



Date: February 25, 2022

RE: 2019 Benefit Year HHS Risk Adjustment Data Validation Results

The Centers for Medicare & Medicaid Services (CMS) is making available summary information on issuers' 2019 benefit year HHS risk adjustment data validation (HHS-RADV) results. The 2019 benefit year HHS-RADV error rates will be averaged with the 2020 benefit year HHS-RADV error rates and applied to the 2020 plan liability risk scores and risk adjustment transfers.^{1,2} 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 for the 2019 and 2020 benefit years' HHS-RADV error rates.³ As a result, combined 2019 and 2020 benefit year HHS-RADV adjustments to 2020 benefit year risk adjustment transfers will not be released until summer 2022, after 2020 benefit year HHS-RADV error rates are published. This memo contains an overview of the 2019 benefit year HHS-RADV error rate methodology, an overview of the 2019 benefit year HHS-RADV reports, and information to assist issuers in understanding their results.⁴

Overview of the 2019 Benefit Year HHS-RADV Error Estimation Methodology

Beginning with the 2019 benefit year HHS-RADV results, the 2021 Payment Notice and the 2020 HHS-RADV Amendments Rule finalized the following key changes to the HHS-RADV error estimation methodology:^{5,6}

¹ 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 77002-77005 (December 1, 2020) (2020 HHS-RADV Amendments Rule).

² 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. 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. As we discuss further below, 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.

³ See supra notes 1 and 2.

⁴ Issuers who participated in 2019 benefit year HHS-RADV will also receive issuer specific and enrollee specific results in the Audit Tool at the same time this memo is released. Issuers will also receive 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 June 2022.

⁵ 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).

⁶ See the 2020 HHS-RADV Amendments Rule, 85 FR at 76998 – 77001.

- Error estimation will use the Super Hierarchical Condition Category (Super HCC) group failure rate approach.⁷ Under this approach, CMS will aggregate Hierarchical Condition Categories (HCCs) that share an HCC coefficient estimation group in the adult risk adjustment models into Super HCCs.⁸ 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, will then be 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).⁹
- 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 will be determined to be an outlier for that HCC group and will receive an adjustment to the IVA-sampled enrollees' risk scores with HCCs in that group (or the SVA-sampled enrollees' risk scores with HCCs in that group if there was insufficient pairwise means agreement).¹⁰
- CMS will no longer utilize a 1.96 standard deviation cutoff to define a 95 percent confidence interval and will instead use a 1.645 standard deviation cutoff to define a 90 percent confidence interval for outlier identification.¹¹ To calculate this adjustment to the enrollees' risk score, CMS will calculate and apply 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.^{12, 13} For outlier issuers with failure rates more than 3 standard deviations from the mean, CMS will calculate 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 will constrain the issuer's HCC 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.¹⁴

⁷ See the 2020 HHS-RADV Amendments Rule, 85 FR at 76984 - 76990.

⁸ These Super HCC groupings will apply to all HHS-RADV sample enrollees, regardless of the risk adjustment models to which they are subject.

⁹ See Section 11.3.3.3 - Calculate Error Rates to Adjust Issuers' PLRS in the 2019 BY 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 BY HHS-RADV Protocols (March 25, 2021) can be accessed at:

https://regtap.cms.gov/uploads/library/HRADV_2019_Protocols_032521_SCR_032521.pdf

¹⁰ Issuers with less than 30 HCCs in a failure rate group will 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.

¹¹ See the 2020 HHS-RADV Amendments Rule, 85 FR at 76990 – 76994.

¹² See the 2020 HHS-RADV Amendments Rule, 85 FR at 76991 – 76992.

¹³ The 90 percent confidence interval is also denoted as the inner CI. Beginning with the 2019 benefit year of HHS-RADV, the 99.7 percent confidence interval (three standard deviations from the mean) is also used and is denoted as the outer CI.

¹⁴ See the 2020 HHS-RADV Amendments Rule, 85 FR at 76994 – 76998.

