

Risk Adjustment Model Overview & Deep Dive

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Introductions



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Presentation Goal

What is Risk Adjustment?

Risk Adjustment in Medicare Advantage and the ACA

Key Programs / Initiatives (RSO, RADV)

Risk adjustment impact to financials

Provide industry insights

Hear from the audience

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Risk Adjustment Model Overview



Why is Risk Adjustment Necessary?

- Underwriting is limited in both MAPD and the ACA
- Appropriate compensation for morbidity risk
- Incentives quality & well managed care over selection
- Rewards accurate and full condition capture and management

Components of a risk score

Demographic

Age / Gender / Plan / Income Status / Plan Duration / etc.

Diagnosis Data

- Claims based diagnosis data coded by a physician
- Other claim fields like CPT codes or bill Type codes used for filtering

Supplemental Diagnosis Data

Additional diagnosis data pulled via chart reviews

Drug Data

Filled NDC codes

Normalization or Budget Neutral Factor

 Making risk adjustment normalized to a 1.0 risk score so that net risk adjustment payments are net neutral

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Risk Score Model Development

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Pole Question

- It's 2021 and Suzy just turned 65 and signed up with her local Medicare Advantage plan during AEP for CY2022. What will Suzy's risk score be based on in CY2022?
 - Nothing, her risk score will be set to the plan average
 - Her incurred commercial data from CY2021
 - Demographic information will be used
 - Claims incurred in CY2022



How to handle "New Enrollees"

- Different risk score models do different things
- Key considerations are:
 - Is the model prospective or retrospective?
 - How often are risk scores calculated?
 - How are new enrollees getting enrolled?
 - Is there claim history available?
- MAPD: New enrollees are scored with separate weights where only demographic info is considered. The "morbidity" component is an average of the new enrollee's demographic cohort.
- ACA: Have onboarding strategy

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ACA & Medicare Model Specifics





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ACA Deep Dive



ACA Deep Dive Overview

- ACA Model Overview
- Risk Adjustment Management
- EDGE Server Integrity
- Risk Score Optimization (RSO)
- Provider Profiling
- Programs
 - RADV
 - High Cost Risk Pooling



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ACA Deep Dive

ACA Model Overview



ACA Model Overview

GOAL: Account for health risk differences while preserving permissible premium differences. Reward quality, affordable coverage and not selection.

- Zero-sum game
- Concurrent Model using diagnosis and pharmacy data
- Risk Score Components: Demo, EDF, HCCs, RXCs
- Separate models for Adult, Child, Infants, and Metal (3x5)
- Cost sharing variants receive multiplicative bump
- Now uses ACA data
- Recent proposed changes for 2023 and beyond

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Risk Score Calculation

1. ENROLLMENT

			Age	Days	EDF
Member	Metal	Age	Weight	Enrolled	Weight
John Doe	Silver	40	1.3	350	0.0
2. MEDICAL					
			Final	Silver	
Diagnosis	ICD10	HCC	HCC	Weight	
Cryptosporidiosis	A07.2	6	6	6.2	
Other intestinal obstruction	K56.690	45	45	5.4	
Total HCC Risk Score				11.6	

4. Risk Score Calculation

Component	Risk Score		
Demo	1.3		
EDF	-		
HCC	11.6		
RXC	-		
Risk Score	12.9		
CSR Factor	1.0		
Final Risk Score	12.9		

3. PHARMACY (NO CLAIMS)

Total RXC Risk Score

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Transfer Formula

$$T_{PMPM} = \left[\frac{PLRS_i \cdot IDF_i \cdot GCF_i}{\sum_i (s_i \cdot PLRS_i \cdot IDF_i \cdot GCF_i)} - \frac{AV_i \cdot ARF_i \cdot IDF_i \cdot GCF_i}{\sum (s_i \cdot AV_i \cdot ARF_i \cdot IDF_i \cdot GCF_i)}\right]\bar{P}_s$$

Where:

