MILLIMAN REPORT

Hospital Measurement Year 2023 Preliminary Readmissions Results

Commissioned by the Wisconsin Department of Health Services

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Ben Mori, Principal and Senior Healthcare Consultant
Andrew Vidikan, Senior Healthcare Consultant
Chip Fetherston, JD, Principal and Healthcare Analytics Consultant
Kiana Nickerson, Healthcare Data Analyst

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Overview

The Wisconsin Department of Health Services (DHS) has engaged Milliman to provide inpatient hospital readmission analyses in support of DHS' Medicaid fee-for-service (FFS) hospital pay-for-performance (P4P) program and Health Maintenance Organization (HMO) quality initiatives for measurement year (MY) 2023. These analyses were conducted using the 3M™ Potentially Preventable Readmissions (PPR) grouping software and Wisconsin Medicaid FFS claims data and HMO encounter data. This report describes the MY 2023 Preliminary Medicaid PPR analyses of readmissions by hospital and by FFS and by managed care Badger Care Plus (BCP) and Supplemental Security Income (SSI) populations. **The hospital MY 2023 preliminary readmissions results produced for these analyses are for informational and reporting purposes only, and do not represent final MY 2023 PPR analyses used for quality payment program purposes.** The terms of Milliman's contract #435400-O21-0818RATESET-00 with DHS apply to this document and its use.

Per 3M, the PPR software identifies "a readmission within a specified time interval that is determined to be clinically related to a previous admission and potentially preventable."[1] The software identifies whether a readmission is clinically related to a prior admission for the same patient, regardless of whether the readmission occurred at the same hospital, based on the prior admission's diagnosis and procedure codes and the reason for readmission. For more information on the PPR software see the "3M™ Potentially Preventable Readmissions (PPR) Grouping Software" fact sheet.[2]

The DHS Medicaid quality payment programs related to the PPR analyses described in this report are performance measurements based on average rates of readmissions over time compared to statewide benchmarks (as opposed to a claim payment denial for an individual readmission). PPR analyses used for DHS' Medicaid quality payment programs are described as follows:

- *FFS hospital P4P program:* DHS goal for its FFS hospital P4P program is "to promote and recognize high quality patient care at all hospitals throughout Wisconsin."[3] For MY 2023, DHS will withhold 3% of inpatient FFS claim payments for in-state acute hospitals and out-of-state major border hospitals paid under All Patient Refined Diagnosis Related Groups (APR DRGs) with more than 25 qualifying admissions per year (averaged over two prior years) to create a hospital P4P payment pool.[4] Once MY 2023 claims data is reasonably mature, qualifying hospitals will receive incentive payments from the P4P payment pool based on their risk-adjusted readmission performance compared to calendar year (CY) 2021 statewide benchmarks.

  For more background, refer to DHS' "Wisconsin Medicaid Program Measurement Year (MY) 2023, 1/1/23 – 12/31/23 Hospital Pay-for-Performance (P4P) Guide."

- *HMO quality initiative:* DHS' Medicaid managed care quality initiative consists of multiple payment policies to incentivize HMOs to improve the measurable quality of care for Medicaid members in the BCP and SSI programs. DHS' HMO quality initiative includes a PPR program for BCP with the following stated goal:

  > *To reduce [PPRs] for Wisconsin Medicaid served by HMOs. Excess readmission chains relative to benchmarks indicates there is an opportunity to improve patient outcomes and to reduce costs through discharge planning, coordination across sites of service, and/or other improvements in the delivery of care.*[5]

[1] https://www.3m.com/3M/en_US/health-information-systems-us/drive-value-based-care/patient-classification-methodologies/pprs/

[2] https://multimedia.3m.com/mws/media/849903O/3m-ppr-grouping-software-fact-sheet.pdf

[3] Wisconsin DHS, "Wisconsin Medicaid Program Measurement Year (MY) 2023, 1/1/23 – 12/31/23 Hospital Pay-for-Performance (P4P) Guide", https://www.forwardhealth.wi.gov/wiportal/content/provider/medicaid/hospital/p4p_guides/pdf/MY2023_HospitalP4P_Guide.pdf.spage

[4] Hospitals paid on a per-diem basis (psychiatric hospitals, rehabilitation hospitals, and long-term acute care providers), hospitals with 25 or fewer qualifying admissions per year, and out-of-state non-border hospitals are excluded from the FFS P4P claim payment withhold.

[5] Wisconsin DHS, "Wisconsin Department of Health Services (DHS) Division of Medicaid Services (DMS) HMO Quality Guide: Measurement Year 2023",

For MY 2023, DHS established a funding pool for an upside only incentive payment (without penalties or capitation rate withholds) to be distributed among HMOs that meet their risk-adjusted readmission targets for the actual to benchmark ratio. HMOs that do not meet the target will not receive PPR incentive funds. HMOs may retain up to 15% of PPR incentive earned for their administrative expenses; remaining incentives must be shared with their providers, including hospital and non-hospital providers.