2019 Benefit Year HHS-RADV Results: Reports

The HHS-RADV Audit Tool¹⁵ provides the following results documents to each issuer that participated in 2019 benefit year HHS-RADV:

1. 2019 Benefit Year HHS-RADV National Program Benchmarks (Appendix A): Provides the national program benchmarks for failure rate group failure rate means and confidence intervals, and summary statistics based on all issuers' results used to establish the national failure rate group metrics for the 2019 benefit year of HHS-RADV.¹⁶
2. State Market Risk Pools with 2020 Risk Adjustment Transfers Impacted By 2019 Benefit Year HHS-RADV Results (Appendix B): Provides a table of state market risk pools, indicating which state market risk pools will have 2020 risk adjustment transfers impacted by 2019 benefit year HHS-RADV due to the presence of at least one error rate outlier in the state market risk pool.^{17,18}
3. State Market Risk Pools with 2019 Risk Adjustment Transfers Impacted By 2019 Benefit Year HHS-RADV Results (Exiting Issuers) (Appendix C): Provides a table of state market risk pools, indicating which state market risk pools will have 2019 Risk Adjustment Transfers impacted by 2019 benefit year HHS-RADV due to the presence of at least one exiting issuer positive error rate outlier in the state market risk pool. As noted above, there were no positive error rate outlier exiting issuers in 2019 benefit year HHS-RADV. Therefore, there is no impact to 2019 benefit year risk scores as a result of 2019 benefit year HHS-RADV and no content in Appendix C.
4. 2019 Benefit Year HHS-RADV Failure Rate Group Definitions (Appendix D): Provides a listing of HCCs, the associated Super HCCs, and the assigned group detail (i.e., Low Failure Rate Group, Medium Failure Rate Group, and High Failure Rate Group) for the 2019 benefit year of HHS-RADV.
5. Issuer-Specific Metrics Report: Provides issuer-specific 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.
6. Enrollee-Level Metrics Report: Provides issuer-specific results for the 2019 benefit year of HHS-RADV that provide the enrollee-level findings for each HIOS ID's HHS-RADV

¹⁵ The HHS-RADV Audit Tool can be accessed by issuers at: <https://ccrms-rari.force.com/HHSRADVAuditTool/>.

¹⁶ In past benefit years, this appendix provided a comparison of the results for the prior and current benefit year of HHS-RADV. However, the 2019 benefit year of HHS-RADV implemented multiple changes to the error estimation process. As such, CMS does not believe a direct comparison between the 2018 and 2019 benefit years would be informative and only 2019 benefit year HHS-RADV results are shown in this appendix.

¹⁷ We note that the state market risk pools may be subject to change as the list in the appendix does not take into account any adjustments for discrepancies or appeals.

¹⁸ In past benefit years, this appendix provided the average error rate in each state market risk pool. However, 2019 benefit year HHS-RADV error rates and 2020 benefit year HHS-RADV error rates will be averaged before being applied to issuers 2020 plan liability risk scores and risk adjustment state transfers. As such, the average error rate in each state market risk pool for 2019 benefit year HHS-RADV will not reflect the HHS-RADV adjustments to be applied to 2020 benefit year risk adjustment state transfers. For these reasons, we elected to provide information in this appendix on which state market risk pools are impacted by 2019 benefit year HHS-RADV results and do not provide estimates of the magnitude of those impacts. See also supra notes 1 and 2.

sampled enrollees' HCCs and applicable adjustments.¹⁹ This is available to issuers in the History and Results tab of the Audit Tool.

7. Issuer D&E Letters and Reports: Provides issuer-specific results of the 2019 benefit year HHS-RADV D&E review, if applicable. This will be available to issuers at the same time as 2020 benefit year HHS-RADV D&E results, in June 2022, and will be posted in the History and Results tab of the Audit Tool.
8. Issuer RXC Letters and Reports: Provides issuer-specific results of the 2019 benefit year HHS-RADV Pilot RXC review, if applicable. This will be available to issuers at the same time as 2020 benefit year HHS-RADV RXC results, in June 2022, and will be posted in the History and Results tab of the Audit Tool.

