLRS_i = \left(1 - \frac{TotalER_{i,2019} + TotalER_{i,2020}}{2}\right) * PLRS_i$$

where:

- $PLRS_i$ is the enrollment-weighted average PLRS for issuer i when including all risk score components on EDGE
- $TotalER_{i,2019}$ is the total error rate for the 2019 benefit year
- $TotalER_{i,2020}$ is the total error rate for the 2020 benefit year

2. Overview of Components Remaining Unchanged in the Methodological Realignment with the 2019 Payment Notice for the Reissuance of 2019 Benefit Year HHS-RADV Results

The following components did not change as part of the methodological realignment for the reissuance of 2019 benefit year HHS-RADV results and remain consistent with the 2019 Benefit Year HHS-RADV Results Memo[43] released in February 2022 and the 2019 Benefit Year HHS-RADV Protocols[44]:

- Total number of HHS-RADV participating issuers;
- Super HCC frequencies and Super HCC Failure Rate statistics;
- Application of HCC hierarchies and categorization of Super HCCs into Failure Rate Groups;
- Calculation of Group Failure Rates (GFRs) and Group Adjustment Factors (GAFs);
- Issuer outlier determination and issuer outlier status; and
- Issuer error rate sign (e.g., issuers that had a positive error rate in the original 2019 benefit year HHS-RADV results still have a positive error rate in the reissued 2019 benefit year HHS-RADV results).

3. Highlights of the Reissued 2019 Benefit Year HHS-RADV Results and the 2020 Benefit Year HHS-RADV Results

In this section, CMS provides a high-level summary of the major trends identified in the reissued 2019 benefit year HHS-RADV results and the 2020 benefit year HHS-RADV results.

Key Finding #1: Issuer participation was similar in 2019 benefit year and 2020 benefit year HHS-RADV.
In the 2019 benefit year, there were 554 issuers of risk adjustment covered plans. 433 issuers (78.2 percent) participated in 2019 benefit year HHS-RADV and 121 issuers (21.8 percent) were exempt from 2019 benefit year HHS-RADV. Of these participating issuers, 427 (98.6 percent) were non-exiting issuers and 6 (1.4 percent) were exiting issuers.

The 2020 benefit year had a slightly higher number of issuers overall, with a total of 569 issuers of risk adjustment covered plans. Of these issuers, 461 (81.0 percent) participated in 2020 benefit year HHS-RADV, and 108 (19.0 percent) were exempt from 2020 benefit year HHS-RADV. Of those who participated, 457 (99.1 percent) were non-exiting issuers and 4 (0.9 percent) were exiting issuers.

Key Finding #2: There was overlap in Highly Miscoded HCCs between the 2019 benefit year and 2020 benefit year of HHS-RADV.
In 2019 and 2020 benefit year SVAs, CMS identified several HCCs that were frequently miscoded on EDGE

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[43] See supra note 1.
[44] See supra note 4.

or that IVA Entities frequently abstracted incorrectly or without necessary supporting documentation. The most common miscoded HCCs as found by the SVA for SVA-reviewed sample enrollees in the 2019 and 2020 benefit year are noted in Table 1 below.[45] The numbers in Table 1 reflect only the subset of sample enrollees reviewed during the SVA process.

Table 1: Sampled Enrollees Reviewed During SVA Process							
HCC Name		2019 BY Frequency			2020 BY Frequency			Coding Clinic Guidance
		EDGE	IVA	SVA	EDGE	IVA	SVA	
8	Metastatic Cancer	675	597	589	785	720	699	Coding Clinic, 2nd Quarter, 2012, page: 9 (Decoding Cancer Staging Information)
20	Diabetes with Chronic Complications	829	771	743	940	899	837	Coding Clinic, 2nd Quarter, 2016, pages: 36-37 (Diabetes and associated conditions clarification)
74	Disorders of the Immune Mechanism	274	169	96	323	231	215	Coding Clinic, 3rd Quarter, 2015, pages: 21-22 (Immunocompromised state due to immunosuppressants or underlying disease process) and Coding Clinic, 4th Quarter, 2020, pages: 10-12 (Immunodeficiency status)
75	Coagulation Defects and Other Specified Hematological Disorders				403	361	326	Coding Clinic, 2nd Quarter, 2006, page: 17 (Coagulopathy) and Coding Clinic, 1st Quarter, 2016, page: 14 (Bleeding caused by extrinsic circulating anticoagulants)
131	Acute Myocardial Infarction	214	165	154				Official Guidelines for Coding & Reporting, Section I.C.9.e. (Acute myocardial infarction)
142	Specified Heart Arrhythmias	542	504	473	622	569	540	Coding Clinic, 1st Quarter, 2019, pages 33-34 (Sick Sinus syndrome controlled with implantable cardiac device)
156	Pulmonary Embolism and Deep Vein Thrombosis	292	229	212	362	300	287	Coding Clinic, 3rd Quarter, 1991, page: 16 (Thrombosis and thrombophlebitis of deep veins of the leg)
209	Completed Pregnancy with No or Minor Complications				68	83	90	Official Guidelines for Coding & Reporting, Chapter 15 (Pregnancy, Childbirth, and the Puerperium, n. Normal Delivery)

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[45] HCC 75 and HCC 209 were only identified as highly miscoded HCCs in 2020 benefit year SVA. HCC 131 was only identified as a highly miscoded HCC in 2019 benefit year SVA.

Key Finding #3: National program benchmarks generally improved between 2019 benefit year and 2020 benefit year HHS-RADV.

For each failure rate group (low, medium and high), the national weighted mean and standard deviation of the group failure rate decreased from 2019 benefit year HHS-RADV to 2020 benefit year HHS-RADV.[46] Figure 1 below illustrates the changes in the distributions of failure rates that led to the decreased national statistics. The average decrease in weighted mean across all three HCC groups between the 2019 and 2020 benefit years of HHS-RADV was 1.9 percentage points and the average decrease in standard deviation across all three HCC groups between the 2019 and 2020 benefit years of HHS-RADV was approximately 0.9 percentage points. As a result, in the 2020 benefit year, there is a narrower distribution of failure rates that is centered closer to zero compared to the 2019 benefit year.

Figure 1: Distribution of Group Failure Rates Across 2019 and 2020 Benefit Years of HHS-RADV
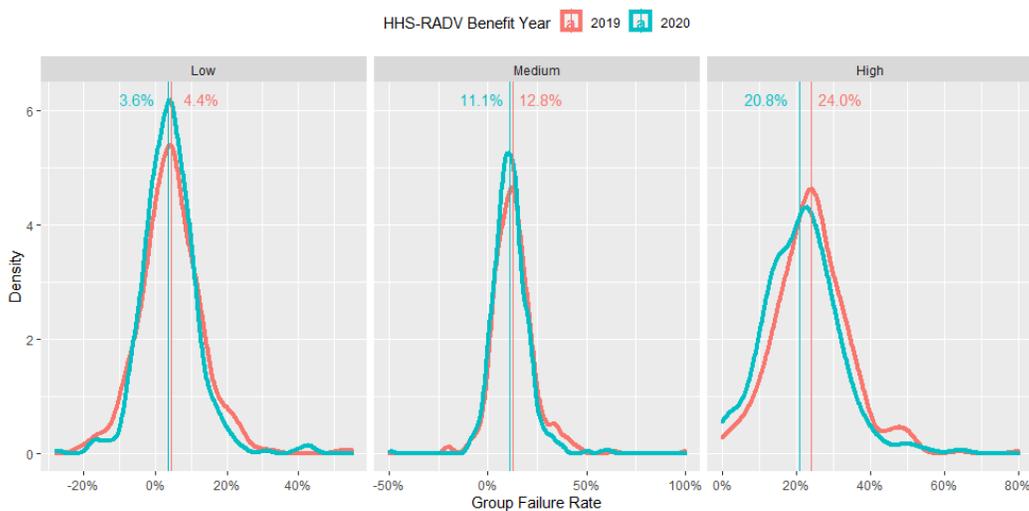
Key Finding #4: Although the number of outliers was relatively stable between the 2019 and 2020 benefit years of HHS-RADV, the averaging of 2019 and 2020 benefit year HHS-RADV error rates resulted in more issuers with HHS-RADV adjusted 2020 benefit year risk adjustment transfers than would have been expected from the number of 2020 HHS-RADV outliers alone.

The 2019 and 2020 benefit years of HHS-RADV had a relatively stable number of issuers identified as outliers. As shown in Table 2, there were 83 outlier issuers in 2019 benefit year HHS-RADV and 75 outlier issuers in 2020 benefit year HHS-RADV. After averaging 2019 and 2020 benefit year HHS-RADV error rates,[47] there are 139 unique outlier issuers across both benefit years. Of these issuers, 71 have negative averaged error rates and 68 have positive averaged error rates.