For more background, refer to DHS' "Wisconsin Department of Health Services (DHS) Division of Medicaid Services (DMS) HMO Quality Guide: Measurement Year 2023."[6]

The MY 2023 preliminary results accompanying this report are preliminary and subject to change based on the availability of additional data and information and DHS policy decisions. Final MY 2023 PPR calculations for the hospital P4P program will be conducted separately, subsequent to these analyses. Readers should reference DHS' MY 2023 FFS hospital P4P guide and appropriate 3M PPR documentation to understand the appropriate use of the information presented; this report should not be considered complete without the reader's reference to those documents.

https://www.forwardhealth.wi.gov/WIPortal/content/Managed%20Care%20Organization/Quality_for_BCP_and_Medicaid_SSI/word/MY2023HMO_Qualtiy_GuideFinal.docx.spage

[6] ibid.

Results and Methodology

The MY 2023 preliminary readmission results accompanying this report are based on Medicaid inpatient FFS claims and HMO encounter data received from DHS on May 3, 2024. These data include inpatient claims and encounters incurred between January 2023 and December 2023, paid through April 2024. We created an extract, transform, and load (ETL) process to combine these Medicaid inpatient claim and encounter header data into a single dataset. Once combined, we created necessary 3M PPR software input files, and executed the 3M PPR software using all inpatient claims and encounters from the DHS extract.

Per DHS P4P policy requirements, we processed the MY 2023 preliminary inpatient FFS claims and HMO encounter data, excluding Medicare crossovers claims, using 3M PPR software version 37 with a 30-day readmission time window. Upon successful completion of the software and assignment of the PPR grouper output, we reviewed the results for completeness and excluded records rejected by the 3M-PPR business rules. We augmented the cleansed 3M PPR results with necessary identifiers to develop exhibits and conduct further analyses. These identifiers include, but are not limited to, Medicaid population, facility name, and benchmark category. Finally, we created extracts in support of the exhibits accompanying this report, excluding records that did not match a Medicaid population[7] or facility of focus.

PPR grouper output relied upon included version 37 APR DRGs and secondary mental health status[8], and key flag fields needed to identify "index admissions" (the initial admission in a "chain" of readmissions), subsequent related PPRs, "only admissions" (without subsequent PPRs), and other admissions excluded from the readmission measurements by the 3M PPR algorithm.[9] The MY 2023 preliminary readmission rate analysis excluded readmissions that occurred in CY 2023 where the initial admission in the chain began in CY 2022. The MY 2023 preliminary readmission rate analysis also excluded Special Needs Plans (SNP) members and Children with Medical Complexities (CMC) members identified by DHS.

For each hospital we calculated MY 2023 preliminary readmission rates by population (FFS, BCP, and SSI) by dividing index admissions by "qualifying admissions" (the sum of index admissions and only admissions). We also calculated of hospital's benchmark readmission rates by applying 2021 readmission rates to the MY 2023 preliminary hospital utilization. For FFS, DHS had a MY 2023 goal of a 7.5% reduction in readmission rates compared to the 2021 benchmark; as such we calculated both "full" benchmark readmission rates (at 100% of the 2021 benchmark) and "target" benchmark readmission rates (at 92.5% of the 2021 benchmark).

Statewide aggregate MY 2023 preliminary readmission rates are summarized in Table 1 below.

TABLE 1 – MY 2023 PRELIMINARY STATEWIDE READMISSION RATES BY POPULATION

MY 2023 Readmission Rates	Qualifying Admissions	Index Admissions (PPR Chain)	Readmission Rate
FFS			
MY 2023 FFS actual readmission rate	26,731	1,952	**7.30%**
MY 2023 FFS full benchmark readmission rate (based on 100% of 2021 benchmarks)	26,731	2,063	**7.72%**
MY 2023 FFS target benchmark readmission rate (based on 92.5% of 2021 benchmarks)	26,731	1,908	**7.14%**

[7] The MY 2023 readmissions analysis excluded admissions where the population program could not be identified.

[8] Secondary mental health status is assigned by the PPR software and used to identify and account for the differing rates of readmissions occurring for these individuals. Secondary mental health status is not used when assessing the rate of readmissions for behavioral health-related admissions.

[9] See the PPR documentation for a listing of the classifications of inpatient stays performed by this software.

