CMS
CENTERS FOR MEDICARE & MEDICAID SERVICES

2012 Regional Technical Assistance Participant Guide

Tuesday, August 7, 2012

Risk Adjustment

ARDX
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INTRODUCTION

Purpose

The purpose of this technical assistance session is to provide an overview of risk adjustment concepts regarding data collection, submission, and reporting, and to provide current risk adjustment information on policy and operations updates for 2013, including changes in the risk adjustment models. This session will also familiarize participants with the concepts and necessary steps to verify their enrollee's risk scores using MARx reports.

About This Training

This training is organized into three modules:

1. Risk Adjustment Overview and Policy Updates
Provide overview of risk adjustment and discuss changes in risk adjustment methodology.

2. Operations Updates
Discuss areas of change in risk adjustment operations and topics that generate frequent questions from plans.

3. Risk Score Calculation
Instruct participants in risk score calculations, including more complicated examples that require using the Monthly Membership Report (MMR) and Model Output Report (MOR) to verify risk scores.

Risk Adjustment Contact Information

Table A provides the roles and contact information for important resources.

TABLE A – RISK ADJUSTMENT POINTS OF CONTACT

Resource	Role	Contact Information
Center for Medicare & Medicaid Services (CMS) Center for Medicare – Medicare Plan Payment Group (MPPG)	Develops and implements the risk adjustment payment methodology for the Medicare Modernization Act (MMA) program. In addition, they monitor plans to improve the quality of data.	Greg McGuigan: Gregory.McGuigan@cms.hhs.gov Andrew Keenan: Andrew.Keenan@cms.hhs.gov Sharon Winchester: Sharon.Winchester@cms.hhs.gov Rebecca Paul Rebecca.Paul@cms.hhs.gov
Ask Risk Adjustment	Provides plans with answers to a wide range of risk adjustment questions, from basic policy questions, to questions about specific risk adjustment issues with their enrollees.	analyst@askriskadjustment.com https://www.askriskadjustment.com
Customer Service and Support Center (CSSC)	Manages the Front-End Risk Adjustment System (FERAS) and hosts technical assistance materials from the sessions as well as connectivity guidance for risk adjustment related systems.	877-534-2772 (toll-free) csscoperations@palmettogba.com www.csscoperations.com
Technical Assistance Registration Center (TARSC)	Provides registration services for the Technical Assistance session and support information on a variety of topics.	1-888-330-9994 TARegistration@tarsc.info www.tarsc.info

Technical Assistance Tools

The materials provided in this training include this participant guide, as well as other tools. Table B provides a description of the materials included as part of this training.

TABLE B – RISK ADJUSTMENT TECHNICAL ASSISTANCE TOOLS

Technical Assistance Tools	Description
Participant Guide	Guides participants through the session and is designed as a reference for future use and as a refresher after the technical assistance session.
Presentation Slides	Highlights the information in the Participant Guide.
Resource Guide	Provides a list of acronyms and common risk adjustment resources including report layouts and model relative factors that are used to calculate risk scores.
Job Aid Handouts	Provides support documentation for the scenarios covered during the session.
Risk Score Calculation Workbook	Contains scenarios for application of the concepts related to risk score calculations highlighted in the session.

Audience

This technical assistance program is designed for individuals who are new and experienced with the risk adjustment process. The primary audiences for this program are:

- Medicare Advantage (MA) and Medicare Advantage – Prescription Drug (MA-PD) organizations;
- Regional and Employer Group Health plans;
- Demonstration projects;
- Program of All-Inclusive Care for the Elderly (PACE) organizations;
- Specialty plans;
- Existing staff unable to attend previous technical assistance sessions;
- New staff at the existing organizations mentioned above; and
- Third party submitters contracted to submit data on behalf of risk adjustment organizations.

Learning Objectives

At the completion of the Technical Assistance session, participants will be able to:

- Describe the foundation of risk adjustment.
- Identify policy updates for 2013.
- Explain updates to submission requirements.
- Describe the difference between the Type A and Type B MOR layouts.
- Review the plan termination process.
- Explain risk score calculation components.
- Analyze reports used for risk score calculation.

MODULE 1 – RISK ADJUSTMENT OVERVIEW AND POLICY UPDATES

Purpose

CMS adjusts payments to Medicare Advantage (MA) plans based on the health status of their enrollees. This requires the calculation of a risk score in order to adjust payments according to risk. This training provides an overview of this process and describes the changes in risk adjustment policy for 2012, including changes to the risk adjustment model, frailty factors, and a forecast for 2013.

Learning Objectives

At the completion of this module, participants will be able to:

- Describe the foundations of risk adjustment.
- Identify the 2012 changes to risk adjustment models.
- Describe policy updates for 2013.

ICON KEY	
Definition	
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1.1 Risk Adjustment Overview

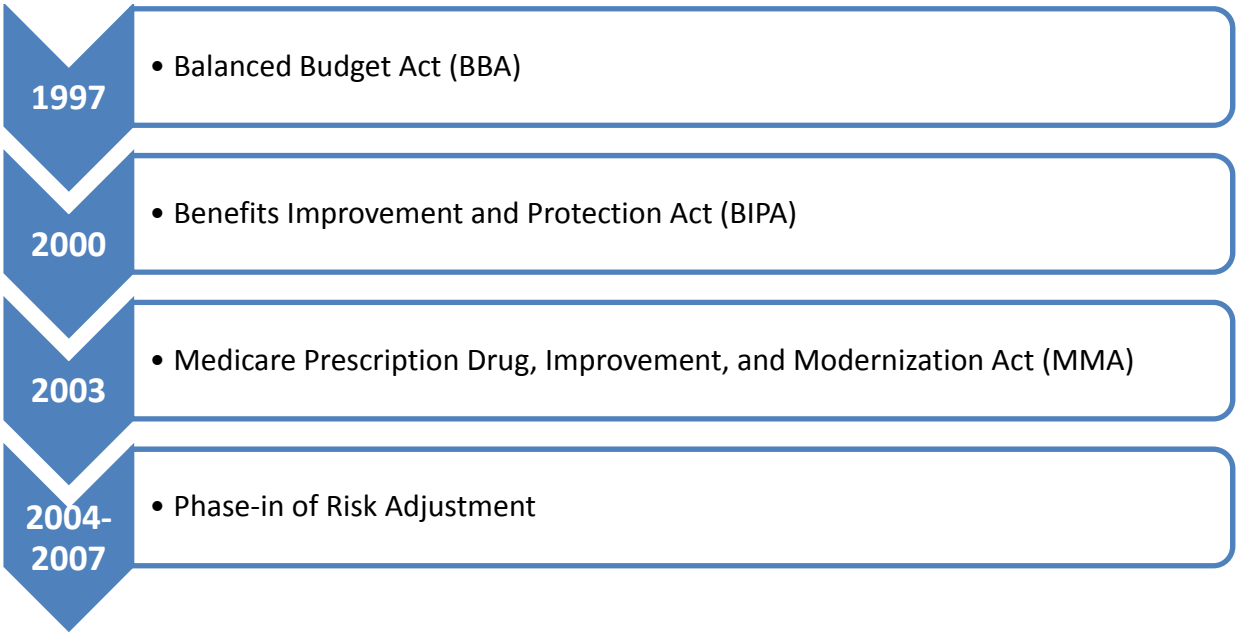
Risk adjustment allows CMS to pay plans for the risk of the beneficiaries they enroll. By risk adjusting plan payments, CMS is able to make appropriate and accurate payments for enrollees with differences in expected costs. Risk adjustment is used to adjust bidding and payment based on the health status and demographic characteristics of an enrollee.

1.1.1 History of Risk Adjustment

The responsibilities of MA organizations have evolved slightly over the years during the implementation of risk adjustment. Risk adjustment methodology for Medicare Advantage (then, Medicare+Choice) was first required by the Balanced Budget Act (BBA). The Benefits Improvement and Protection Act of 2000 (BIPA) required the sources of diagnoses to include ambulatory settings. The Medicare Prescription Drug, Improvement, and Modernization Act (MMA) established the prescription drug benefit (Part D) under risk adjustment methodology to go into effect in 2006. The Medicare Advantage program phased into risk adjustment methodology for payment, with completion of 100% risk adjusted payment in 2007 for the majority of MA organizations. Some demonstrations were not fully phased in until 2008.

Figure 1A illustrates the history of risk adjustment described above.

Figure 1A – History of Risk Adjustment



1.1.2 Defining Risk Adjustment

Risk adjustment adjusts payments to health plans based on the expected health care costs of their enrollees. Medicare risk adjustment is prospective, meaning diagnoses from the previous year and demographic information are used to predict future costs.

1.1.3 Risk Adjustment Components

Risk scores are based on a combination of demographic and disease data. This information is used in the risk adjustment models to calculate a risk score for each beneficiary in order to adjust payments to MAOs and PDPs.

1.1.3.1 Demographic Factors

Depending on the model and segment, CMS uses the following demographic information to calculate a risk score:

- Age;
- Sex;
- Medicaid Status;
- Original Reason for Entitlement;
- Institutionalization; and
- Frailty.

The age and sex are used to assign a demographic score for all beneficiaries. Medicaid status in the year prior to the payment year results in an additional factor. If a beneficiary is age 65 or above, but was originally entitled to Medicare due to disability, then they are assigned an additional factor for original disability.

Institutional status for a beneficiary may be used to determine which segment of the risk adjustment model is used to determine the risk score for a beneficiary. The CMS Hierarchical Condition Category (CMS-HCC), End Stage Renal Disease (ESRD) Functioning Graft, and Part D Prescription Drug (Rx-HCC) models have institutional segments. For more information on the effect of institutional status on risk score calculation, refer to Module 3.

For Program for All-Inclusive Care of the Elderly (PACE) organizations and applicable Fully Integrated Dual Eligible (FIDE) Special Needs Plans (SNPs), beneficiaries that qualify for frailty receive an additional factor added to their risk score. This factor is added as the last step in the risk score calculation process for applicable beneficiaries.

1.1.3.2 Disease Factors

CMS uses diagnoses submitted by plans through the Risk Adjustment Processing System (RAPS) to assign Hierarchical Condition Categories (HCCs) and interactions for each beneficiary. The Renal Network also sends ESRD related information to CMS, which CMS uses to assign beneficiaries to different stages of ESRD. When a beneficiary has undergone transplant, they are considered to be in Functioning Graft status and a factor is assigned based on this status.

The information used to calculate a disease factor for beneficiaries includes:

- HCCs
- Interactions
- Graft Factors

CMS assigns a factor for each HCC, Interaction, and Graft Factor that is relevant for a beneficiary. The factors are added to calculate the disease portion of the risk score. After all HCCs are listed for a beneficiary, some HCCs may be removed based on a hierarchy. The process of removing HCCs based on hierarchy ensures that only the most severe occurrence of a diagnosis is included in the risk score calculation for a beneficiary.

1.1.3.3 Normalization and Coding Adjustment

When CMS calibrates the CMS-HCC and Rx-HCC models, there is a gap between the year of the model denominator and the payment year. CMS assigns a factor to adjust risk scores between the denominator year and the payment year to adjust for the underlying trend in risk scores. This adjustment keeps the average risk score at 1.0. The normalization factor for each payment year, for each model and segment, is published in the Announcement for the payment year.

CMS uses fee-for-service data to calibrate the CMS-HCC risk adjustment model. Because the calibration data is a different source than the data used to calculate risk scores (Medicare Advantage), CMS applies the coding difference adjustment to make up for the difference in coding patterns between fee-for-service beneficiaries and MA enrollees. CMS applies this adjustment to Part C risk scores in payment years 2010, forward, excluding the ESRD Dialysis and Transplant model segments.

1.1.3.4 Perform Risk Score Calculations

After all factors are established, the demographic and disease portions of the risk score are added together to calculate a raw risk score. Then, the raw risk score is divided by the normalization factor. Depending on the model and segment, the adjustment for coding may be applied. If the beneficiary is in a PACE organization or FIDE-SNP plan, then a frailty factor may be added. When a final risk score is calculated, the risk score is used to adjust the monthly payment to the plan.

1.2 Risk Adjustment Models

The risk adjustment models consist of the CMS- HCC model, the CMS-HCC ESRD model, and the Rx-HCC model. Each model has a sub-set of segments based on demographics of the enrollees for whom a risk score is being calculated. The segments consider such aspects as: age, disability, low income status, community versus institutional residence, and stage of ESRD. Regardless of the model used to calculate the risk score, the Risk Adjustment System (RAS) is the processor that performs the calculation and sends the risk score to the payment system (MARx).

Periodically, the models are updated (recalibrated) with more recent data. Currently, this requires the use of fee-for-service utilization. When CMS recalibrates the risk adjustment models with more recent data, an updated coefficient is calculated for each diagnosis group and demographic characteristic in the model (e.g., age, sex). This coefficient represents the additional cost of that diagnosis group or demographic characteristic in predicting FFS per capita costs. These coefficients are then converted to relative cost factors by dividing each by the average per capita cost predicted for a specific year.

Effective January 1, 2012, beneficiaries in PACE organizations have their risk scores determined with a different set of coefficients than the MA population at large under the CMS-HCC Program of All-Inclusive Care for the Elderly (PACE) model. For more information on the model used for PACE beneficiaries, refer to Module 2.

Table 1A describes each model and lists the segments within the models.

TABLE 1A – RISK ADJUSTMENT MODELS

Model	General Description	Model Segments
CMS-HCC Model	The CMS-HCC risk adjustment model uses submitted ICD-9-CM codes to calculate risk scores for aged/disabled beneficiaries and is used in payments for the Part C program.	• Aged/disabled Community • Aged/disabled Institutional • Aged/disabled New enrollee • Aged/disabled New enrollee C-SNP
CMS-HCC PACE (beginning 2012)	The CMS-HCC model used for PACE organizations beginning in 2012 is an updated version of the CMS-HCC model. The differences include additions, deletions, and revisions of HCCs.	• Aged/disabled Community • Aged/disabled Institutional • Aged/disabled New enrollee
CMS-HCC ESRD	The CMS-HCC ESRD model is based on the CMS-HCC model. It was updated in 2012. It uses the same HCCs as the CMS-HCC PACE model that was updated in 2012. It is different than other models in that it is structured for different payment rates based on the beneficiaries' phase of End Stage Renal Disease: dialysis status, transplant, and functioning graft.	• ESRD Dialysis • ESRD Dialysis New Enrollee • ESRD Transplant • ESRD Functioning Graft – Community • ESRD Functioning Graft – Institutional • ESRD Functioning Graft – New Enrollee
Rx-HCC Model	The Part D model is similar to the CMS-HCC risk adjustment model, except that it predicts Part D plan liability costs under the Medicare standard Part D benefit. Different diseases predict drug costs than Part A/B costs. Incremental costs of low-income (LI) and long term institutional (LTI) beneficiaries are incorporated into the model.	• Aged, non-low income • Aged, low income • Disabled, non-low income • Disabled, low income • Institutional • New Enrollee, non-low income • New Enrollee, low income • New Enrollee, institutional

Beginning in payment year 2011, CMS implemented a separate set of New Enrollee factors that apply to enrollees of Chronic Care Special Needs Plans (C-SNPs). Because C-SNP enrollees must, as a condition of enrollment, have specific conditions, the average new enrollee risk score of new enrollees in C-SNPs is better predicted with new enrollee factors calibrated specifically for those with specified conditions.