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[46] See Appendix A for additional detail. We do not offer a comparison of 2019 and 2020 benefit year HHS-RADV national program benchmarks to 2018 benefit year HHS-RADV national program benchmarks as the methodological changes outlined above, such as the adoption of the sliding scale adjustment, impacted the calculation of issuer group failure rates.

[47] See supra note 10.

Table 2: Outlier Issuers Across 2019 and 2020 Benefit Years[48]			
RADV Year	**Issuers with Non-Zero Error Rates**	**Negative Error Rates**	**Positive Error Rates**
Averaged Error Rates	139	71	68
2020 HHS-RADV Results	75	37	38
2019 HHS-RADV Results	83	45	38

Table 3 provides a closer look at the type of outlier identified in each failure rate group in the 2019 and 2020 benefit years of HHS-RADV. In the 2019 benefit year, 91.5 percent of outliers fall between 1.645 and 3 standard deviations of the weighted mean failure rate for the failure rate group and 8.5 percent of outliers fall outside of 3 standard deviations of the weighted mean failure rate for the failure rate group. In the 2020 benefit year, 85.5 percent of outliers fall within 1.645 and 3 standard deviations of the weighted mean failure rate for the failure rate group and 14.5 percent of outliers fall outside of 3 standard deviations of the weighted mean failure rate for the failure rate group.

Table 3: Outlier Counts By Outlier Identification Threshold						
Failure Rate Group	**2019 Benefit Year**			**2020 Benefit Year**		
	Within 1.645 and 3 SD	**Outside 3 SD**	**Total**	**Within 1.645 and 3 SD**	**Outside 3 SD**	**Total**
Low	38	4	42	30	5	35
Medium	33	5	38	31	5	36
High	37	1	38	33	6	39
Total	108	10	118	94	16	110

Key Finding #5: The magnitude of error rates for positive error rate outliers is greater than the magnitude of error rates for negative error rate outliers.

Starting in 2019 benefit year HHS-RADV, CMS constrained the issuer's HCC group failure rate to zero for purposes of calculating the adjustments to enrollees' risk scores for negative error rate outlier issuers with a negative group failure rate.[49] As a result of the application of this new negative failure rate constraint, we found that the magnitude of error rates among positive error rate outliers is greater and more varied than the

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[48] The chart reflects the number of outlier issuers excluding any issuers that exited in the applicable benefit year and had a negative error rate in that benefit year. Such issuers have their error rates in the exiting benefit year set to zero. See the 2020 Payment Notice, 84 FR at 17503 – 17504. There was only one exiting issuer in 2020 benefit year HHS-RADV with a negative 2020 benefit year HHS-RADV error rate and this issuer's 2020 benefit year HHS-RADV was set to zero. There were six exiting issuers in 2019 benefit year HHS-RADV, all of which were not outliers and thus, had zero 2019 benefit year HHS-RADV error rates.

[49] See supra notes 29 and 30.

magnitude of error rates among negative error rate outliers in the combined, averaged 2019 and 2020 HHS-RADV results. Figure 2 below illustrates the distribution of averaged 2019 and 2020 error rates. The minimum negative error rate is -2.74 percent, but the maximum positive error rate is 21.17 percent, which is why the distribution extends further to the right.

Figure 2: Distribution of Averaged 2019 and 2020 Benefit Year HHS-RADV Error Rates
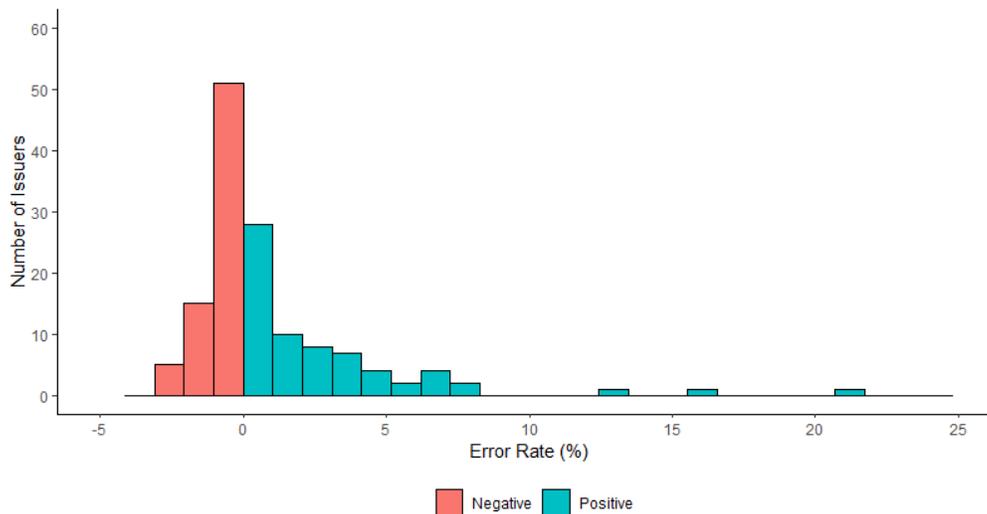
Key Finding #6: Averaging 2019 and 2020 HHS-RADV results increased the number of state market risk pools being adjusted.

In 2019 benefit year HHS-RADV, 28 states' individual market non-catastrophic risk pools[50] and 34 states' small group market risk pools were impacted due to the identification of outliers. In 2020 benefit year HHS-RADV, 30 states' individual market non-catastrophic risk pools and 28 states' small group market risk pools were impacted due to the identification of outliers. After averaging outlier issuers' 2019 and 2020 benefit year error rates, a total of 38 states' individual market non-catastrophic risk pools and 39 states' small group market risk pools will be impacted due to the identification of outliers in either benefit year.[51]

4. Reissued 2019 Benefit Year HHS-RADV Results and 2020 Benefit Year HHS-RADV Results: Key Metrics and Reports:

The HHS-RADV Audit Tool[52] provides the following documents for reissued 2019 benefit year HHS-RADV results and the 2020 benefit year HHS-RADV results[53]:

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[50] States with merged market risk pools in the 2019 and 2020 benefit years (Massachusetts and Vermont) are included in this analysis as a state with an individual market non-catastrophic risk pool.

[51] See Appendix B for additional detail.

[52] The HHS-RADV Audit Tool can be accessed by issuers (issuer SO, back-up SO and RADV coordinators) at: https://ccrms-rari.force.com/HHSRADVAuditTool/.

[53] For issuers who did not participate in the 2020 benefit year of HHS-RADV, documents #6 and 7 in the below list will not be provided. However, these issuers can view the reissued 2019 benefit year HHS-RADV results and the 2020 benefit year HHS-RADV results in this memo and documents #1 - #5 in the list. For issuers who participated in the 2019 benefit year of HHS-RADV, documents #8, 9 and 10 in the list will also be provided. IVA Entities will have access to this memo and the HHS-RADV Results Job

1. **National Program Benchmarks – 2020 Benefit Year HHS-RADV Compared to Reissued 2019 Benefit Year HHS-RADV (Appendix A):** Provides the national program benchmarks for failure rate group means and confidence intervals, and summary statistics based on all issuers' results used to establish the national failure rate group metrics for the 2020 benefit year and reissued 2019 benefit year HHS-RADV results.

2. **2020 Benefit Year RA State Market Risk Pool Weighted Average Error Rate from Reissued 2019 Benefit Year HHS-RADV Results and 2020 Benefit Year HHS-RADV Results (Appendix B):** Provides comparison information that shows which state market risk pools are impacted by 2019 benefit year HHS-RADV Error rates and/or 2020 benefit year HHS-RADV error rates.[54] State market risk pools will have 2020 benefit year risk adjustment state transfers impacted if there is at least one error rate outlier in the state market risk pool in either the 2019 benefit year or 2020 benefit year of HHS-RADV.[55]

3. **2020 Benefit Year HHS-RADV Failure Rate Group Definitions (Appendix C):** Provides a listing of HCCs, the associated Super HCC, and the group detail (i.e., Low Failure Rate Group, Medium Failure Rate Group, and High Failure Rate Group) for the 2020 benefit year.

