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2022 Risk Adjustment Data Validation (RADV) Results and Insights

Executive Summary

Wakely conducts national HHS-RADV IVA (initial validation audit) surveys to assist participants in estimating their RADV-adjusted risk transfers in advance of CMS official results. Obtaining timely estimates of RADV impacts and detailed deliverables allow issuers to understand RADV impact to risk transfers and manage financial risks.

In order to estimate potential RADV impacts, Wakely collected study participants' 2022 RADV initial validation audit (IVA) results through Wakely's National Risk Adjustment Reporting (WNRAR) project.¹ These files allowed Wakely to carry out CMS' RADV methodology to calculate national HCC Group average failure rates, national confidence intervals, and ultimately estimate HIOS ID (i.e. issuer) and market average error rates. This paper presents national level results of our analysis for 2022 as well as a comparisons of prior year RADV results.²

RADV error rates are used to adjust issuers' plan liability risk scores (PLRS). 2022 RADV error rates are used to adjust 2022 PLRS and subsequently impact 2022 risk adjustment transfers.³

Comparing 2022 Wakely results to prior year, we observed:

1. **Most markets will have a risk transfer impact based on RADV results.** The percentage of markets with non-zero error rates (72%) remained consistent when compared with Wakely 2021 results (72%). The magnitude of the average error rates increased for positive markets and decreased for negative markets when comparing the 2021 results to 2022 results. See Table 3 for more detail.
2. **RADV results remain volatile.** 42% of markets did not have the same sign error rate in 2022 as 2021 results (i.e. market error rate was not 0%, positive, or negative in two consecutive years). See Table 4 for more detail.

To illustrate the market error rates in 2021 and 2022, Table 1 below shows the error rates for the 71 markets that were present in the 2021 and 2022 Wakely RADV IVA studies.

¹ We had full participation from all 2023 WNRAR participants, representing data from 473 HIOS IDs and reporting results for 71 markets.

² Wakely's RADV results are based on our understanding and interpretation of guidance in payment notices and protocols.

³ More detail on this calculation can be found in Appendix A.

Table 1: Market Error Rates from Wakely's 2021 and 2022 Results

Market Error Rate	% of Markets	
	2021 Wakely RADV	2022 Wakely RADV
[-5%,-3%)	1%	0%
[-3%,-1%)	7%	7%
[-1%,0%)	32%	37%
0%	27%	28%
(0%,1%]	31%	24%
(1%,3%]	1%	4%
(3%,5%]	0%	0%

Key factors to consider when comparing the error rates across studies in Table 1 include:

1. **2022 High Level Results:** The magnitude of the market average error rate increased for positive error rates but decreased for negative error rates. As shown by the tails of the above Table 1, we observed that the 2022 results had more markets in the tail ends of results for positive error rates, and fewer markets in the tail ends for negative error rates. The average positive market error rate increased from 0.2% in 2021 to 0.3% in 2022. The average negative market error rate increased from -0.6% to -0.4%.
2. **Continued Volatility in Year-over-Year Results:** We observed issuer and market results experience volatility year-over-year. While the distribution of market error rates remained similar between 2021 and 2022, the experience at the granular issuer or market level varies significantly.

Further comparisons of the data can be found in the “Results and Observations” section below.

Background

In the 2024 Notice of Benefit and Payment Parameters (NBPP)⁴, CMS released final details for the 2022 RADV program, including the calculation details to determine the issuer error rate. 2022 RADV is a concurrent RADV program with 2022 RADV error rates used to adjust 2022 PLRS and subsequently impact 2022 risk adjustment transfers. An illustration of this calculation is presented in Appendix A.

For the 2022 RADV program, issuers were required to submit their IVA Package One Reporting to CMS on January 11th, 2024. After completing subsequent steps including the secondary validation audit (SVA), CMS is expected to release the 2022 RADV results in summer of 2024. In this white paper, Wakely

⁴ <https://www.federalregister.gov/documents/2023/04/27/2023-08368/patient-protection-and-affordable-care-act-hhs-notice-of-benefit-and-payment-parameters-for-2024>

estimated preliminary 2022 RADV market average error rates using participants' IVA results and compared the preliminary 2022 results to our 2021 RADV study.

