



SOCIETY OF ACTUARIES

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**Session # 27 TS: Medicare Advantage:
Revenue Payments + Part D Accounting**

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Medicare Advantage & Part D Revenue Calculation And Accounting Practices

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Calculation Of MA & Part D Revenues

Medicare Health Plan Payment Summary

Cash Flows	Part C: Medicare Advantage	Part D: Prescription Drug
Plan Bid PMPM (or Benchmark, if Bid exceeds benchmark)	CMS sets county payment rates for parts A & B (excludes regional PPOs)	Direct subsidy plus estimated subsidies for catastrophic reinsurance and LICs
X		
Enrollee-Specific Risk Score	CMS-HCC Model	RxHCC model
+		
Enrollee Premium	Plan bid amount above benchmark + supplemental benefits; rebated for bids below benchmark	Difference between the plans standardized bid and the direct subsidy (made up of premium and Part D buy-downs from A/B Bid (if any))
+		
Rebate Dollars	MA rebate dollars (if any)	
=		
Total Monthly Revenue PMPM		

Components Driving MA Payments

- Plan A/B bid – Consists of the estimated costs *to the bidding Plan* of providing Medicare A/B benefits, plus the proportional admin/profit related to those costs
- MA ratebook – Minimum of 100% Medicare FFS costs or an increase over prior year based on Medicare trend and corrections to prior trend adjustments
- Risk score
- Plan A/B benchmark – Expected member weighted average of risk adjusted payment rates by county
- Rebate = $\text{Max}(0, 0.75 * (\text{plan A/B benchmark} - \text{plan A/B bid}))$

A Brief History Of Medicare Capitation

- Pre 1997 BBA –
 - Medicare Managed Care (MMC) plans were paid 95% of an enrollee's county's adjusted average per capita cost (AAPCC) – payments based on FFS expenditures
 - Payments did not reflect illness burden of members
- PIP-DCG Model phased in by CMS beginning in 2000
 - Determines health status based on prior inpatient hospital stays
 - Ignored physician and outpatient services
- DCG/HCC – In use today, but varied slightly (CMS-HCC)

DCG/HCC Model Principles

- Diagnostic Cost Group / Hierarchical Cost Category
- Only meaningful diagnosis (ICD-9-CM) codes are used
- Conditions should be created in a hierarchal manner with most severe conditions given a greater weight
- The diagnosis classification should encourage specific coding – does not encourage coding proliferation
- Discretionary codes are excluded from the model

How Does The Classification Work?

- Over 15,000 ICD-9-CM Codes are classified into 784 diagnostic groups (DxGroups)
- DxGroups represents a well-specified medical condition
- DxGroups are aggregated into 184 Condition Categories (CCs)
- Once hierarchies are imposed, the CCs become Hierarchical Condition Categories (HCCs)
- HCCs within the same CC do not interact, but HCCs within different CCs can interact

The CMS Model Utilizes Fewer HCCs

- DCG/HCC Model utilizes 101 HCCs
- CMS determined eliminating a large number of HCCs did not hurt the predictive ability of the model
- CMS had to make sure that high cost, low frequency services were not excluded
- CMS selected 70 of 101 HCCs to include in their model (representing approx. 3,000 ICD-9-CM codes instead of the 15,000+ available)
- RxHCC's also use ICD-9-CM codes, not prescription drug information

Example Of CMS-HCC Risk Score Calculation

Item	Description	Detail	Factors	Total Factors
Age/Sex Factor	Female Age 72			0.368
HCC Disease Groups	HCC 17	Diabetes w/ Acute Comp	0.339	
	HCC 19	Diabetes w/ Comp	0.000	
	HCC 101	Cerebral Palsy...	0.180	0.519
Interactions	HCC INT 2	Diabetes + CVD		0.102
Risk Score				0.989
Normalization Factor (2009)				1.03
Normalized Risk Score				0.960

Example Of MA Revenue Calculation

- 2009 Maricopa (AZ) county ratebook = \$818.77
- Plan A/B bid submitted by XYZ = \$700.00
- Rebate = $0.75 * (818.77 - 700) = \89.08 (assumes bid risk score of 1.0)
- Assume Jane Doe has a risk score of 0.96 per the prior slide:
 - Payment based on bid $0.96 * \$700 =$ \$672.00
 - Premium \$ 0.00
 - Rebate amount \$ 89.08
 - Total payment \$761.08