Example 1

A risk score analyst at plan QED Health is verifying a beneficiary's risk score. In order to verify the risk score, the analyst must determine which model and segment were used for the calculation. She notes that the beneficiary does not have ESRD, is 73 years old, and has the long term institutional indicator on her Monthly Membership Report (MMR) record. Therefore, the analyst determined that the Institutional segment of the CMS-HCC model must be used for risk score calculation. To verify that this was the model that was used, she checks the MMR and finds Risk Adjustment Factor Type (RAFT) code of "I," indicating that indeed, the Institutional segment was used.

1.3 2013 Forecast

1.3.1 Recalibration of CMS-HCC Model

For payment year 2013, CMS has recalibrated the CMS-HCC model. The updated model was calibrated using 100 percent fee-for-service (FFS) claims for the years 2008 and 2009. The current CMS-HCC model is calibrated on a 5 percent sample of 2004 and 2005 data. More recent data results in a more accurate risk score calculation, and therefore a more accurate plan payment. Model recalibration with more recent data can result in changes in the relative factors assigned to each HCC, and individual risk scores can change, even though the average remains 1.0.

Please note that the changes to the model discussed in this section are for CMS-HCC model version located in the 2013 Announcement, not the PACE and ESRD models (version 21) from the 2012 Announcement.

1.3.2 Recalibration of Rx-HCC Model

For 2013, CMS has recalibrated the Rx-HCC risk adjustment model using updated diagnostic and cost data. To ensure the greatest accuracy, CMS used data from beneficiaries who were enrolled in a PDP for at least one month in the prediction year (2009). The new data was used to create new relative factors for the Rx-HCC model for 2013. The relative factors are used to calculate risk scores for individual beneficiaries, which will average 1.0 in the denominator year.

The denominator for the revised Rx-HCC risk adjustment model is developed using data from Medicare beneficiaries enrolled in both MAPDs and PDPs. CMS does this in order to set the average Rx-HCC risk score to 1.0 for the enrolled population. CMS used a denominator of average per capita costs for 2010 to create the relative factors for the model. The denominator, which is used to create relative factors for all segments of the model, is $1,152.85.

The denominator is created by taking a 2010 July cohort of Medicare beneficiaries and running their diagnoses through the newly-recalibrated model with dollar coefficients. The average of the beneficiaries' predicted values was used to denominate the model and create relative factors by dividing all the dollar coefficients by the average predicted costs for the denominator year. Since the model itself was calibrated using costs that were adjusted to reflect the 2013 gap adjustment, the denominator reflects the 2013 gap adjustment.

1.3.3 Recalibration of Frailty Factors

CMS is required by law to ensure that payments to PACE organizations reflect the frailty of the PACE population. Frailty adjustment is based on measures of the Activities of Daily Living (ADL) of enrollees in the plan, including: 1) bathing and showering; 2) dressing; 3) eating; 4) getting in or out of bed or chairs; 5) walking; and 6) using the toilet. The ADLs are collected through the Health Outcome Survey-Modified (HOS-M) survey, which allows CMS to calculate a plan-level frailty adjustment. The plan-level frailty factor is added to the risk score of frailty-eligible enrollees in each PACE organization.

The Affordable Care Act allows CMS to apply a frailty adjustment to Fully Integrated Dual Eligible (FIDE) SNPs if the SNP has similar average levels of frailty to the PACE program. Because HOS data is usually collected on the contract level and FIDE SNPs are on the Plan Benefit Package (PBP) level, MAOs that anticipate offering a FIDE SNP are allowed to field the HOS survey at the PBP level in order to allow CMS to calculate the FIDE SNP's frailty score.

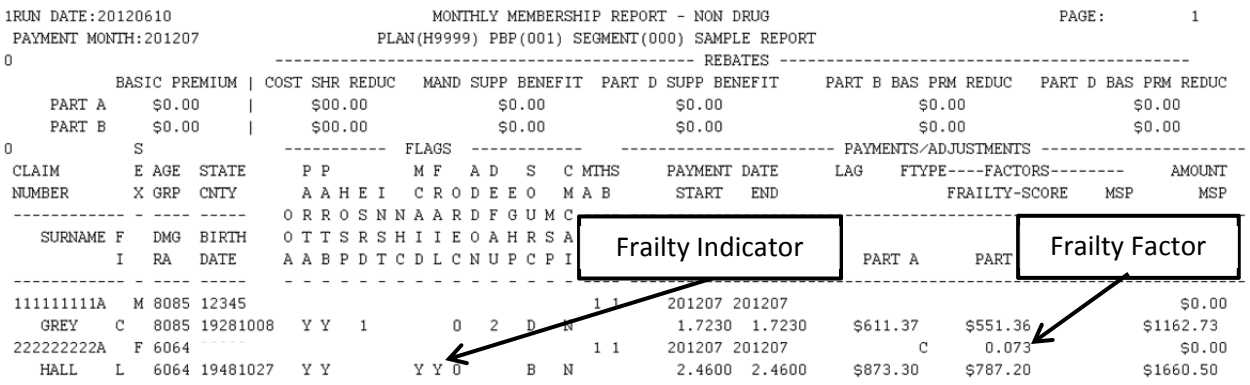
For payment year 2013, CMS is updating the frailty factors for both PACE organizations and FIDE SNPs. Table 1B shows the updated frailty factors.

TABLE 1B – RECALIBRATED FRAILTY FACTORS FOR CY 2013

ADL	FIDE SNP Factors (Non-Medicaid)	PACE Factors (Non-Medicaid)	FIDE SNP Factors (Medicaid)	PACE Factors (Medicaid)
0	−0.062	−0.062	−0.198	−0.189
1-2	0.151	0.152	0	0
3-4	0.276	0.272	0.154	0.147
5-6	0.276	0.272	0.387	0.38

The frailty factor only applies to beneficiaries with a sufficient level of frailty and, therefore, a plan must look to the frailty indicator on the MMR. If the frailty indicator is positive, then the frailty factor is added to the final risk score. Figure 1B shows where frailty information is located on the MMR.

Figure 1B – Frailty on the Monthly Membership Report



MODULE 2 – OPERATIONS UPDATES

Purpose

CMS adjusts payments to Medicare Advantage (MA) plans based on the health status of their enrollees. This requires the collection and submission of diagnosis data. This training describes recent changes in risk adjustment operations, including data collection, submission compliance, edits, and reporting (i.e., changes to the Model Output Report (MOR) layouts).

Learning Objectives

At the completion of this module, participants will be able to:

- Explain submission requirements.
- Describe the difference between the Type A and Type B MOR layouts.
- Distinguish between the New Enrollee RAFT Codes and Default Risk Factors.
- Review the plan termination process.

ICON KEY	
Definition	
Example	
Reminder	
Resource	

2.1 Risk Adjustment Operations Overview

2.1.1 Common Terms

Table 2A provides definitions of common risk adjustment terminology.

TABLE 2A – COMMON RISK ADJUSTMENT TERMINOLOGY

Acronym or Term	Description
FERAS	The Front-End Risk Adjustment System, a system used in the risk adjustment process where submitters send risk adjustment data to Palmetto. Front-end edits are performed in this system.
RAPS	Risk Adjustment Processing System processes risk adjustment data.
RAPS File	The file layout required for submission of diagnosis clusters to RAPS.
RAS	The Risk Adjustment System calculates the risk score.
MARx	The Medicare Advantage Prescription Drug System calculates the risk payment.
MARx UI	The MARx User Interface maintains Medicare beneficiary eligibility and payment data.

TABLE 2A – COMMON RISK ADJUSTMENT TERMINOLOGY (CONTINUED)

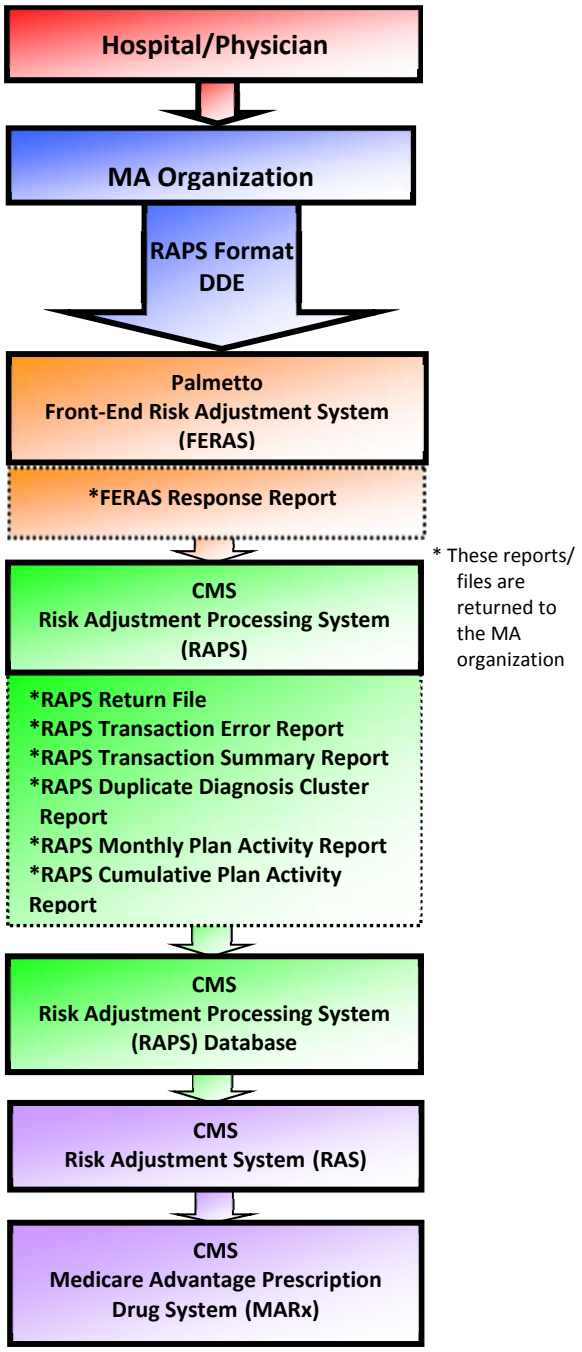
Acronym or Term	Description
HPMS	The Health Plan Management System is a CMS MA information system that contains health plan-level data.
RAFT Code	The Risk Adjustment Factor Type code on the Monthly Membership Report indicates which model/segment was used for each beneficiary for which a payment was calculated.
Default Risk Factor Code	A Default Risk Factor Code on the Monthly Membership Report indicates which set of default factors was used for a beneficiaries' risk score calculation. The Default Risk Factor Code is assigned when a beneficiary joins Medicare Advantage between model runs or switches models between model runs.
HCC	The Hierarchical Condition Category is a diagnosis grouping with a single relative factor assigned to it for each model segment.
Interaction	The combination of multiple diagnoses or disability that result in an extra relative factor added to the risk score calculation.
Demographics	The characteristics of a beneficiary that result in "demographic" relative factors, including age, sex, Medicaid status, and disability.
Hierarchy	The Hierarchy is a listing of HCCs in a cost relation to each other, where if a beneficiary has two HCCs in the same hierarchy, the more costly HCC will be used for risk score calculation and the less costly HCC will be dropped.
ICD-9-CM Diagnosis Code	The International Classification of Diseases 9th Edition Clinical Modification (ICD-9-CM) codes are used to assign diagnoses that may trigger HCCs for a beneficiary's risk score calculation.
ICD-10-CM	The International Classification of Diseases 10th Edition Clinical Modification (ICD-10-CM) codes are used to assign diagnoses that may trigger HCCs for a beneficiary's risk score calculation.
Status	Referred to as "Flags" on the MMR, these include additional characteristics of an enrollee that affect payment calculation, such as frailty, Medicaid, ESRD status, Medicare Secondary Payer (MSP) status, and Institutional status.
Model Run	When the risk adjustment model is run to calculate risk scores for all beneficiaries with available data. This occurs three times each payment year: once for initial risk score, once for the mid-year update, and once for final reconciliation.

2.1.2 Risk Adjustment Data Flow

Risk scores measure individual beneficiaries' relative risk and are used to adjust payments for each beneficiary's expected expenditures. In order to calculate individual risk scores, plans must submit data based on beneficiary diagnoses to RAPS. Figure 2A is a high-level diagram of risk adjustment processing of the sources of data and flow of risk adjustment data submission to payment.

- Hospital/physician submits data to MA organization.
- The MA organization submits these data at least quarterly to Palmetto GBA.
- The MA organization submits the data via Direct Data Entry or in the RAPS format.
- The data are sent to FERAS for processing where the file-level data, batch-level data, and first and last detail records are checked.
- If any data are rejected, then data are reported on the FERAS Response Report.
- After passing the FERAS checks, the file is submitted to RAPS where detail editing is performed.
- The RAPS Return File is returned daily and shows all records approved and where errors occurred.
- The RAPS Transaction Error Report displays records on which errors occurred.
- The RAPS Transaction Summary Report is sent to the MA organization daily and identifies data that have been finalized in RAPS database.
- The Duplicate Diagnosis Cluster Report identifies diagnosis clusters submitted with information that duplicates a stored cluster.
- The RAPS Monthly Plan Activity Report and Cumulative Plan Activity Report provides a summary of all diagnoses stored for a given time period.
- Distributed monthly and quarterly, the Error Frequency Report provides an overview of all errors associated with files submitted in test and production.
- RAPS database stores all finalized diagnosis clusters.
- RAS calculates the risk adjuster factors by executing the CMS-HCC model.
- MARx is used in the calculation of payments and determination of plan payments.

Figure 2A – Risk Adjustment Dataflow



2.1.3 Model Run Schedule

In order for data to be included in the model run, MA organizations must meet three submission deadlines each year: the first Friday in September, the first Friday in March, and a reconciliation (final submission) deadline of January 31. It is important for plans to recognize the connection between the model runs and the dates of service. Table 2B shows the timetable for model runs and dates of service.

TABLE 2B – MODEL RUN TIMETABLE

Payment Year (PY)	Model Run	Date Data Due for Inclusion in Model Run	Dates of Service Included in Model Run	Payment Date Following Model Run
2012	Initial	9/2/2011	7/1/2010 - 6/30/2011	January 2012
2012	Mid-Year	3/2/2012	1/1/2011 - 12/31/2011	July 2012
2012	Final Reconciliation	1/31/2013	1/1/2011 - 12/31/2011	August 2013
2013	Initial	9/7/2012	7/1/2011 - 6/30/2012	January 2013
2013	Mid-Year	3/1/2013	1/1/2012 - 12/31/2012	July 2013
2013	Final Reconciliation	1/31/2014	1/1/2012 - 12/31/2012	August 2014
2014	Initial	9/6/2013	7/1/2012 - 6/30/2013	January 2014
2014	Mid-Year	3/7/2014	1/1/2013 - 12/31/2013	July 2014
2014	Final Reconciliation	1/31/2015	1/1/2013 - 12/31/2013	August 2015

Plans should keep in mind that the model run timetable includes not only diagnosis information, but all statuses that affect risk adjustment. For example, if a beneficiary has a Medicaid status change that is received by CMS in November 2011, then the status change will not be included in the Initial 2012 model run, but will be retroactively adjusted in the Mid-Year 2012 model run.