4. **2019 Benefit Year HHS-RADV Failure Rate Group Definitions (Appendix D):** Provides a listing of HCCs, the associated Super HCC, and the group detail (i.e., Low Failure Rate Group, Medium Failure Rate Group, and High Failure Rate Group) for the 2019 benefit year.[56]

5. **Comparison of Variable Names Relevant to the Methodological Realignment Applied to the Reissued 2019 Benefit Year HHS-RADV Results and the 2020 Benefit Year HHS-RADV Results (Appendix E):** Provides a comparison of variable names relevant to the methodological realignment that were updated to distinguish between the usage of similar terms with different definitions in the realigned methodology and the 2019 Payment Notice.[57]

6. **2020 Benefit Year Issuer-Specific Metrics Report:** Provides issuer-specific results for the 2020 benefit year HHS-RADV on each HIOS ID's HCC group failure rates and error rate, if applicable. This is available to issuers in the History and Results tab of the Audit Tool. Issuers with more than one HIOS ID will receive separate Issuer HCC Group Metrics Reports for each HIOS ID.

7. **2020 Benefit Year Enrollee-Level Metrics Report:** Provides issuer-specific results for the 2020 benefit year of HHS-RADV that provide the enrollee-level findings for each HIOS ID's HHS-RADV sampled enrollees' HCCs and applicable adjustments.[58] This is available to issuers in the History and Results tab of the Audit Tool.

8. **Reissued 2019 Benefit Year Issuer-Specific Metrics Report:** Provides issuer-specific reissued

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Aid, but they will not receive issuer specific results (i.e., documents #6 - #10 in the list). Issuers may choose to share their issuer specific results with their IVA entities.

[54] We note that the state market risk pool weighted average risk score error rates are subject to change as they do not take into account any adjustments for potential actionable HHS-RADV discrepancies or successful HHS-RADV appeals.

[55] There was one exiting issuer with a negative error rate and one exiting issuer with a positive error rate in 2020 benefit year HHS-RADV. There were six exiting issuers in 2019 benefit year HHS-RADV and none were outliers. Under the policies finalized in the 2020 Payment Notice and 2020 HHS-RADV Amendments Rule, HHS will continue to apply only positive error rate outlier exiting issuers' error rates to the benefit year being audited. See the 2020 Payment Notice, 84 FR at 17503-17504 and the 2020 HHS-RADV Amendments Rule, 85 FR at 77003. Also see supra note 11.

[56] The 2019 Benefit Year Failure Rate Group Definitions are unaffected by the methodological realignment and remain unchanged from the February 2022 2019 HHS-RADV Results Memo and are reproduced in Appendix D for reference. See supra note 1.

[57] See the 2019 Payment Notice, 83 FR at 16961 - 16965.

[58] Issuers should note that the HIOS ID's error rate may be a zero (0) or a non-zero rate.

results for the 2019 benefit year HHS-RADV on each HIOS ID's HCC group failure rates and error rate, if applicable. This is available to issuers in the History and Results tab of the Audit Tool. Issuers with more than one HIOS ID will receive separate Issuer HCC Group Metrics Reports for each HIOS ID.

9. **Reissued 2019 Benefit Year Enrollee-Level Metrics Report:** Provides issuer-specific reissued results for the 2019 benefit year of HHS-RADV that provide the enrollee-level findings for each HIOS ID's HHS-RADV sampled enrollees' HCCs and applicable adjustments.[59] This is available to issuers in the History and Results tab of the Audit Tool.

10. **2019 Benefit Year & 2020 Benefit Year Average Error Rate Report:** Provides the issuer-specific average error rate from averaging issuers' reissued 2019 benefit year HHS-RADV error rates and 2020 benefit year HHS-RADV error rates. This is available to issuers in the History and Results tab of the Audit Tool.

To help issuers understand the results, CMS is also providing a Reissued 2019 Benefit Year HHS-RADV Results and 2020 Benefit Year HHS-RADV Results Job Aid, which includes definitions for each of the data fields in the results that will be available in the HHS-RADV Audit Tool. The Reissued 2019 Benefit Year HHS-RADV Results and 2020 Benefit Year HHS-RADV Results Job Aid includes an addendum, called "Error Rate Calculation Example", that provides step-by-step directions for calculating an issuer's reissued 2019 HHS-RADV error rate and 2020 HHS-RADV error rate.

5. Impact of HHS-RADV Error Rates and Outlier Status on 2020 Benefit Year Risk Adjustment Transfers:[60]

The impact of a risk score error rate on an issuer's risk adjustment transfers depends on whether the issuer was identified as an outlier and whether additional outliers exist in the state market risk pool. As previously mentioned, non-exiting issuers' reissued 2019 benefit year HHS-RADV error rates are averaged with the 2020 benefit year HHS-RADV error rates and will be applied as one adjustment to the 2020 benefit year plan liability risk scores and risk adjustment transfers.[61]

- Exempt Issuers: Exempt issuers will receive a zero error rate for the year in which they were exempt.
    - Issuers that did not participate in the 2019 or 2020 benefit year of HHS-RADV will receive a zero error rate for the applicable exempt benefit year. If these issuers participated in either 2019 or 2020 benefit year HHS-RADV, they may have a non-zero error rate applied to their respective 2020 benefit year plan liability risk scores based on the issuer's own reissued 2019 benefit year HHS-RADV results or its 2020 benefit year HHS-RADV results, averaged together with the zero error rate for the applicable exempt benefit year.[62]
    - If issuers are exempt in both the 2019 and 2020 benefit years, then they will have a zero error rate applied to their respective 2020 benefit year plan liability risk scores. However, due to the budget neutral nature of the HHS-operated risk adjustment program, exempt issuers' 2020 benefit year risk adjustment transfers may still be subject to HHS-RADV adjustments if other issuers in their state market risk pool are identified as outliers in either the 2019 or 2020 benefit year of HHS-RADV.

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[59] Ibid.
[60] See supra notes 10 and 11.
[61] Ibid.
[62] The transitional average error rate approach does not apply to issuers that exited after the 2019 benefit year. See supra notes 10 and 11.

- Non-Outlier Issuers: Non-outlier issuers will receive a zero error rate for the year in which they were non-outliers.
    - The majority of participating issuers' 2019 and 2020 HHS-RADV results are within the confidence intervals of the national HCC group failure rates. If non-outlier issuers in one of these benefit years are outliers in the other benefit year, they may have adjustments made to their respective 2020 benefit year plan liability risk scores.[63] If issuers are non-outliers in both the 2019 benefit year and 2020 benefit year, then they will not have an adjustment made to their respective 2020 benefit year plan liability risk scores.
    - Due to the budget neutral nature of the HHS-operated risk adjustment program, 2020 benefit year risk adjustment transfers will be impacted for issuers that were non-outliers in both 2019 and 2020 if other issuers in the state market risk pool are identified as outliers in either the 2019 or 2020 benefit year of HHS-RADV.
- Outlier Issuers: Outlier issuers will receive non-zero error rates.[64,65] These non-zero error rates could be positive or negative. Issuers' reissued 2019 benefit year HHS-RADV error rates and 2020 benefit year HHS-RADV error rates are averaged together.[66] If an issuer is identified as an outlier in one benefit year and a non-outlier in the other, the HHS-RADV error rate for the benefit year they are a non-outlier will be considered as zero (0) in the averaging of their error rates.
    - If the outlier issuer's averaged error rate is positive, the issuer's 2020 benefit year plan liability risk scores will be adjusted downward by the error rate. Assuming no adjustments to other issuers' risk scores in the same state market risk pool, this would result in a higher 2020 benefit year risk adjustment charge or lower risk adjustment payment, or shift the transfer amount from a payment to a charge.
    - If the outlier issuer's averaged error rate is negative, the issuer's 2020 benefit year plan liability risk scores will be adjusted upwards by the error rate. Again, assuming no adjustments to other issuers' risk scores in the same state market risk pool, this would result in a lower 2020 benefit year risk adjustment charge or higher risk adjustment payment, or shift the transfer amount from a charge to a payment.
    - As described below, we note that the magnitude and direction of 2020 benefit year transfer adjustments may change if other issuers in the state market risk pool are identified as outliers in either the 2019 or 2020 benefit year of HHS-RADV.

The application of the averaged error rates to outlier issuers' 2020 benefit year risk scores affects the state average risk score for a state market risk pool, which in turn affects other issuers' 2020 benefit year risk adjustment transfer calculations in that state market risk pool, even if those issuers had zero error rates for both the 2019 and 2020 benefit years of HHS-RADV. As a result, exempt issuers and non-outlier issuers may

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[63] CMS will use the unweighted average value of issuers' reissued 2019 benefit year HHS-RADV error rates and 2020 benefit year HHS-RADV error rates to adjust 2020 benefit year risk scores and risk adjustment state transfers. See supra notes 10 and 11. If an issuer is identified as an outlier in one benefit year and a non-outlier in the other, the HHS-RADV error rate for the benefit year they are a non-outlier will be considered as zero (0) in the averaging of their error rates. Exempt issuers and non-outlier issuers have zero (0) error rates. Issuers that are new market entrants in the 2020 benefit year will receive a zero (0) error rate for the 2019 benefit year in the average error rate formula.