Value In Auditing Diagnosis
Codes

How Can You Maximize Risk Scores

- Actively encourage your patients go to the doctor
 - If your members do not see the doctor their HCC risk score = 0
 - Encourage at least 1 physical/visit per year through benefit design
- Incent doctors to record their patient's diagnosis codes
 - If doctors are capitated provide incentives for higher risk scores
 - Include some type of risk sharing in your contracts
 - These items will ensure that doctors do not "ignore" coding
 - Establish provisions that hold doctors accountable for upcoding or inappropriate coding
 - E.g., periodic chart audits with payback of reimbursement associated with unsupported coding
- Audit your diagnosis codes
 - Internally built software
 - Pre-packaged software
 - Consulting firms

Why Audit Diagnosis Codes?

- The diagnosis codes are the dominate driver in accurate risk score calculations.
- Incomplete recording of diagnosis codes could have a significant impact on member revenue.
- As CMS recognizes that MA members have a higher average risk score, companies not auditing their diagnosis codes will be hurt even more.
 - This year CMS has announced that MA bids have a higher average risk score than the average Medicare population
 - Not auditing diagnosis codes will result in a double hit
 - One for understating risk scores of your current population
 - Two for CMS requiring you to adjust your risk scores down
- Plans are responsible for defending risk scores in the case of a CMS audit.

Do Diagnosis Codes Have That Much Of An Impact?

- HCC 19 (diabetes w/o complications) risk score = 0.162
- HCC 15 (diabetes w/ renal or peripheral circulatory manifestation) risk score = 0.508
- Approximately 15% of California residents with diabetes are HCC19, but what if your data shows only 11%?

HCC19 Risk Score	0.162
HCC15 Risk Score	0.508
Understatement	0.346
Los Angeles Benchmark	966.03
Expected Additional Members With HCC 15	4.0%
Increased Revenue Per HCC15 Member Per Month	334.25
Monthly Revenue Impact Per 1,000 Members	13,370

Example Of An Understated Risk Score

- Demographic info: Male, 67 years old on Medicaid
- HCC disease groups recorded: 17, 19, and 101
- Interactions w/ HCC disease groups: INT 2
- Calculation of risk score vs. audited risk score:

Component	Component Value	Factor
Age/Sex Base Factor	Male 65-69 (Community)	0.328
Interactions w/ Age/Sex	Medicaid	0.166
HCC Disease Groups (Hierarchical)	HCC 17: Diabetes w/ Acute Comp	0.339
	HCC 19: Diabetes w/o Comp (0.162)	0.000
	HCC 101: Cerebral Palsy	0.180
Interactions w/ HCC Disease Grps	HCC INT 2: Diabetes + CVD	0.102
Total Risk Score		1.115

Progressed/Specific Condition of Above Disease:	
HCC 16: Diabetes w/ Oth Manifest	0.408
HCC 100: Hemiplegia	0.437
HCC Int 2: Diabetes + CVD	0.102

0.621

0.947

Audited Records Can Increase Revenue

- Assume bid = benchmark for Chicago, Illinois
- Bid = Benchmark = \$895.84
- HCC disease groups recorded: 17, 19, and 101
- Interactions w/ HCC disease groups: INT 2
- Calculation of risk score vs. audited risk score:

Risk Score and Revenue Based on HCC Submitted

Age/Sex Factor	0.328	Bid/Benchmark	x	Risk Score	=	Revenue
INT Age/Sex	0.166	\$895.84	x	1.115	=	\$998.86
HCC	0.621					
Total Risk Score	1.115					

Risk Score and Revenue Based on Specified HCC Submitted

Age/Sex Factor	0.328	Bid/Benchmark	x	Risk Score	=	Revenue
INT Age/Sex	0.166	\$895.84	x	1.441	=	\$1,290.91
HCC	0.947					
Total Risk Score	1.441					

Understating Risk Scores Also Results in Less Competitive Products

- Auditing diagnosis codes affects income as well as the company's bids.
- Initially auditing diagnosis codes results in higher revenue.
- Following years result in more competitive bids.