Example 1

For the 2012 payment year (PY) (also known as calendar year), the payment beginning July 1, 2012, the mid-year risk factor update, is based on diagnoses from dates of service January, 1, 2011 – December 31, 2011. However, if a diagnosis is received by a plan from a provider in December 2011 and the plan fails to submit the diagnosis to RAPS by the March deadline, the diagnosis will not be included when the beneficiary's risk score is updated in July. In this case, the payment adjustment based on the diagnosis will not be included in the plan's payment until the final reconciliation payment in August of 2013.

Refer to the Risk Adjustment Chapter of the Managed Care Manual for more information on risk adjustment timing and payment.

2.2 General Collection Rules

There are several general data collection rules for MA organizations to observe when collecting data for risk adjustment purposes.

MA organizations must collect certain data elements from the sources (providers/physicians) of risk adjustment data described in this module. The minimum data elements that must be collected are:

- Health Insurance Claim (HIC) Number
- ICD-9-CM Diagnosis Codes

- Service From Date
- Service Through Date
- Provider Type

MA organizations are responsible for ensuring that the data they collect comes from acceptable sources. These sources are hospital inpatient facilities, hospital outpatient facilities, and physicians.

Diagnoses must be supported by appropriate medical record documentation and the dates of service must be within the data collection year.

Diagnosis codes are provided to CMS in the RAPS format. The diagnoses are currently in International Classification of Diseases, 9th Edition Clinical Modification (ICD-9-CM) coding, but is scheduled to be transitioned to the 10th Edition or ICD-10 on October 1, 2014. Plans do not submit procedure codes of any kind [i.e., Current Procedural Terminology (CPT) codes, Healthcare Common Procedure Coding System (HCPCS) codes] to RAPS, only diagnosis codes.

These data must be collected from an acceptable provider type. Acceptable provider types are broken into three categories: hospital inpatient, hospital outpatient, and physician services.

Example 2

A Risk Adjustment Analyst at QED Health is submitting RAPS data. She prepares the submission, which includes procedure code G0106, Colorectal Cancer Screening. The diagnosis cluster is rejected because RAPS only accepts diagnoses for risk adjustment purposes, not procedure codes.

2.2.1 Sources of Risk Adjustment Data

MA organizations are responsible for ensuring that the data they collect comes from acceptable sources. These sources are hospital inpatient facilities, hospital outpatient facilities, and physicians.

2.2.1.1 Hospital Inpatient Data

Hospital inpatient services include those for which the patient is admitted to the facility for at least one overnight stay. Table 2C lists covered and non-covered hospital inpatient facilities.

TABLE 2C – COVERED AND NON-COVERED INPATIENT FACILITIES*

Covered Facilities	Non-Covered Facilities
• Short-term (general and specialty) Hospitals • Religious Non-Medical Health Care Institutions • Long-term Hospitals • Rehabilitation Hospitals • Children's Hospitals • Psychiatric Hospitals • Medical Assistance Facilities/ Critical Access Hospitals	• Skilled Nursing Facilities (SNFs) • Hospital Inpatient Swing Bed Components • Intermediate Care Facilities • Respite Care • Hospice • Etc.

* These are examples of non-covered facilities and not a comprehensive list.

2.2.1.2 Hospital Outpatient Data

Hospital outpatient services are therapeutic and rehabilitative services provided for sick or injured persons who do not require inpatient hospitalization or institutionalization. Table 2D lists covered and non-covered hospital outpatient facilities.

TABLE 2D – COVERED AND NON-COVERED HOSPITAL OUTPATIENT FACILITIES AND SERVICES

Covered Facilities	Non-Covered Facilities*
• Short-term (general and specialty) Hospitals • Medical Assistance Facilities/Critical Access Hospitals • Community Mental Health Centers • Federally Qualified Health Centers • Religious Non-Medical Health Care Institutions • Long-term Hospitals • Rehabilitation Hospitals • Children's Hospitals • Psychiatric Hospitals • Rural Health Clinic (Free-standing and Provider-Based)	• Free-standing Ambulatory Surgical Centers (ASCs) • Home Health Care • Free-standing Renal Dialysis Facilities
Non-Covered Services	
• Laboratory Services • Ambulance • Durable Medical Equipment • Prosthetics	• Orthotics • Supplies • Radiology Services

* These are examples of non-covered facilities and are not to be considered a comprehensive list.

Regardless of the type of diagnostic radiology bill (outpatient department or physician component), this hospital outpatient service is not acceptable for risk adjustment.

Note: Diagnostic radiologists typically do not document confirmed diagnoses. The diagnosis confirmation comes from referring physicians or physician extenders and therefore not assigned in the medical record documentation from diagnostic radiology services alone.

2.2.1.3 Physician Data

The collection of physician data for risk adjustment is associated with the physician's specialty. That is, all ICD-9-CM diagnoses that are required for the risk adjustment models and rendered as a result of a physician face-to-face visit must be collected by the MA organization. This includes data collected from non-network as well as network physicians. CMS recently updated the list of acceptable physician specialty types by adding three new codes effective for dates of service beginning January 1, 2012. Table 2E provides the 2012 list of acceptable physician specialty types and their associated specialty codes.

TABLE 2E – ACCEPTABLE PHYSICIAN SPECIALTY TYPES FOR RISK ADJUSTMENT DATA SUBMISSION

Code	Specialty	Code	Specialty	Code	Specialty
1	General Practice	25	Physical Medicine And Rehabilitation	67	Occupational Therapist
2	General Surgery	26	Psychiatry	68	Clinical Psychologist
3	Allergy/Immunology	27	Geriatric Psychiatry	72*	Pain Management
4	Otolaryngology	28	Colorectal Surgery	76*	Peripheral Vascular Disease
5	Anesthesiology	29	Pulmonary Disease	77	Vascular Surgery
6	Cardiology	33*	Thoracic Surgery	78	Cardiac Surgery
7	Dermatology	34	Urology	79	Addiction Medicine
8	Family Practice	35	Chiropractic	80	Licensed Clinical Social Worker
9	Interventional Pain Management (IPM)	36	Nuclear Medicine	81	Critical care (intensivists)
10	Gastroenterology	37	Pediatric Medicine	82	Hematology
11	Internal Medicine	38	Geriatric Medicine	83	Hematology/Oncology
12**	Osteopathic Manipulative Medicine	39	Nephrology	84	Preventive Medicine
13	Neurology	40	Hand Surgery	85	Maxillofacial Surgery
14	Neurosurgery	41	Optometry	86	Neuropsychiatry
15	Speech Language Pathologist	42	Certified Nurse Midwife	89*	Certified Clinical Nurse Specialist
16	Obstetrics/Gynecology	43	Certified Registered Nurse Anesthetist	90	Medical Oncology
17	Hospice And Palliative Care	44	Infectious Disease	91	Surgical Oncology
18	Ophthalmology	46*	Endocrinology	92	Radiation Oncology
19	Oral Surgery	48*	Podiatry	93	Emergency Medicine
20	Orthopedic Surgery	50*	Nurse Practitioner	94	Interventional Radiology
21***	Cardiac Electrophysiology	62*	Psychologist	97*	Physician Assistant
22	Pathology	64*	Audiologist	98	Gynecologist/Oncologist
23***	Sports Medicine	65	Physical Therapist	99	Unknown Physician Specialty
24	Plastic And Reconstructive Surgery	66	Rheumatology	C0***	Sleep Medicine

* Indicates that a number has been skipped.
** Name change from Osteopathic Manipulative Therapy to Osteopathic Manipulative Medicine
*** Added codes effective January 1, 2012

Note: The only exception to the face-to-face visit requirement is pathology services (professional component only).

CMS periodically updates the list of acceptable physician specialty type, which will be posted to the CSSC website in the RAPS Data section.

2.3 Connectivity

Prior to submitting risk adjustment data, plans must establish a connection to CMS systems. MA organizations use the electronic connection not only to submit risk adjustment data to CMS, but receive reports in return as well.

New MA organizations must complete an Electronic Data Interchange (EDI) Agreement with CMS and submit to CSSC prior to submitting risk adjustment data. The EDI Agreement is a contract between the MA organization and CMS attesting to the accuracy of the data submitted. An officer (e.g., CEO) that represents the MA organization must sign this document.

A new option for 2013 is the TIBCO MFT Internet Server and 2012 in a transition year. If plans will use TIBCO MFT as their connection option, then they are responsible for phasing in the new option and phasing out Gentran. Plans currently using Gentran should refer to migration guidance on the MAPD Helpdesk webpage.

TIBCO MFT Internet Server migration guidance is available at https://www.cms.gov/Research-Statistics-Data-and-Systems/CMS-Information-Technology/mapdhelpdesk/index.html.

For other forms and necessary documentation for connecting to CMS systems for submission of risk adjustment data, refer to the CSSC website section "Enroll to Submit Risk Adjustment Data"

Table 2F describes the connectivity options available to plans.

TABLE 2F – CONNECTIVITY OPTIONS

Connection Option	Description
Connect:Direct (File transfer software Product)	• Formerly Network Data Mover (NDM). • Mainframe-to-mainframe connection. • Next day receipt of FERAS response.
File Transfer Protocol (FTP)	• Modem-to-modem (dial-up) or lease line connection. • Requires password and phone line. • Same day receipt of FERAS response.
Gentran (CMS Enterprise File Transfer)	• This connectivity option will be phased out by December 2012
TIBCO MFT Internet Server	• IP transmissions over the Internet. • Trading Partners will use an SFTP Client to transmit files to CMS. • Next day receipt of FERAS response.

2.4 Data Submission Compliance

Plans are required to comply with CMS requirements to submit accurate data in a timely manner, which includes submitting diagnoses, meeting the quarterly submission requirement, and not submitting duplicate diagnosis clusters.

Plans agree when signing EDI Agreements that they will to the best of their knowledge, information, and belief, submit risk adjustment data that are accurate, complete, and truthful. Based on this, those who are cleaning out their files or decide to send every claim they have to make sure no claims were left out are considered non-compliant.

The current RAPS layout is available on the Risk Adjustment section of the CSSC website at: http://www.csscoperations.com/internet/cssc.nsf/Home

2.4.1 Low/No Submissions

The risk adjustment rules require that for each quarter MA organizations submit approximately 25 percent of the total expected data for the year for each provider type (source). Meeting or exceeding this standard (e.g., submitting monthly or weekly) helps organizations avoid "playing catch up" at the end of the collection year and helps ensure accurate risk adjustment calculation. If data are not submitted in a timely and consistent manner, there may be a data collection issue. Also, it may be necessary to check that third party billers used by providers (especially large volume providers) are current on risk adjustment procedures and the importance of timely filing.

CMS recommends MA organizations collect data from providers and physicians within 90 days of the service through date. Consistent collection lags of more than 90 days may cause problems in submitting data in a timely manner.

2.4.2 Duplicate Submission Compliance

For RAPS processing, plans are required to submit accurate diagnostic data using the RAPS format. The detail record in the RAPS file contains the diagnosis cluster which contains the core information for calculating the risk factor. Table 2G describes the elements contained within the diagnosis cluster.

TABLE 2G – DIAGNOSIS CLUSTER

Data Element	Description
Provider Type	• Codes created for risk adjustment and assigned to each source of data: • hospital inpatient (01 for principle diagnosis or 02 for secondary diagnosis) • hospital outpatient (10) • physician (20)
From Date of Service	• From and Through Dates of Service must be submitted in CCYYMMDD format. • The "Through Date" defines the data used in the data collection year for risk adjustment purposes.
Through Date of Service	
Diagnosis Code	• Each required diagnosis code must be submitted at least once during a reporting period. • The decimal is implied in the format.

A maximum of 10 diagnosis clusters are allowed per detail record (CCC). Each cluster must include the items identified above. If any of these attributes are submitted more than once for the same HIC number, a duplicate diagnosis cluster error will occur.

The full layout of the RAPS file for submission is available on the CSSC website under RAPS.

CMS considers a plan submission that contains 5% or greater duplicate diagnosis clusters to be a high level of duplicate submissions and to be in violation of the requirement to submit accurate data. Failure to submit accurate and timely risk adjustment production files may result in:

1. Incorrect payments to your MA organization;
2. Loss of monthly prospective revenue relating to beneficiary-health status;
3. Payment recovery through a lump-sum recovery;
4. Cessation of monthly payments throughout the remainder of a coverage year; and/or
5. Adjusting payments in a subsequent year.

Non-compliance with these requirements may result in CMS restricting future risk adjustment submissions by your MA organization.

2.4.2.1 Avoiding Duplicate Submission

Table 2H provides tips to assist plan sponsors in tracking diagnosis clusters so that they can be compliant with the guidance on the 5 percent benchmark for duplicate diagnosis cluster errors.

TABLE 2H – TIPS FOR AVOIDING DUPLICATE SUBMISSION

Tips	Description
Identify a Duplicate Diagnosis Cluster	CMS defines a Duplicate Diagnosis Cluster as one that shares all of the same attributes (HIC Number, Provider Type, From and Through Dates and Diagnosis) as one previously submitted and stored in the RAPS database.
Review Reports	Review current and previous RAPS Return Files to determine which clusters RAPS stored. If RAPS stored the cluster, MA organizations should not resubmit.
Understand Error Resolution	300-Level Errors Resubmit all clusters associated with the record, this would not create a duplicate diagnosis because none of the records were previously stored. 400-Level Errors Only resubmit the specific cluster that resulted in the 400-level error message. Do not resubmit all clusters within the record, only the clusters that contain errors.
Understand Modifying Data	MA organizations should only resubmit the diagnosis clusters that require a modification.
Understand RAPS Processing	MA organizations should not delete a diagnosis code or record repeatedly on the same day and on the same record. MA organizations should implement a process to ensure that only one instance of a specific diagnosis cluster (either add or delete) is submitted on a given day.

Example 3

Plan QED Health submitted eight clusters, and the following week the organization notices the date of service submitted was incorrect in one of the clusters, the organization must submit that specific cluster with a “D” in the delete indicator field, and submit a new cluster with the correct date. Resubmitting all of the remaining seven clusters would create seven duplicates.

Example 4

Plan QED Health submitted a RAPS file with 50 diagnosis clusters in July. In August they found an apparent error and deleted all 50 diagnosis clusters. They submitted a RAPS file to delete all of the original diagnosis clusters. They immediately realized that there was no error in the diagnosis clusters, so they waited three hours and resubmitted the diagnosis clusters again. Because the deletes had not processed by the time the resubmitted diagnosis clusters was received, the entire resubmission was rejected as duplicate submissions. Subsequently, QED Health built a check into their internal systems to ensure that only one instance of a specific diagnosis cluster can be submitted in a single day.

2.5 Error Codes

To assist plans in ensuring that they submit RAPS compliant files, FERAS returns response files to plans detailing any errors found on the file and batch level of the submitted RAPS file. FERAS also checks the first and last detail record for balance and some edits. RAPS is the system that checks all of the detail records for format, integrity, and validity. The following sections discuss the FERAS error codes in general and describe the newest additions to the error codes.

Figure 2B shows the record types in the RAPS file layout referred to above and includes a brief description of the data included at each level.

Figure 2B – RAPS File Layout Record Types

Record Level	Record Type	Description
File Header	AAA	Contains submitter and file information.
Batch Header	BBB	Contains plan and batch information.
Detail	CCC	Contains patient information and diagnosis clusters.
Batch Trailer	YYY	Contains plan and record trailer information.
File Trailer	ZZZ	Contains submitter and batch trailer information.