MY 2023 Readmission Rates	Qualifying Admissions	Index Admissions (PPR Chain)	Readmission Rate
Managed Care BCP			
MY 2023 BCP actual readmission rate	65,063	3,129	**4.81%**
MY 2023 BCP full benchmark readmission rate (based on 100% of 2021 benchmarks)	65,063	3,082	**4.74%**
Managed Care SSI			
MY 2023 SSI actual readmission rate	5,820	729	**12.53%**
MY 2023 SSI full benchmark readmission rate (based on 100% of 2021 benchmarks)	5,820	648	**11.13%**

As shown in Table 1, MY 2023 preliminary statewide aggregate actual readmission rates for the FFS population are below 100% of the benchmarks and above the DHS target of 92.5% of the benchmarks. The MY 2023 preliminary statewide aggregate actual readmission rates are higher than the benchmark rates for each of the Managed Care BCP and SSI populations. DHS' final evaluation of MY 2023 Wisconsin Medicaid hospital readmission performance will include a full year of measurement data.

Note that hospital P4P program payments will be based on each hospital's readmission performance relative to its own benchmark readmission rates (as opposed to the statewide aggregate average readmission rate).

DEVELOPMENT OF MY 2023 PRELIMINARY RESULTS

After the ETL and PPR grouping process, we summarized MY 2023 preliminary data for the purposes of producing hospital and HMO-specific preliminary reports based on the requirements specified in the DHS MY 2023 hospital and HMO P4P guides. Per DHS's direction, we summarized the PPR analyses for reporting purposes as follows:

1. MY 2023 data was summarized as follows:
    a. Program – FFS, BCP, or SSI
    b. HMO name
    c. Attributed facility – the hospital at which an admission occurred or, for PPRs, the facility at which the attributed initial admission (start of the readmission chain) occurred
    d. APR DRG – based on the PPR grouping software assignment
    e. Admission type – based on PPR grouping software flag fields:
        i. Initial admissions – an initial inpatient admission for a patient where there was a subsequent PPR within 30 days (the start of a "readmission chain" of admissions)
        ii. PPRs – readmission that was potentially preventable within 30 days of an initial admission or another PPR, part of a readmission chain
        iii. Only admissions – admissions without a subsequent PPR within 30 days
        iv. Excluded admissions – admissions not counted as initial admissions, PPRs, or only admissions (e.g., cases where the patient expired or for clinically complex cases)
    f. Secondary mental health status – based on the PPR grouping software assignment (used for benchmarking purposes)

2. MY 2023 data summaries include the following totals:
    a. Count of admissions by the admission types and variables listed above
    b. Reported allowed dollars by the admission types and variables listed above
    c. Summary of benchmark PPR chains and benchmark readmission rates, both at 100% of the 2021 benchmark readmission rates at 92.5% of the 2021 rates (per DHS' goal of reducing readmissions by 7.5% by the end of MY 2023).

The preliminary readmissions reporting is focused on initial admissions, only admissions, *qualifying admissions* (the sum of initial and only admissions), and the rate of PPR chains as a percent of qualifying admissions (i.e., the count

of initial admissions divided by the count of qualifying admissions). Financial values associated with these admission types are also included the analyses (e.g., the average allowed dollar cost of a PPR chain). For more information about the types of admissions identified by the PPR software and their definitions, please see pages 8 and 9 of the Hospital P4P Guide and page 20 of the HMO P4P Guide.

Per DHS' MY 2023 readmission policy requirements, in the PPR reporting we also compared MY 2023 PPR rates to benchmark values based on CY 2021 Medicaid experience. CY 2021 PPR benchmark rates have been finalized by DHS, and were summarized at the APR DRG level, and included separate risk adjustments for pediatric patients, secondary mental health status, and behavior health DRGs.

To calculate the benchmark PPR chains shown in the report, we first summarized the MY 2023 qualifying admission counts by program, hospital, APR DRG, adult/pediatric identification, secondary mental health status, and presence of behavior health DRG. We then multiplied the MY 2023 qualifying admission counts by the DHS' program-specific APR DRG benchmark PPR chain rate (based on CY 2021 data), which produced a non-population adjusted PPR benchmark. We then adjusted the benchmark PPR chains by multiplying by the appropriate DHS pediatric and behavioral health population adjustment factor (also based on CY 2021 data).[10]

For a detailed description of the DHS requirements for our PPR analyses, including specifications for PPR calculations, comparison to CY 2021 benchmarks, and the basis for subsequent MY 2023 P4P payment calculations, refer to pages 12-14 in the Hospital P4P Guide (which illustrates the calculations required to develop the provided exhibits).

The hospital MY 2023 preliminary readmission reports accompanying this report consist of hospital-specific PDF summaries of admission types and benchmarks, separated by FFS, BCP, and SSI populations. Milliman has also developed Excel-based hospital-specific admission-level tables of each index admission and readmission identified by the PPR grouping software. This provides DHS and providers with the ability to track individuals through their PPR chain and review the services provided (as defined by the reported APR DRG) or to refer to their own claims data for more information about the PPR chain.[11]

[10] For a subgroup for which no benchmark rate is available, the observed number of initial admits is used as the benchmark.