[64] Issuers with failure rates that fall outside of one or more of the failure group confidence intervals, and have at least 30 HCCs in the failure rate group, are considered outliers.

[65] Issuers who exited all markets in a state after the 2020 benefit year and who have negative error rates for 2020 benefit year HHS-RADV will have their 2020 benefit year HHS-RADV error rates adjusted to zero (0) in the averaging of their error rates to adjust 2020 benefit year risk scores and transfers.

[66] See supra notes 63 and 65.

receive adjustments to their 2020 benefit year risk adjustment transfers due to the identification of outliers in their state market risk pools and the application of outlier issuer averaged error rates.

We provide the weighted average risk score error rates by state market risk pool in Appendix B (for 2020 benefit year transfers, i.e., incorporating both the reissued 2019 HHS-RADV results and the 2020 benefit year HHS-RADV results) so that issuers can compare this information to the data that was released in the Summary Report on Permanent Risk Adjustment Transfers for the 2020 Benefit Year.[67] The weighted average risk score error rates are calculated by taking the weighted average of issuers' unweighted averaged reissued 2019 benefit year HHS-RADV error rates and 2020 benefit year HHS-RADV error rates for each state market risk pool, weighted by each issuer's billable member months and plan liability risk scores.[68] Issuers can use these data in conjunction with issuer-specific 2020 benefit year risk adjustment data, the state tables, and the payment transfer denominator amounts that were included in the Summary Report on Permanent Risk Adjustment Transfers for the 2020 Benefit Year to estimate the impact of averaged error rates and their HHS-RADV adjusted 2020 benefit year risk adjustment transfers. Information on the HHS-RADV adjustments to 2020 benefit year risk adjustment transfers will be available when the Summary Report of 2019 and 2020 Benefit Year Risk Adjustment Data Validation Adjustments to Risk Adjustment Transfers is released in Fall 2022.[69]

To further explain Appendix B, issuers in state market risk pools with zero (0) averaged error rates can generally expect no change to their 2020 benefit year risk adjustment transfer amount(s) as a result of HHS-RADV. For issuers in state market risk pools with a non-zero weighted average risk score error rate, issuers may apply the weighted average risk score error rate to the state average risk score to help understand the HHS-RADV impact in the same manner that issuers' risk score error rates are applied to issuers' risk scores – that is, a negative weighted average risk score error rate will increase a state average risk score, while a positive average risk score error rate will decrease a state average risk score. For "zero" error rate issuers in state risk pools[70] with a "non-zero" weighted average risk score error rate:
- In state market risk pools with a negative weighted average error rate, "zero" error rate issuers can generally expect their charge to increase, their payment to decrease, or a shift in the transfer amount from a payment to a charge, due to the state average risk score increasing.
- In state market risk pools with a positive weighted average error rate, "zero" error rate issuers can generally expect their charge to decrease, their payment to increase, or a shift in the transfer amount from a charge to a payment, due to the state average risk score decreasing.

6. Next Steps:
Based on these results, issuers in state market risk pools with averaged non-zero error rates will see these risk score adjustments applied to 2020 benefit year risk adjustment transfers in a separate report to be released in Fall 2022.

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[67] This report is available at https://www.cms.gov/CCIIO/Programs-and-Initiatives/Premium-Stabilization-Programs/Downloads/RA-Report-BY2020.pdf.

[68] See supra notes 10 and 11.

[69] There were no positive error rate outliers among exiting issuers in the 2019 benefit year of HHS-RADV; therefore, no adjustments will be made to 2019 benefit year risk scores and risk adjustment transfer amounts as a result of the 2019 benefit year of HHS-RADV. See the February 2022 2019 Benefit Year HHS-RADV Results Memo for more information, which can be accessed at: https://www.cms.gov/files/document/2019-radv-results-memoclean2022-02-23.pdf.

[70] Exempt issuers and non-outlier issuers have zero (0) error rates. Issuers that are new market entrants in the 2020 benefit year will receive a zero (0) error rate for the 2019 benefit year in the average error rate formula.

Error Rate Calculation Attestation and Discrepancy Reporting Process: All issuers subject to 2019 benefit year HHS-RADV or 2020 benefit year HHS-RADV are required to attest to the error rate calculation for each applicable benefit year[71], or qualify the attestation by filing a discrepancy (see 45 CFR 153.630(d)(2)). Beginning on September 15, 2022, issuers have thirty (30) calendar days, until October 17, 2022, to attest to findings or qualify their attestation with a discrepancy related to the reissued 2019 benefit year HHS-RADV risk score error rate calculation and the 2020 benefit year HHS-RADV risk score error rate calculation. Issuers will need to attest to each benefit year separately and must complete the Error Rate Attestation and Discrepancy Reporting Process in the HHS-RADV Audit Tool for any benefit year in which they participated. A separate communication will be distributed to issuers with instructions for completing the HHS-RADV Error Rate Attestation and Discrepancy Form.

Issuers are encouraged to review their results and contact CMS with any questions at: CCIIOACARADatavalidation@cms.hhs.gov.

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[71] Both outlier and non-outlier issuers are required to attest to their respective error rate calculation or qualify the attestation by filing a discrepancy. Exempt issuers are not subject to this requirement.

Appendix A. National Program Benchmarks – 2020 Benefit Year HHS-RADV Compared to Reissued 2019 Benefit Year HHS-RADV

Table A1: National Failure Rate Group Summary Statistics

| RADV Year | Failure Rate Group | National Confidence Interval Point Values | | | | | Weighted Standard Deviation of GFR | Number of Outliers |
		Lower 99.7% CI Threshold	Lower 90% CI Threshold	National Weighted Mean	Upper 90% CI Threshold	Upper 99.7% CI Threshold		
Original 2019	Low	-0.202562984	-0.091144897	0.044119128	0.179383153	0.290801241	0.082227371	42
	Medium	-0.147562707	-0.023191761	0.127797321	0.278786403	0.403157350	0.091786676	38
	High	-0.031661990	0.090954071	0.239812684	0.388671298	0.511287360	0.090491558	38
Reissued 2019	Low	-0.202562984	-0.091144897	0.044119128	0.179383153	0.290801241	0.082227371	42
	Medium	-0.147562707	-0.023191761	0.127797321	0.278786403	0.403157350	0.091786676	38
	High	-0.031661990	0.090954071	0.239812684	0.388671298	0.511287360	0.090491558	38
2020	Low	-0.176932282	-0.080855391	0.035784081	0.152423554	0.248500445	0.070905454	35
	Medium	-0.117629674	-0.014182777	0.111404046	0.236990870	0.340437767	0.076344573	36
	High	-0.060668971	0.060570212	0.207757266	0.354944320	0.476183504	0.089475412	39

Table A2: National Error Rate Summary Statistics

Metric	Original 2019 Value	Reissued 2019 Value	2020 Value
HIOS ID Count	433	433	461
Total # Issuers Receiving an Error Rate (+ or -)	83	83	75
Count of Issuers with Final Negative Error Rate	45	45	37
Average National Negative (Total) Error Rate	-0.015653486	-0.012551843	-0.012784821
Negative (Total) Error Rate (Max)	-0.051068938	-0.044677116	-0.041394527
Count of Issuers with Final Positive Error Rate	38	38	38
Average National Positive (Total) Error Rate	0.069385851	0.053662817	0.048158027
Positive (Total) Error Rate (Max)	0.394423264	0.312867793	0.252145384

Appendix B. 2020 Benefit Year RA State Market Risk Pool Weighted Average Error Rate from the Reissued 2019 Benefit Year HHS-RADV Results and the 2020 Benefit Year HHS-RADV Results

Appendix B provides comparison information that shows which state market risk pools are impacted by 2019 benefit year HHS-RADV error rates and/or 2020 benefit year HHS-RADV error rates due to the presence of at least one error rate outlier in the state market risk pool and the associated average error rates.[72,73,74] Issuers' reissued 2019 HHS-RADV error rates and 2020 benefit year HHS-RADV error rates will be averaged together to adjust 2020 HHS-RADV PLRS (if applicable), and calculate HHS-RADV adjustments to 2020 benefit year risk adjustment state transfers.[75] For more information on interpreting this table, refer to the "Impact of HHS-RADV Error Rates and Outlier Status on 2020 Benefit Year Risk Adjustment Transfers" section of this memo.