 T_i = Transfer for issuer *i* $\overline{P_s}$ = State Average Premium $PLRS_i$ = Issuer *i*'s plan liability risk score IDF_i = Issuer *i*'s induced demand factor ARF_i = Issuer *i*'s allowable rating factor AV_i = Issuer *i*'s metal level actuarial value GCF_i = Issuer *i*'s geographic cost factor s_i = Issuer *i*'s share of State enrollment, and the denominator is summed across all issuers in the risk pool in the market + state

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Key Programs & Considerations

- Standard Risk Adjustment
- Risk Adjustment Management
- Data integrity & the EDGE Server
- Risk Score Optimization (RSO) & Supplemental Claims
- RADV
- HCRP



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Risk Adjustment Management



Risk Adjustment Management

Why?

- Risk adjustment transfers larger than profit margins
- Zero-Sum inefficiencies benefit competitors
- Data is King





How?

- Create deliberate, comprehensive, enterprise-wide risk adjustment strategy
- Key components
 - Enterprise-wide alignment
 - EDGE overview of EDGE needed?
 - Coding Accuracy capturing true morbidity
 - Risk Analytics Monitoring & Reporting

Risk Score Accuracy and the Management Cycle



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Risk Adjustment Operations

Risk Adjustment Data Timing

- BY 2021 data is submitted by April 30th, 2022
- Final data impacts risk adjustment results
- EDGE Server is offline until July/August

Finance Team

- Making accruals throughout the year
- Dealing with audit CMS Final Results are released mid-year of the year following benefit year
- BY2021 transfers are announced June 30th, 2022, RADV Summer 2023
- What data goes into the accrual estimates?

Pricing Team

- Pricing is usually done before most recent CMS risk transfer results are released
- Pricing for 2023 is likely complete by June 30th (or shortly after).

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You can't manage what you don't measure.

Peter F. Drucker

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EDGE Server



EDGE Server - Overview





Hazards

- EDGE Server
 - Black box with limited insight
 - Several layers of filtering
 - Summary files can be useful but difficult to decipher
 - Chasing every issue isn't feasible
 - EDGE Server isn't live until August



Keys to Success



- Healthy Collaboration with EDGE Vendor
- Deciphering the "black box"
- Data validation
- Early planning & execution
- ROI analyses

Ensuring EDGE Accuracy

- Independent verification of risk adjustment (RA) calculations
- Compare results of EDGE and internal model
- Identify systemic data deficiencies
- Identify acute data deficiencies and non-allowable data
- Quantify & prioritize identified issues
- *Understand what EDGE vendors are and are not doing

Example Schedule



Case Study – EDGE Data Stream



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Risk Score Optimization



Mind the Gap

Goal: Obtain true morbidity of population to obtain appropriate revenue.

- Understand the "GAP"
- ACA initiatives subpar
- Band-Aids vs solutions
- Monitoring, Reporting, Monetizing
- Better coding = better clinical management



Risk Score Optimization

Lessons Learned



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Risk Score Optimization

How To

- Identify and prioritize chase list
- Once identified
 - Provider outreach & education
 - Member outreach & scheduling
 - Chart review
- Provider Engagment
 - Integration of RSO
 - Benchmark to peers
 - Financial alignment & incentives



Ways to Ensure Accuracy of Risk Scores

Retrospective

- Existing member suspecting
- Prioritization of HCCs
- Retrospective chart review
- New member suspecting
- EDGE vs Data Warehouse
- Denied claim approval

Prospective

- Target list prioritization
- Real time integration
- Member risk assessments & incentives (activate your card)
- Home visits
- Provider education
- Provider financial alignment

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Risk Score Optimization

Lessons Learned

- Finite Resources
 - Prioritization of HCCs | Money + Likelihood
 - 20% of members have HCCs
- Clinician input
- Evaluating programs & ROI
 - Vendor evaluation
 - Chart chase post-mortem
- Provider Profiling (benchmarking)



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Ways to Ensure Accuracy of Risk Scores

Applying band-aids in April each year does not yield long-term ROI

Short Term Supplemental

April Band-Aids

Long Term Robust monitoring & reporting

Provider education

Provider incentives

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Example Timeline

Best Practices - Sample



Risk Score Optimization - Recap

Recall:

- Understand the "GAP"
- ACA initiatives subpar
- Band-Aids vs solutions
- Monitoring, Reporting, Monetizing
- Better coding = better clinical management

Implement:

- Provider education & integration
- Comprehensive plan
- Targeted, prioritized chase list
- Program evaluation

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Supplemental Claims



Supplemental Claims – Overview

Understand the "GAP"

Increasing trend line

2% effect – targeted approach

Evaluate ROI

Engage with providers

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- Supplemental claim impact increasing
- 2020 average was nearly 3% increase to risk scores

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Supplemental Claims – Impact Example

Issuer:

- 100,000 member months
- 3% increase to risk scores from supplemental
- \$500 statewide premium



- Supplemental Impact
 - 3% risk score increase ~= 3% of statewide premium
 - 3% of \$500 = \$15 PMPM
 - \$15 PMPM * 100,000 MMs = \$1.5 M

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RADV





How does it work?

RADV Goal / Purpose:

"HHS-RADV promotes confidence in the RA program by providing assurance with respect to the integrity and quality of data provided from issuers operating in state markets under the HHS-operated RA program...



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How does it work?



- RADV process determines if data were incorrectly coded
- Issuer rates of failure to substantiate HCCs (conditions coded in risk adjustment) are compared to national benchmark
- Issuers outside of "confidence interval" are adjusted.
- Risk scores are adjusted thus risk transfers are adjusted after

HHS-RADV Level Set

- Audit on EDGE data that can affect risk transfers if an issuer in a market is deemed an outlier
- Impactful changes in recent rules
- Recent RADV final rule
 - More outliers but smaller impact
 - # of markets with outliers will increase
 - Average issuer negative error (PLRS adjustment) changes from -7% to -2%¹
- 2021 NBPP finalized moving to concurrent schedule
 - 2021 benefit year (BY) data audit will adjust 2021 risk transfers
 - Downstream effect 1 year delay in risk transfers being finalized

¹ Based on CMS' analysis of model changes shown on next slide.

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Significant Changes to HHS-RADV Program 2019+

Final Rule:

Significant Changes beginning with 2019 RADV Program Year

- Consensus: <u>overall reduction in the</u> <u>average magnitude of those RADV</u> <u>adjustments</u>
- Other Appendix slides have additional details on changes and impact on historical data based on Wakely RADV IVA study

Comparison of HHS-RADV Error Rate Estimated Changes Based on Prior Benefit Year HHS-RADV Data

	2017	Data	2018 Data			
	Mean Negative Error Rate	Mean Positive Error Rate	Mean Negative Error Rate	Mean Positive Error Rate		
Current Methodology	-5.68%	9.96%	-6.92%	5.43%		
New Sorting Method, Sliding Scale & Negative Constraint (Finalized)	-1.66%	5.32%	-1.86%	2.47%		

 Estimates of the magnitude of average error rates decrease substantially following adoption of these refinements

~	Note:

2017 and 2018 benefit year HHS-RADV are still subject to the current methodology

The changes finalized in the 2020 HHS-RADV Amendments Final Rule are effective beginning with the 2019 benefit year HHS-RADV

https://www.regtap.info/uploads/library/HRADV_Slides_ 121620_5CR_121620.pdf



What can we do about it?

Examine nonsubstantiated HCCs

Improve partnership with IVA

Change in program



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HHS-RADV Timing Schedule

RADV Timing Schedule

	Risk				
	Adjustment	Reporting Year	Results	MLR	Collection &
Audit Year	Impact Year	(MLR)	Released	Submissions	Payments
2017	2018	2021	August 2019	July 2022	Fall 2021
2018	2019	2022	August 2020	July 2023	Fall 2022
2019 & 2020	2020	2021	June 2022	July 2022	August 2022
2021	2021	2022	June 2023	July 2023	August 2023
2022	2022	2023	June 2024	July 2024	August 2024
2023	2023	2024	June 2025	July 2025	August 2025
)					

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Past Schedule
Transition Year
Future steady state

- New timing delays finalized transfers by 1 year
- New schedule collection and payments are more immediate

