

**PDPM Grouper DLL Package V1.0009**  
**Centers for Medicare & Medicaid Services**

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## ***Introduction***

This is the ninth revision to the initial release of the Patient-Driven Payment Model (PDPM) Grouper software. (The first revision was released within jRAVEN only. The second revision was released to the public on September 27, 2019. The third revision was released to the public on October 7, 2019. The fourth revision was released to the public on April 1, 2020. The fifth revision was a BETA version released to the public in July, 2020. The sixth revision introduced support for standalone OBRA assessments. The seventh revision added six ICD-10 codes that were inadvertently excluded from the NTA calculation in V1.0006. The eighth revision corrected a bug in the DLL that caused calculation issues when processing multiple assessments within a short time frame.)

This release adds support for new ICD-10 codes that were introduced on January 1, 2021.

Effective beginning October 1, 2019, the PDPM began to be used under the Skilled Nursing Facility (SNF) Prospective Payment System (PPS) for classifying SNF patients in a covered Part A stay.

Effective beginning October 1, 2020, the PDPM began to be used for OBRA assessments where A0310A = [01,02,03,04,05,06] and A0310B = [99] and target date was on or after October 1, 2020.

Please note the following:

- Use of the PDPM for OBRA assessment calculation is state-optional – each state must specify whether it requires the PDPM calculation for its OBRA's.
- FY2021 ICD-10 codes must be used for I0020B in these assessments.
- Also, FY2021 ICD-10 codes must be used for the I8000A-J items in these assessments.

For detailed information on the PDPM logic, please visit <https://www.cms.gov/Medicare/Quality-Initiatives-Patient-Assessment-Instruments/NursingHomeQualityInits/MDS30RAIManual.html> and refer to Chapter 6 in the latest version of the RAI Manual.

## ***Disclaimer***

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## ***Description***

This package contains the C++ source code as well as a compiled Windows-based DLL. The source code also contains files to support calls in the UNIX environment.

**NOTE:** This package is intended for vendors/developers to include in their software.

For users looking for an external program that can be used to send assessments to the DLL and display the results, please go to the MDS Technical Information page and download the latest version of the jRAVEN software. With this software, assessments can be imported, then validated, along with obtaining PDPM result values.

A single method is provided for use by other programs - it is named `mdsgrouper`. This method supports the use of the MDS submission fixed-length string as input to the grouper.

The method declaration is as follows:

`mdsgrouper (char* pdpmRecord, char* HIPPSCode, int* errorcode, char* HIPPSVersionCode)`

## Parameter Definitions

Parameter Name	Parameter Type	Data Type	Description
pdpmRecord	Input	String	A 3690-byte fixed-length string containing an MDS assessment in the format defined by the MDS 3.0 Data Specifications V3.00.1, which went into production on October 1, 2019, and has been updated in accordance with Errata V3.00.6.
HIPPSCode	Output	String	The resulting 5-character HIPPS Code returned by the method for assessments where A0310B = [01,08] -OR- the resulting 4-character HIPPS Code returned by the method for assessments where A0310B = [99].
errorcode	Output	Integer	An integer code indicating whether an error was encountered. This parameter returns 0 if no errors are encountered in processing the assessment, and it returns 5 if errors are encountered.
HIPPSVersionCode	Output	String	The version code for the PDPM software, which is "1.0009" for this release.

## Test Data

Test submission data files have been provided in the zip file "PDPM\_V10009\_Test\_Data.zip", so that vendors may confirm that their software is generating the correct results. The correct PDPM scores for each assessment are stored in Z0100A (positions 1344-1350 of the assessment fixed-length string) and Z0100B (positions 1351-1360 of the assessment fixed-length string).

