Risk Adjustment Methodology

November 28, 2018

Purpose

- Provide an overview of risk adjustment methodology and describe the changes in risk adjustment policy for payment years 2017 through 2019.

Learning Objectives

- Describe the foundations of risk adjustment.
- Explain the risk adjustment models and the segments.
- Identify updates made to the risk adjustment models in recent years.

History of Risk Adjustment

1997	• Balanced Budget Act (BBA) of 1997 (42 CFR 422):
	  – Created the Medicare+Choice (M+C) program.
	  – Mandated risk adjustment methodology that accounts for variations in per capita costs based on health status and other demographic factors for payments.

2000 – 2001	• Gradual phase-in of risk adjustment based on principal inpatient diagnosis and demographic factors (age, sex, Medicaid status, original reason for Medicare entitlement).
	• Benefits Improvement and Protection Act (BIPA) of 2000:
	  – Established the implementation schedule to achieve 100 percent risk adjusted payment in 2007.
	  – Required risk adjustment for MA enrollees in ESRD status.

History of Risk Adjustment (cont.)

2002 – 2007

- Medicare Prescription Drug, Improvement, and Modernization Act of 2003 (MMA):
  - Created MA program to replace M+C program and introduced bidding.
  - Retained many M+C provisions while introducing new plan types and new payment rules.
  - Created Medicare Part D Prescription drug benefit to begin in 2006 including risk adjusted payments.
- 2004 – Implemented first CMS-HCC model, including the institutional and community models.
- 2005 – Implemented ESRD model.
- 2006 – Implemented RxHCC risk adjustment model.
- 2000 – 2007 - Phase-in implementation of risk adjusted MA payments.

History of Risk Adjustment (cont.)

2010

- Patient Protection and Affordable Care Act:
  - Refinements of MA risk adjustment methodology.
    - CMS developed and implemented methodology for New Enrollee Risk Scores for Chronic Condition SNPs in 2011.
      - Takes into account the condition(s) that enrollees in these particular SNPs must have as a condition of enrollment.
      - C-SNP-specific new enrollee risk scores are developed to reflect the risk of enrolled beneficiaries.

History of Risk Adjustment (cont.)

2016

- 21st Century Cures Act
- Requires CMS to make improvements to Risk Adjustment for 2019 and subsequent years. The agency was, among other things, specifically directed to:
- Evaluate the impact of including diagnosis codes for specific conditions to the risk adjustment model.
- Take into account the total number of diseases or conditions of an individual enrolled in an MA plan by making an additional adjustment as the number of diseases or conditions of an individual increases.
- Phase-in any changes to risk adjustment payment over a 3-year period, "beginning with 2019, with such changes being fully implemented for 2022 and subsequent years."

Risk Adjustment Overview

- Used to adjust plan bids.

- Used to adjust payment to MAOs, PACE organizations, certain demonstration plans, and Part D sponsors.

- Adjusts payments based on each enrollee's expected health care costs.

- CMS' HCC-based Medicare risk adjustment models are prospective: diagnoses in one year are used to predict costs in the following year.

- Incorporates demographic and disease factors.

Risk Adjustment Overview (cont.)

- Hierarchical condition categories (HCCs & RxHCCs): Diagnoses are grouped into condition categories; in certain condition categories (e.g., diabetes), hierarchies of disease severity are applied so that risk scores reflect the most severe and costly category of a condition.

- Purpose: Ensure appropriate and accurate payments, reduction in adverse selection, and improved beneficiary access.

- Multiple models to address differences in the beneficiary population (e.g., the ESRD population) and program costs (e.g., Part C versus Part D).

How the Model Works: Demographic & Disease Groups

- Statistical model that measures incremental predicted costs associated with a beneficiary's demographic characteristics, including age and gender, and health status.

- Predicted costs are driven largely by chronic diseases.

- Additive, meaning that the total predicted costs are determined by summing the coefficients of a beneficiary's demographics and health status factors.

Risk Adjustment Models

Model	General Description	Model Segments

CMS-HCC	The CMS-HCC risk adjustment model uses diagnoses codes to calculate risk scores for aged/disabled (non-ESRD) beneficiaries and is used in payments for the Part C program.	• Continuing Enrollee
		  - Aged/Disabled/Dual Status/Community
		  - Institutional
		• Aged/Disabled New Enrollee
		• Aged/Disabled New Enrollee Chronic SNP

CMS-HCC ESRD	The CMS-HCC ESRD model has similar characteristics as the CMS-HCC model. It is different from the CMS-HCC model in that it predicts costs for beneficiaries with End Stage Renal Disease status: dialysis status, transplant, and functioning graft.	• ESRD Dialysis Continuing Enrollee
		• ESRD Dialysis New Enrollee
		• ESRD Transplant
		• ESRD Functioning Graft – Community
		• ESRD Functioning Graft – Institutional
		• ESRD Functioning Graft – New Enrollee
		  - Duration since Transplant 4-9 months
		  - Duration since Transplant 10+ months

Risk Adjustment Models (cont.)

Model	General Description	Model Segments
CMS-HCC PACE (2012)	The CMS-HCC model implemented in 2012 is used for aged and disabled beneficiaries enrolled in PACE organizations.	• Aged/disabled Community • Aged/disabled Institutional • Aged/disabled New enrollee
Rx-HCC (2018)	The Part D model is similar to the CMS-HCC risk adjustment model, except that it predicts Part D plan liability costs under the Part D program. Different diseases predict drug costs rather than Part A/B costs.	• Continuing Enrollee Community - Aged, non-low income - Aged, low income - Disabled, non-low income - Disabled, low income • Continuing Enrollee Institutional • New Enrollee, non-low income • New Enrollee, low income • New Enrollee, institutional

2017 CMS-HCC Model Update

- In 2017, CMS implemented a revised version of the CMS-HCC risk adjustment model.

