

Medicare Modernization of Payment Software

What's Changed?

- Added link for the updated version of the ICD-10 MS-DRG Grouper Software and MCE ICD-10 Software (page 2)
- Added information on Java Pricers and Web Pricers (pages 1, 3 and 4)
- Updated Java Conversion Schedule Summary table (pages 4 and 5)

This fact sheet is for providers submitting institutional claims to Medicare Administrative Contractors (MACs). It's primarily for software vendors and others who support you with claims processing systems. If you use a software vendor, it's important that your vendor knows about this modernization update.

CMS is modernizing its grouping and code editor software. Medicare processes all Original Medicare institutional claims through at least 1 of 3 sub-systems within the Fiscal Intermediary Shared System (FISS):

- The Medicare Code Editor (MCE)
- The Inpatient Grouper (MS-DRG)
- The Integrated Outpatient Code Editor (I/OCE)

These sub-systems use an outdated programming language (Assembler) that's difficult to extend, maintain, support, and test. Modernizing these programs will protect CMS from future quality and integration risks.

We expanded this modernization effort to include these additional software products:

- The Inpatient Rehabilitation Facility (IRF) Case-Mix Group (CMG) Grouper
- The Skilled Nursing Facility (SNF) Patient Driven Payment Model (PDPM) Grouper
- [Java Pricers](#)
- [Web Pricers](#)

In 2018, we did a project to test the ability of replacing the Assembler MS-DRG Grouper program with a Java version of Grouper. The project was successful, integrating the Java module into the CICS COBOL mainframe environment of FISS. We identified best practices for software that can run in a multi-threaded, shared Java Virtual Machine (JVM) environment. This allows Medicare data centers that run this software to improve the flexibility of their own systems to better use this software. Based on this success, we've moved forward with converting all Assembler-based grouping and code editor software to Java versions.

First Step – Java Home Health Grouper

The first step in the process wasn't a conversion, but the inclusion of the Java-based Home Health (HH) Grouper into Medicare claims processing systems. Previously, Home Health Agency (HHA) sites and the Quality Improvement Evaluation System (QIES) used this software. We added this software into FISS as part of the implementation of the HH Patient-Driven Groupings Model (PDGM) effective January 1, 2020.

Today, the Java-based HH Grouper in FISS generates the Health Insurance Prospective Payment System (HIPPS) code we use for payment of Medicare HH claims. As a result, we no longer maintain the HH Grouper in QIES. HHAs may use the HH Grouper as part of their billing software to calculate accounts receivable amounts. To support this function, find the Java source code for the HH Grouper on the [Home Health PPS Grouper Software](#) webpage.

Conversion of MCE and MS-DRG Grouper

We did a conversion of the inpatient claim software, the MCE and MS-DRG Grouper, after the completion of HH implementation. Since these 2 programs work in accordance with processing of Inpatient Prospective Payment System (IPPS) claims, there are efficiencies in converting them at the same time. The [Inpatient PPS Web Pricer](#) is available on our website.

By October 2022, we plan to post only the Java version of the MCE and MS-DRG Grouper software on our website. While a fully converted Java re-write of both the MCE and MS-DRG Grouper software was conducted for Version 39 (October 1, 2021), the October 2022 date (Version 40) allows external stakeholders more time for transition and testing.

We released an updated version of the ICD-10 MS-DRG GROUPEr Software and MCE ICD-10 Software along with the ICD-10 Definitions of Medicare Code Edits File Version 39.1. Find the files on the [MS-DRG Classifications and Software](#) webpage by scrolling down to the MS-DRG Definitions Manual and Software section.

Conversion of the I/OCE

Given the complexity of the business logic and the high volume of claims affected by the I/OCE, we plan to convert this program only after the successful conversion of the others. This will apply any lessons learned and best practices we identify in the earlier stages of the I/OCE conversion.

We'll test a converted Java version of I/OCE in 2022. A public version of this test software should be available in July 2022. We should have the fully converted Java re-write of the I/OCE ready for implementation with Version 24, effective January 2, 2023. We'll provide an Assembler version of Version 24 to stakeholders as part of this implementation. Beginning with Version 24.1 in April 2023, only the Java version of the I/OCE will

be available to stakeholders via our website. At this point, our retirement of Assembler-based code editing and grouping software will be complete.

