

MILLIMAN REPORT

# Wisconsin Department of Health Services

## Hospital Potentially Preventable Readmissions Dashboard User Guide - Measurement Year 2020 Preliminary Results

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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. 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 provides a user guide for the Microsoft Power BI-based PPR Dashboard summarizing Wisconsin Medicaid hospital readmission results through **the measurement year (MY) 2020**, with details on how to effectively leverage this tool, including logging onto the Power BI dashboard and navigating the Power BI Report. The services provided for this project were performed under the signed contract between Milliman and DHS effective February 3, 2021.

The PPR Dashboard includes summaries of Wisconsin Medicaid readmissions by hospital and Health Maintenance Organization (HMO), separately for the FFS and managed care BadgerCare Plus (BCP) and Supplemental Security Income (SSI) populations. The methodology and data sources relied upon for the Measurement Year (MY) 2020 analyses supporting the PPR dashboard are described in the Milliman reports *Hospital Measurement Year 2020 Preliminary Readmissions Results* and *HMO Measurement Year 2020 Preliminary Readmissions Results*. The MY 2019 results shown in the PPR dashboard were developed and provided by DHS. **The MY 2020 hospital readmissions results shown in the PPR Dashboard are for informational and reporting purposes only, and do not represent final measurement year PPR analyses used for quality payment program purposes.**

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.”<sup>1</sup> 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.<sup>2</sup>

The DHS Medicaid quality payment programs related to the PPR dashboard 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.”<sup>3</sup> For MY 2020, DHS withheld 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.<sup>4</sup> Once MY 2020 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 2018 statewide benchmarks.

<sup>1</sup> [https://www.3m.com/3M/en\\_US/health-information-systems-us/drive-value-based-care/patient-classification-methodologies/pprs/](https://www.3m.com/3M/en_US/health-information-systems-us/drive-value-based-care/patient-classification-methodologies/pprs/)

<sup>2</sup> <https://multimedia.3m.com/mws/media/8499030/3m-ppr-grouping-software-fact-sheet.pdf>

<sup>3</sup> Wisconsin DHS, “Wisconsin Medicaid Program Measurement Year (MY) 2020, 1/1/20 – 12/31/20 Hospital Pay-for-Performance (P4P) Guide”, [https://www.forwardhealth.wi.gov/WIPortal/Subsystem/SW/StaticContent/Provider/medicaid/hospital/p4p\\_guides/pdf/MY2020\\_HospitalP4P\\_Guide.pdf.spage](https://www.forwardhealth.wi.gov/WIPortal/Subsystem/SW/StaticContent/Provider/medicaid/hospital/p4p_guides/pdf/MY2020_HospitalP4P_Guide.pdf.spage)

<sup>4</sup> 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.

For more background, refer to DHS' "Wisconsin Medicaid Program Measurement Year (MY) 2020, 1/1/20 – 12/31/20 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 suggest 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.*<sup>5</sup>

For MY 2020, 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 2020."

***Final measurement year PPR calculations for the hospital P4P program will be conducted separately from the PPR dashboard, subsequent to these analyses.***

Readers should reference Milliman's *Measurement Year 2020 Preliminary Readmissions Results* report, DHS' *MY 2020 FFS Hospital P4P guide* and *HMO Quality Guide*, and appropriate 3M PPR documentation, to understand the appropriate use of the information presented. The PPR dashboard should not be considered complete without the reader's reference to those documents.

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<sup>5</sup> Wisconsin DHS, "Wisconsin Department of Health Services (DHS) Division of Medicaid Services (DMS) HMO Quality Guide: Measurement Year 2020", [https://www.forwardhealth.wi.gov/WIPortal/content/Managed%20Care%20Organization/Quality\\_for\\_BCP\\_and\\_Medicaid\\_SSI/word/MY2020\\_HMO\\_Quality\\_GuideV2.docx.space](https://www.forwardhealth.wi.gov/WIPortal/content/Managed%20Care%20Organization/Quality_for_BCP_and_Medicaid_SSI/word/MY2020_HMO_Quality_GuideV2.docx.space)

## Dashboard Methodology

The purpose of the PPR dashboard is to summarize Wisconsin Medicaid readmissions results and provide actionable information to hospitals and HMOs for improving post-discharge planning and reducing readmission rates. This section describes how users login into the PPR Dashboard and navigate through the results of the readmissions analyses.