Appendix B provides a comparison of Wakely's 2022 RADV Study results compared to actual 2022 CMS results.

Methodology

Wakely sent participating issuers proprietary project codes to summarize preliminary 2022 RADV files, namely 2022 RADVEE, RADVDE, RADVPSF, RATEE and IVA_Findings_Report. Wakely's project codes compiled and summarized issuers' IVA results by member cohorts. No member level details were provided to Wakely. We reviewed summary files for reasonability, and in many cases, we worked with issuers to address potential issues but did not audit the data and cannot guarantee that the data is error-free.

Using participants' IVA results, Wakely compiled the reported EDGE server recorded Hierarchical Condition Categories (HCCs) and IVA substantiated HCCs for sampled RADV members at the issuer level to determine HCC failure rates nationally. Wakely, then, ranked each HCC's failure rates across all participants to estimate HCC Groups – namely, Low, Medium and High HCC Groups. The mean failure rate and confidence interval for each HCC Group were calculated separately to establish the estimated national benchmarks.

Using these national benchmarks, we estimated issuers' error rates based on our understanding of available guidance related to CMS' methodology.⁵ However, since member-level information was not collected, certain calculations and metrics - such as enrollee level adjustments – were calculated at a rolled up cohort level. Our modified approach will cause inaccuracies in the issuer error rate and therefore market error rate. This modified approach does not impact our estimates of failure rates and ability to identify outliers. Market average error rates were then estimated by weighting each issuer's estimated 2022 RADV error rates with their estimated 2022 total risk based on estimates from our WNRAR project.⁶ We did not include all submitted HIOS IDs in our national metric calculation. Issuers who reported being exempt from conducting a 2022 RADV IVA were excluded from the calculation of the national metrics. However, these exempted issuers were included in market error rate calculations by implicitly assigning a 0% error rate and using 2022 estimated total risk in weighting.

In most markets, we had over 90% participation of all issuers (when including non-participants), and in several markets, we had 100% participation from all issuers within the market. WNRAR participants should review the caveats and limitations tab in the Excel file delivered to your organization with this report for additional information and important data notes. Caveats specific to this paper are included in the Disclosures and Limitations section below.

⁵ https://regtap.cms.gov/reg_library_openfile.php?id=4469&type=l

⁶ Estimated total risk is calculated from issuers' final 2022 benefit year RATEE files as collected through the WNRAR project.

Results and Observations

Summary of 2022 Preliminary Wakely RADV Results

We had full WNRAR participation in 71 markets, which includes 36 small group markets and 35 individual markets (including 1 merged market). We did not include catastrophic market results in this analysis.

Based on our estimates, we expect 51 markets (72% of markets) to have non-zero average error rates. For all issuers within a market with non-zero error rates, we expect their 2022 risk transfers to be adjusted as a result of the 2022 RADV program. Of these 51 markets, we estimated 20 markets with positive error rates and 31 markets with negative error rates. Tables 2 and 3 below summarize our findings for Wakely's 2022 RADV study compared to Wakely's 2021 RADV study and CMS 2021 results.

Table 2: RADV Summary Statistics – Issuer

Data Element	2021 CMS	2021 Wakely RADV	2022 Wakely RADV
HIOS ID Count	608	456	473
% Non-Exempt	67%	77%	82%
% Exempt	33%	23%	18%
Non-Exempt Issuers	407	349	390
% Non-zero Error Rate	22%	26%	20%
% Positive Error Rate	11%	13%	9%
% Negative Error Rate	11%	13%	11%

Table 2 shows that the number of non-zero error rate issuers are comparatively lower in the 2022 Wakely study than the 2021 Wakely study. The decrease in the percentage of non-zero error rate issuers (or issuers with outlier failure rates) can be attributed to issuers' failure rates have generally moved towards the national mean.