In addition to the FERAS error codes, plans receive RAPS error codes. These error codes notify plans of errors in the CCC level of the RAPS file, including errors in the diagnosis cluster. There are no recent updates to the RAPS Error codes.

2.5.1 FERAS Error Codes

When an MA organization submits a RAPS file to FERAS, FERAS performs the format and integrity checks. Format and integrity checks include verification that the layout of the file is correct, that valid plan numbers are included, that sequence numbering is correct, and many other general checks to the AAA and ZZZ records. FERAS also checks to ensure that there is at least one CCC record with a diagnosis cluster in the file.

If all checks pass, the submission continues in RAPS. If any of the data fail, FERAS rejects the complete file and generates the FERAS Response Report. The FERAS Response Report identifies the errors discovered during the edit check with 100 and 200 level error codes. Table 2I describes the FERAS error code ranges.

TABLE 2I – FERAS ERROR CODE RANGES

Error Code Level	Explanation
100	File-level errors on the AAA or ZZZ records.
200	Batch-level errors on the BBB or YYY records.
300 and 400	Detail-level errors on the CCC records – first and last only in FERAS.

NOTE: RAPS edits include 300, 400, and 500 level edits. The 500 level edits are informational.

2.5.1.1 New FERAS Error Codes

Beginning January 1, 2012, the following FERAS Error Codes were added to the error code list. Table 2J provides the new or re-defined error codes.

TABLE 2J – FERAS ERROR CODES NEW FOR 2012

Error Code	Description
109	ICD 10 FILES NOT ACCEPTED AT THIS TIME
214	CONTRACT ENROLLMENT DATE NOT ON FILE

A complete list of all FERAS error codes is available on the CSSC website under RAPS.

Error code 109 is being implemented to facilitate the transition to ICD-10 codes. This error will be sent to plans if they submit RAPS files with dates of service previous to the ICD-10 transition date of October 1, 2014 in the AAA record with ICD-10 codes in the diagnosis clusters of the CCC records.

Error 214 is a new error code for the BBB batch level to inform plans that CMS does not have an enrollment date for the contract number listed in field three of the BBB Record.

Example 5

A submission analyst at plan QED Health submitted a RAPS file with ICD-10 codes on the new ICD-10 compliant layout. On the RAPS Return file, QED Health received error code 109 for those diagnosis clusters that contained ICD-10 codes. They received the error, because while the ICD-10 compliant RAPS layout is available, CMS will not accept ICD-10 codes prior to the ICD-10 implementation date.

2.6 Reporting

Throughout the year, plans receive reports from RAPS and MARx to communicate activity for their enrolled beneficiaries in regard to issues from enrollment to payment. Both the FERAS and RAPS systems generate reports that provide the results of the edit checks in each stage of processing. Some reports present summary-level data, others present details about individual diagnosis clusters, including whether or not a cluster generated an error in RAPS. In addition, RAPS generates a series of management reports to assist plans with managing data collection and submission. It is essential that the appropriate staff at MA organizations understand how to interpret the reports and resolve any issues identified. In addition to the reports generated by FERAS and RAPS, plans receive monthly reports from MARx that can be used in reconciling risk score and payment information; specifically the Monthly Membership (MMR) and Model Output Reports (MORs).

2.6.1 FERAS and RAPS Reporting

The various reports display the results of the data submitted to RAPS, such as diagnoses submitted, accepted, and rejected, as well as errors. Table 2K and 2L provides an overview of the reports that FERAS and RAPS sends to plans.

TABLE 2K – FERAS REPORT

FERAS Report	
FERAS Response Report	• Indicates file is accepted or rejected • Identifies reasons for rejection • Report layout • Secured Website and FTP users receive reports the same business day • Connect:Direct users receive reports the next business day • Gentran users currently receive reports the next business day • TIBCO users receive reports the next business day

TABLE 2L – RAPS REPORTS

RAPS Transaction Processing Reports	
RAPS Return File	• Contains the entire submitted transaction • Identifies 300-, 400-, and 500-level errors • Flat file layout • Received the next business day after submission
RAPS Transaction Error Report	• Communicates errors found in CCC records during processing • Displays only 300-, 400-, and 500-level error codes • Report layout • Received the next business day after submission
RAPS Transaction Summary Report	• Summarizes the disposition of diagnosis clusters • Report layout • Received the next business day after submission
RAPS Duplicate Diagnosis Cluster Report	• Identifies diagnosis clusters with 502-error message • Clusters accepted, but not stored • Report layout • Received the next business day after submission

TABLE 2L – RAPS REPORTS (CONTINUED)

RAPS Management Reports	
RAPS Monthly Plan Activity Report	• Provides monthly summary of the status of submissions by Submitter ID and Plan Number • Report layout • Available for download the second business day of the month • Generated only when plan has activity in current month
RAPS Cumulative Plan Activity Report	• Provides cumulative summary of the status of submissions by Submitter ID and Plan Number • Report layout • Available for download the second business day of the month o Beginning August 2012, the report will only generate when a plan has activity for the month of the report
RAPS Monthly Error Frequency Report	• Provides a monthly summary of all errors associated with files submitted in test and production • Report layout • Available for download the second business day of the month
RAPS Quarterly Error Frequency Report	• Provides a quarterly summary of all errors on all file submissions within the 3-month quarter • Report layout • Available for download the second business day of the month following each quarter

It is the plans responsibility to download and save all reports received. Plans may want to work with their IT Departments to establish a process for downloading and maintaining reports over time. Plans should keep reports for future reference of diagnosis cluster acceptance and other activity, as it is their responsibility to ensure the RAPS data is accepted. If a plan receives errors, they should correct and resubmit as soon as possible because waiting until a submission deadline does not guarantee the diagnosis will be accepted and included in risk score calculation.

It is important to understand when plans receive reports is related to the cut off time for file transfer. The cut off time for data submission and completion of file transfer is 5:00 PM EST, Monday through Friday. So, of a plan submits a RAPS File, but does not receive the RAPS report the next morning, then the plan did not meet the cut off. Any files submitted after 5:00 PM EST, will be processed the next day and the reports will come the following morning. If a file is received on Friday after 5:00 PM, the file will not go up to CMS until Monday, and the reports will be returned Tuesday morning.

If needed, plans may contact CSSC Operations to request a report be restored. When requesting to restore reports, the plan must provide the File ID and the date the file was submitted. However, if requesting many reports from previous years, CSSC will first contact CMS to obtain permission before restoring the reports.

2.6.1.1 RAPS Monthly and Cumulative Plan Activity Reports

In 2012, CMS made changes regarding the RAPS Monthly and Cumulative Plan Activity Reports. The RAPS Monthly Plan Activity Report provides a summary of the status of submissions and the RAPS Cumulative Plan Activity Report accumulates a summary of the status of submissions over time. The reports are arrayed by provider type and

month (determined by through date of service). The RAPS Monthly Plan Activity Report is organized by submitter ID and plan number, while the RAPS Cumulative Plan Activity report is organized by plan number.

The RAPS Cumulative Plan Activity Reports will now be distributed to plans in ICD-9 and ICD-10 versions following the ICD-10 implementation. Plans can identify each report by the "**ICD9**" or "**ICD10**" label in the report header. Figure 2C shows the layout of the reformatted report.

Figure 2C – ICD-10 Compliant RAPS Cumulative Plan Activity Report

1REPORT: RAPM0020 **ICD10** CMS RAPS ADMINISTRATION
PAGE: 1
RUN DATE: 20100818 RAPS CUMULATIVE PLAN ACTIVITY REPORT
SERVICE YEAR: 2009

PLAN NO: H0000 FOR PERIOD ENDING JULY 31, 2010

PROVIDER TYPE/TOTALS	JANUARY	FEBUARY	MARCH	APRIL	MAY	JUNE	TOTAL
PRINCIPAL INPATIENT							
TOTAL SUBMITTED	2				0	0	224
TOTAL REJECTED	2				0	0	224
TOTAL ACCEPTED	0				0	0	0
TOTAL STORED	0				0	0	0
TOTAL MODEL STORED	0				0	0	0
TOTAL DELE ACPTD	0	0	0	0	0	0	0
TOTAL DELE RJCTD	0	0	0	0	0	0	0
OTHER INPATIENT							
TOTAL SUBMITTED	18	66	98	1284	0	0	1466
TOTAL REJECTED	18	66	98	1284	0	0	1466
TOTAL ACCEPTED	0	0	0	0	0	0	0
TOTAL STORED	0	0	0	0	0	0	0
TOTAL MODEL STORED	0	0	0	0	0	0	0
TOTAL DELE ACPTD	0	0	0	0	0	0	0
TOTAL DELE RJCTD	0	0	0	0	0	0	0
OUTPATIENT							
TOTAL SUBMITTED	40	44	246	876	0	0	1206
TOTAL REJECTED	40	44	246	876	0	0	1206
TOTAL ACCEPTED	0	0	0	0	0	0	0
TOTAL STORED	0	0	0	0	0	0	0
TOTAL MODEL STORED	0	0	0	0	0	0	0
TOTAL DELE ACPTD	0	0	0	0	0	0	0
TOTAL DELE RJCTD	0	0	0	0	0	0	0
PHYSICIAN							
TOTAL SUBMITTED	70	110	284	714	2	0	1180
TOTAL REJECTED	70	110	284	714	2	0	1180
TOTAL ACCEPTED	0	0	0	0	0	0	0
TOTAL STORED	0	0	0	0	0	0	0
TOTAL MODEL STORED	0	0	0	0	0	0	0
TOTAL DELE ACPTD	0	0	0	0	0	0	0
TOTAL DELE RJCTD	0	0	0	0	0	0	0

Upon conversion to ICD-10, the Cumulative Plan Activity Report will come in two versions, ICD-9 and ICD-10.

In addition, beginning in August 2012, CMS will no longer distribute the RAPS Cumulative Plan Activity Report to a plan when there is no plan activity to be reported for that period.

2.6.2 MARx Reporting

MARx reports contain the beneficiary data that is needed to verify risk scores and plan payments for individual beneficiaries. The MMR contains demographic and payment data, while the MOR contains diagnosis data that is used in the model.

These reports are available in data file and report layout versions. The data file versions are ideal for importing into a database for analysis of enrollee data, verifying risk scores, statuses, etc. Report layouts have predetermined fields and provide information specific to the fields included on the report.

Table 2M outlines the reports available for risk score verification from MARx.

TABLE 2M – MARx REPORTS FOR RISK SCORE VERIFICATION

MARx Report	Description
Monthly Membership Detail Report – Non Drug Report	Reports beneficiary level demographic and Part C payment information as it was recorded in CMS systems at the time of payment calculation.
Monthly Membership Detail Report – Drug Report	Reports beneficiary level demographic and Part D payment information as it was recorded in CMS systems at the time of payment calculation.
Monthly Membership Detail Data File	Reports all information that is contained in both the Drug and Non Drug MMR report layouts. This file is a flat file, which is conducive to use in a database.
Part C Risk Adjustment Model Output Report	Reports beneficiary level HCCs, Medicaid, and Disability factors used in the risk score calculation during the most recent model run. This report is also available in a flat file layout.
Part D RA Model Output Report	Reports beneficiary level Rx-HCCs, Medicaid, and Disability factors used in the risk score calculation during the most recent model run. This report is also available in a flat file layout.

The MMR and MOR reports and data file layouts are available in the Plan Communications User Guide (PCUG) Appendices on the CMS MAPD Helpdesk website at http://www.cms.hhs.gov/Research-Statistics-Data-and-Systems/CMS-Information-Technology/mapdhelpdesk/Plan_Communications_User_Guide.html. Plans should regularly check the MAPD Helpdesk for updates to the PCUG.

2.6.2.1 2012 Part C Model Output Report (MOR)

In 2012, CMS implemented a new risk adjustment model for ESRD and PACE plans, which is known as Version 21. For beneficiaries who are neither ESRD or in a PACE plan, beneficiary risk scores continue to be calculated using the version (Version 12) of the model announced in the Announcement of Calendar Year (CY) 2009 Medicare Advantage Capitation Rates and Medicare Advantage and Part D Payment Policies.

To facilitate reporting of the HCCs for the different models in a single MOR, CMS developed two different layouts identified by record type for the MOR, one for Version 12 of the model, and one for Version 21 of the model. The layout for Version 12 is known as Record Type A and Version 21 is known as Record Type B. The Type B layout is formatted to account for the new HCCs and interactions in Version 21 of the model, as well as the fact that it has to support beneficiaries identified as either ESRD or PACE.

Beneficiaries will only appear on either the Type A or Type B layout in a single MOR. At no point will a beneficiary have a Type A record and Type B record in the same file.

Because the Type B layout carries information for beneficiaries in PACE plans as well as those in ESRD status, a field is included in the Type B layout to differentiate between the two types of beneficiaries, the RAS ESRD Indicator switch. This field is populated with a 'Y' when the record is carrying information for the ESRD model, meaning that

the ESRD model was used to calculate the risk score for the beneficiary. This is particularly important to PACE plans, which can have records on a MOR from both the ESRD and PACE versions of the model in the same file.

In addition to the ESRD indicator on the Type B MOR layout, the interactions have changed as well. Where with the Type A layout the interactions appear as numbers, INT6 for example, on the Type B layout the interactions have text descriptions in the report and flat file versions.

Table 2N below shows the new Type B record layout for ESRD and PACE. The new fields are shaded in gray for easy identification.

TABLE 2N – 2012 TYPE B MOR LAYOUT

Field #	Field Name	Field Description
1	Record Type Code	1 = Header, A = Details for V12 PTC MOR, B = Details for V21 PTC MOR, 3 = Trailer
2	Health Insurance Claim Account Number	This is the Health Insurance Claim Account Number (known as HICAN) identifying the primary Medicare Beneficiary under the SSA or RRB programs. The HICAN consists of Beneficiary Claim Number (BENE_CAN_NUM) along with the Beneficiary Identification Code (BIC_CD) uniquely identifies a Medicare Beneficiary. For the RRB program, the claim account number is a 12-byte account number.
3	Beneficiary Last Name	Beneficiary Last Name
4	Beneficiary First Name	Beneficiary First Name
5	Beneficiary Initial	Beneficiary Initial
6	Date of Birth	The date of birth of the Medicare Beneficiary
7	Sex	Represents the sex of the Medicare Beneficiary. Examples include Male and Female.
8	Social Security Number	The beneficiary's current identification number that was assigned by the Social Security Administration.
9	RAS ESRD Indicator Switch	The beneficiary's ESRD status as of the model run. Also indicates if the beneficiary was processed by the ESRD models in the model run.
10	Age Group Female0_34	Female between ages 0 and 34, inclusive.
11	Age Group Female35_44	Female between ages 35 and 44, inclusive.
12	Age Group Female45_54	Female between ages 45 and 54, inclusive.
13	Age Group Female55_59	Female between ages 55 and 59, inclusive.
14	Age Group Female60_64	Female between ages 60 and 64, inclusive.
15	Age Group Female65_69	Female between ages 65 and 69, inclusive.
16	Age Group Female70_74	Female between ages 70 and 74, inclusive.
17	Age Group Female75_79	Female between ages 75 and 79, inclusive.
18	Age Group Female80_84	Female between ages of 80 and 84, inclusive.
19	Age Group Female85_89	Female between ages of 85 and 89, inclusive.
20	Age Group Female90_94	Female between ages of 90 and 94, inclusive.
21	Age Group Female95_GT	Female, age 95 or greater.
22	Age Group Male0_34	Male between ages of 0 and 34, inclusive.
23	Age Group Male35_44	Male between ages of 35 and 44, inclusive.