Analysis of Impact on Bid

	W/ Understated Risk Score	W/ Correct Risk Score
Estimated Claim Costs	\$895.84	\$895.84
Estimated Risk Score	1.000	1.100
Standardized Plan Bid	\$895.84	\$814.40
Actual Risk Score	1.100	1.100
Revenue	\$985.42	\$895.84

Numerous Causes Lead to Inaccurate Risk Scores

- Data filtering issues (e.g. filtering provider claim data)
- Coding specificity issues (e.g. Diabetes w/ complications vs. w/o complications)
- Chronic disease coding continuum issues (e.g. CHF, COPD, Vascular Disease)
- Clinically similar codes not mapped (e.g. “Disorder of Immunity” HCC restricted to 24 Dx codes)
- Universal physician coding issue – training/focus on ICD-9
- Capitated providers not recording diagnosis codes

There Are Many Ways To Recognize Risk Score Issues

- Monitoring risk scores for various populations (total, ESRD, institutionalized, renewal members, etc.)
 - Decreasing risk scores can indicate a coding issue
 - Members who have ESRD, are in Medicaid, or institutionalized having risk scores lower than the average could indicate an issue
- Analyze the claim history of members for whom the diagnosis portion of their risk score = 0
- Unusual shifts in distribution of various HCC or HCC w/ interaction groupings
- Analyze risk scores by diagnosis (e.g. if someone is on dialysis and their diagnosis portion of their risk score is 0 there is an issue)
- Do risk scores make sense in relation to prescriptions?
- Do certain doctors have lower risk score than others?

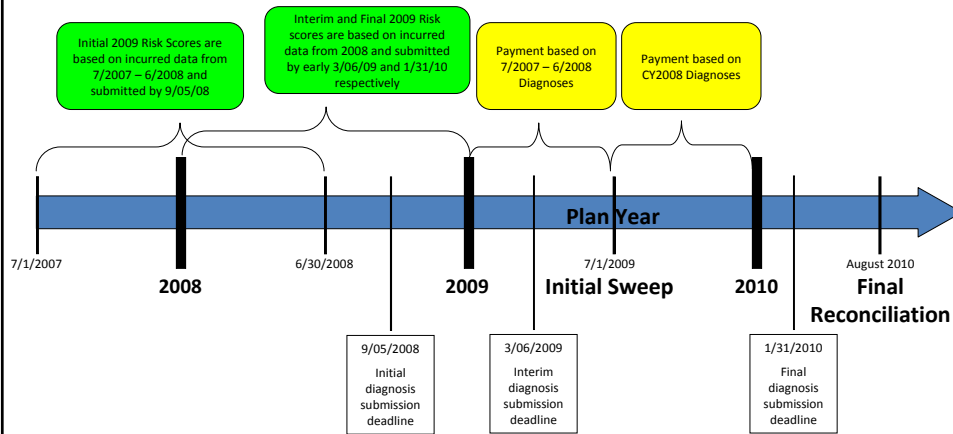


Timing Of Data Sweeps

Risk Scores Are Calculated Three Times Per Plan Year

- Plan revenue is ultimately based on member level demographics and diagnostic experience from the prior year
- Since credible diagnostic data for the prior year is unavailable at the outset of the plan year, initial risk scores are based on data from the year ending six months prior to the plan year
- Risk scores are recalculated during and following plan year, with the differences in revenue credited (or debited) to the plan

Sweeps Timing For The 2009 Plan Year



Account for Revenue
Adjustments Due to Diagnosis
Codes

Health Plans set RAF Accruals to Account in Advance for the Revenue Adjustments at Sweeps

- Medicare Advantage plans have access to HCCs submitted and accepted by CMS prior to sweeps
- CMS makes the model used to calculate RAF scores available to health plans
- Using the model, it is possible to determine the exact RAF adjustment that will occur at sweeps, provided the member was enrolled in the health plan for the entire prior year
 - The model can also be use to estimate risk scores for partial year members, when estimating risk scores based on the CY base period. These estimates will underestimate the final risk score, to the extent that CMS data will have diagnoses for these members that is not in the plan's experience.
- Booking the difference between MMR RAF scores and calculated RAF scores will help prevent large adjustments following sweeps