Table 3: RADV Summary Statistics – Market

Data Element	2021 CMS	2021 Wakely RADV	2022 Wakely RADV
Market Count	100	72	71
% Non-zero Error Rate	68%	72%	72%
% Positive Error Rate	31%	32%	28%
% Negative Error Rate	37%	40%	44%
Market Error Rate Metrics			
Max Market Error Rate Estimate	7.2% ⁷	1.9%	1.7%
Min Market Error Rate Estimate	-3.7%	-4.1%	-2.1%
Average Market Positive Error Rate	0.7%	0.2%	0.3%
Average Market Negative Error Rate	-0.5%	-0.6%	-0.4%

Table 3 illustrates that the percentage of markets with a non-zero error rate (72%) stayed consistent between 2021 and 2022 Wakely RADV. The magnitude of the average market positive error rate increased by 0.1% between 2021 and 2022 Wakely results. The magnitude of the average market negative error rate decreased by 0.2% between 2021 and 2022 Wakely results. While market average metrics stayed relatively similar year over year, the movements of singular markets remained volatile as seen in prior year observations and further illustrated in the error rate changes section below.

To further understand the impact of error rates, we have included a simplified calculation of how RADV error rates may impact issuers' risk transfers in Appendix A.

Error Rate Changes

The percent of non-zero market error rates remained consistent at 72% in both our 2021 and 2022 studies. It is important to note 42% of markets did not have the same sign error rate in 2022 as in 2021 (i.e. market error rate was not 0%, positive, or negative in two consecutive years). Table 1 and Table 4 provide additional detail on market error rate distribution and continuity between the two years.⁸

Table 4: RADV Summary Statistics – Market Error Rate Continuity

Data Element	Count	Percent
Number of Markets in both 2021 Wakely Study and 2022 Wakely Study	71	100%
# of Markets with zero error rates in both years	10	14%
# of Markets with same sign	31	44%
# of Markets switching signs	11	15%
# of Markets with non-0 error rate in 21 and 0% error in 22	10	14%
# of Markets with 0% error rate in 21 and non-0% error in 22	9	13%

⁷ The 7.2% max market error rate is attributed to AL individual market, which is not included in the WNRAR study.

⁸ See Executive Summary for Table 1.

The issuer error rates, which ultimately determine the market error rates discussed above, are calculated by comparing each issuer's failure rates by HCC Group against the national distribution. More specifically, if an issuer's HCC Group failure rate is outside of the 90% confidence interval, an adjustment to the issuer's PLRS will be made; they will have an error rate. More discussion on the national confidence intervals and its impact are in the next section.

National Confidence Interval

In the 2022 RADV study, the HCC Group mean decreased for all HCC groups compared to Wakely's 2021 study. The HCC Group standard deviation increased for the low and medium groups but decreased for the high HCC group in the 2022 RADV study compared to Wakely's 2021 study as shown in Table 5 below.

Table 5 – Comparison of Wakely 2022 & Wakely 2021 National Confidence Interval

Wakely 2022 - Wakely 2021				
HCC Group	Mean	Lower Bound	Upper Bound	Std Deviation
Low	-0.2%	-1.00%	0.52%	0.46%
Medium	-3.8%	-4.27%	-3.26%	0.31%
High	-2.8%	-1.47%	-4.13%	-0.81%

Additional Observations

RXCs

The 2022 RADV program required issuers participating in 2022 RADV to perform RXC validation activities. RXC validation results are not included in the calculation of 2022 RADV issuer and market error rates, however material RXC errors may result in adjustments to the 2022 RA transfer amount.⁹ Of the 360 non-exempt HIOS IDs with at least the required number of RXCs audited for which we collected RADV data, 100% of HIOS IDs were found to be within the acceptable number of standard deviations.¹⁰

Disclosures and Limitations

The data included in this report and produced by the Wakely National Risk Adjustment Reporting (WNRAR) project are inherently uncertain and relies upon data provided by WNRAR participants. Users

⁹ 2022 RADV protocols (https://regtap.cms.gov/reg_library_openfile.php?id=4469&type=l) state "CMS requires that issuers participating in the 2022 benefit year HHS-RADV perform RXC validation activities. CMS uses HHS-RADV to discover relevant and significant incorrect EDGE server data submissions and to make adjustments under 45 C.F.R. § 153.630(e) for identified material RXC errors. RXC errors discovered during HHS-RADV are handled as late- filed discrepancies and may result in adjustments to the applicable benefit year RA transfer amount. CMS does not use RXC errors in the risk score error calculation."