[11] Note that under certain circumstances, not all reports will tie exactly. Where a patient's program cannot be identified, that admission will be reported as an excluded admission in reports that do not discriminate between the various programs (e.g., SSI, BCP). In reports that are specific to a program (e.g., SSI), those admissions will not be reported in any totals (excluded or otherwise).

Data Sources and Assumptions

The MY 2023 preliminary readmission results were developed using data from the sources described below.

DHS P4P PERFORMANCE GUIDES

The MY 2023 FFS hospital and HMO P4P Guides were downloaded from the DHS website. These DHS documents describe the methodologies employed in our development of the PPR analysis of readmission rates, readmission payments, average readmission chain payments, and associated benchmark values. These DHS documents also describe the subsequent P4P payment calculations for the final MY 2023 readmissions analyses.

HOSPITAL CROSSWALK

Based on DHS' list of in-state and major border hospitals and hospital types, provided by DHS on March 11, 2021.

3M PPR GROUPING SOFTWARE

3M™ PPR Grouping Software version 37 was used to process the Medicaid inpatient claims data provided by DHS. We relied on accurate processing by the software, reviewed the software output for reasonableness, but did not audit the results.

For the purposes of our analyses, the software uses sorted detailed inpatient claims data as inputs and appends APR DRGs and admission type, among other outputs, to the claims data. These output fields, along with the other claims data information (such as reported allowed amounts), are the inputs for our analyses as outlined by the HMO and FFS P4P Guides.

WISCONSIN MEDICAID FFS CLAIMS AND HMO ENCOUNTER DATA

DHS provided Milliman with Medicaid inpatient hospital FFS claims and HMO encounter data used in these analyses on January 15, 2024. These claims included service dates during January 2022 through December 2023 and submitted through January 2024. We understand these claims were extracted by DHS' MMIS vendor. We reviewed the provided data for reasonableness and compared our results to those of the prior contractor for the overlapping periods of our analyses (when possible), but we did not audit the data provided by DHS.

WISCONSIN MEDICAID SNP MEMBER LIST

DHS provided Milliman with a Medicaid SNP member list on June 9, 2021, for exclusion from the readmission rate analysis.

WISCONSIN MEDICAID CMC MEMBER LIST

DHS provided Milliman with a Medicaid CMC member list on October 20, 2023 for exclusion from the readmission rate analysis.

Caveats and Limitations

The terms of Milliman's contract #435400-O21-0818RATESET-00 with DHS apply to this document and its use. This report contains information produced, in part, by using the 3M™ Potentially Preventable Readmissions (PPR) software, which is proprietary computer software created, owned and licensed by 3M Company. All copyrights in and to the 3M Software are owned by 3M Company or its affiliates. All rights reserved.

The information contained in this report has been prepared for the purpose of informing DHS and Wisconsin hospitals on the Measurement Year (MY) 2023 fourth quarter readmissions analysis and may not be appropriate for other purposes. We understand that this report will be shared with Wisconsin Medicaid hospitals. To the extent that the information contained in this correspondence is provided to any approved third parties, the correspondence should be distributed in its entirety. Any user of the data must possess a certain level of expertise in health care modeling that will allow appropriate use of the data presented.

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Milliman has developed certain models to estimate the values included in this report. The intent of the models is to provide hospitals with preliminary estimates of MY 2023 readmission rates relative to statewide benchmarks for informational purposes. We have reviewed the models, including their inputs, calculations, and outputs for consistency, reasonableness, and appropriateness to the intended purpose.

The models rely on data and information as input to the models. We have relied upon certain data and information provided by CMS, 3M, SAS, Gainwell Technologies, Guidehouse, DHS, and DHS's provider and HMO partners for this purpose and accepted it without audit. To the extent that the data and information provided is not accurate, or is not complete, the values provided in this report may likewise be inaccurate or incomplete.

Milliman's data and information reliance includes the items outlined in the Data Sources and Assumptions section of this report. The models, including all input, calculations, and output may not be appropriate, and should not be use, for any other purpose.

This work does not represent a projection. Differences between our results and actual amounts depend on the extent to which future experience conforms to the assumptions made for these analyses. PPR analyses results may change from these estimates due to final DHS policy decisions. In addition, future PPR results will differ from these estimates due to a number of factors, including changes to medical management policies, enrollment, provider utilization and service mix, COVID-19-related impacts, and other factors.

The model and results for MY 2023 are preliminary and subject to change based on the availability of additional data and information. These results do not represent the final PPR analyses and withholding impacts for MY 2023.

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CONTACT

Ben Mori
ben.mori@milliman.com

Andrew Vidikan
andrew.vidikan@milliman.com

Chip Fetherston
chip.fetherston@milliman.com

Kiana Nickerson
chip.fetherston@milliman.com