# Issues for risk adjustment in Medicare

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# Importance of risk adjustment in Medicare

- Nearly 30% of beneficiaries are in MA program
- Needed for payment neutrality among fee-for-service (FFS), Medicare Advantage (MA), and accountable care organizations (ACOs)
- If providers are asked to take on more risk, payments need to be risk adjusted

# Background for risk adjustment in MA

- MA plans receive monthly capitated payments for each enrollee
- Payments are risk adjusted based on how much enrollees are expected to cost
  - Higher payments for sicker enrollees
  - Lower payments for healthier enrollees
- Risk scores represent how much enrollee is expected to cost relative to national average

# Description of CMS-HCC

- Uses data on beneficiaries' demographics and medical conditions to determine risk scores

- Medical conditions
    - Conditions from inpatient, outpatient, and physician visits in previous year
    - Collected into broader categories

- Each demographic variable and condition category has a coefficient that CMS uses to determine risk scores

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# Example of predicted cost and risk score for beneficiary in community

| Characteristic | Coefficient | National avg. cost | Risk score |
|---|---|---|---|
| Male, age 74 | $3,302 | $9,276 | .356 |
| Medicaid | $1,642 | $9,276 | .177 |
| Diabetes w/o complications | $1,095 | $9,276 | .118 |
| COPD | $3,210 | $9,276 | .346 |
| Total | $9,249 | $9,276 | .997 |

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# Performance of CMS-HCC model

- Explains 11% of variation in costs
- Has reduced favorable selection (Newhouse et al. 2012)
- But, for a given condition category, plans can benefit if they attract the lowest-cost beneficiaries
- Also, underpredicts costs for frail/high-cost beneficiaries
- Plans focusing on the sickest beneficiaries may be at a disadvantage (PACE, SNPs)

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# MedPAC analysis to improve CMS-HCC predictive power (June 2012)

- Add socioeconomic measures (race, income): No improvement

- Add number of conditions for each beneficiary: Improves payment accuracy for frailest beneficiaries

- Use two years of diagnosis data to determine condition categories:

    - Improves payment accuracy for frailest beneficiaries

    - Not as much as adding number of conditions

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# More recent analyses to improve CMS-HCC predictive power

- Add measures of functional status (ADLs)
    - Does little to improve CMS-HCC model, which is consistent with other studies
    - Has been shown to improve more focused models (episodes including PAC)
- Separating dual eligibles into full- and partial-dual eligibles would improve payment accuracy for these two groups

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# Potential changes to address broader risk adjustment issues

- Replace CMS-HCC model with a different model (CRG, ACG, CDPS)
- Add data (multiple years, functional status, drug data, number of conditions)
- Concurrent risk adjustment
- Hybrid (prospective with concurrent)
- Beneficiaries' prior cost/use
- Truncate costs

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# Replace CMS-HCC model

- All possible replacements use diagnosis and demographic data, as does the CMS-HCC

- Not much difference between models in terms of performance

- Moving from CMS-HCC to another model unlikely to be helpful

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# Adding data helpful, but limited

- Additional years of diagnoses: Improves overall fit, but increases underprediction for high-cost cases
- Add functional status:
  - Little improvement for CMS-HCC
  - For narrower populations, can improve risk adjustment
- Add drug data: Adds little to broad models
- Patient severity: Helpful, but costly to collect

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# Concurrent risk adjustment

- **Prospective**: Use diagnoses from last year to predict costs in current year

- **Concurrent**: Use diagnoses from current year to predict costs in current year

- Improves $R^2$ substantially: captures costs as conditions occur

- But, plans have less incentive to manage enrollees' care; also, plans have more incentive to upcode

# Hybrid mixes concurrent with prospective

- Concurrent adjustment for a few conditions that are chronic, costly, well defined, and easy to verify
- Prospective adjustment for all other conditions
- Analysis by Dudley et al. (2003)
  - Makes strong improvement to predictive power
  - Sample from non-Medicare population
  - Additional analysis needed to identify which conditions should be concurrent

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# Including prior cost or use in risk adjustment model

- Excellent predictor of future costs; substantially improves predictive power

- Can capture patient severity, patient preferences, providers' practice patterns

- Winkelman et al. (SOA 2007): Warn against using prior-year costs; weakens incentives to contain costs

- Schone and Brown: Support using prior year costs, recommend using non-preventable hospitalizations as proxy

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# Truncating costs from high-cost claims

- Challenge: Cost data are skewed, reducing risk adjustment effectiveness
- Truncating high-cost claims is a common strategy for addressing this issue
- What to do about costs above truncation?
    - Reinsurance
    - Pay plans on FFS basis
- Where should the threshold be set? Should it differ by condition?

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# Neutrality among FFS, MA, and ACOs

- Commission has recommended payment neutrality between FFS and MA (March 2001, March 2002, June 2005)
- Encourages enrollment in more efficient sector
- Should neutrality also include ACOs?

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# Payment neutrality and risk adjustment

- **If payment neutrality is our objective, risk adjustment is vital**

- **MA payments=(risk score)*(base rate)**

- **If base rate = local FFS, obtain neutrality with appropriate risk adjustment**

# Important issues regarding neutrality and risk adjustment

- FFS and ACOs responsible for hospice and ESRD; MA plans are not

- Under alternative system, ACOs may be able to 'code creep' like MA plans

- If we want payment neutrality among FFS, MA, and ACOs, potential changes discussed earlier need to be considered in that context

- FFS data used to calibrate CMS-HCC, should MA data be used when available?

# Discussion

- Direction for risk adjustment for MA
- Risk adjustment for broad reforms such as episodes
- Risk adjustment in context of neutrality for FFS, MA, and ACOs

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