HHS-RADV Year-End Considerations

- "Estimable and probable"
- Each issuer and market is different
- Consider model, timing changes
- What is "conservative"?
- WNRAR modeled the methodology changes
- Final NBPP may change things



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High Cost Risk Pooling



High-Cost Risk Pooling

- Starting with the 2018 BY, CMS administered highcost risk pooling as a national program through the risk adjustment program
- HCRP is administered as a national program
- National Collections = National Payments
 - This means everyone pays in regardless of your expected "reinsurance"
- Charge is assessed as a percent of issuer's premiums



High-Cost Risk Pooling

- Through the HCRP program, issuers will be reimbursed for 60% of claim costs for claims above \$1,000,000.
- The parameters have not been updated since 2018 payment notice. 2019 2022 share the same parameters.

HCRP BY 2018-2020 Percent of Premium Charges

	2018	2019	2020
Individual	0.20%	0.24%	0.24%
Small Group	0.32%	0.37%	0.38%

Why does HCRP matters?



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Medicare Deep Dive



A Brief History of Time

MA Risk Adjustment

- The general version of the CMS-HCC model has been used to perform risk adjustment in Medicare Advantage (Part C) since 2004.
- A similar model with the same principles, the CMS-RxHCC model, has been used for risk adjustment in Medicare Advantage (Part D) since the program's inception in 2006.
- Both models' risk adjustment methodologies utilize a combination of demographic and diagnostic data to develop a member-level risk score.



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MA Risk Adjustment Demographics

Basics



- Both the CMS-HCC and CMS-RxHCC models include a demographic component to risk adjustment.
- The specific demographic data for a member will determine two items for risk adjustment: The model type to which the member is assigned, and the demographic coefficient the member receives.
- The CMS-HCC and CMS-RxHCC risk adjustment models are both prospective, meaning the diagnoses used to calculate a member's risk score in the present plan year are derived from claim data from the prior incurred year.

MA Risk Adjustment Demographics

Model Type

- Part C 4 Basic model types
 - New Enrollee
 - Demographic-only risk scores for members without a full 12 months diagnoses in the collection period.
 - The demographic score for new enrollees implicitly includes the estimated morbidity for a new member within the age/sex band.
 - Community currently 6 models varying by:
 - Aged vs. disabled
 - Dual status: non-dual, full dual, partial dual
 - Institutional (Continuing enrollees)
 - ESRD (Various models)
- Part D Currently 9 models varying by:
 - New enrollee vs. continuing enrollee (similar to MA Part C)
 - Low-income (LI) vs. non-LI vs. institutional
 - ESRD vs. non-ESRD (new enrollee model distinction only)

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MA Risk Adjustment Demographics

Model Coefficients

		Community NonDual	Community NonDual	Community FBDual	Community FBDual	Community PBDual	Community PBDual	
Variable	Description Label	Aged	Disabled	Aged	Disabled	Aged	Disabled	Institutional
Female								
0-34 Years			0.241	-	0.349	-	0.383	0.902
35-44 Years		-	0.315	-	0.349	-	0.414	1.105
45-54 Years		-	0.348	-	0.374	-	0.418	1.043
55-59 Years		-	0.379	-	0.434	-	0.414	1.065
60-64 Years		-	0.428	-	0.490	-	0.412	1.067
65-69 Years		0.323	-	0.441		0.359	-	1.245
70-74 Years		0.386	-	0.519	-	0.406	-	1.150
75-79 Years		0.451	-	0.593	-	0.476	-	1.014
80-84 Years		0.529	-	0.716	-	0.550	-	0.882
85-89 Years		0.642	-	0.865	-	0.653	-	0.798
90-94 Years		0.784	-	0.987	-	0.783	-	0.668
95 Years or Over		0.787	-	1.041	-	0.873	-	0.501
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Basics

- The underlying diagnosis data for risk adjustment in MA is sourced from inpatient, outpatient, and professional claims. Note, in MA risk adjustment, drug data is excluded in risk adjustment.
- From 2007 to 2021, the Risk Adjustment Processing System (RAPS) has been used to filter medical data to determine claims that are acceptable to use for risk adjustment.
- Beginning in 2014(?), CMS began to incorporate the Electronic Data Processing System (EDS) as a method to filter medical data for risk adjustment.