To help issuers understand the results, CMS provides a 2019 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 2019 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 error rate.²⁰

IVA Entities will have access to this memo and the HHS-RADV Results Job Aid, but they do not receive issuer specific results (i.e., documents #5 - #8 in the above list). Issuers may choose to share their issuer specific results with their IVA entities. For issuers who did not participate in the 2019 benefit year of HHS-RADV, documents #5 - #8 in the above list will not be provided. However, these issuers can view the results in this memo and documents #1 - #4 in the above list.

Impact of HHS-RADV Error Rates and Outlier Status on Risk Adjustment Transfers

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' 2019 benefit year HHS-RADV error rates will be averaged with the 2020 benefit year HHS-RADV error rates and applied to the 2020 plan liability risk scores and risk adjustment transfers.²¹ This approach will result in one HHS-RADV adjustment to the 2020 benefit year plan liability risk scores and risk adjustment transfers that reflects the average value for the 2019 and 2020 benefit years' HHS-RADV error rates for these issuers. For issuers who exited all markets following the 2019 benefit year, HHS will continue to adjust only for positive error rate outliers and those outlier issuers' HHS-RADV results to 2019 benefit year plan liability risk scores and risk adjustment transfers.^{22,23}

- Exempt Issuers: Exempt issuers will receive a zero error rate.
 - Issuers that did not participate in the 2019 benefit year of HHS-RADV will receive a

¹⁹ Issuers should note that the HIOS ID's error rate may be a zero or a non-zero rate.

²⁰ Issuer's 2019 benefit year HHS-RADV error rates will be averaged with their 2020 benefit year HHS-RADV error rates and applied to the 2020 plan liability risk scores and risk adjustment transfers. See supra notes 1 and 2.

²¹ See supra notes 1 and 2.

²² 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.

²³ As previously noted, there were no positive error rate outlier exiting issuers in 2019 benefit year HHS-RADV. Therefore, there is no impact to 2019 benefit year risk scores as a result of 2019 benefit year HHS-RADV.

zero error rate for the 2019 benefit year. If these issuers participated in the 2020 benefit year of HHS-RADV, they may have adjustments made to their respective 2020 benefit year plan liability risk scores based on the issuer's own 2020 HHS-RADV results.²⁴ If issuers are exempt in both the 2019 benefit year and 2020 benefit years, then they will not have an adjustment made to their own respective 2020 benefit year plan liability risk scores.

- Due to the budget neutral nature of the HHS-operated risk adjustment program, exempt issuers' 2020 benefit year transfer amounts may change if other issuers in the same state market risk pool are identified as outliers in either the 2019 or 2020 benefit years of HHS-RADV.
- Non-Outlier Issuers: Non-outlier issuers will receive a zero error rate.
 - The majority of participating issuers' 2019 benefit year HHS-RADV results are within the confidence intervals of the national HCC group failure rates. If these issuers participated in the 2020 benefit year, they may have adjustments made to their respective 2020 benefit year plan liability risk scores if they are identified as an outlier in the 2020 benefit year of HHS-RADV.²⁵ If issuers are non-outliers in both the 2019 benefit year and 2020 benefit years, 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, non-outlier issuers' 2020 benefit year transfer amounts may change if other issuers in the state market risk pool are identified as outliers in either the 2019 or 2020 benefit years of HHS-RADV.
- Outlier Issuers: Outlier issuers will receive non-zero error rates.²⁶ These non-zero error rates could be positive or negative. Issuers' 2019 benefit year HHS-RADV error rates will be averaged with the 2020 benefit year HHS-RADV error rates.²⁷
 - If the averaged 2019 and 2020 benefit year error rate is positive, the issuer's 2020 benefit year plan liability risk scores will be adjusted downward by the adjustment 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 averaged 2019 and 2020 benefit year error rate is negative, the issuer's 2020 benefit year plan liability risk scores will be adjusted upwards by the adjustment 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

²⁴ A new entrant to a state market risk pool in 2020 would see its risk score(s) and transfer impacted by the new issuer's own 2020 HHS-RADV results, the combined 2019 and 2020 HHS-RADV results of other non-exiting issuers in the same state market risk pool, and the 2020 HHS-RADV results for positive error rate outlier exiting issuers in the same state market risk pool. For issuers participating in 2020 HHS-RADV who did not participate in 2019 HHS-RADV, their 2019 HHS-RADV error rate would be considered as zero (0) in the averaging of 2019 and 2020 HHS-RADV error rates.