State	Individual (Excluding Catastrophic)			Small Group			Catastrophic		
	Reissued 2019	2020	Avg	Reissued 2019	2020	Avg	Reissued 2019	2020	Avg
AK	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	N/A	N/A	N/A
AL	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
AR	0.00%	-0.17%	-0.09%	0.00%	-0.13%	-0.07%	N/A	N/A	N/A
AZ	-2.69%	0.00%	-1.35%	0.00%	-0.01%	0.00%	-0.03%	0.00%	-0.02%
CA	-0.99%	-0.65%	-0.82%	-0.89%	-0.64%	-0.77%	-0.99%	-0.79%	-0.89%
CO	-0.96%	0.08%	-0.44%	-0.56%	0.00%	-0.28%	-0.95%	-0.31%	-0.63%
CT	0.00%	0.00%	0.00%	0.05%	0.63%	0.34%	0.00%	0.00%	0.00%
DC	6.06%	-0.18%	2.94%	5.70%	-0.05%	2.82%	6.59%	-0.05%	3.27%
DE	0.00%	-1.25%	-0.62%	-0.03%	-1.12%	-0.57%	0.00%	-1.25%	-0.62%
FL	0.00%	0.14%	0.07%	0.01%	0.00%	0.01%	0.00%	1.63%	0.81%
GA	-0.02%	0.04%	0.01%	-0.01%	0.01%	0.00%	-0.04%	0.00%	-0.02%
HI	-0.51%	0.00%	-0.26%	-0.61%	0.00%	-0.31%	0.00%	0.00%	0.00%
IA	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
ID	-0.01%	0.00%	-0.01%	-0.11%	-0.01%	-0.06%	-0.03%	0.00%	-0.01%
IL	-1.80%	0.00%	-0.90%	-1.86%	0.00%	-0.93%	-2.12%	0.00%	-1.06%
IN	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
KS	0.00%	2.43%	1.22%	0.23%	3.57%	1.90%	0.00%	0.00%	0.00%
KY	0.00%	0.00%	0.00%	-0.08%	0.00%	-0.04%	0.00%	0.00%	0.00%
LA	0.50%	12.63%	6.57%	1.43%	11.16%	6.30%	N/A	N/A	N/A
MA	0.00%	-0.43%	-0.21%	N/A	N/A	N/A	0.00%	0.00%	0.00%
MD	5.92%	-0.21%	2.85%	5.71%	-0.03%	2.84%	7.23%	-0.03%	3.60%
ME	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
MI	0.21%	0.27%	0.24%	0.06%	0.08%	0.07%	0.04%	0.03%	0.03%
MN	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
MO	0.00%	-0.02%	-0.01%	0.00%	0.00%	0.00%	0.00%	-0.55%	-0.27%
MS	0.00%	0.07%	0.03%	0.00%	0.78%	0.39%	N/A	N/A	N/A
MT	0.38%	0.00%	0.19%	0.72%	0.00%	0.36%	-0.20%	0.00%	-0.10%
NC	-0.73%	-0.38%	-0.56%	-0.39%	-0.16%	-0.28%	-0.78%	-0.37%	-0.58%
ND	0.00%	0.00%	0.00%	0.00%	0.23%	0.12%	0.00%	0.00%	0.00%
NE	0.00%	-0.06%	-0.03%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%

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[72] The state market risk pool weighted average risk score error rate is calculated by taking the weighted average of issuers' error rates among all issuers within the state market risk pool. The weight for an issuer is equal to the total risk score of the issuer within the state market risk pool, which is calculated as the summation of the plan liability risk score multiplied by the plan-level billable member months among all plans for the issuer within the state market risk pool.

[73] The impacted state market risk pools are subject to change as the list in this appendix does not take into account any adjustments for potential actionable HHS-RADV discrepancies or successful HHS-RADV appeals.

[74] The original 2019 HHS-RADV results Appendix B supplement was published on April 7, 2022. See https://www.cms.gov/files/document/by19-radv-appendix-b-supplement.pdf.

[75] See supra notes 63 and 65.

State	Individual (Excluding Catastrophic)			Small Group			Catastrophic		
	Reissued 2019	2020	Avg	Reissued 2019	2020	Avg	Reissued 2019	2020	Avg
NH	-0.09%	0.00%	-0.04%	-0.19%	0.00%	-0.10%	-0.19%	0.00%	-0.10%
NJ	4.39%	0.59%	2.49%	1.35%	0.19%	0.77%	0.73%	0.11%	0.42%
NM	0.00%	-0.15%	-0.08%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
NV	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
NY	0.44%	0.87%	0.66%	0.07%	-0.37%	-0.15%	2.96%	5.98%	4.47%
OH	0.92%	0.02%	0.47%	0.14%	0.14%	0.14%	1.42%	0.03%	0.73%
OK	-0.97%	-1.12%	-1.05%	-0.89%	-0.93%	-0.91%	-0.60%	-1.65%	-1.12%
OR	-0.86%	-0.56%	-0.71%	-0.66%	-0.34%	-0.50%	-0.24%	-0.13%	-0.19%
PA	0.37%	-0.17%	0.10%	0.40%	-0.21%	0.10%	0.06%	-0.06%	0.00%
RI	4.42%	1.48%	2.95%	9.01%	3.02%	6.02%	N/A	N/A	N/A
SC	-2.20%	-0.03%	-1.11%	-1.48%	-0.12%	-0.80%	-2.23%	-0.04%	-1.13%
SD	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
TN	0.00%	-0.09%	-0.04%	-0.01%	0.00%	-0.01%	0.00%	-0.81%	-0.41%
TX	-0.26%	0.00%	-0.13%	-0.64%	0.00%	-0.32%	-0.50%	0.00%	-0.25%
UT	0.23%	0.00%	0.12%	0.03%	0.00%	0.01%	0.00%	0.00%	0.00%
VA	0.07%	-0.15%	-0.04%	0.27%	-0.05%	0.11%	0.52%	-0.28%	0.12%
VT	0.00%	0.00%	0.00%	N/A	N/A	N/A	0.00%	0.00%	0.00%
WA	0.03%	-0.04%	-0.01%	0.00%	-0.03%	-0.02%	0.03%	-0.13%	-0.05%
WI	-0.12%	-0.01%	-0.06%	-0.02%	0.07%	0.02%	0.00%	0.00%	0.00%
WV	-1.49%	0.20%	-0.65%	-1.36%	1.27%	-0.05%	-2.01%	0.00%	-1.00%
WY	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	N/A	N/A	N/A

Notes: (1) "N/A" represents states with no issuers operating in that state market risk pool and are therefore grayed out.
(2) Values for merged market states (Massachusetts and Vermont) are displayed in the Individual (Excluding Catastrophic) column with an "N/A" in the small group column.

Appendix C. 2020 Benefit Year HHS-RADV Failure Rate Group Definitions

Appendix C provides a listing of HCCs, the associated Super HCC, and the group detail for the 2020 benefit year HHS-RADV.[76]

Super HCC	HCC	Failure Rate Group	HCC Label
1	1	Low Failure Rate Group	HIV/AIDS
2	2	Medium Failure Rate Group	Septicemia, Sepsis, Systemic Inflammatory Response Syndrome/Shock
3	3	High Failure Rate Group	Central Nervous System Infections, Except Viral Meningitis
4	4	High Failure Rate Group	Viral or Unspecified Meningitis
6	6	High Failure Rate Group	Opportunistic Infections
8	8	Medium Failure Rate Group	Metastatic Cancer
9	9	High Failure Rate Group	Lung, Brain, and Other Severe Cancers, Including Pediatric Acute Lymphoid Leukemia
10	10	Low Failure Rate Group	Non-Hodgkin's Lymphomas and Other Cancers and Tumors
11	11	High Failure Rate Group	Colorectal, Breast (Age < 50), Kidney, and Other Cancers
12	12	High Failure Rate Group	Breast (Age 50+) and Prostate Cancer, Benign/Uncertain Brain Tumors, and Other Cancers and Tumors
13	13	High Failure Rate Group	Thyroid Cancer, Melanoma, Neurofibromatosis, and Other Cancers and Tumors
18	18	Low Failure Rate Group	Pancreas Transplant Status/Complications
G01	19	Low Failure Rate Group	Diabetes with Acute Complications
G01	20	Low Failure Rate Group	Diabetes with Chronic Complications
G01	21	Low Failure Rate Group	Diabetes without Complication
23	23	Medium Failure Rate Group	Protein-Calorie Malnutrition
G02A	26	Medium Failure Rate Group	Mucopolysaccharidosis
G02A	27	Medium Failure Rate Group	Lipidoses and Glycogenosis
28	28	Low Failure Rate Group	Congenital Metabolic Disorders, Not Elsewhere Classified
G02A	29	Medium Failure Rate Group	Amyloidosis, Porphyria, and Other Metabolic Disorders
G02A	30	Medium Failure Rate Group	Adrenal, Pituitary, and Other Significant Endocrine Disorders
34	34	Medium Failure Rate Group	Liver Transplant Status/Complications
35	35	Low Failure Rate Group	End-Stage Liver Disease
36	36	Medium Failure Rate Group	Cirrhosis of Liver
37_1	37_1	High Failure Rate Group	Chronic Viral Hepatitis C
37_2	37_2	High Failure Rate Group	Chronic Hepatitis, Except Chronic Viral Hepatitis C
38	38	High Failure Rate Group	Acute Liver Failure/Disease, Including Neonatal Hepatitis
41	41	High Failure Rate Group	Intestine Transplant Status/Complications
42	42	High Failure Rate Group	Peritonitis/Gastrointestinal Perforation/Necrotizing Enterocolitis
45	45	High Failure Rate Group	Intestinal Obstruction
46	46	Low Failure Rate Group	Chronic Pancreatitis