TABLE 2N – 2012 TYPE B MOR LAYOUT (CONTINUED)

Field #	Field Name	Field Description
24	Age Group Male45_54	Male between ages of 45 and 54, inclusive.
25	Age Group Male55_59	Male between ages of 55 and 59, inclusive.
26	Age Group Male60_64	Male between ages of 60 and 64, inclusive.
27	Age Group Male65_69	Male between ages of 65 and 69, inclusive.
28	Age Group Male70_74	Male between ages of 70 and 74, inclusive.
29	Age Group Male75_79	Male between ages of 75 and 79, inclusive.
30	Age Group Male80_84	Male between ages of 80 and 84, inclusive.
31	Age Group Male85_89	Male between ages of 85 and 89, inclusive.
32	Age Group Male90_94	Male between ages of 90 and 94, inclusive.
33	Age Group Male95_GT	Male, age 95 or greater.
34	Medicaid Female Disabled	Beneficiary is a female disabled and also entitled to Medicaid.
35	Medicaid Female Aged	Beneficiary is a female aged (> 64) and also entitled to Medicaid.
36	Medicaid Male Disabled	Beneficiary is a male disabled and also entitled to Medicaid.
37	Medicaid Male Aged	Beneficiary is a male aged (> 64) and also entitled to Medicaid.
38	Originally Disabled Female	Beneficiary is a female and original Medicare entitlement was due to disability.
39	Originally Disabled Male	Beneficiary is a male and original Medicare entitlement was due to disability.
40	HCC001	HIV/AIDS
41	HCC002	Septicemia, Sepsis, Systemic Inflammatory Response Syndrome/Shock
42	HCC006	Opportunistic Infections
43	HCC008	Metastatic Cancer and Acute Leukemia
44	HCC009	Lung and Other Severe Cancers
45	HCC010	Lymphoma and Other Cancers
46	HCC011	Colorectal, Bladder, and Other Cancers
47	HCC012	Breast, Prostate, and Other Cancers and Tumors
48	HCC017	Diabetes with Acute Complications
49	HCC018	Diabetes with Chronic Complications
50	HCC019	Diabetes without Complication
51	HCC021	Protein-Calorie Malnutrition
52	HCC022	Morbid Obesity
53	HCC023	Other Significant Endocrine and Metabolic Disorders
54	HCC027	End-Stage Liver Disease
55	HCC028	Cirrhosis of Liver
56	HCC029	Chronic Hepatitis
57	HCC033	Intestinal Obstruction/Perforation
58	HCC034	Chronic Pancreatitis
59	HCC035	Inflammatory Bowel Disease
60	HCC039	Bone/Joint/Muscle Infections/Necrosis
61	HCC040	Rheumatoid Arthritis and Inflammatory Connective Tissue Disease
62	HCC046	Severe Hematological Disorders
63	HCC047	Disorders of Immunity
64	HCC048	Coagulation Defects and Other Specified Hematological Disorders
65	HCC051	Dementia With Complications
66	HCC052	Dementia Without Complication

TABLE 2N – 2012 TYPE B MOR LAYOUT (CONTINUED)

Field #	Field Name	Field Description
67	HCC054	Drug/Alcohol Psychosis
68	HCC055	Drug/Alcohol Dependence
69	HCC057	Schizophrenia
70	HCC058	Major Depressive, Bipolar, and Paranoid Disorders
71	HCC070	Quadriplegia
72	HCC071	Paraplegia
73	HCC072	Spinal Cord Disorders/Injuries
74	HCC073	Amyotrophic Lateral Sclerosis and Other Motor Neuron Disease
75	HCC074	Cerebral Palsy
76	HCC075	Polyneuropathy
77	HCC076	Muscular Dystrophy
78	HCC077	Multiple Sclerosis
79	HCC078	Parkinson's and Huntington's Diseases
80	HCC079	Seizure Disorders and Convulsions
81	HCC080	Coma, Brain Compression/Anoxic Damage
82	HCC082	Respirator Dependence/Tracheostomy Status
83	HCC083	Respiratory Arrest
84	HCC084	Cardio-Respiratory Failure and Shock
85	HCC085	Congestive Heart Failure
86	HCC086	Acute Myocardial Infarction
87	HCC087	Unstable Angina and Other Acute Ischemic Heart Disease
88	HCC088	Angina Pectoris
89	HCC096	Specified Heart Arrhythmias
90	HCC099	Cerebral Hemorrhage
91	HCC100	Ischemic or Unspecified Stroke
92	HCC103	Hemiplegia/Hemiparesis
93	HCC104	Monoplegia, Other Paralytic Syndromes
94	HCC106	Atherosclerosis of the Extremities with Ulceration or Gangrene
95	HCC107	Vascular Disease with Complications
96	HCC108	Vascular Disease
97	HCC110	Cystic Fibrosis
98	HCC111	Chronic Obstructive Pulmonary Disease
99	HCC112	Fibrosis of Lung and Other Chronic Lung Disorders
100	HCC114	Aspiration and Specified Bacterial Pneumonias
101	HCC115	Pneumococcal Pneumonia, Emphysema, Lung Abscess
102	HCC122	Proliferative Diabetic Retinopathy and Vitreous Hemorrhage
103	HCC124	Exudative Macular Degeneration
104	HCC134	Dialysis Status
105	HCC135	Acute Renal Failure
106	HCC136	Chronic Kidney Disease, Stage 5
107	HCC137	Chronic Kidney Disease, Severe (Stage 4)
108	HCC138	Chronic Kidney Disease, Moderate (Stage 3)

TABLE 2N – 2012 TYPE B MOR LAYOUT (CONTINUED)

Field #	Field Name	Field Description
109	HCC139	Chronic Kidney Disease, Mild or Unspecified (Stages 1-2 or Unspecified)
110	HCC140	Unspecified Renal Failure
111	HCC141	Nephritis
112	HCC157	Pressure Ulcer of Skin with Necrosis Through to Muscle, Tendon, or Bone
113	HCC158	Pressure Ulcer of Skin with Full Thickness Skin Loss
114	HCC159	Pressure Ulcer of Skin with Partial Thickness Skin Loss
115	HCC160	Pressure Pre-Ulcer Skin Changes or Unspecified Stage
116	HCC161	Chronic Ulcer of Skin, Except Pressure
117	HCC162	Severe Skin Burn or Condition
118	HCC166	Severe Head Injury
119	HCC167	Major Head Injury
120	HCC169	Vertebral Fractures without Spinal Cord Injury
121	HCC170	Hip Fracture/Dislocation
122	HCC173	Traumatic Amputations and Complications
123	HCC176	Complications of Specified Implanted Device or Graft
124	HCC186	Major Organ Transplant or Replacement Status
125	HCC188	Artificial Openings for Feeding or Elimination
126	HCC189	Amputation Status, Lower Limb/Amputation Complications
127	Disabled Disease HCC006	Disabled (Age<65) and CMS Ver 021 HCC 006 Opportunistic Infections
128	Disabled Disease HCC034	Disabled (Age<65) and CMS Ver 021 HCC 034 Chronic Pancreatitis
129	Disabled Disease HCC046	Disabled (Age<65) and CMS Ver 021 HCC 046 Severe Hematological Disorders
130	Disabled Disease HCC054	Disabled (Age<65) and Disabled (Age<65) and CMS Ver 021 HCC 054 Drug/Alcohol Psychosis
131	Disabled Disease HCC055	Disabled (Age<65) and CMS Ver 021 HCC 055 Drug/Alcohol Dependence
132	Disabled Disease HCC110	Disabled (Age<65) and CMS Ver 021 HCC 110 Cystic Fibrosis
133	Disabled Disease HCC176	Disabled (Age<65) and CMS Ver 021 HCC 176 Complications of Specified Implanted Device or Graft
134	CANCER_IMMUNE	CANCER_IMMUNE
135	CHF_COPD	CHF_COPD
136	CHF_RENAL	CHF_RENAL
137	COPD_CARD	COPD_CARD
138	DIABETES_	DIABETES_
139	SEPSIS_CARD	SEPSIS_CARD
140	Medicaid	Beneficiary is entitled to Medicaid.
141	Originally Disabled	Beneficiary original Medicare entitlement was due to disability.
142	Disabled Disease HCC039	Disabled (Age<65) and CMS Ver 021 HCC 039 Bone/Joint/Muscle Infections/Necrosis
143	Disabled Disease HCC077	Disabled (Age<65) and CMS Ver 021 HCC 077 Multiple Sclerosis
144	Disabled Disease HCC085	Disabled (Age<65) and CMS Ver 021 HCC 085 Congestive Heart Failure
145	Disabled Disease HCC161	Disabled (Age<65) and CMS Ver 021 HCC 161 Chronic Ulcer of Skin, Except Pressure

TABLE 2N – 2012 TYPE B MOR LAYOUT (CONTINUED)

Field #	Field Name	Field Description
146	ART_OPENINGS_PRESSURE_ULCER	ART_OPENINGS_PRESSURE_ULCER
147	ASP_SPEC_BACT_PNEUM_PRES_ULC	ASP_SPEC_BACT_PNEUM_PRES_ULC
148	COPD_ASP_SPEC_BACT_PNEUM	COPD_ASP_SPEC_BACT_PNEUM
149	DISABLED_PRESSURE_ULCER	DISABLED_PRESSURE_ULCER
150	SCHIZO-PHRENIA_CHF	SCHIZO-PHRENIA_CHF
151	SCHIZO-PHRENIA_COPD	SCHIZO-PHRENIA_COPD
152	SCHIZO-PHRENIA_SEIZURES	SCHIZO-PHRENIA_SEIZURES
153	SEPSIS_ARTIF_OPENINGS	SEPSIS_ARTIF_OPENINGS
154	SEPSIS_ASP_SPEC_BACT_PNEUM	SEPSIS_ASP_SPEC_BACT_PNEUM
155	SEPSIS_PRESSURE_ULCER	SEPSIS_PRESSURE_ULCER
156	Filler	Filler

CMS recommends plans use the MOR flat file when storing MOR data in their internal database. For purposes of reading the MOR with the "naked eye," or to view an individual beneficiary, it is recommended to use a formatted report. Figure 2D shows a sample Model Output Report for an MA plan that illustrates two beneficiaries; one Record Type A (non-ESRD) and one Record Type B (ESRD).

Figure 2D – Sample MOR Report for an MA Plan

```
1RUN DATE: 20120610                    RISK ADJUSTMENT MODEL OUTPUT REPORT                                    PAGE:     1
 PAYMENT MONTH: 201207                 PLAN: H9999 SAMPLE MOR Report                                             RAPMORP1
0            LAST            FIRST                                    DATE OF
 HIC         NAME            NAME           I                         BIRTH    SEX & AGE GROUP  ESRD
 ----------- --------------- -------------- -                         -------- ---------------  ----

 XXXXXXXXXB  NAME            FIRST          I                        19000000 Female70-74      y
 HCC DISEASE GROUPS:  HCC017 Diabetes with Acute Complications
                      HCC134 Dialysis Status

 XXXXXXXXXB  NAME            FIRST          I                        000000 Male80-84          N
 Medicaid Female Aged (Age<65)
 HCC DISEASE GROUPS:  HCC045 Disorders of Immunity
                      HCC054 Schizophrenia
                      HCC074 Seizure Disorders and Convulsions
```

RAS ESRD Indicator Switch

Updates to the reports are distributed in the Software Announcements posted to the MAPD Helpdesk at http://www.cms.hhs.gov/Research-Statistics-Data-and-Systems/CMS-Information-Technology/mapdhelpdesk

Example 6

A payment reconciliation analyst at QED Health pulls the July Part C MOR data file for the first six months of 2012 to ensure that adjustments were applied correctly. Before she can properly read the report layouts, she must first look to the first field in the record, Record Type Code, to ensure that she is applying the correct format, remembering that those with an "A" in the first field use the same layout as 2011 and those with a "B" in the first field will contain data for the ESRD enrollees in QED Health and use the version 21 layout above.

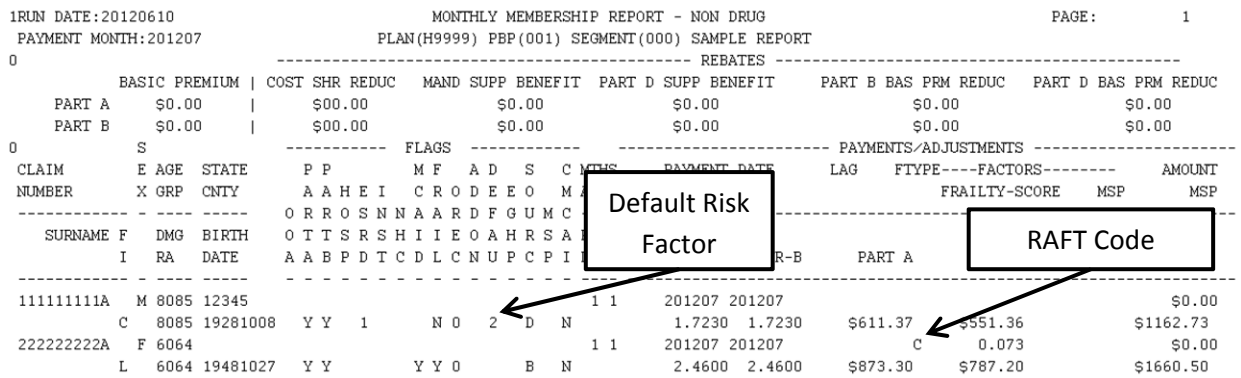
Example 7

A payment analyst as QED PACE is reconciling payments and notices that because she is analyzing payments for a PACE plan, all records in the file begin with a "B." However, because the relative factors related to the HCCs displayed on the MOR could belong to those in PACE or ESRD status, she must divide the MOR out between the PACE enrollees and the PACE enrollees with ESRD. To segregate the ESRD beneficiaries for the purpose of assigning relative factors to the HCCs on the MOR, she must use Field 9 on the Type B layout, the RAS ESRD Indicator Switch.

2.6.3 Reporting New and Default Status Enrollees

RAFT codes and Default Risk Factor Codes on the MMR communicate which model was used to calculate the risk score for a beneficiary. When the risk score is calculated for a beneficiary that does not have diagnosis data for 12 months in a data collection period on record in RAPS, they can be assigned either a New Enrollee RAFT code or a Default Risk Factor Code. Figure 2E shows how these statuses are reported to plans on the MMR.

Figure 2E – RAFT Code and Default Risk Factor Reporting



2.6.3.1 New Enrollee RAFT Codes vs. Default Risk Factor Codes

A New Enrollee factor is used when a beneficiary is newly eligible to Medicare and has less than 12 months of Part B coverage. This is because the enrollee does not have a full 12 months of diagnoses that can be used to calculate a risk score for full risk beneficiaries. In this case, RAS generates a New Enrollee risk score and identifies the RAFT Code in Field 47 of the data file.