²⁵ CMS will use the unweighted average value of non-exiting issuers' 2019 and 2020 benefit years' HHS-RADV results to adjust 2020 benefit year risk scores and risk adjustment state transfers. See supra notes 1 and 2. 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 would be considered as zero (0) in the averaging of their 2019 and 2020 HHS-RADV error rates.

²⁶ Issuers with failure rates that lie outside of one or more of the HCC failure group confidence intervals, and have 30 or more HCCs in the failure rate group, are considered outliers.

²⁷ See supra note 25.

- 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.

The application of the averaged 2019 and 2020 benefit year 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 an error rate of zero for both the 2019 and 2020 benefit year HHS-RADV results. This includes new issuers entering a state market risk pool in 2019 in which outlier issuers were identified in 2019 benefit year HHS-RADV, and new issuers entering a state market risk pool in 2020 in which outlier issuers were identified in 2020 benefit year HHS-RADV. As a result, exempt issuers, non-outlier issuers, and new market entrants may receive adjustments to their 2020 benefit year transfers due to the identification of outliers in their state market risk pools and the application of outlier issuer averaged 2019 or 2020 benefit year error rates.

We provide a summary of which state market risk pools have outliers based on the 2019 benefit year HHS-RADV results, which will affect the 2020 benefit year state average risk score calculations, in Appendix B. However, state market risk pools without outliers in the 2019 benefit year HHS-RADV results may still be impacted if there are outliers identified in these state market risk pools in the 2020 benefit year HHS-RADV results.

Next Steps

Issuers will be able to estimate the combined impact of 2019 and 2020 benefit year HHS-RADV error rates on their HHS-RADV adjusted 2020 benefit year risk adjustment transfers once the 2020 benefit year HHS-RADV results are released in Summer 2022. These adjustment amounts will be collected and distributed beginning in Summer 2022.²⁸

Error Rate Calculation Attestation and Discrepancy Reporting Process: All issuers participating in 2019 benefit year HHS-RADV²⁹ are required to attest to the error rate calculation, or qualify the attestation by filing a discrepancy (see 45 C.F.R. § 153.630(d)(2)). Beginning on February 25, 2022, issuers have thirty (30) calendar days, until March 28, 2022, to attest to findings or qualify their attestation with a discrepancy related to the 2019 benefit year HHS-RADV risk score error rate calculation. Issuers must complete the Error Rate Attestation and Discrepancy Reporting Process in the HHS-RADV Audit Tool. 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

²⁸ See, e.g., Table 3 in the Proposed Key Dates for Calendar Year 2022: Qualified Health Plan (QHP) Data Submission and Certification; Rate Review; and Risk Adjustment, available at: <https://www.cms.gov/CCIIO/Resources/Regulations-and-Guidance/Downloads/Proposed-Key-Dates-Tables-For-CY2022.pdf>.

²⁹ 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: 2019 Benefit Year HHS-RADV National Program Benchmarks

Table A1: National Failure Rate Group Summary Statistics

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		
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

Table A2: National Error Rate Summary Statistics

Metric	Value
HIOS ID Count	433
Total # Issuers Receiving an Error Rate (+ or -)	83
Count of Issuers with Final Negative Error Rate	45
Average National Negative (Total) Error Rate	-0.015653486
Negative (Total) Error Rate (Max)	-0.051068938
Count of Issuers with Final Positive Error Rate	38
Average National Positive (Total) Error Rate	0.069385851
Positive (Total) Error Rate (Max)	0.394423264

Appendix B: State Market Risk Pools with 2020 Risk Adjustment Transfers Impacted By 2019 Benefit Year HHS-RADV Results