### DASHBOARD LOGIN

In order to utilize the Wisconsin Department of Health Services PPR Dashboard, authorized users need credentials to access Milliman's online Power BI application (<https://app.powerbi.com/>). Users should view the dashboard through Google Chrome or Microsoft Edge web browser (other web browsers may not display the dashboard as well). Initial login instructions and temporary passwords are provided by Milliman for users authorized by DHS. Please contact DHS at [DHSDMSBRS@wi.gov](mailto:DHSDMSBRS@wi.gov) for issues and questions on logging in to the PPR Dashboard.

PPR Dashboard users should take the following steps to initially log in:

1. Open a web browser and enter the URL <https://app.powerbi.com/>.
2. Users should be presented with the option to "Sign In". *IMPORTANT:* If presented with the Power BI interface or if signed in under a user name with a domain different from "@onmilliman.com", logout by clicking the person icon in the upper right-hand corner and selecting "Sign Out". Then, log back in with the "@onmilliman.com" username and password.
3. Use the credentials received from Milliman and enter the username and password to the "@onmilliman.com" account. Note that passwords are case-sensitive and that users may be required to supply a phone number to receive text verification as part of the Power BI two-factor authentication protocol.
4. Once signed in, users may be requested to change their password. Create a new password and remember it for future use. Passwords should follow these guidelines from Microsoft:
  - A minimum of 8 characters and a maximum of 256 characters.
  - Requires three out of four of the following:
    - Lowercase characters
    - Uppercase characters
    - Numbers (0-9)
    - Symbols (see the previous password restrictions)
5. Once at the Power BI Home page, click "Apps" on the left-hand side. From there, select "Wisconsin Department of Health Services PPR Dashboard - Hospital".
6. The first window that will appear is the "ReadMe" view. First-time users must review the user agreement and click "Accept".

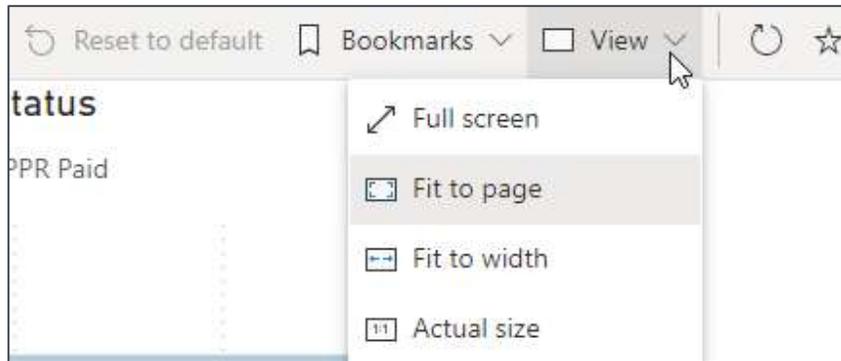
### POWER BI FUNCTIONALITY

The PPR dashboard is comprised of several windows containing reports and visuals summarizing Wisconsin Medicaid hospital readmission results attributable to the user's hospital or HMO. On the left side of the screen, there are several filters to slice or filter the user's data. Power BI remembers and saves the parameters last selected on the dashboard, including any filter or slicer selections. To return to the default state, select 'Reset to default' from the ribbon.

- **Viewing the Dashboard:** Viewing plots, tables, and visuals within this dashboard sometimes require zooming in and blocking out whitespace to see the full picture. By default the dashboard

maintains whitespace notate when are where the dashboard stops and starts. There are a couple of ways to zoom in on the dashboard to clearer picture:

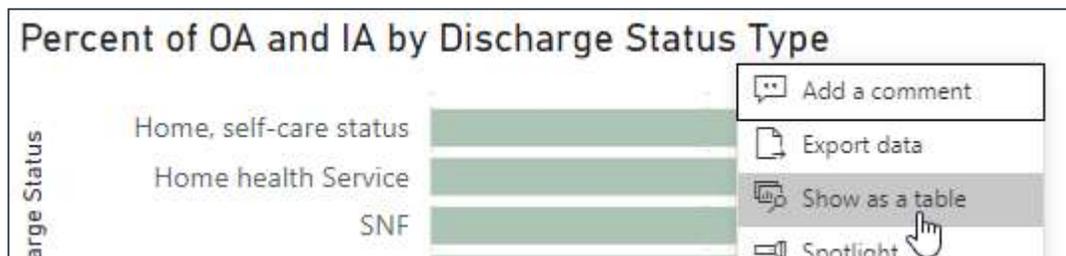
- **View options:** There are a few options to change the perspective on the dashboard. These include “Full screen”, “Fit to page”, and “Fit to Width”.



- **Focus Mode:** When hovering over the upper right-hand corner of each visual, a pane of option appear. The second to last option from the right is Focus Mode. Focus Mode will open up a new page for users to see a zoomed-in version of the focused visual.



- **Show as a table:** Some users prefer to look at tables of numbers over visuals. To that end, in the upper right-hand of each visual is an “...” that appears on hover. Selecting this ellipsis produces a drop down menu where the user can select “Show as a table” to focus a visual and bring up a table of values underneath it.



- **Filters and Slicers:** Filters in this dashboard allow users to select one or more items from a drop-down list. Selecting multiple items is as simple as holding CTRL and clicking to select more than one item.
- **Time Drill Hierarchy:** For plots involving time, Power BI allows users to drill up or down to the desired granularity. By default, the time series in this dashboard will be set at the Year-Quarter-Month level. When hovering over the time series, many buttons will appear in the upper right-hand corner. The left most pair of arrows designate the direction users can select (up or down).

The third and fourth buttons from the left designate whether the user wishes to keep the previous higher level of granularity in the result set. To clarify the differences between these two methods of summarization, we provide the following answers to questions for the drill-down on the *Hospital View* with the PPR Chain vs. Benchmark Chains over Time plot.

*Question #1: Regardless of Year, how do I identify the quarter with the most PPR chains?*

Answer:

1. These directions assume you are starting at the Year-Quarter-Month granularity. If your plot is at a different granularity, use the 'Reset to default' button in the ribbon to return the dashboard to its original state.
2. Hover over the time series and select the left-most arrow twice to go up two levels. You should now be summarized at the Year level.
3. Select the two vertical arrows pointing downwards to drill down to the Quarter level.
4. Hover over each of the quarters to identify which quarter has the most PPR chains.

*Question #2: Taking Year into account, how do I identify which Quarter has the most Benchmark chains?*

Answer:

1. Use the 'Reset to default' button in the ribbon to return the dashboard to its original state.
2. Assuming you are starting at the Year-Quarter-Month granularity, select the left-most arrow once to go up one level to the Year-Quarter granularity.
3. Hover over each of the Year-Quarter combinations to identify which Year-Quarter has the most Benchmark chains.

- **Data Export Options:** On any of the summary views, the data behind the view can be exported by clicking within the table / visual and then clicking on the ellipses (“...”) to the top and right of the table. Please note that the export is limited to 30,000 rows for Comma-Separated (.csv) files and 150,000 rows for Excel (.xlsx) files.