Beneficiaries with less than 12 months of Part B will get the new enrollee risk score during the model run, but a default factor is assigned for new enrollment in Medicare after the model run, change in status (i.e., new to ESRD),

a change in HIC number, or in rare cases when there is a lapse in Part B coverage (i.e., when a beneficiary has not paid their premium).

While the New Enrollee and Default codes are triggered for different reasons, they link to the same tables for relative factors for the beneficiaries. So, in calculating the risk score for two beneficiaries, one with RAFT code E1 and one with Default Risk Factor Code 5, the same table of relative factors is used. Table 2O maps the RAFT codes to the Default Risk Factor Codes.

TABLE 2O – DEFAULT RISK FACTOR TO RAFT CODE

Default Risk Factor Code	Description	RAFT Code
1	Default/New Enrollee - Aged/Disabled	E
2	Default/New Enrollee - ESRD dialysis	ED
3	Default/New Enrollee - ESRD Transplant Kidney, Month 1	G1
4	Default/New Enrollee - ESRD Transplant Kidney, Months 2-3	G2
5	Default/New Enrollee - ESRD Post Graft, Months 4-9	E1
6	Default/New Enrollee - ESRD Post Graft, 10+Months	E2
7	Default/New Enrollee - Chronic Care SNP Enrollee	SE

At final payment reconciliation, all beneficiaries enrolled during the payment year receive a RAS-generated risk score.

Example 8

A payment analyst at Plan QED Health is calculating a risk score for two female beneficiaries aged 73, one with a Default Code '2' and another with a RAFT code 'ED' in the 2011 payment year indicating new enrollees with dialysis status. The analyst must use the relative factors from the 2008 CMS-HCC Dialysis Model for New Enrollees, located in the 2008 Announcement. The result for both enrollees is a raw risk score of 1.162. After applying the normalization factor (keeping in mind that the coding difference adjustment does not apply to the dialysis model), both enrollees have a final risk score of 1.096.

2.6.3.1.1 Part A-Only Enrollees

Beneficiaries with 12 or more months of entitlement to benefits under Part A and less than 12 months of Part B enrollment during the data collection period (referred to as "Part A-only" enrollees) are considered new enrollees for the purpose of risk adjusted payments. Because of concerns expressed by some demonstrations that "Part A only" enrollees are always considered to be new enrollees, CMS created an option for determining payments for this category of enrollees. Effective for 2006 payments, organizations may elect to have CMS determine payments for all "Part A-only" enrollees using either new enrollee factors or full risk adjustment factors. The organization's decision will be applied to all "Part A-only" enrollees in the plan. Plans may not elect to move some eligible "Part A-only" enrollees into risk adjustment, while retaining others as new enrollees.

2.7 Plan Termination

Reporting is an essential part of the Medicare Advantage contracting system. Therefore, plans must be aware that when they terminate their contract with CMS, access to any MARx reports is removed and no subsequent monthly payments are made. A final settlement must be completed as payment adjustments continue to be processed for the periods when there was an active contract.

It depends on the circumstances as to whether the plan can still submit RAPS data after terminating a contract. If an insurance carrier is terminating all its contracts and its relationship with Medicare, and has no other means of submitting data, then CMS has a deadline in place to require them to submit the data by the March deadline for the last data collection period during which they are operating. For instance, January 2011 through December 2011 dates of service must be submitted by March 4, 2012. This allows any plan to which the terminating plans' enrollees move to receive appropriate payment starting at the mid-year update of the year after the plan terminated, because the deadline for terminating plans is the same as the regular mid-year deadline.

If a contract or a plan is terminating, but the entity continues to have a relationship with Medicare and an EDI agreement with the front-end, then data can be submitted up to the normal deadline. If an entity has the ability to continue to submit data, they should follow all the usual rules. However, they should never use another contractor's ID to submit data.

2.7.1 Plan Termination Process

When a plan terminates its contract, CMS conducts an analysis of payment adjustments and premiums for retroactive months up to the point that the final Risk Adjustment and Part D Reconciliations are completed, usually by the fall of the year after the plan terminates its contract. A determination is made whether CMS owes the plan or the plan owes funds to CMS.

The results of this analysis, plus copies of the final Monthly Membership and Monthly Premium Withholding Reports, are mailed to the plans. If the plan owes CMS, instructions for wiring the funds are provided. If CMS owes the plan, the latest banking information on file is provided so that it can be verified. Plans are allowed 120 days to appeal, but must notify the DPO representative within 30 days of the date on the cover letter of this intention.

CMS conducts an analysis of all payment activity occurring after termination up to the point that final Risk Adjustment and Part D reconciliations are completed. Coverage Gap Discount (CGD) reconciliation occurs as a second phase of the Part D annual reconciliation. As a result of the time it takes to complete all the reconciliations, plans can anticipate receiving their final settlement information in late spring two years following the year the contract terminates.

Plans have certain responsibilities in the termination process. For instance, plans must:

- Give CMS notice at least 90 days before the intended date of termination which specifies the reasons the MA organization is requesting contract termination.

- Give enrollees a CMS-approved notice at least 60 days before the proposed termination effective date and include a description of alternatives available for obtaining Medicare services within the service area, including alternative MA plans, Medigap options, original fee-for-service Medicare.

- Notify the public at least 60 days before the termination effective date by publishing a CMS-approved notice in one or more newspapers of general circulation in each community or county located in the MA organization's service area.

MODULE 3 – RISK SCORE CALCULATION

Purpose

CMS uses the risk adjustment models to calculate a risk score for each beneficiary. Calculation of the risk score requires pulling data from many sources. This training demonstrates how CMS performs the risk score calculation by using complex examples so plans will have an understanding of calculating risk scores in various scenarios based on the payment year and beneficiary characteristics.

Learning Objectives

At the completion of this module, participants will be able to:

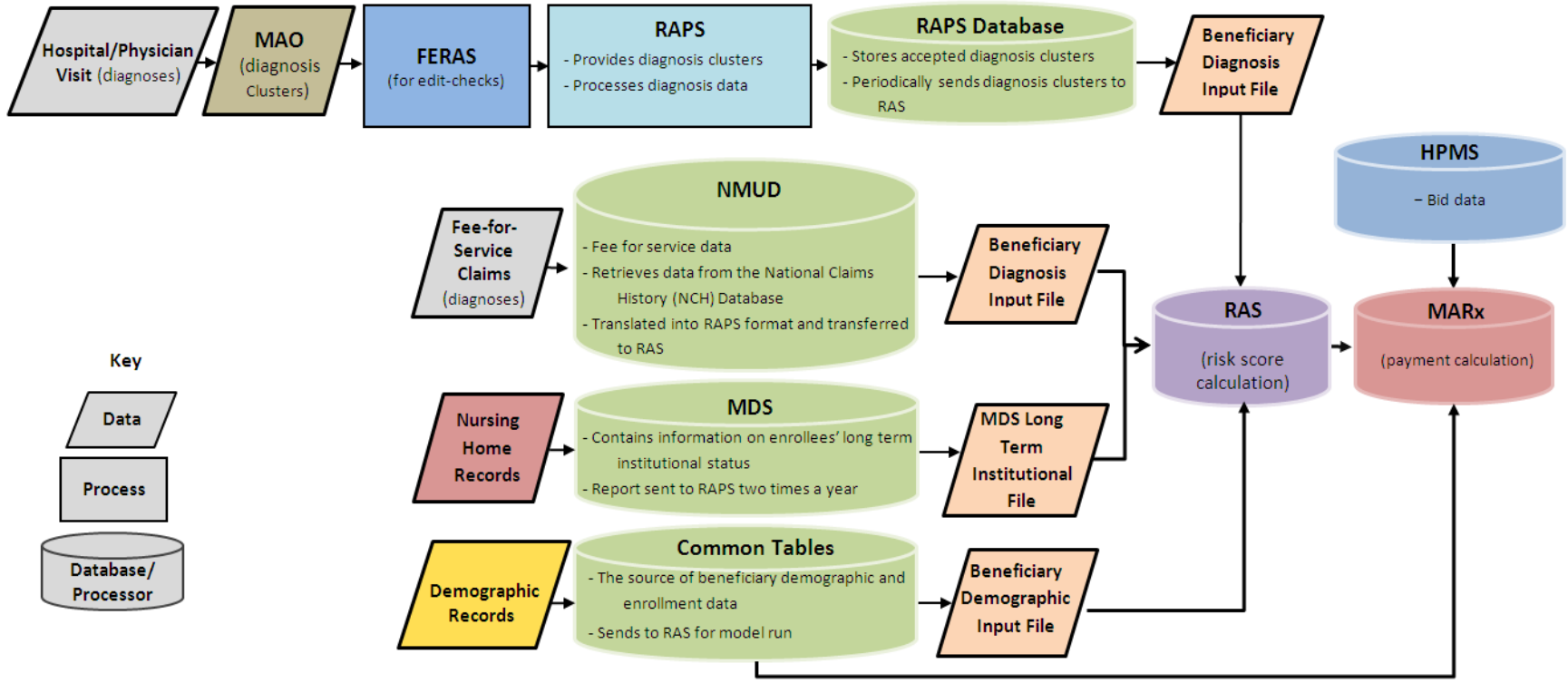
- Describe the sources and flow of risk adjustment data.
- Retrieve demographic and diagnostic information from reports.
- Calculate risk scores.

ICON KEY	
Definition	
Example	
Reminder	
Resource	

3.1 Risk Adjustment Data

CMS adjusts plan payments according to their enrollees' risk scores. The RAS calculates risk scores. In order for the RAS to calculate a risk score, RAS must retrieve data from multiple databases to perform this task. Once the risk scores are calculated, the Medicare Advantage Part D payment system (MARx) calculates payments using these scores. Figure 3A describes the sources of beneficiary data and databases utilized in risk score calculation and the role and/or description of the data source.

Figure 3A – Risk Adjustment Data Processing Flow



When the model is run, RAS uses beneficiary demographic and diagnostic information to calculate a risk score for each beneficiary for whom data is available and assigns New Enrollee risk scores to those for whom insufficient diagnosis data is available. The risk scores then go to MARx, where a payment is calculated based on the RAS-generated risk score and the plan bid information from the Health Plan Management System (HPMS). MARx also generates monthly reports for plans of data used to calculate risk scores used in payment. It is these reports that plans can use to verify their enrollee's risk scores.

TABLE 3A – SOURCES OF BENEFICIARY DATA

Data	Source Database	Description
Diagnosis Data	MAOs and National Medicare Utilization Database (NMUD)	MAOs receive claims from providers and submit diagnosis clusters to RAPS based on claims. The NMUD is the source for diagnoses from FFS Medicare
Institutional Records	MDS	Source of long term institutional data for RAS.
Demographic Data	Common Tables	Source of age, sex, and other demographic data for RAS.
Bid Data	HPMS	Sends bid data to MARx for payment calculation.

Each of these data sources has a mechanism for storing data to have it ready for RAS use.

RAS retrieves data from each of these sources through Input Files:

- RAPS data from a Beneficiary Diagnosis Input File;
- FFS diagnoses from a Beneficiary Diagnosis Input File;
- Institutional data from the MDS Long Term Institutional File; and
- Beneficiary demographic and enrollment from the Beneficiary Demographic Input File.

3.2 Part C Risk Score Calculation Process

Before verifying risk scores, plans must retrieve the MMR and MOR for the contract, payment month, and year of the beneficiary to be verified. The reports are generated monthly from MARx and contain the demographic and diagnosis data that are used in calculating a risk score. The information from MARx is retrieved from multiple sources, many of which update on different schedules. The steps for verifying risk scores with these reports are outlined in the following sections.

Most of the statuses on the MMR are updated monthly, such as demographic flags. However, some elements are updated at each model run. The risk score and the RAFT codes are examples of those elements that are only updated when the model is run.

The HCCs and indicators on the MOR are only updated when the risk adjustment models are run. When a beneficiary receives a risk score in January (the initial run), it is not updated again until July (the mid-year run). Therefore, if a beneficiary has a status change, such as a change in institutional status, this change will not be reported on the MOR or included in the risk score until the mid-year model run. When the model is run for the mid-year update, the beneficiary's risk score will be updated with the more recent data and any necessary retroactive adjustments will be made as well. There are a few exceptions to this cycle. One exception is changes in ESRD status. If a beneficiary becomes ESRD between risk score runs, a default ESRD risk score will be used in payment. At the following risk score run, an ESRD risk score will be calculated.

At each step in the risk score verification process, plans may check their internal databases of beneficiary statuses to verify that their records match with CMS records.

The MMR contains most of the demographic information and the MOR contains mostly diagnosis information. Figure B and Figure C show where to find demographic and disease information relevant to risk score calculation.

Figure 3B – Monthly Membership Report Layout

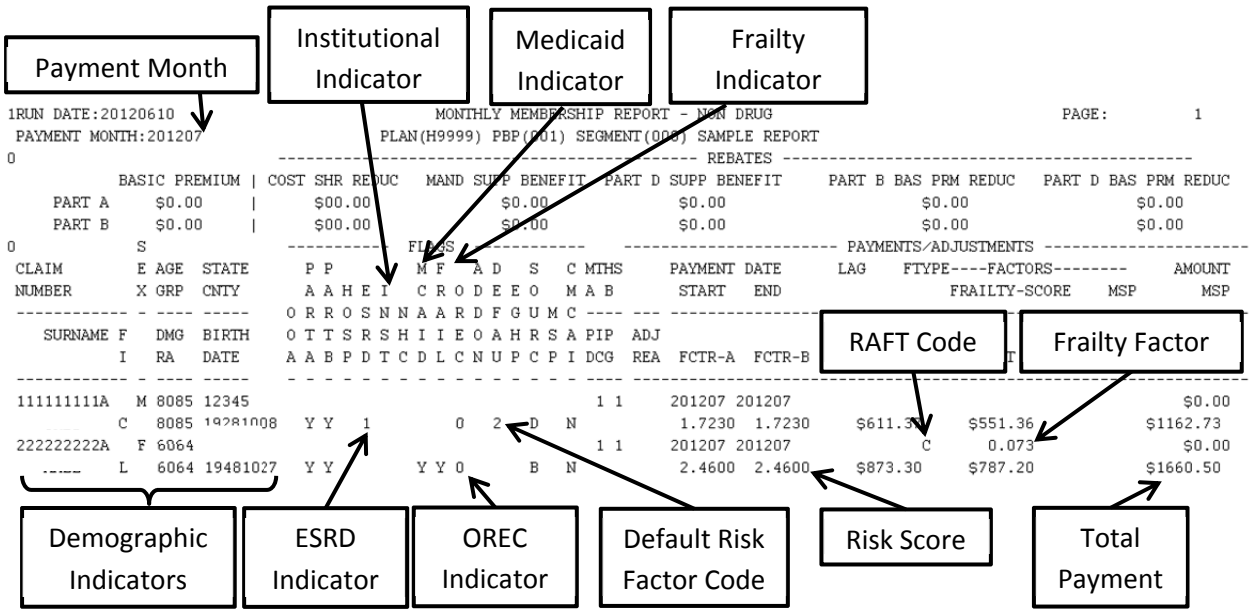
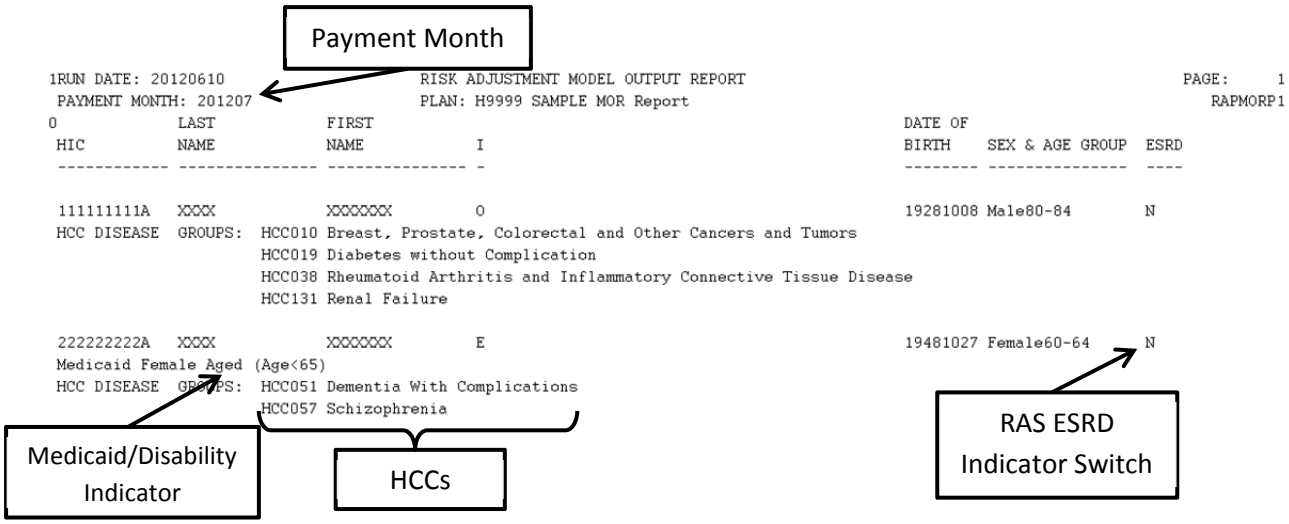