Process

- The RAPS methodology assigns claim filtering responsibility to the individual health plans. The plans must apply the filtering guidelines provided in the Medicare Managed Care Manual to determine claims that are appropriate to include for risk adjustment.
- The EDS methodology assigns claim filtering responsibility to CMS. Plans convert HCFA 1500 or UB-04 provider claims into 837 claim files to be submitted to CMS, and CMS determines the claims eligible for risk adjustment.
- Both the Part C and Part D models start with the same set of diagnoses for risk adjustment. However, for Part C there is a different CMS-HCC model for the RAPS and EDS diagnoses. In Part D, there is only 1 CMS-RxHCC model.

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RAPS Diagnosis Filtering Process

RAPS filtering is a mostly linear process. The key filtering step is performed by the health plan and filtered diagnoses are submitted to CMS.

RAPS files are flat files with a few basic data elements:

- HIC Number
- Provider Type
- Date of Service
- Diagnosis Code(s)



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EDS Diagnosis Filtering Process



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HCC Coefficients

Once the filtering process determines the present diagnoses for each member, the diagnostic component of the member risk score can be calculated.

The diagnostic component of a continuing enrollee's risk score is determined by the enrollee's model type and diagnoses in the measurement period.

The hierarchical construction of the risk adjustment model only counts the most severe HCC within a particular disease group towards a member's risk score.

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		Community NonDual	Community NonDual	Community FBDual	Community FBDual	Community PBDual	Community PBDual	
Variable	Description Label	Aged	Disabled	Aged	Disabled	Aged	Disabled	Institutional
HCC115	Pneumococcal Pneumonia, Empyema, Lung Absecss	-	-	0.258	-	0.093	0.082	0.156
HCC122	Proliferative Diabetic Retinopathy and Vitreous Hemorrhage	0.221	0.231	0.271	0.269	0.182	0.201	0.394
HCC124	Exudative Macular Degeneration	0.521	0.314	0.298	0.145	0.393	0.158	0.217
HCC134	Dialysis Status	0.435	0.406	0.683	0.594	0.446	0.480	0.468
HCC135	Acute Renal Failure	0.435	0.406	0.683	0.594	0.446	0.480	0.468
HCC136	Chronic Kidney Disease, Stage 5	0.288	0.231	0.260	0.323	0.280	0.261	0.245
HCC137	Chronic Kidney Disease, Severe (Stage 4)	0.288	0.105	0.260	0.138	0.280	0.039	0.201
HCC138	Chronic Kidney Disease, Moderate (Stage 3)	0.069	0.021	0.017	-	0.043	-	0.092

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Disease Interactions

- Costs driven by co-morbidities are accounted for via the CMS-HCC's Disease Interaction coefficients.
- These coefficients are additive to the individual HCC coefficients.

Disease Interactions	2	2	3	5		8	2	8
HCC47_gCancer	Immune Disorders*Cancer	0.837	0.460	0.853	0.679	0.656	0.601	2
Diabetes_CHF	Congestive Heart Failure*Diabetes	0.120	0.024	0.192	0.043	0.113		0.169
CHF_gCopdCF	Congestive Heart Failure*Chronic Obstructive Pulmonary Disease	0.153	0.121	0.230	0.154	0.158	0.141	0.191
HCC85_gRenal_v24	Congestive Heart Failure*Renal	0.155	0.411	0.187	0.461	0.186	0.382	4
gCopdCF_CARD_RESP_FAIL	Cardiorespiratory Failure*Chronic Obstructive Pulmonary Disease	0.363	0.379	0.528	0.455	0.392	0.479	0.414

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Disease/Disabled Interactions

- There are "co-morbidities" that increase costs for disease states in disabled people.
- These disease/disabled coefficients are also additive to the individual HCC coefficients.