¹⁰ RXC validation Outcomes are defined on pages 96-97 of 2022 RADV protocols: https://regtap.cms.gov/reg_library_openfile.php?id=4469&type=l

of this white paper should be qualified to use it and understand the results and the inherent uncertainty. Wakely makes no warranties regarding the results. Actual results will vary, potentially significantly.

We performed reasonability checks on the data where possible but did not audit the data. RADV results from issuers not participating in this survey may change the results provided in this white paper. Other uncertainty in the estimates contained in these results include but are not limited to the following:

1. The results presented in this white paper are based on initial validation audit (IVA) results due to the timing of this analysis. This does not include any adjustments made through the secondary validation audit (SVA) that would be performed after our data collection.
2. Our interpretation of CMS guidance on RADV¹¹ may not be perfect. Where model parameters or methodology are not clear or appear to be erroneous, we have made decisions on what we believe to be the most appropriate approach. Actual implementation by CMS may be different than we have assumed.

WNRAR participants should review the caveats and limitations tab in the Excel file delivered to your organization with this report for additional information and important data notes. Wakely is not a legal or audit firm. Please consult your accounting, legal and actuarial experts in developing your internal estimates.

Please contact Chia Yi Chin at Chiayi.Chin@wakely.com, Matt Sauter at MattS@wakely.com, or Maris Hayes at Maris.Hayes@wakely.com with any questions or to discuss these estimates.

¹¹ https://regtap.cms.gov/reg_library_openfile.php?id=4469&type=l

Appendix A – Sample Illustration of Risk Transfer Impact

In this section, we are illustrating a simplified example of the potential impact of the RADV program on issuers’ risk transfers. These results do not represent actual results from any markets/participants in our 2022 RADV study above. It is only provided for discussion purposes.

Exhibit A1 – Error Rate Calculations in Mock-up Market

Statewide RA Premium (P): \$500

A		B		C = A * B		E = B / Mrkt(B)		F = (E-1)*A*P		G		H		I* = E*(1+H)* (1-G)		J=(I-1)*A*P		K=J-F		L=K/(A*P)	
Issuer	Billable Member Months	PLRS	Total Risk	Pre-RADV Transfers		RADV Results		Post-RADV Transfers		Change in Transfers		Relative Risk ²	Transfer	Change in Transfers	% of Premium						
				Relative Risk	Transfer	Issuer Error Rate	Market Error Rate ¹	Relative Risk ²	Transfer												
Issuer A	50,000	1.10	55,000	1.116	\$ 2,898,551	-6.0%	3.4%	1.224	\$ 5,592,499	\$ 2,693,949	10.8%										
Issuer B	100,000	1.00	100,000	1.014	\$ 724,638	0.0%	3.4%	1.049	\$ 2,474,270	\$ 1,749,632	3.5%										
Issuer C	200,000	0.95	190,000	0.964	\$ (3,623,188)	8.0%	3.4%	0.917	\$ (8,274,976)	\$ (4,651,787)	-4.7%										
Market	350,000	0.99	345,000	1.000	\$ -	3.4%	3.4%	1.000	\$ -	\$ -	0.0%										

¹ Market error rate calculated by taking issuer error rate weighted by total risk; H = SUMPRODUCT(C,G)/SUM(C)

² Post-RADV relative risk is calculated using a simplified formula

In our mock-up market, we show three issuers with varying market share and risk profiles. Relative risk shown in the example above is simplified for illustrative purpose and is calculated using plan liability risk scores (PLRS) only. Actual calculation is more complex.¹² In this example, we note that Issuer A and Issuer C had error rates based on their RADV results (-6.0% and +8.0% respectively). This resulted in a market average error rate of 3.4%. Then, we estimated post-RADV relative risk using a simplified calculation.¹³

As shown in column L of the above exhibit, RADV results can significantly impact an issuer’s risk transfer results. The change in risk transfers range from -4.7% to 10.8% for issuers in this mock-up market. Further, we note that Issuer B had their risk transfers adjusted by 3.5% of statewide average premium despite their own RADV results yielding a 0% error rate. The illustration above is simplified but highlights a key point – even if an issuer error has a 0% error rate, risk adjustment transfers can still be affected by a significant amount if at least one issuer within its market is adjusted through RADV.