Figure 3C – Model Output Report Layout



3.2.1 Demographic Data

Risk scores are calculated using a combination of demographic and disease components. The demographic statuses that affect payment are available on the MMR. The age, sex, Medicaid status, and Original Reason for Entitlement (OREC) all link directly to coefficients published in the payment announcements. If the plan is a PACE organization or a FIDE SNP that receives a frailty payment, then the frailty status should be checked. This information can come from either the MMR report or data file. For the CMS-HCC, CMS-HCC Functioning Graft model, and the new PACE model, there are two sets of coefficients based on whether the beneficiary is in the community or is in Long Term Institutional (LTI) status. Part C LTI status indicates if the beneficiary is currently in LTI status

Depending on the date of the change in status, it may not affect the risk score immediately. The statuses are incorporated in the risk score each time the model is run, so if a status changes between model runs, it will not be included in the risk score calculation until the following model run. When the model is run, changes that previously took place will be adjusted retroactively. For an explanation of where to find the factors on the MMR, refer to the figures in Section 3.2. Table 3B describes the demographic statuses.

TABLE 3B – RISK ADJUSTMENT DEMOGRAPHIC STATUSES

Status	Description
Age	Age status is based on the age of the beneficiary on February 1st of the payment year, with the exception of beneficiaries who have recently aged into Medicare and may have been 64 on February 1st. These beneficiaries are treated as 65.
Sex	Sex is based on CMS records and used in selecting the relevant the Age/Sex demographic factor.
Medicaid	Medicaid factor is applied to full risk beneficiaries if they have one or more months of Medicaid status in the data collection year and for new enrollees when they have one or more months of Medicaid in the payment year.
Original Reason for Entitlement	An additional factor is added to the risk score if the beneficiary is age 65 or above and was originally entitled to Medicare due to disability. The OREC flag for a beneficiary less than age 65 may be positive, but the factor is not applied for them.
Frailty	An additional factor is applied to beneficiaries who are in a PACE organization or qualifying FIDE-SNP and qualifies for frailty.
Part C Long Term Institutional	The LTI status is based upon 90 day or longer stays in an institutional setting and determines which segment of the model to apply to beneficiaries in the CMS-HCC model and CMS-HCC ESRD Functioning Graft Segments

The Original Reason for Entitlement code is a number, 0-3, that represents the beneficiary's reason for entitlement to Medicare. Table 3C provides a description of each code and whether the code requires the addition of a factor to the risk score.

TABLE 3C – ORIGINAL REASON FOR ENTITLEMENT CODES

OREC	Description	Result in additional factor?
0	Beneficiary insured due to age	NO
1	Beneficiary insured due to disability	YES
2	Beneficiary insured due to ESRD	NO
3	Beneficiary insured due to disability and current ESRD	YES

3.2.2 RAFT Codes

RAFT codes appear on the MMR and signify which model and segment were used in calculating the risk score for an individual beneficiary. Check the RAFT code to determine whether a status (e.g., institutional) was used in the risk score calculation. Use the RAFT code or Default Risk Factor code for the beneficiary to determine:

- Which model was used to calculate the beneficiary's risk score;
- Whether the beneficiary is in new enrollee status;
- What stage of functioning graft the beneficiary is in; and
- Whether to use community or institutional coefficients for CMS-HCC and CMS-HCC Functioning Graft models.

The RAFT code and Default Risk Factor code are displayed on the MMR report layout as well as the Monthly Membership Detail Data File. On the data file, the RAFT code appears in field 47 and the Default Risk Factor code appears in field 23. Table 3D shows the RAFT and Default Risk Factor Codes and the descriptions that help plans determine which model and segment to use to calculate a beneficiary's risk score.

TABLE 3D – RAFT AND DEFAULT RISK FACTOR CODES

RAFT/Default Risk Factor Code	Description	Model	Segment
C	Community	CMS-HCC	Community
C1	Community Post-Graft I (ESRD)	CMS-HCC ESRD	Functioning Graft Community
C2	Community Post-Graft II (ESRD)	CMS-HCC ESRD	Functioning Graft Community
D	Dialysis (ESRD)	CMS-HCC ESRD	Dialysis
E	New Enrollee	CMS-HCC	New Enrollee
ED	New Enrollee Dialysis (ESRD)	CMS-HCC ESRD	Dialysis New Enrollee
E1	New Enrollee Post-Graft I (ESRD)	CMS-HCC ESRD	Functioning Graft New Enrollee
E2	New Enrollee Post-Graft II (ESRD)	CMS-HCC ESRD	Functioning Graft New Enrollee
G1	Graft I (ESRD)	CMS-HCC ESRD	Transplant
G2	Graft II (ESRD)	CMS-HCC ESRD	Transplant
I	Institutional	CMS-HCC	Institutional
I1	Institutional Post-Graft I (ESRD)	CMS-HCC ESRD	Functioning Graft Institutional
I2	Institutional Post-Graft II (ESRD)	CMS-HCC ESRD	Functioning Graft Institutional
SE	New Enrollee Chronic Care SNP	CMS-HCC	C-SNP New Enrollee (PY2011, forward)

TABLE 3D – RAFT AND DEFAULT RISK FACTOR CODES (CONTINUED)

RAFT/Default Risk Factor Code	Description	Model	Segment
1	Default Enrollee- Aged/Disabled	CMS-HCC	New Enrollee
2	Default Enrollee- ESRD dialysis	CMS-HCC ESRD	Dialysis New Enrollee
3	Default Enrollee- ESRD Transplant Kidney, Month 1	CMS-HCC ESRD	Transplant
4	Default Enrollee- ESRD Transplant Kidney, Months 2-3	CMS-HCC ESRD	Transplant
5	Default Enrollee- ESRD Post Graft, Months 4-9	CMS-HCC ESRD	Functioning Graft New Enrollee
6	Default Enrollee- ESRD Post Graft, 10+Months	CMS-HCC ESRD	Functioning Graft New Enrollee
7	Default Enrollee Chronic Care SNP	CMS-HCC	C-SNP New Enrollee (PY2011, forward)

Please note that in payment years 2012, forward, the RAFT codes do not have an indicator to identify PACE organizations when the beneficiary risk score was calculated using the updated PACE version of the CMS-HCC model. Organizations must use their own discretion in determining when this circumstance applies to them.

If the beneficiary does not have a RAFT code listed on the MMR, then check the Default Risk Factor Code. A default code is used when the beneficiary has a risk score assigned after the model run.

3.2.3 Normalization and Coding Adjustment

When CMS calibrates the model, there is a gap between the denominator year and the payment year. The normalization factor adjusts the risk scores so that the average risk score remains 1.0.

Because the original model calibration was conducted with fee-for-service beneficiary data, the coding difference adjustment makes up for the difference in coding patterns between fee-for-service and MA. CMS began using this adjustment in payment year 2010, applying it to the CMS-HCC model and the CMS-HCC ESRD Functioning Graft Model. Table 3E contains the normalization factor and coding intensity adjustments that were used for the models from payment years 2010 through 2013.

TABLE 3E – NORMALIZATION AND CODING INTENSITY FACTORS

Payment Year	Model/Segment	Normalization Factor	Coding Intensity Adjustment
2011	CMS-HCC	1.058	0.0341
2011	CMS-HCC C-SNP	1.058	0.0341
2011	CMS-HCC ESRD Dialysis	1.06	N/A
2011	CMS-HCC ESRD Transplant	1.06	N/A
2011	CMS-HCC ESRD Functioning Graft	1.088	0.0341
2012	CMS-HCC	1.079	0.0341
2012	CMS-HCC C-SNP	1.079	0.0341
2012	CMS-HCC ESRD Dialysis	1.012	N/A
2012	CMS-HCC ESRD Transplant	1.012	N/A
2012	CMS-HCC ESRD Functioning Graft	1.051	0.0341
2012	CMS-HCC PACE	1.051	0.0341
2013	CMS-HCC	1.028	0.0341
2013	CMS-HCC C-SNP	1.028	0.0341
2013	CMS-HCC ESRD Dialysis	1.023	N/A
2013	CMS-HCC ESRD Transplant	1.023	N/A
2013	CMS-HCC ESRD Functioning Graft	1.07	0.0341
2013	CMS-HCC PACE	1.07	0.0341

The Announcements that contain the Normalization, Coding Intensity, and Relative Factors are available on the CMS website at: http://www.cms.gov/Medicare/Health-Plans/MedicareAdvtgSpecRateStats/Announcements-and-Documents.html

3.2.4 Model Factors

After gathering and verifying the information from the reports, including demographic information and HCCs, refer to the appropriate Announcement to locate the relative factors that are assigned to each demographic status and HCC. The Announcements are available on the CMS website at the following address: http://www.cms.gov/Medicare/Health-Plans/MedicareAdvtgSpecRateStats/Announcements-and-Documents.html. Table 3F shows which Announcements to refer to for each year and model combination.

TABLE 3F – ANNOUNCEMENT YEAR BY MODEL

Payment Year	Model/Segment	Announcement Year for Relative Factors
2011	CMS-HCC	2009
2011	CMS-HCC C-SNP New Enrollee	2011
2011	CMS-HCC ESRD Dialysis	2008
2011	CMS-HCC ESRD Transplant	2008
2011	CMS-HCC ESRD Functioning Graft	2008
2012	CMS-HCC	2009
2012	CMS-HCC PACE	2012
2012	CMS-HCC C-SNP New Enrollee	2011
2012	CMS-HCC ESRD Dialysis	2012
2012	CMS-HCC ESRD Transplant	2012
2012	CMS-HCC ESRD Functioning Graft	2012
2013	CMS-HCC	2013
2013	CMS-HCC PACE	2012
2013	CMS-HCC C-SNP New Enrollee	2013
2013	CMS-HCC ESRD Dialysis	2012
2013	CMS-HCC ESRD Transplant	2012
2013	CMS-HCC ESRD Functioning Graft	2012

3.2.4.1 Demographic Coefficients

When CMS calibrates the risk adjustment models, a coefficient is created for each demographic status, representing the additional estimated costs for each demographic status. To determine the coefficient value for each demographic factor that applies to the beneficiary, use the Announcement from the appropriate year. The Age/Sex, Medicaid, and Disability factors are listed in each model publication. Disability is calculated based on the beneficiaries' Original Reason for Entitlement Code (OREC). However, the factor for this flag is only used in the calculation of risk scores for beneficiaries with age greater than 64.

- Age/Sex Factor
- Medicaid Factor
- Disability Factor

The relative factor for Original Reason for Entitlement (OREC) status of 1 (beneficiary insured due to disability) only applies to beneficiaries that are age 65 or above.

Figure 3D provides an example of the demographic coefficients in the 2013 Announcement for the 2013 CMS-HCC model as an example of the demographic characteristics and the associated relative factors for community or institutional beneficiaries. When the risk adjustment models are recalibrated, CMS publishes tables of relative factors in the annual Announcement of Medicare Advantage Capitation Rates and Medicare Advantage and Part D Payment Policies showing the new relative factors for that recalibration.

Figure 3D – Example of Demographic Characteristics and Relative Factors

Variable	Disease Group	Community Factors	Institutional Factors
Female			
0-34 Years		0.210	0.950
35-44 Years		0.217	0.950
45-54 Years		0.276	0.950
55-59 Years		0.343	1.031
60-64 Years		0.415	1.031
65-69 Years		0.279	1.131
70-74 Years		0.337	1.025
75-79 Years		0.426	0.900
80-84 Years		0.525	0.772
85-89 Years		0.651	0.700
90-94 Years		0.786	0.576
95 Years or Over		0.822	0.447
Male			
0-34 Years		0.117	1.089
35-44 Years		0.133	0.960
45-54 Years		0.193	0.960
55-59 Years		0.272	1.020
60-64 Years		0.337	1.082
65-69 Years		0.283	1.281
70-74 Years		0.346	1.178
75-79 Years		0.436	1.178
80-84 Years		0.534	1.104
85-89 Years		0.656	1.041
90-94 Years		0.824	0.883
95 Years or Over		0.993	0.796
Medicaid and Originally Disabled Interactions with Age and Sex			
Medicaid_Female_Aged		0.202	0.096
Medicaid_Female_Disabled		0.103	0.096
Medicaid_Male_Aged		0.232	0.096
Medicaid_Male_Disabled		0.099	0.096
Originally Disabled_Female		0.228	-
Originally Disabled_Male		0.160	-

3.2.4.2 Disease Coefficients

Determine which disease factors, including HCCs and Interactions, are applicable for a beneficiary using the MOR. Plans may determine whether to include graft factors by using the RAFT code on the MMR. If the functioning graft model is being used, then graft factors must be applied. CMS populates the MOR with assigned HCCs, automatically removing any HCCs that are dropped due to the hierarchies. So, if calculating the risk score based on information from the MOR, it is not necessary to drop HCCs based on hierarchy. Figures 3E and 3F provide examples of the HCCs and Interactions with the relative factors published in the Announcement.