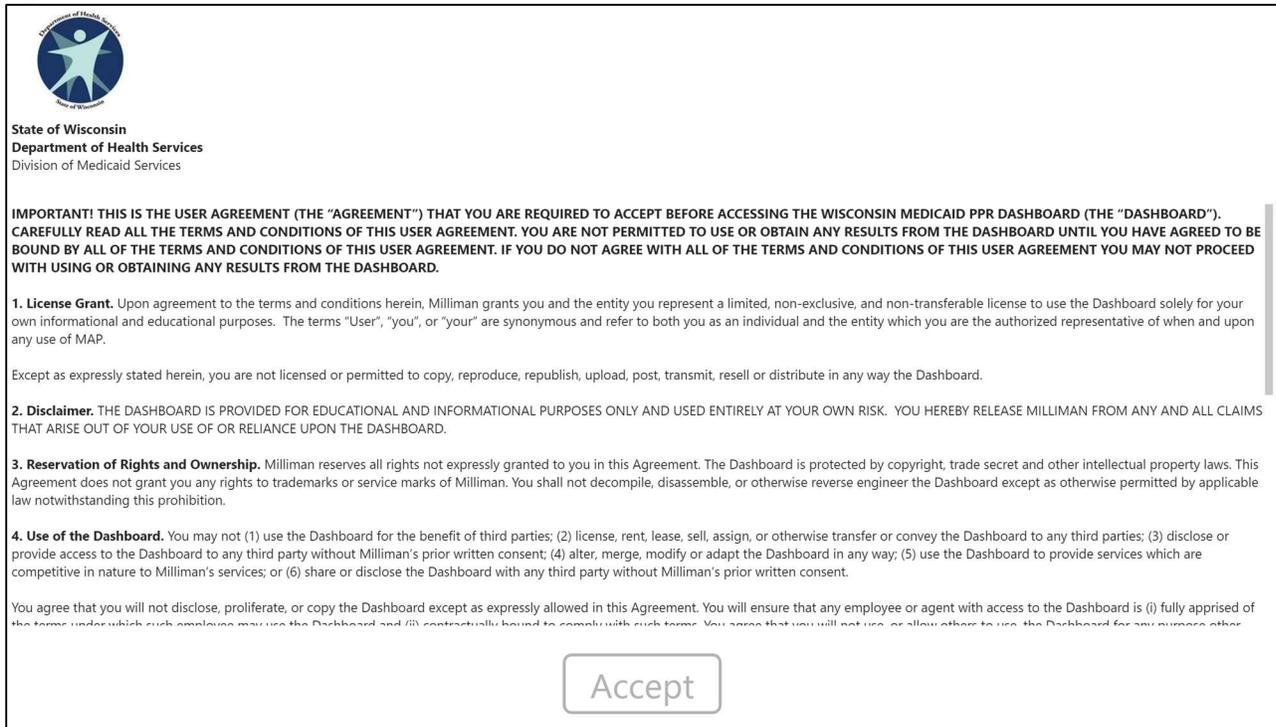
## DASHBOARD WINDOWS

The PPR Dashboard contains the multiple windows, described as follows.

### ReadMe View

All users should consult the “ReadMe” view, which contains the terms and conditions of the PPR dashboard user agreement. See Figure 1 below for an example window view.

**Figure 1: ReadMe View**



  
**State of Wisconsin**  
**Department of Health Services**  
Division of Medicaid Services

**IMPORTANT! THIS IS THE USER AGREEMENT (THE "AGREEMENT") THAT YOU ARE REQUIRED TO ACCEPT BEFORE ACCESSING THE WISCONSIN MEDICAID PPR DASHBOARD (THE "DASHBOARD"). CAREFULLY READ ALL THE TERMS AND CONDITIONS OF THIS USER AGREEMENT. YOU ARE NOT PERMITTED TO USE OR OBTAIN ANY RESULTS FROM THE DASHBOARD UNTIL YOU HAVE AGREED TO BE BOUND BY ALL OF THE TERMS AND CONDITIONS OF THIS USER AGREEMENT. IF YOU DO NOT AGREE WITH ALL OF THE TERMS AND CONDITIONS OF THIS USER AGREEMENT YOU MAY NOT PROCEED WITH USING OR OBTAINING ANY RESULTS FROM THE DASHBOARD.**

**1. License Grant.** Upon agreement to the terms and conditions herein, Milliman grants you and the entity you represent a limited, non-exclusive, and non-transferable license to use the Dashboard solely for your own informational and educational purposes. The terms "User", "you", or "your" are synonymous and refer to both you as an individual and the entity which you are the authorized representative of when and upon any use of MAP.