- The revised model improved the predictive accuracy of the community dual and non-dual aged/disabled subgroups.

Revisions to the Community Segment in PY2017

- In PY2017, CMS separated the single community segment of the CMS-HCC model into six (6) segments; one for each of the following dual eligible subgroups:
  - Full benefit dual aged
  - Full benefit dual disabled
  - Partial benefit dual aged
  - Partial benefit dual disabled
  - Non-dual aged
  - Non-dual disabled

Revisions to the Community Segment in PY2017 (cont.)

- Dual status is determined:
  - On a month-by-month basis
  - During the payment year
- Instead of being a factor in the model, dual status is used to select the appropriate risk score for a month.
- Concurrent Medicaid Status: CMS will no longer look for dual status any time during the data collection year.

Institutional and New Enrollee Segments

- The institutional and new enrollee segments are unchanged from the 2014 CMS-HCC model, except for the following updates:
  - For the institutional segment:
    - Recalibrated with more recent data
    - Dual status will be measured concurrently in the payment year
  - For the new enrollee segment:
    - Recalibrated with more recent data

Model Relative Factors & Disease Interactions

- All model HCCs that were in the 2014 CMS-HCC model remained the same in the 2017 CMS-HCC model. There was no clinical revision of the HCCs.

- The disease-disease interactions for each of the six (6) separate community segments are the same, except for one disease-disease interaction that is only included in the three disabled community segments:

  - Psych HCC group × substance use disorder HCC group

Dual Status Definitions

Dual Status	Definition
Full Benefit Dual Eligibles	Eligible for full Medicaid benefits under title XIX of the Social Security Act. Includes those who have Medicaid benefits only, or who are also eligible as Qualified Medicare Beneficiaries (QMBs) or Specified Low Income Medicare Beneficiaries (SLMBs). • Dual status codes 02, 04, 08, or presence on the monthly Puerto Rico file
Partial Benefit Dual Eligibles	Eligible only as Qualified Medicare Beneficiaries (QMBs), Specified Low Income Medicare Beneficiaries (SLMBs), and under other categories of beneficiaries who are not eligible for full Medicaid benefits under title XIX. • Dual status code 01, 03, 05, or 06
Non-Dual Eligibles	Neither full benefit dual or partial benefit dual eligible.

Medicaid Status

- Medicaid data utilized from three (3) sources:
  1. Medicare Modernization Act (MMA) State files
  2. Point of Sale data
  3. Monthly Medicaid file that the Commonwealth of Puerto Rico submits to CMS

PY2017 Risk Score Calculation

- *For PY2017 (DOS 2016)*, CMS blended the risk scores:
  - 75% of risk score calculated with RAPs & FFS diagnoses +
  - 25% of risk score calculated with ED & FFS diagnoses =
  - Blended 2017 risk score

PY2017 Risk Score Calculation (cont.)

- Blended Payment:
  - The blend of RAPS-based and encounter data-based risk scores applies to risk scores calculated with the following models:
    - CMS-HCC model (revised for PY 2017)
    - ESRD dialysis model
    - ESRD functioning graft model
    - RxHCC model (recalibrated for PY 2017)
- *For PACE organizations* PY 2017 risk score calculations, CMS continues to use the same method as used for PY 2015, which is to use diagnoses from RAPS, FFS, and ED in equal measure (with no weighting).

PY2018 Risk Score Calculation

- *For PY2018 (DOS 2017),* CMS will blend the risk scores:
  - 85% of risk score calculated with RAPs & FFS diagnoses +
  - 15% of risk score calculated with ED & FFS diagnoses =
  - Blended 2018 risk score

PY2018 Risk Score Calculation (cont.)

- Blended Payment:
  - The blend of RAPS-based and encounter data-based risk scores will apply to risk scores calculated with the following models:
    - CMS-HCC model (2017 CMS-HCC model)
    - ESRD dialysis model
    - ESRD functioning graft model
    - RxHCC model (recalibrated for 2018)
- *For PACE organizations* PY2018 risk scores will be calculated using the same method as used for PY2017.

PY 2019 Risk Adjustment Model Updates

Model	Updates
CMS-HCC	• Implement new model with additional conditions (Chronic kidney disease, mental health, and substance use disorder conditions) • Updated the data years used to calibrate the model to 2014/2015 • Selected diagnoses for calibration with the CPT/HCPCS-based methodology
ESRD	• Recalibrated all ESRD Model Segments • Updated the Medicaid factors to be concurrent with the payment year for the Dialysis and Functioning Graft Models
RxHCC (Part D)	• Continue to use the 2018 RxHCC model
PACE	• Continue to use the 2012 PACE model

PY 2019 CMS-HCC Model - Blended Risk Score

$$75\% \quad + \quad 25\% \quad = \quad 100\%$$

2017 CMS-HCC model (using diagnoses from RAPS and FFS)

2019 CMS-HCC model (using diagnoses from encounter data, RAPS inpatient records and FFS)

Summary

- Described the foundations of risk adjustment.
- Explained the recent changes to risk adjustment models.
- Identified policy updates for 2017-2019.

Opportunities to Ask Questions?

- During the Breakout Sessions
- During the Open Q&A
- By email at riskadjustment@cms.hhs.gov