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[76] See supra note 56.

Super HCC	HCC	Failure Rate Group	HCC Label
47	47	High Failure Rate Group	Acute Pancreatitis/Other Pancreatic Disorders and Intestinal Malabsorption
48	48	Low Failure Rate Group	Inflammatory Bowel Disease
G03	54	High Failure Rate Group	Necrotizing Fasciitis
G03	55	High Failure Rate Group	Bone/Joint/Muscle Infections/Necrosis
56	56	Low Failure Rate Group	Rheumatoid Arthritis and Specified Autoimmune Disorders
57	57	Low Failure Rate Group	Systemic Lupus Erythematosus and Other Autoimmune Disorders
G04	61	Medium Failure Rate Group	Osteogenesis Imperfecta and Other Osteodystrophies
G04	62	Medium Failure Rate Group	Congenital/Developmental Skeletal and Connective Tissue Disorders
63	63	High Failure Rate Group	Cleft Lip/Cleft Palate
64	64	High Failure Rate Group	Major Congenital Anomalies of Diaphragm, Abdominal Wall, and Esophagus, Age < 2
66	66	Low Failure Rate Group	Hemophilia
G06	67	High Failure Rate Group	Myelodysplastic Syndromes and Myelofibrosis
G06	68	High Failure Rate Group	Aplastic Anemia
G07	69	High Failure Rate Group	Acquired Hemolytic Anemia, Including Hemolytic Disease of Newborn
G07	70	High Failure Rate Group	Sickle Cell Anemia (Hb-SS)
G07	71	High Failure Rate Group	Thalassemia Major
G08	73	High Failure Rate Group	Combined and Other Severe Immunodeficiencies
G08	74	High Failure Rate Group	Disorders of the Immune Mechanism
75	75	Medium Failure Rate Group	Coagulation Defects and Other Specified Hematological Disorders
G09	81	High Failure Rate Group	Drug Psychosis
G09	82	High Failure Rate Group	Drug Dependence
87	87	Medium Failure Rate Group	Schizophrenia
88	88	Medium Failure Rate Group	Major Depressive and Bipolar Disorders
89	89	High Failure Rate Group	Reactive and Unspecified Psychosis, Delusional Disorders
90	90	Medium Failure Rate Group	Personality Disorders
94	94	Medium Failure Rate Group	Anorexia/Bulimia Nervosa
96	96	Low Failure Rate Group	Prader-Willi, Patau, Edwards, and Autosomal Deletion Syndromes
97	97	Medium Failure Rate Group	Down Syndrome, Fragile X, Other Chromosomal Anomalies, and Congenital Malformation Syndromes
102	102	Medium Failure Rate Group	Autistic Disorder
103	103	Low Failure Rate Group	Pervasive Developmental Disorders, Except Autistic Disorder
G10	106	High Failure Rate Group	Traumatic Complete Lesion Cervical Spinal Cord
G10	107	High Failure Rate Group	Quadriplegia
G11	108	Low Failure Rate Group	Traumatic Complete Lesion Dorsal Spinal Cord
G11	109	Low Failure Rate Group	Paraplegia
110	110	High Failure Rate Group	Spinal Cord Disorders/Injuries
111	111	Low Failure Rate Group	Amyotrophic Lateral Sclerosis and Other Anterior Horn Cell Disease
112	112	Medium Failure Rate Group	Quadriplegic Cerebral Palsy

Super HCC	HCC	Failure Rate Group	HCC Label
113	113	Low Failure Rate Group	Cerebral Palsy, Except Quadriplegic
114	114	Low Failure Rate Group	Spina Bifida and Other Brain/Spinal/Nervous System Congenital Anomalies
115	115	Low Failure Rate Group	Myasthenia Gravis/Myoneural Disorders and Guillain-Barre Syndrome/Inflammatory and Toxic Neuropathy
G12	117	Medium Failure Rate Group	Muscular Dystrophy
118	118	Low Failure Rate Group	Multiple Sclerosis
G12	119	Medium Failure Rate Group	Parkinson's, Huntington's, and Spinocerebellar Disease, and Other Neurodegenerative Disorders
120	120	Medium Failure Rate Group	Seizure Disorders and Convulsions
121	121	Medium Failure Rate Group	Hydrocephalus
122	122	High Failure Rate Group	Non-Traumatic Coma, Brain Compression/Anoxic Damage
125	125	Low Failure Rate Group	Respirator Dependence/Tracheostomy Status
G13	126	High Failure Rate Group	Respiratory Arrest
G13	127	High Failure Rate Group	Cardio-Respiratory Failure and Shock, Including Respiratory Distress Syndromes
G14	128	Medium Failure Rate Group	Heart Assistive Device/Artificial Heart
G14	129	Medium Failure Rate Group	Heart Transplant
130	130	Medium Failure Rate Group	Congestive Heart Failure
131	131	High Failure Rate Group	Acute Myocardial Infarction
132	132	High Failure Rate Group	Unstable Angina and Other Acute Ischemic Heart Disease
135	135	High Failure Rate Group	Heart Infection/Inflammation, Except Rheumatic
137	137	High Failure Rate Group	Hypoplastic Left Heart Syndrome and Other Severe Congenital Heart Disorders
138	138	High Failure Rate Group	Major Congenital Heart/Circulatory Disorders
139	139	High Failure Rate Group	Atrial and Ventricular Septal Defects, Patent Ductus Arteriosus, and Other Congenital Heart/Circulatory Disorders
142	142	Medium Failure Rate Group	Specified Heart Arrhythmias
145	145	High Failure Rate Group	Intracranial Hemorrhage
146	146	High Failure Rate Group	Ischemic or Unspecified Stroke
149	149	High Failure Rate Group	Cerebral Aneurysm and Arteriovenous Malformation
150	150	Low Failure Rate Group	Hemiplegia/Hemiparesis
151	151	High Failure Rate Group	Monoplegia, Other Paralytic Syndromes
153	153	High Failure Rate Group	Atherosclerosis of the Extremities with Ulceration or Gangrene
154	154	High Failure Rate Group	Vascular Disease with Complications
156	156	High Failure Rate Group	Pulmonary Embolism and Deep Vein Thrombosis
158	158	High Failure Rate Group	Lung Transplant Status/Complications
159	159	Low Failure Rate Group	Cystic Fibrosis
G15	160	Low Failure Rate Group	Chronic Obstructive Pulmonary Disease, Including Bronchiectasis
G15	161	Low Failure Rate Group	Asthma
162	162	Medium Failure Rate Group	Fibrosis of Lung and Other Lung Disorders

