

Risk adjustment in Medicare Advantage

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Background

- MA plans receive monthly capitated payments for each enrollee
- Each payment is the product of two factors
 - Base rate
 - Enrollee's risk score
- Risk scores
 - Come from the CMS Hierarchical Condition Categories (CMS-HCC) model
 - Represent enrollee's expected annual Medicare spending relative to national average

Description of CMS-HCC

- Uses enrollee's data to determine their risk scores
- Demographic information: age, sex, Medicaid, institutional status, aged but originally eligible because of disability
- Medical conditions
 - Uses conditions diagnosed in previous year
 - Represented in 70 HCCs
- Each demographic variable and HCC has a coefficient that is used to determine risk scores

Example of how risk scores are calculated

- Female, age 68, Medicaid, diagnosed with COPD
- These CMS-HCC coefficients apply:
 - Female, age 65-69: .30
 - Female, Medicaid, aged: .18
 - COPD: .40
- Risk score = $.30 + .18 + .40 = .88$
- Each year, the national average risk score is 1.0

Concerns over CMS-HCC

- Systematic underpayments for plans focusing on specific groups (SNPs, PACE)
- May leave opportunities for favorable selection
- Regional differences in coding of conditions

Variation in spending explained by CMS-HCC

- CMS-HCC has R-square of .11, meaning it explains about 11% of variation in Medicare spending
- Research indicates at least 20-25% of variation can be predicted; the remainder is random (not predictable)
- CMS-HCC might explain half of predictable variation, suggesting systematic payment inaccuracies could occur

Possible underlying reasons for payment inaccuracies

- Within HCCs, beneficiary costliness varies
- Plans may experience financial losses by attracting the highest cost beneficiaries in a given HCC
- CMS-HCC model calibrated with FFS cost data
- Cost of treating given condition may differ between MA plans and FFS Medicare (Newhouse et al.)

If systematic payment inaccuracies occur, how to address?

- If it is due to cost variation within HCCs, add variables to the CMS-HCC
 - Conditions (HCCs)
 - Socioeconomic variables (race, income)
 - Number of conditions for each beneficiary
- If it is due to cost differences between FFS and MA: Use MA cost data to calibrate CMS-HCC

Payment inaccuracies may adversely affect plans serving complex patients

- Research indicates CMS-HCC systematically underpays for some groups and overpays for others
- For most plans, systematic underpayments for one group can be offset with overpayments in another
- However, SNPs and PACE may not be able to make these offsets because they focus on specific beneficiary groups

Do plans serving complex patients face systematic underpayments?

Category	Predictive ratio	
	Current CMS-HCC	Proposed CMS-HCC
Medicaid	.95	.97
Diabetes	1.03	1.00
Prostate cancer	1.09	1.06
Dementia	.80	.95
5+ conditions	.88	.89

Predictive ratio = (Predicted cost for group)/(Actual cost for group)

Are regional differences in coding an issue for risk adjustment?

- Song et al. indicate that in FFS Medicare conditions are coded more intensively in high-use regions (higher risk scores)
- If regional coding differences in MA, higher payments for plans in high-coding regions
- However, MA plans have incentive to code as much as possible
- Need to determine if regional coding differences occur in MA

If MA has regional differences in coding, how to address?

- Determine if MA plans have regional differences in coding intensity
- Evaluate whether regional differences in MA coding affect MA risk scores by region
- Adjust MA risk scores based on how much coding affects regional risk scores

Immediate next steps

- Determine if plans focusing on complex patients are systematically underpaid
- Evaluate alternatives for improving predictive power of CMS-HCC
- Investigate the extent of geographic differences in coding among MA plans?