Appendix B provides a table indicating which state market risk pools will have 2020 Risk Adjustment Transfers impacted by 2019 benefit year HHS-RADV due to the presence of at least one error rate outlier in the state market risk pool.³⁰ State market risk pools without outliers in the 2019 benefit year HHS-RADV results may have 2020 benefit year transfers impacted if there are outliers identified in these state market risk pools in the 2020 benefit year HHS-RADV results.³¹ Issuers' 2019 benefit year HHS-RADV error rates will be averaged with 2020 benefit year HHS-RADV error rates to calculate 2020 benefit year adjusted plan liability risk scores and state average risk scores, as well as the HHS-RADV adjustment amounts to 2020 benefit year risk adjustment state transfers.³² Issuers will be able to estimate the combined impact of 2019 and 2020 benefit year HHS-RADV error rates on their 2020 benefit year risk adjustment transfers once the 2020 benefit year HHS-RADV results are released.

State	Individual (Excluding Catastrophic)	Small Group	Catastrophic
AK	No	Yes	N/A
AL	No	No	No
AR	No	No	N/A
AZ	Yes	No	Yes
CA	Yes	Yes	Yes
CO	Yes	Yes	Yes
CT	No	Yes	No
DC	Yes	Yes	Yes
DE	No	Yes	No
FL	No	Yes	No
GA	Yes	Yes	Yes
HI	Yes	Yes	No
IA	No	No	No
ID	Yes	Yes	Yes
IL	Yes	Yes	Yes
IN	No	No	No
KS	No	Yes	No
KY	No	Yes	No
LA	Yes	Yes	N/A
MA	No	N/A	No
MD	Yes	Yes	Yes
ME	No	No	No
MI	Yes	Yes	Yes
MN	No	No	No
MO	No	No	No
MS	No	Yes	N/A

State	Individual (Excluding Catastrophic)	Small Group	Catastrophic
MT	Yes	Yes	Yes
NC	Yes	Yes	Yes
ND	No	No	No
NE	No	No	No
NH	Yes	Yes	Yes
NJ	Yes	Yes	Yes
NM	No	No	No
NV	No	No	No
NY	Yes	Yes	Yes
OH	Yes	Yes	Yes
OK	Yes	Yes	Yes
OR	Yes	Yes	Yes
PA	Yes	Yes	Yes
RI	Yes	Yes	N/A
SC	Yes	Yes	Yes
SD	No	No	No
TN	No	Yes	No
TX	Yes	Yes	Yes
UT	Yes	Yes	No
VA	Yes	Yes	Yes
VT	No	N/A	No
WA	Yes	No	Yes
WI	Yes	Yes	No
WV	Yes	Yes	Yes
WY	No	No	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 states with merged market risk pools (Massachusetts and Vermont) are displayed in the Individual (Excluding Catastrophic) column with an "N/A" in the small group column.

³⁰ See supra note 17.

³¹ See supra notes 1 and 2.

³² See supra note 25.

Appendix C: State Market Risk Pools with 2019 Risk Adjustment Transfers Impacted By 2019 Benefit Year HHS-RADV Results (Exiting Issuers)

As described above, because there were no positive error rate outlier exiting issuers in the 2019 benefit year of HHS-RADV, no adjustments will be made to 2019 benefit year risk scores or state transfers based on 2019 benefit year HHS-RADV results.

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

Appendix D provides a listing of HCCs, the associated Super HCC, and the assigned group detail for the 2019 benefit year HHS-RADV.

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 Glycogenesis
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
47	47	Medium Failure Rate Group	Acute Pancreatitis/Other Pancreatic Disorders and Intestinal Malabsorption

Super HCC	HCC	Failure Rate Group	HCC Label
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	Amotrophic Lateral Sclerosis and Other Anterior Horn Cell Disease
112	112	Low Failure Rate Group	Quadriplegic Cerebral Palsy
113	113	Medium Failure Rate Group	Cerebral Palsy, Except Quadriplegic

Super HCC	HCC	Failure Rate Group	HCC Label
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
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

Super HCC	HCC	Failure Rate Group	HCC Label
			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