IRF CMG Grouper

Before FY 2021, we distributed the IRF CMG Grouper software as a Dynamic Linked Library (DLL) download package. This program runs in the Internet Quality Improvement and Evaluation System (iQIES) and the iQIES User Tool to calculate HIPPS codes from IRF Patient Assessment Instrument (IRF-PAI) assessments. We report these back to the IRF on their IRF-PAI validation reports. It's also available to your billing software vendors to incorporate into their products. We converted this program to Java for FY 2021. Your vendors should be using the Java version of the IRF CMG Grouper for IRF-PAI assessments with discharge dates on and after October 1, 2020.

SNF PDPM Grouper

Before FY 2022, we distributed the SNF PDPM Grouper software as a DLL download package. This program runs in the QIES/Assessment Submission and Processing (ASAP) system to calculate HIPPS codes from Minimum Data Set (MDS) assessments. We report these HIPPS codes to the SNF on their MDS validation reports. The program is also available to provider billing software vendors to incorporate into their products. We converted this program to Java for FY 2022. Your vendors should be using the Java version of the SNF PDPM Grouper for MDS assessments with Assessment Reference Dates (ARDs) on and after October 1, 2021.

Java Pricers

We annually produce 10 Pricer applications used in the Medicare claims processing system and post their source code to help providers and other payers estimate what Original Medicare would have paid institutional providers under various payment systems. Before the conversion to Java, we posted COBOL source code for all 10 Pricers. Effective January 2022, we've converted all Pricers from COBOL to Java. We now only post Java Pricer source code, which is a resource for viewing logic and rates. The Java source code isn't meant to be compiled and executed. For users that want to run the Pricers, we also post Pricer software (executable JAR files). Stakeholders that wish to use CMS Pricer software should transition to using the Java versions. All Java Pricers contain pricing logic and rates for FYs or CYs 2020 and later; some contain information for earlier years. The Java Pricer source code and executable software are available on the [Pricer Source Code](#) webpage. Check there often for updates.

Web Pricers

We provide 8 Web Pricer applications for public use to help providers and other payers estimate what Original Medicare would pay institutional providers under various payment systems. Historically, these applications were on our website as downloadable COBOL-based Personal Computer (PC) Pricer applications. In the last 2 years, we began converting these COBOL-based products to web applications called Web Pricers. We first launched the IRF Web Pricer in July 2020, followed by 7 additional Web Pricers, effective beginning calendar or fiscal year 2020. Users should refer to Web Pricers as CMS will no longer release the downloadable PC Pricer applications. All 8 Web Pricers are accessible via the [Web Pricer webpage](#) and the [Web Pricer application website](#).

Web Pricers Available:

- [End Stage Renal Disease \(ESRD\) PPS Web Pricer](#)
- [Home Health \(HH\) PPS Web Pricer](#)
- [Hospice PPS Web Pricer](#)
- [Inpatient Prospective Payment System \(IPPS\) Web Pricer](#)
- [Inpatient Rehabilitation Facility \(IRF\) PPS Web Pricer](#)
- [Inpatient Psychiatric Facility \(IPF\) PPS Web Pricer](#)
- [Long Term Care Hospital \(LTCH\) PPS Web Pricer](#)
- [Skilled Nursing Facility \(SNF\) PPS Web Pricer](#)

To access these Web Pricers, use Google Chrome, Microsoft Edge, or Mozilla Firefox. Microsoft Internet Explorer isn't supported.

The following table presents our timeline for the Java conversion schedule.

Java Conversion Schedule Summary

Program	Last non-Java Release	Java-only Release
HH Grouper	N/A	Completed
IRF CMG Grouper	v.4.01, March 2020	Completed
IRF PPS Pricer	October 2019	October 2019
SNF PDPM Grouper	v.1.0009, January 2021	Completed
IPPS Pricer	April 2021	October 2021
LTCH PPS Pricer	January 2021	October 2021
SNF PPS Pricer	May 2021	October 2021
Hospice PPS Pricer	March 2021	October 2021
IPF PPS Pricer	October 2020	October 2021
ESRD PPS Pricer	April 2021	January 2022
HH PPS Pricer	April 2021	January 2022

Java Conversion Schedule Summary (continued)

Program	Last non-Java Release	Java-only Release
FQHC PPS Pricer	July 2021	January 2022
OPPS PPS Pricer	July 2021	January 2022
MCE	v.39, October 2021	v.40, October 2022
MS-DRG Groupers	v.39, October 2021	v.40, October 2022
I/OCE	v.24, January 2023	v.24.1, April 2023

Note: The dates shown in the middle column reflect our current expectations. However, they may be subject to change.

Together we can advance health equity and help eliminate health disparities for all minority and underserved groups. Find resources and more from the [CMS Office of Minority Health](#):

- [Health Equity Technical Assistance Program](#)
- [Disparities Impact Statement](#)

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