The factors that must be included for this step are:

- HCCs
- Interactions
- Graft Factors (for functioning graft model, graft factor determined based on age vs. duration since transplant)

Figure 3E – Example of HCCs and Relative Factors

Disease Coefficients	Description Label	Community Factors	Institutional Factors
HCC1	HIV/AIDS	0.458	1.732
HCC2	Septicemia/Shock	0.766	0.796
HCC5	Opportunistic Infections	0.465	0.471
HCC7	Metastatic Cancer and Acute Leukemia	2.175	0.910
HCC8	Lung, Upper Digestive Tract, and Other Severe Cancers	0.919	0.576
HCC9	Lymphatic, Head and Neck, Brain, and Other Major Cancers	0.706	0.413
HCC10	Breast, Prostate, Colorectal and Other Cancers and Tumors	0.187	0.240
HCC15	Diabetes with Renal or Peripheral Circulatory Manifestation[1,4]	0.371	0.413
HCC16	Diabetes with Neurologic or Other Specified Manifestation[1,4]	0.371	0.413
HCC17	Diabetes with Acute Complications[1,4]	0.371	0.413
HCC18	Diabetes with Ophthalmologic or Unspecified Manifestation[1,4]	0.371	0.413

Figure 3F – Example of Interactions and Relative Factors

Disabled/Disease Interactions		Community	Institutional
D_HCC5	Disabled_Opportunistic Infections[3]	0.597	-
D_HCC44	Disabled_Severe Hematological Disorders	1.340	0.633
D_HCC51	Disabled_Drug/Alcohol Psychosis	0.383	0.284
D_HCC52	Disabled_Drug/Alcohol Dependence	0.105	0.284
D_HCC107	Disabled_Cystic Fibrosis[3]	2.556	-
Disease Interactions			
INT1	DM_CHF[2]	0.150	0.111
INT2	DM_CVD	0.150	0.051
INT3	CHF_COPD	0.278	0.248
INT4	COPD_CVD_CAD	0.233	0.118
INT5	RF_CHF[2,3]	0.262	-
INT6	RF_CHF_DM[2]	0.600	0.373

If the beneficiary has their risk score calculated under the Functioning Graft model, then the graft factor must be added to the risk score along with the relative factors for each HCC. Use the graft factors from the same Announcement year that are used to find the relative factors for the HCCs. Figure 3G shows how the relative factors for the graft factors appear in the Announcement.

Figure 3G – Graft Factors as Displayed for 2012 Functioning Graft Community Population

Variable	Relative Factor
Functioning Graft Factors	
Aged 65+, with duration since transplant of 4-9 months	2.635
Aged <65, with duration since transplant of 4-9 months	2.582
Aged 65+, with duration since transplant of 10 months or more	1.268
Aged <65, with duration since transplant of 10 months or more	1.170

Plans may check their internal database of accepted diagnoses for a beneficiary, map the accepted diagnoses to the HCCs in the appropriate model, and then use this information to calculate the beneficiary's risk score. When using this method, plans must verify if a hierarchy exists, and apply only the most severe manifestation in the hierarchy to the risk score calculation. The hierarchies are published in the Announcement along with the relative factors each time the model is updated or recalibrated. Figure 3H shows the hierarchies as they appear in the 2013 Announcement for the 2013 CMS-HCC model, the most recent recalibration.

SAS software is provided on the CMS website for plans to calculate their risk scores. The software is available at the following address under the link "2012 CMS-HCC MA and Cost Plan model software": http://www.cms.gov/Medicare/Health-Plans/MedicareAdvtgSpecRateStats/Risk_adjustment.html

Figure 3H – Disease Hierarchies for 2013 CMS-HCC Model

Hierarchical Condition Category (HCC)	If the Disease Group is Listed in This Column…	…Then Drop the Associated Disease Group(s) Listed in This Column
	Disease Group Label	
5	Opportunistic Infections	112
7	Metastatic Cancer and Acute Leukemia	8, 9, 10
8	Lung, Upper Digestive Tract, and Other Severe Cancers	9, 10
9	Lymphatic, Head and Neck, Brain and Other Major Cancers	10
15	Diabetes with Renal Manifestations or Peripheral Circulatory Manifestation	16, 17, 18, 19
16	Diabetes with Neurologic or Other Specified Manifestation	17, 18, 19
17	Diabetes with Acute Complications	18, 19
18	Diabetes with Ophthalmologic or Unspecified Manifestations	19
25	End-Stage Liver Disease	26, 27
26	Cirrhosis of Liver	27
51	Drug/Alcohol Psychosis	52
54	Schizophrenia	55
67	Quadriplegia/Other Extensive Paralysis	68, 69, 100, 101, 157
68	Paraplegia	69, 100, 101, 157
69	Spinal Cord Disorders/Injuries	157
77	Respirator Dependence/ Tracheostomy Status	78, 79
78	Respiratory Arrest	79
81	Acute Myocardial Infarction	82, 83
82	Unstable Angina and Other Acute Ischemic Heart Disease	83
95	Cerebral Hemorrhage	96
100	Hemiplegia/Hemiparesis	101
104	Vascular Disease with Complications	105, 149
107	Cystic Fibrosis	108
111	Aspiration and Specified Bacterial Pneumonias	112
130	Dialysis Status	131, 132
131	Renal Failure	132
148	Decubitus Ulcer of Skin	149
154	Severe Head Injury	75, 155
161	Traumatic Amputation	177

Plans that wish to calculate a risk score based on the diagnosis codes they have submitted may use the ICD-9 to HCC mapping available on the CMS website at: http://www.cms.gov/Medicare/Health-Plans/MedicareAdvtgSpecRateStats/Risk_adjustment.html

3.2.5 Part C Risk Score Calculations

There are five steps in the risk score calculation:

1. Sum the demographic and disease factors to determine the raw risk score. This requires adding all of the relative factors from the demographic indicators (age/sex/Medicaid/disability) and all of the relative factors from the disease indicators (HCCs, Interactions, Graft Factors).

   Raw Risk Score = Demographic Relative Factors + Disease Relative Factors

2. Normalize the risk score by dividing the raw risk score by the normalization factor, and then rounding to three (3) decimal places. It is important to remember to round at each step, as not doing so could cause a discrepancy in the final calculation.

   Normalized Risk Score = Raw Risk Score/Normalization Factor

3. If applicable, apply Coding Difference Adjustment by multiplying normalized risk score times (1-Coding Difference Adjustment) and then rounding to three (3) decimal places.

   Risk Score with Coding Intensity Adjustment = Normalized Risk Score * (1 – Coding Intensity Factor)

4. If applicable, add frailty factor to the risk score.

   Risk Score with Frailty = Risk Score + Frailty Factor

5. For risk adjusted payment, multiply final risk score times the monthly capitation rate for the beneficiary.

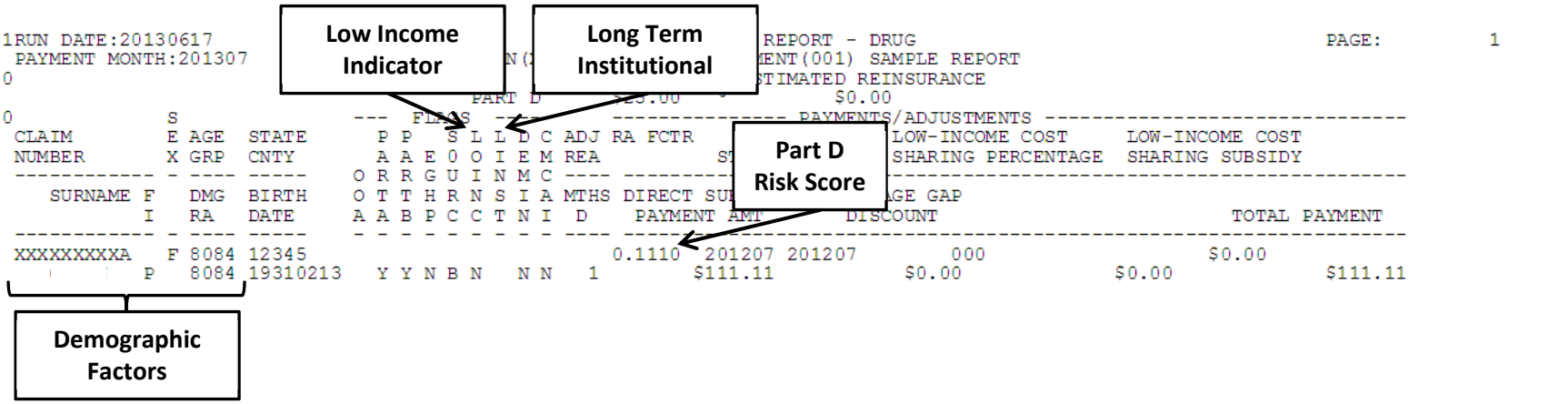
   Risk Adjusted Payment = Monthly Capitation Rate * Risk Score

NOTE: The Risk Adjusted Payment may need to be adjusted for Medicare Secondary Payer (MSP), cost sharing reductions, rebates, mandatory supplemental benefits, premiums, and/or premium reductions to obtain the final payment.

3.3 Part D Risk Score Calculation Process

The principals of the calculation of a Part D risk score are the same as those that apply to the calculation of a Part C risk score. As with the CMS-HCC, begin by finding the factors that are relevant to risk score calculation. Figures 3I and Figure 3J show where to find the relevant factors on the Part D MMR and Part D MOR respectively.

Figure 3I – Part D MMR Layout

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                                                                    $0.00
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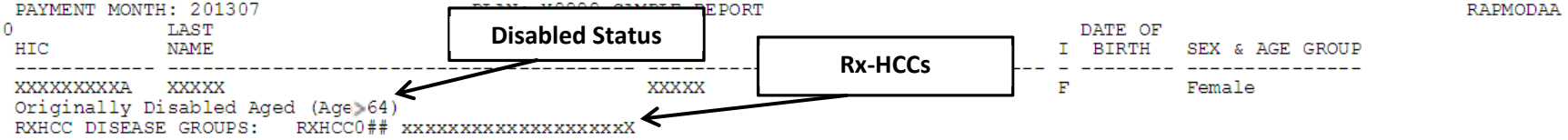
 NUMBER      X GRP  CNTY         A A E 0 O I E M REA          ST  SHARING PERCENTAGE  SHARING SUBSIDY
 ----------- - ---- -----      O R R G U I N M C ---- ---------  ----------------------------------------
    SURNAME F   DMG  BIRTH     O T T H R N S I A MTHS DIRECT SU      AGE GAP
            I   RA   DATE      A A B P C C T N I  D    PAYMENT AMT       DISCOUNT                TOTAL PAYMENT
 ----------- - ---- -----      - - - - - - - - - ---- ---------  ----------------------------------------
 XXXXXXXXXA   F 8084 12345                                0.1110  201207 201207        000              $0.00
              P 8084 19310213   Y Y N B N   N N   1        $111.11          $0.00          $0.00            $111.11
```

Figure 3J – Part D MOR Layout

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 PAYMENT MONTH: 201307                                                                                      RAPMODAA
0            LAST                                                                    DATE OF
 HIC         NAME                                                                I   BIRTH    SEX & AGE GROUP
 ----------- ------------------------------------------ ---------  ---------- --- - -------- ---------------
 XXXXXXXXXA   XXXXX                                     XXXXX                      F          Female
 Originally Disabled Aged (Age>64)
 RXHCC DISEASE GROUPS:   RXHCC0## xxxxxxxxxxxxxxxxxxx
```

3.3.1 Part D Risk Factors

As with the CMS-HCC model, the demographic factors must be checked, including:

- Age/Sex
- Community vs. Institutional status;
- Low Income status; and
- Disability.

The Rx-HCC model is divided into five segments, therefore age, community versus institutional status, and low income status are required in determining which segment to use in calculating the beneficiary's risk score. Figure 3K provides an example of the segments in the 2013 Announcement.

Figure 3K – Example of 2013 Rx-HCC Relative Factors

Disease Coefficients	Description Label	Community, Non-Low Income, Age>=65	Community, Non-Low Income, Age<65	Community, Low Income, Age>=65	Community, Low Income, Age<65	Institutional
RXHCC1	HIV/AIDS	1.769	2.351	2.135	2.546	0.929
RXHCC5	Opportunistic Infections	0.110	0.128	0.087	0.178	0.085
RXHCC8	Chronic Myeloid Leukemia	1.965	2.118	2.383	2.842	1.168
RXHCC9	Multiple Myeloma and Other Neoplastic Disorders	1.259	1.522	1.134	1.357	0.619
RXHCC10	Breast, Lung, and Other Cancers and Tumors	0.216	0.212	0.249	0.258	0.105
RXHCC11	Prostate and Other Cancers and Tumors	0.031	0.057	0.106	0.056	0.080
RXHCC14	Diabetes with Complications	0.266	0.191	0.293	0.289	0.175
RXHCC15	Diabetes without Complication	0.187	0.153	0.225	0.236	0.125
RXHCC18	Diabetes Insipidus and Other Endocrine and Metabolic Disorders	0.297	0.764	0.246	0.661	0.110

An additional factor is added to the beneficiary risk score for original disabled status. As shown in Figures 3I and 3J above, the disabled status is communicated to plans on the Rx-HCC MOR, not the Drug-MMR.

3.3.2 Part D RA Factor Type Codes

The Part D RA Factor Type codes for continuing and new enrollees determine which segment of the model to apply. Table 3G defines the Part D RA Factor codes.

TABLE 3G – PART D RA FACTOR CODES

Part D RA Factor	Description
D1	Community Non-Low Income Continuing Enrollee
D2	Community Low Income Continuing Enrollee
D3	Institutional Continuing Enrollee
D4	New Enrollee Community Non-Low Income Non-ESRD
D5	New Enrollee Community Non-Low Income ESRD
D6	New Enrollee Community Low Income Non-ESRD
D7	New Enrollee Community Low Income ESRD
D8	New Enrollee Institutional Non-ESRD
D9	New Enrollee Institutional ESRD

For example, if a beneficiary has a D1 Part D RA Factor Type code and is age>65, then the first column of factors in Figure 3K will be used to calculate the beneficiary risk score. However, if the beneficiaries' Part D RA Factor Type is D2 and the beneficiary is age<65, then the fourth column of factors in Figure 3K will be used to calculate the risk score.

Note: The Part D RA Factor Type code does not appear on the Drug-MMR. The code is only found on the Monthly Membership Detail Data File, in field 87.

3.3.3 Part D Risk Score Calculations

After all statuses are determined and relative factors are retrieved from the Announcements, there is a series of calculations to perform. First, the relative factors must be added together and the normalization factor must be applied to the raw risk score. Table 3H shows the normalization factors and announcement years to refer to for calculating Part D risk scores.

TABLE 3H – CMS-RX-HCC NORMALIZATION FACTORS AND ANNOUNCEMENT YEARS

Payment Year	Normalization Factor	Announcement Year
2011	1.029	2011
2012	1.031	2012
2013	1.034	2013

Note: The adjustment for coding intensity does not apply to the Rx-HCC model.

1. Sum the demographic and disease factors to determine the raw risk score. This requires adding all of the relative factors from the demographic indicators (age/sex/Medicaid/disability) and all of the relative factors from the disease indicators (Rx-HCCs, Interactions).

   Raw Risk Score = Demographic Relative Factors + Disease Relative Factors

2. Normalize the risk score by dividing the raw risk score by the normalization factor, and then rounding to three (3) decimal places. It is important to remember to round at each step, as not doing so could cause a discrepancy in the final calculation.

   Normalized Risk Score = Raw Risk Score/Normalization Factor

3. For risk adjusted payment, multiply final risk score times the monthly Part D rate for the beneficiary.

   Direct Subsidy = Monthly Part D Rate * Risk Score