DISABLED_PRESSURE_ULCER	Disabled, Pressure Ulcer	() 5 ,5						0.544
DISABLED_HCC161	Disabled, Chronic Ulcer of the Skin, Except Pressure Ulcer	•	•		÷	÷	200	0. <mark>4</mark> 73
DISABLED_HCC39	Disabled, Bone/Joint Muscle Infections/Necrosis	1721			4	4	4	0.456
DISABLED_HCC77	Disabled, Multiple Sclerosis	2	-	÷		2	÷	0.496
DISABLED_HCC6	Disabled, Opportunistic Infections		-	24	-	-	-1	0.405
MA Risk Adjustment Diagnostics

Payment HCC Counts

- Finally, added to the 2020 EDS CMS-HCC model, there are Payment HCC Count coefficients that add to a member's risk score based on the number.
- This addition was based on a section of the 21st Century Cures Act that required CMS to implement the number of conditions a beneficiary has into the risk adjustment model.
- The Payment Count HCC coefficients begin to increase a beneficiary's risk score at 4-6 HCCs for Community members who are continuing enrollees (varying by CMS-HCC CE model).



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"Simplified" Risk Score Example

Member scored according to the Continuing Enrollee, Non-Dual, Aged HCC Model				Formula
Demogra	phics		value	
Gender, Age		Female, 75	0.448	А
Disabled Status Original Reason for Entitlement		Not Disabled Originally insured due to age	0.000 0.000	B C
Diagnosis	Codes Associated with Member			
C33	Malignant Neoplasm of Trachea	HCC9	0.970	E
C75.1	Malignant Neoplasm of Pituitary Gland	HCC10 (trumped by HCC 9)	0.000	F
D84.9	Immunodeficiency, Unspecified	HCC47	0.625	G
E20.9	Hypoparathyroidism, Unspecified	HCC23	0.228	Н
G30.9	Alzheimer's Disease, Unspecified	Not associated with an HCC	N/A	I
M41.9	Scoliosis, Unspecified	Not associated with an HCC	N/A	J
Total Diagnostic Component				K = E + F + G + H + I + J
Interactio	ons			
Cancer + Immune Disorders		Cancer (8-12), Immune (47)	0.893	L
Total In	teraction Component		0.893	M = L
Total Raw Risk Score			3.164	N = D + K + M
Adjustme	nts			
FFS Nor	malization		1.075	0
Coding Pattern Adjustment			0.941	Р
Final Risk Score			2.770	Q = N / O * P

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Our risk score is 1.5!!! Isn't that great?

Questions to ask...

Is this a mature plan?

Is this a Special Needs Plan?

Is this a raw risk score or has it been adjusted for FFS normalization and coding pattern?

What basis is it on?

• Before/after mid-year and/or final sweep?

Is it RAPS-based, EDS-based, or a blend?

How do the claims relate to this risk score?



Use of Risk Scores in MA Bids

Premium Development Component		Notes		
Standardized A/B Benchmark	(a)	Weighted average of county enrollment and county rates		
Quality Bonus Payment	(b)	4.0 Star Plans Receive a 5% Bonus		
Projected Risk Score	(c)			
Plan A/B Benchmark	(d)=(a)*(b)*(c)			
Projected FFS Claim Costs	(e)	Only portion that reflects Medicare FFS benefits		
Projected FFS Administrative Costs	(f)	Allocated administrative expenses to FFS benefits		
FFS Margin	(g)	Allocated margin to FFS benefits		
Plan A/B Bid (Medicare FFS Costs)	(h) = (e)+(f)+(g)	Total Medicare FFS "equivalent" costs		
Savings	(i)=(d)-(h)			
Rebate Percent	<u>(i)</u>	Based on Star Rating - 70% for 4.5 Star Plans		
Rebates	(k) = (i) * (j)			
Rebate Buy-Down Options				
Enhanced Part C Benefits	(I)	Includes enhanced cost sharing and supplemental benefits		
Part D Member Premium	(m)	Includes basic and supplemental part d premiums		
Part B Buy-Down	(n)			
Member Premium	(p) = (l)+(m)+(n)-(k)			

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Appendix