There Are Four Categories Of Members For Calculating RAF Accruals

- Categories of members
 - New Medicare enrollees – these are members that have been with Medicare for less than a complete calendar year
 - New enrollees to your health plan – members for which you have no HCC information
 - Enrollees that we enrolled in your plan for less than 12 months
 - Enrollees that were part of your health plan for the entire prior year
- Each category should be considered separately for the purpose of estimating RAF accruals

RAF Accruals Can Be Calculated Directly For New And Longstanding Members

- RAF scores for new Medicare enrollees do not consider HCC information
 - RAF scores are calculated purely on demographics
 - Plans can independently verify the risk scores, but the change at sweeps is likely to be minimal
- RAF scores cannot be “calculated” for new plan enrollees. High level methods can be used.
- For members with a full prior year of data, RAF scores can be regularly calculated with the most recent available HCC data
 - With proper controls, booking to the calculated number will result in minimal adjustments at sweeps

RAF Accruals For Members With Partial Year Data Can Be Calculated In Several Ways

- Different methods for calculating RAF include:
 - Assume that the ultimate RAF score will equal the current RAF score. No RAF accrual is set. This approach is unbiased, but imprecise.
 - Calculate a RAF score based on partial year data. This is a conservative approach as final scores will be greater than or equal to the calculated score in all instances.
 - Take the greater of the CMS risk score and the partial year risk score. May be aggressively biased.
 - Calculate and complete a RAF score based on a partial year data. This is a complicated method that involves transforming a partial year risk score to a full year risk score. Results will vary by the quality of underlying data.

Completing Partial Year HCC Data Is A Complex And Imperfect Exercise

- Underlying experience is volatile
- The pattern can change significantly from year to year as HCC factors are adjusted
- One approach is to develop factors based on members with a full year of data
 - Mine the underlying data to determine how partial year data compares to full year
 - Consider separately calculations for major demographic groups or HCC categories
 - Consider directionality – the final months of the year may be more complete than the earlier months

There Are Considerations Beyond The Calculated Risk Scores.

- When setting RAF accruals the actuary should consider:
 - The quality and maturity of underlying data
 - Whether or not to set an accrual for members without a full year of prior data
 - Whether to make any adjustment for rejected HCCs that will be resubmitted
 - Booking conservatively to account for any potential overturned diagnoses resulting from an audit
 - The possibility that CMS will recover revenue due to errors in submission
 - The portion of the estimates that is based on encounters already accepted by CMS, vs. unsubmitted or unaccepted encounters.
 - Unaccepted encounters will have some level of rejection associated with them, and counting all of them could potentially overstate accruals.

Part D RAF Accruals Are Less Precise Than Part C

- CMS has updated their RAF model over time, but has not made the more recent models available to the public
- Like Part C, risk scores are partially based on diagnosis data – unlike Part C, the health plan may not have this data (e.g. PDPs)
- Part D RAF accruals can be extrapolated from the relationship between Part C and Part D risk scores. The actuary should determine whether or not there is a statistically significant relationship before booking an adjustment.
- When booking a Part D RAF accrual, incorporate this into Part D risk sharing calculations.



Accounting For Other Medicare Part D Settlements

There Are Five Part D Settlements Related To Claims Experience

- There are two settlements related to coordination of benefits
 - Plan to Plan (P2P)
 - State to Plan (S2P)
- There are two settlements for reconciling prospective subsidies
 - Low Income Cost Sharing (LICS)
 - Reinsurance
- After the previous four settlements have been accounted for, a risk sharing settlement is calculated between CMS and the health plan.