Super HCC	HCC	Failure Rate Group	HCC Label
163	163	High Failure Rate Group	Aspiration and Specified Bacterial Pneumonias and Other Severe Lung Infections
183	183	Low Failure Rate Group	Kidney Transplant Status
184	184	High Failure Rate Group	End Stage Renal Disease
G16	187	Medium Failure Rate Group	Chronic Kidney Disease, Stage 5
G16	188	Medium Failure Rate Group	Chronic Kidney Disease, Severe (Stage 4)
G17	203	Low Failure Rate Group	Ectopic and Molar Pregnancy, Except with Renal Failure, Shock, or Embolism
G17	204	Low Failure Rate Group	Miscarriage with Complications
G17	205	Low Failure Rate Group	Miscarriage with No or Minor Complications
G18	207	Medium Failure Rate Group	Completed Pregnancy With Major Complications
G18	208	Medium Failure Rate Group	Completed Pregnancy With Complications
G18	209	Medium Failure Rate Group	Completed Pregnancy with No or Minor Complications
217	217	Low Failure Rate Group	Chronic Ulcer of Skin, Except Pressure
226	226	High Failure Rate Group	Hip Fractures and Pathological Vertebral or Humerus Fractures
227	227	High Failure Rate Group	Pathological Fractures, Except of Vertebrae, Hip, or Humerus
242	242	High Failure Rate Group	Extremely Immature Newborns, Birthweight < 500 Grams
243	243	High Failure Rate Group	Extremely Immature Newborns, Including Birthweight 500-749 Grams
244	244	Medium Failure Rate Group	Extremely Immature Newborns, Including Birthweight 750-999 Grams
245	245	High Failure Rate Group	Premature Newborns, Including Birthweight 1000-1499 Grams
246	246	Medium Failure Rate Group	Premature Newborns, Including Birthweight 1500-1999 Grams
247	247	Medium Failure Rate Group	Premature Newborns, Including Birthweight 2000-2499 Grams
248	248	Medium Failure Rate Group	Other Premature, Low Birthweight, Malnourished, or Multiple Birth Newborns
249	249	High Failure Rate Group	Term or Post-Term Singleton Newborn, Normal or High Birthweight
251	251	Low Failure Rate Group	Stem Cell, Including Bone Marrow, Transplant Status/Complications
253	253	Low Failure Rate Group	Artificial Openings for Feeding or Elimination
254	254	Low Failure Rate Group	Amputation Status, Lower Limb/Amputation Complications

Appendix D. 2019 Benefit Year HHS-RADV Failure Rate Group Definitions

Appendix D provides a listing of HCCs, the associated Super HCC, and the group detail for the 2019 benefit year HHS-RADV. The 2019 Benefit Year HHS-RADV HCC Group Definitions (Appendix D) is unaffected by the methodological realignment and remains unchanged from the 2019 HHS-RADV Results Memo released in February 2022.[77] It is reproduced here for reference.

Super HCC	HCC	Failure Rate Group	HCC Label
1	1	Low Failure Rate Group	HIV/AIDS
2	2	Medium Failure Rate Group	Septicemia, Sepsis, Systemic Inflammatory Response Syndrome/Shock
3	3	High Failure Rate Group	Central Nervous System Infections, Except Viral Meningitis
4	4	High Failure Rate Group	Viral or Unspecified Meningitis
6	6	High Failure Rate Group	Opportunistic Infections
8	8	High Failure Rate Group	Metastatic Cancer
9	9	High Failure Rate Group	Lung, Brain, and Other Severe Cancers, Including Pediatric Acute Lymphoid Leukemia
10	10	Low Failure Rate Group	Non-Hodgkin's Lymphomas and Other Cancers and Tumors
11	11	High Failure Rate Group	Colorectal, Breast (Age < 50), Kidney, and Other Cancers
12	12	Medium Failure Rate Group	Breast (Age 50+) and Prostate Cancer, Benign/Uncertain Brain Tumors, and Other Cancers and Tumors
13	13	High Failure Rate Group	Thyroid Cancer, Melanoma, Neurofibromatosis, and Other Cancers and Tumors
18	18	Low Failure Rate Group	Pancreas Transplant Status/Complications
G01	19	Low Failure Rate Group	Diabetes with Acute Complications
G01	20	Low Failure Rate Group	Diabetes with Chronic Complications
G01	21	Low Failure Rate Group	Diabetes without Complication
23	23	Medium Failure Rate Group	Protein-Calorie Malnutrition
G02A	26	Medium Failure Rate Group	Mucopolysaccharidosis
G02A	27	Medium Failure Rate Group	Lipidoses and Glycogenosis
28	28	Low Failure Rate Group	Congenital Metabolic Disorders, Not Elsewhere Classified
G02A	29	Medium Failure Rate Group	Amyloidosis, Porphyria, and Other Metabolic Disorders
G02A	30	Medium Failure Rate Group	Adrenal, Pituitary, and Other Significant Endocrine Disorders
34	34	Medium Failure Rate Group	Liver Transplant Status/Complications
35	35	Medium Failure Rate Group	End-Stage Liver Disease
36	36	Low Failure Rate Group	Cirrhosis of Liver
37_1	37_1	Medium Failure Rate Group	Chronic Viral Hepatitis C
37_2	37_2	Medium Failure Rate Group	Chronic Hepatitis, Except Chronic Viral Hepatitis C
38	38	High Failure Rate Group	Acute Liver Failure/Disease, Including Neonatal Hepatitis
41	41	Low Failure Rate Group	Intestine Transplant Status/Complications
42	42	High Failure Rate Group	Peritonitis/Gastrointestinal Perforation/Necrotizing Enterocolitis
45	45	High Failure Rate Group	Intestinal Obstruction
46	46	Medium Failure Rate Group	Chronic Pancreatitis

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[77] See supra note 1.

Super HCC	HCC	Failure Rate Group	HCC Label
47	47	Medium Failure Rate Group	Acute Pancreatitis/Other Pancreatic Disorders and Intestinal Malabsorption
48	48	Low Failure Rate Group	Inflammatory Bowel Disease
G03	54	Medium Failure Rate Group	Necrotizing Fasciitis
G03	55	Medium Failure Rate Group	Bone/Joint/Muscle Infections/Necrosis
56	56	Low Failure Rate Group	Rheumatoid Arthritis and Specified Autoimmune Disorders
57	57	Low Failure Rate Group	Systemic Lupus Erythematosus and Other Autoimmune Disorders
G04	61	Medium Failure Rate Group	Osteogenesis Imperfecta and Other Osteodystrophies
G04	62	Medium Failure Rate Group	Congenital/Developmental Skeletal and Connective Tissue Disorders
63	63	High Failure Rate Group	Cleft Lip/Cleft Palate
64	64	High Failure Rate Group	Major Congenital Anomalies of Diaphragm, Abdominal Wall, and Esophagus, Age < 2
66	66	Medium Failure Rate Group	Hemophilia
G06	67	High Failure Rate Group	Myelodysplastic Syndromes and Myelofibrosis
G06	68	High Failure Rate Group	Aplastic Anemia
G07	69	High Failure Rate Group	Acquired Hemolytic Anemia, Including Hemolytic Disease of Newborn
G07	70	High Failure Rate Group	Sickle Cell Anemia (Hb-SS)
G07	71	High Failure Rate Group	Thalassemia Major
G08	73	High Failure Rate Group	Combined and Other Severe Immunodeficiencies
G08	74	High Failure Rate Group	Disorders of the Immune Mechanism
75	75	Medium Failure Rate Group	Coagulation Defects and Other Specified Hematological Disorders
G09	81	High Failure Rate Group	Drug Psychosis
G09	82	High Failure Rate Group	Drug Dependence
87	87	Medium Failure Rate Group	Schizophrenia
88	88	Medium Failure Rate Group	Major Depressive and Bipolar Disorders
89	89	Medium Failure Rate Group	Reactive and Unspecified Psychosis, Delusional Disorders
90	90	Medium Failure Rate Group	Personality Disorders
94	94	High Failure Rate Group	Anorexia/Bulimia Nervosa
96	96	Low Failure Rate Group	Prader-Willi, Patau, Edwards, and Autosomal Deletion Syndromes
97	97	Medium Failure Rate Group	Down Syndrome, Fragile X, Other Chromosomal Anomalies, and Congenital Malformation Syndromes
102	102	Low Failure Rate Group	Autistic Disorder
103	103	Medium Failure Rate Group	Pervasive Developmental Disorders, Except Autistic Disorder
G10	106	Medium Failure Rate Group	Traumatic Complete Lesion Cervical Spinal Cord
G10	107	Medium Failure Rate Group	Quadriplegia
G11	108	Low Failure Rate Group	Traumatic Complete Lesion Dorsal Spinal Cord
G11	109	Low Failure Rate Group	Paraplegia
110	110	High Failure Rate Group	Spinal Cord Disorders/Injuries
111	111	Medium Failure Rate Group	Amyotrophic Lateral Sclerosis and Other Anterior Horn Cell Disease