A negative market average error rate indicates that the market average risk scores are expected to increase. For example, if an issuer’s RADV results shows that it had a zero error rate but the market average error rate is negative, the issuer’s risk score will remain the same while the market average risk score is expected to increase. This will result in a lower relative risk after RADV for that issuer, and hence, risk transfer receipt will decrease. In other words, risk transfer charge will increase for that issuer.

¹² The actual formula to calculate relative risk is as follows:

$$1 + \left[\frac{PLRS_i \times IDF_i \times GCF_i}{\sum_i (s_i \times PLRS_i \times IDF_i \times GCF_i)} - \frac{AV_i \times ARF_i \times IDF_i \times GCF_i}{\sum_i (s_i \times AV_i \times ARF_i \times IDF_i \times GCF_i)} \right]$$

¹³ We expect CMS to ultimately use the issuer error rate from RADV to adjust issuer PLRS at each plan ID and rating area level for that HIOS.

Appendix B – Wakely RADV Study vs Actual CMS Results

Market Error Rates

A table comparing the estimated market error rate sign (negative, 0, or positive) compared to the actual market sign released by CMS is presented below. Wakely correctly estimated the market error rate sign for 56 out of 71 markets in 2022 and the average absolute difference between CMS and Wakely error rates was under 0.15%.

Table B.1 – Comparison of Wakely & CMS 2022 Market Error Rate

		2022 CMS				Percent Classified Correctly	Average Absolute Difference of Error Rates
Error Rate		Negative	Zero	Positive			
2022 Wakely	Negative	27	1	3	87.1%	0.11%	
	Zero	3	17	0	85.0%	0.01%	
	Positive	1	7	12	60.0%	0.08%	

National Confidence Intervals

Wakely’s 2022 national confidence interval estimates compared to CMS’ final 2022 results¹⁴ are presented below. Despite not having full national participation, Wakely’s national mean benchmark estimates were close to the final averages released by CMS with differences of about 0.5% or less in 2022. Similarly, Wakely’s estimates for the three HCC Group confidence interval bounds were in line with CMS’ final results and differed by approximately 1.0% or less in 2022.

Table B.2 – Comparison of Wakely & CMS 2022 National Confidence Interval

Wakely 2022 Failure Rate National CI				Wakely 2022 - CMS 2022		
HCC Group	Mean	Lower Bound	Upper Bound	Mean	Lower Bound	Upper Bound
Low	2.7%	-7.3%	12.8%	-0.5%	-1.0%	0.0%
Medium	8.0%	-2.6%	18.7%	-0.3%	0.2%	-0.8%
High	17.8%	7.1%	28.5%	-0.3%	0.3%	-0.8%

¹⁴ <https://www.cms.gov/files/document/by22-hhs-radv-results-memo-appendix.xlsx>

OUR STORY

Five decades. Wakely began in 1969 and eventually evolved into several successful divisions. In 1999, the actuarial arm became the current-day Wakely Consulting Group, LLC, which specializes in providing actuarial expertise in the healthcare industry. Today, there are few healthcare topics our actuaries cannot tackle.

Wakely is now a subsidiary of Health Management Associates. HMA is an independent, national research and consulting firm specializing in publicly funded healthcare and human services policy, programs, financing, and evaluation. We serve government, public and private providers, health systems, health plans, community-based organizations, institutional investors, foundations, and associations. Every client matters. Every client gets our best. With more than 20 offices and over 400 multidisciplinary consultants coast to coast, our expertise, our services, and our team are always within client reach.

Broad healthcare knowledge. Wakely is experienced in all facets of the healthcare industry, from carriers to providers to governmental agencies. Our employees excel at providing solutions to parties across the spectrum.

Your advocate. Our actuarial experts and policy analysts continually monitor and analyze potential changes to inform our clients' strategies – and propel their success.

Our Vision: To partner with clients to drive business growth, accelerate success, and propel the health care industry forward.

Our Mission: We empower our unique team to serve as trusted advisors with a foundation of robust data, advanced analytics, and a comprehensive understanding of the health care industry.

Learn more about Wakely Consulting Group at www.wakely.com