## DLL Version History

Version	Comments
1.0000	This was the initial production release.
1.0001	This was a jRAVEN-only release, and not available separately. It resolved the following issues: <ul style="list-style-type: none"> <li>In the method BehavioralSymptomsStep2 the value of 0 was treated as a not assessed/not complete. As a result the staff assessment was being used to determine cognitive performance.</li> <li>The ConversionFunctionTwoDigit function was not handling the "-" and "^" characters, which was resulting in the default 0 being returned.</li> <li>When determining the NTA score for number of "Stage 4 Unhealed Pressure Ulcer Currently present" the value must be greater than 0.</li> <li>The method DetermineUnhealedPressure only checked for a value of 1.</li> </ul>
1.0002	This was the second production release. It resolved the following issues: <ul style="list-style-type: none"> <li>The code "CheckImpairment = (ImpairIndicate1, ImpairIndicate2)" was incorrect, and was modified to be "CheckImpairment = CheckImpair(ImpairIndicate1, ImpairIndicate2)."</li> <li>There are 20 ICD codes that can score under multiple conditions for the NTA component. The PDPM code was only allowing those ICD codes to score once.</li> </ul>

Version	Comments
1.0003	<p>This was the third production release. It resolved the following issues:</p> <ul style="list-style-type: none"> <li>• SLP Category: Modified logic to account for [S02.0XXD] in I0020B when Non-Orthopedic Surgery eligible and the patient has had a recent surgery that is a non-orthopedic Surgery.</li> <li>• SLP Category: Modified the logic to account for [S34.111D] in I0020B when Orthopedic Surgery eligible and the patient has NOT had a recent surgery.</li> <li>• Cognitive Level: Modified the code so that it applies logic to look for "1" in B0100 instead of looking for "01".</li> <li>• In the event an ICD10 code was not found in the applicable list for item I0020B, the method DeterminePrimaryDiagnosis returned an index of 0, which was incorrectly indicating the code "A000" and, therefore, the clinical category "Acute Infections" instead of being handled as a "Return to Provider." It was modified to return -1.</li> </ul>
1.0004	<p>This was the fourth production release.</p> <p>It added support for the COVID-19 ICD-10-CM code, [U07.1^^], which became a valid code for use with MDS assessments with target date on or after April 1, 2020.</p>
1.0005	<p>This was the BETA for the fifth production release. It supported calculation of HIPPS codes for assessments with A0310A = [01,02,03,04,05,06] and A0310B = [99].</p> <p>It DID NOT contain support for FY2021 ICD-10 codes, which will be used with MDS assessments with target date on or after October 1, 2020. For the BETA, FY2020 codes were used for all MDS assessments.</p> <p>Note that the BETA documentation indicated that the Version value was 1.0005B; however, the DLL was actually returning 1.0005. Therefore, it was decided to increment the production version to 1.0006.</p>
1.0006	<p>This was the sixth release (fifth production release, since 1.0005 was a beta release).</p> <p>As with the previous beta release, it supported calculation of HIPPS codes for assessments with A0310A = [01,02,03,04,05,06] and A0310B = [99]. It also contained support for FY2021 ICD-10 codes, which must be used for MDS assessments with target date on or after October 1, 2020.</p> <p><b>IMPORTANT NOTE: The I8000A-J items began to be versioned in the grouper. Therefore, FY2021 ICD-10 codes must be used for the I8000A-J items for MDS assessments with target date on or after October 1, 2020.</b></p>
1.0007	<p>This is the seventh release (sixth production release, since 1.0005 was a beta release).</p> <p>This release adds six ICD-10 codes that were inadvertently excluded from the NTA calculation in V1.0006:</p> <ul style="list-style-type: none"> <li>• T8484XA</li> <li>• T8389XA</li> <li>• T8321XA</li> <li>• T82399A</li> <li>• T82392A</li> <li>• T83021A</li> </ul>
1.0008	<p>This is the eighth release (seventh production release, since 1.0005 was a beta release).</p> <p>This release corrects an issue with a dynamic array that was not consistently reinitialized when processing multiple assessments within a short time frame. This occasionally caused incorrect PDPM recalculation results when processing pre- and post- 10/01/2020 assessments.</p>

Version	Comments
1.0009	This is the ninth release (eighth production release, since 1.0005 was a beta release). This release adds support for new ICD-10 codes that can be used for assessments with target date of January 1, 2021 and later: Z11.52, Z20.822, Z86.16, M35.81, M35.89 and J12.82. Note that one ICD-10 code that was already in production, M35.8, will not be allowed in assessments with target date on or after January 1, 2021, since it is replaced by the two new codes, M35.81 and M35.89.

### **Contact Information**

Please report any issues by contacting the MDS Technical Issues Support team, using the following email address: [iQIES@cms.hhs.gov](mailto:iQIES@cms.hhs.gov).