Super HCC	HCC	Failure Rate Group	HCC Label
112	112	Low Failure Rate Group	Quadriplegic Cerebral Palsy
113	113	Medium Failure Rate Group	Cerebral Palsy, Except Quadriplegic
114	114	Low Failure Rate Group	Spina Bifida and Other Brain/Spinal/Nervous System Congenital Anomalies
115	115	Medium Failure Rate Group	Myasthenia Gravis/Myoneural Disorders and Guillain-Barre Syndrome/Inflammatory and Toxic Neuropathy
G12	117	Low Failure Rate Group	Muscular Dystrophy
118	118	Low Failure Rate Group	Multiple Sclerosis
G12	119	Low Failure Rate Group	Parkinson's, Huntington's, and Spinocerebellar Disease, and Other Neurodegenerative Disorders
120	120	Medium Failure Rate Group	Seizure Disorders and Convulsions
121	121	Low Failure Rate Group	Hydrocephalus
122	122	High Failure Rate Group	Non-Traumatic Coma, Brain Compression/Anoxic Damage
125	125	Low Failure Rate Group	Respirator Dependence/Tracheostomy Status
G13	126	High Failure Rate Group	Respiratory Arrest
G13	127	High Failure Rate Group	Cardio-Respiratory Failure and Shock, Including Respiratory Distress Syndromes
G14	128	Medium Failure Rate Group	Heart Assistive Device/Artificial Heart
G14	129	Medium Failure Rate Group	Heart Transplant
130	130	Medium Failure Rate Group	Congestive Heart Failure
131	131	High Failure Rate Group	Acute Myocardial Infarction
132	132	High Failure Rate Group	Unstable Angina and Other Acute Ischemic Heart Disease
135	135	High Failure Rate Group	Heart Infection/Inflammation, Except Rheumatic
137	137	High Failure Rate Group	Hypoplastic Left Heart Syndrome and Other Severe Congenital Heart Disorders
138	138	High Failure Rate Group	Major Congenital Heart/Circulatory Disorders
139	139	High Failure Rate Group	Atrial and Ventricular Septal Defects, Patent Ductus Arteriosus, and Other Congenital Heart/Circulatory Disorders
142	142	Medium Failure Rate Group	Specified Heart Arrhythmias
145	145	High Failure Rate Group	Intracranial Hemorrhage
146	146	High Failure Rate Group	Ischemic or Unspecified Stroke
149	149	High Failure Rate Group	Cerebral Aneurysm and Arteriovenous Malformation
150	150	Low Failure Rate Group	Hemiplegia/Hemiparesis
151	151	High Failure Rate Group	Monoplegia, Other Paralytic Syndromes
153	153	High Failure Rate Group	Atherosclerosis of the Extremities with Ulceration or Gangrene
154	154	High Failure Rate Group	Vascular Disease with Complications
156	156	High Failure Rate Group	Pulmonary Embolism and Deep Vein Thrombosis
158	158	Medium Failure Rate Group	Lung Transplant Status/Complications
159	159	Medium Failure Rate Group	Cystic Fibrosis
G15	160	Low Failure Rate Group	Chronic Obstructive Pulmonary Disease, Including Bronchiectasis
G15	161	Low Failure Rate Group	Asthma

Super HCC	HCC	Failure Rate Group	HCC Label
162	162	Medium Failure Rate Group	Fibrosis of Lung and Other Lung Disorders
163	163	High Failure Rate Group	Aspiration and Specified Bacterial Pneumonias and Other Severe Lung Infections
183	183	Low Failure Rate Group	Kidney Transplant Status
184	184	High Failure Rate Group	End Stage Renal Disease
G16	187	Medium Failure Rate Group	Chronic Kidney Disease, Stage 5
G16	188	Medium Failure Rate Group	Chronic Kidney Disease, Severe (Stage 4)
G17	203	High Failure Rate Group	Ectopic and Molar Pregnancy, Except with Renal Failure, Shock, or Embolism
G17	204	High Failure Rate Group	Miscarriage with Complications
G17	205	High Failure Rate Group	Miscarriage with No or Minor Complications
G18	207	High Failure Rate Group	Completed Pregnancy With Major Complications
G18	208	High Failure Rate Group	Completed Pregnancy With Complications
G18	209	High Failure Rate Group	Completed Pregnancy with No or Minor Complications
217	217	Medium Failure Rate Group	Chronic Ulcer of Skin, Except Pressure
226	226	High Failure Rate Group	Hip Fractures and Pathological Vertebral or Humerus Fractures
227	227	High Failure Rate Group	Pathological Fractures, Except of Vertebrae, Hip, or Humerus
242	242	High Failure Rate Group	Extremely Immature Newborns, Birthweight < 500 Grams
243	243	Medium Failure Rate Group	Extremely Immature Newborns, Including Birthweight 500-749 Grams
244	244	High Failure Rate Group	Extremely Immature Newborns, Including Birthweight 750-999 Grams
245	245	Medium Failure Rate Group	Premature Newborns, Including Birthweight 1000-1499 Grams
246	246	Medium Failure Rate Group	Premature Newborns, Including Birthweight 1500-1999 Grams
247	247	Low Failure Rate Group	Premature Newborns, Including Birthweight 2000-2499 Grams
248	248	High Failure Rate Group	Other Premature, Low Birthweight, Malnourished, or Multiple Birth Newborns
249	249	High Failure Rate Group	Term or Post-Term Singleton Newborn, Normal or High Birthweight
251	251	Low Failure Rate Group	Stem Cell, Including Bone Marrow, Transplant Status/Complications
253	253	Low Failure Rate Group	Artificial Openings for Feeding or Elimination
254	254	Low Failure Rate Group	Amputation Status, Lower Limb/Amputation Complications

Appendix E. Comparison of Variable Names Relevant to the Methodological Realignment Applied to the Reissued 2019 Benefit Year HHS-RADV Results and the 2020 Benefit Year HHS-RADV Results

2019 Payment Notice[78]	This Document	Description
$EdgeRS_{i,e}$	$HccEdgeRS_{i,e}$	As defined in the 2019 Payment Notice: "the risk score for EDGE HCCs of enrollee e of issuer i". In this document, the variable name was changed and the value was modified. More specifically, the risk score for EDGE HCCs is expressed as $HccEdgeRS_{i,e}$ and is defined as the weighted average across all plans for all enrollment periods of the sum of enrollee e's HCC coefficients as determined by the enrollee's risk adjustment model for that enrollment period at issuer i, as recorded on EDGE. This value includes only HCC coefficients from the enrollee's risk adjustment model(s), is weighted by the length of the enrollee's enrollment periods, and takes the applicable metal level and CSRs (if any) of each enrollment period plan into account.[79]
$AdjRS_{i,e}$	$HccAdjRS_{i,e}$	As defined in the 2019 Payment Notice: "the adjusted risk score for sampled enrollee e of issuer i." In this document, this variable name was changed and the value modified to refer to the $HccEdgeRS_{i,e}$ value after enrollee-level adjustments have been applied rather than $TotalEdgeRS_{i,e}$.
$ErrorRate_i$	$HccER_i$	As defined in the 2019 Payment Notice: "the final error rate for issuer i based on the sampled enrollees." In this document, this variable name was changed and the value modified such that it is calculated based on $HccEdgeRS_{i,e}$ rather than $TotalEdgeRS_{i,e}$.
N/A	$TotalEdgeRS_{i,e}$	This variable has a new notation unique to this document.[80] It expresses the value for the total EDGE risk score, defined as the weighted average across all plans for all enrollment periods of the sum of enrollee e's risk adjustment model coefficients for that enrollment period at issuer i as recorded on EDGE. This value includes all applicable benefit year risk score components, is weighted by the length of the enrollee's enrollment periods, and takes the metal level and CSRs of each enrollment period plan into account. *Note:* This value is provided to CMS from the EDGE server reports and is not calculated by CMS.

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[78] See the 2019 Payment Notice, 83 FR at 16961 - 16965.

[79] See Appendix F and Table F2 of the Reissuing 2018 Benefit Year HHS-RADV Results Memo for a comparison of risk score components by risk adjustment model and an illustration of the formula used to calculate this value by risk adjustment model. This Memo is available at: https://www.cms.gov/files/document/reissuing-2018-hhs-radv-results.pdf.

[80] See supra note 36.

2019 Payment Notice[78]	This Document	Description
N/A	$HccPLRSweight_i$	This is a new variable unique to this document. It expresses the ratio of the weighted Sum of $HccEdgeRS_{i,e}$ to the weighted sum of $TotalEdgeRS_{i,e}$ to estimate how much of the issuer's total EDGE PLRS is HCC-related based on the issuer's sample.
N/A	$TotalER_i$	This is a new variable unique to this document. It expresses the value of $HccER_i$ after scaling this value such that it only applies to the HCC portion of the issuer's PLRS.