Most Plans Do Not Account For P2P And S2P Before The Amounts Are Known

- Plan to plan reconciliation adjusts for claims paid for enrollees of other plans.
 - CMS provides this amount along with data necessary to adjust PDE files
 - This is difficult to estimate as plans have minimal data on claims paid by other plans for their enrollees
- State to plan reconciliation represents claims paid by state Medicaid plans for Part D enrollees
 - CMS provides this data with minimal detail
 - Data can come long after settlements are complete
- The impact of both of these reconciliations has greatly declined since Part D inception
- Once these amounts are known, insurers have accounted for these as either “unpaid claims liability” or “aggregate write-ins”
 - Accounting as unpaid claims liability brings them in scope of the Actuarial Opinion

Plans Should Account For LICs, Reinsurance And Risk Sharing Throughout The Plan Year

- LICs, Reinsurance, and Risk Sharing are estimable and material to health plans.
 - Settlements can frequently exceed target margin
 - Bid estimation errors can lead to substantial cash flow shortages
- The SOA Medicare Part D Practice Note recommends that for LICs and Reinsurance subsidies
 - Liabilities should be reported in uninsured plan liabilities
 - Assets should be reported as receivables for uninsured plans
 - While these accounting items are not automatically within the Actuarial Opinion, many actuaries will include them due to their nature. In practice, this may reduce the level of audit scrutiny.
- Risk Sharing, whether an asset or a receivable, should be accounted for as premium revenue, as is therefore covered by the Actuarial Opinion

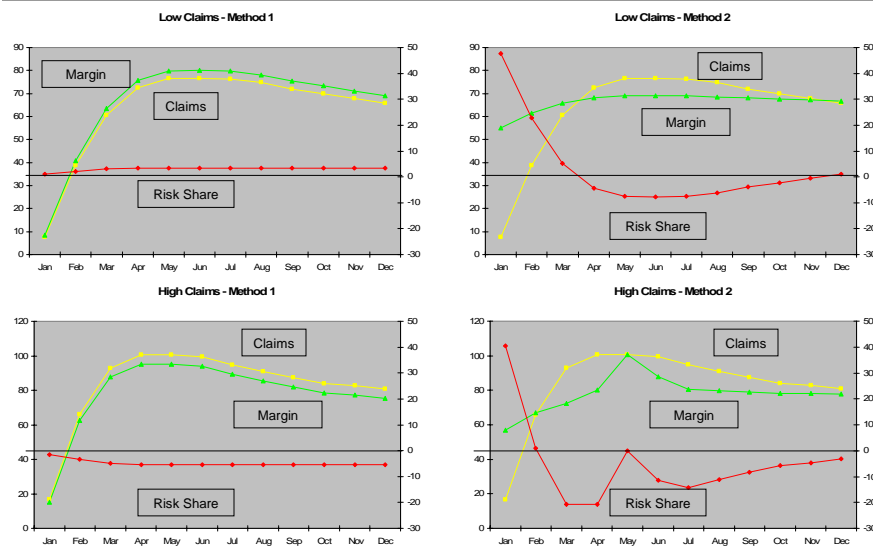
Various Actuarial Assumptions Affect Part D Accruals

- The basic formulas for calculating accruals can be found in CMS literature. They involve data fields from bid submissions, MMRs, and PDE reports.
- Other factors must be considered when setting accruals
 - DIR (rebate assumptions)
 - Estimating data prior to the submission (or receipt) of PDE fields
 - Making allowances for rejected claims (REJ or INF codes) that will be resubmitted
 - Adjusting for the impact of state to plan reconciliations

There Are Two Approaches For Setting Midyear Part D Accruals

- One approach is to project year end accruals and spread them over each month
 - This approach stabilizes accruals which would otherwise bounce around significantly due to the seasonality of Part D claims
- A second approach is to calculate the accrual each month based on YTD data
 - Month to month expenses would not tie directly to claims due to the asymmetric nature of risk sharing corridors
 - Accruals will experience significant volatility
 - Overall expense will be far more stable

A Comparison Of The Two Interim Approaches



- The left axis represents claims and margin PPM; the right axis represents risk sharing

When Setting Part D Accruals, Consistency Trumps Conservatism

- LICs, Reinsurance, and Risk Sharing all serve to mitigate the underlying volatility of Part D experience
 - Poor claims experience relative to bid assumptions leads to receivables from CMS
 - Favorable claims experience relative to bid assumptions leads to payables to CMS
- Applying conservatism to both claims estimates and accruals is a form of double counting
- I would recommend using a conservative claims cost assumption, and then apply consistent estimates to the Part D settlements