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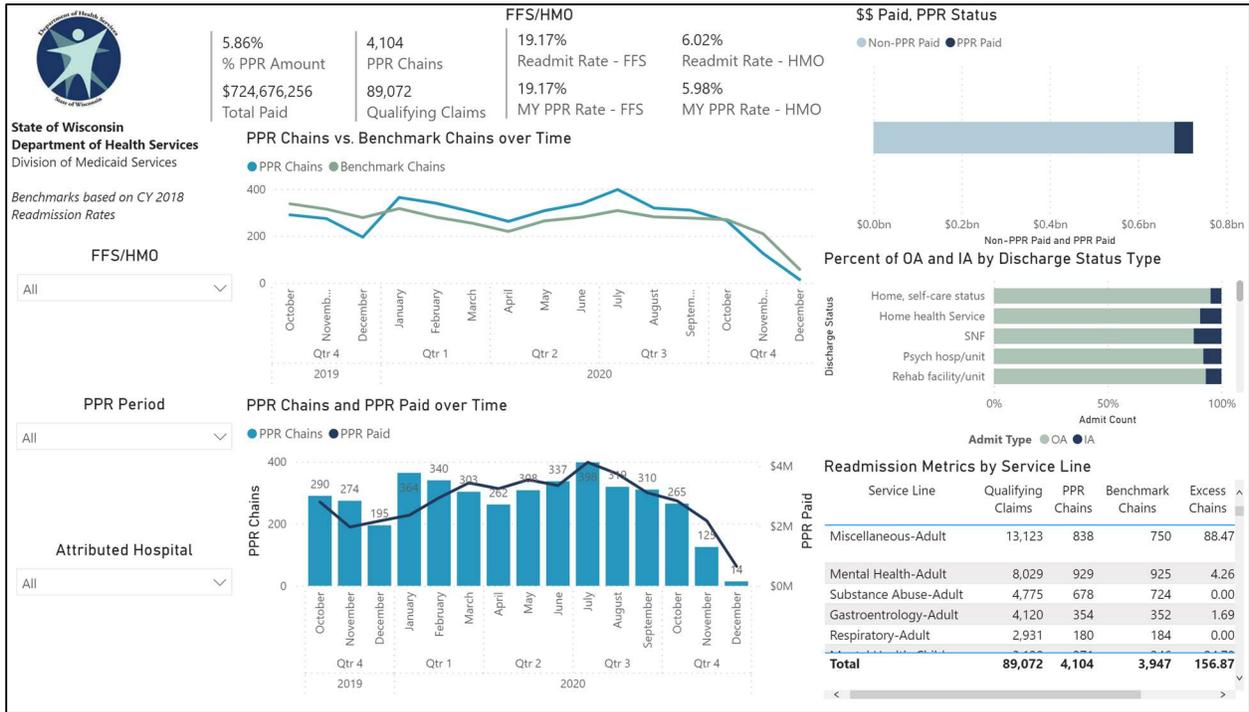
**4. Use of the Dashboard.** You may not (1) use the Dashboard for the benefit of third parties; (2) license, rent, lease, sell, assign, or otherwise transfer or convey the Dashboard to any third parties; (3) disclose or provide access to the Dashboard to any third party without Milliman's prior written consent; (4) alter, merge, modify or adapt the Dashboard in any way; (5) use the Dashboard to provide services which are competitive in nature to Milliman's services; or (6) share or disclose the Dashboard with any third party without Milliman's prior written consent.

You agree that you will not disclose, proliferate, or copy the Dashboard except as expressly allowed in this Agreement. You will ensure that any employee or agent with access to the Dashboard is (i) fully apprised of the terms under which such employee may use the Dashboard and (ii) contractually bound to comply with such terms. You agree that you will not use, or allow others to use, the Dashboard for any purpose other

**Hospital View**

The Hospital View summarizes the PPR chain data by hospital for MYs 2019-2020. See Figure 2 below for an example window view.

Figure 2: Hospital View



The Hospital View includes the following metrics:

- High Level Metrics (Top):** The first vertical pair of high level metrics at the top of the window summarize Total Paid and the percent of Total Paid attributed to PPR chains. The second vertical pair of high level numbers tallies how many PPR and total claims fall under the given filter set. The right set of four titled “FFS/HMO” aggregate the overall Readmit Rate over the filter set for FFS and HMO. If FFS is selected, the HMO numbers will default to zero, and vice-versa.
- PPR Chain vs. Benchmark Chains over Time (Middle):** This time series aggregates the PPR and Benchmark chain counts over time from MY 2019 to 2020 at various segments. Time series will summarize data at the Year-Quarter-Month granularity by default. However, using Time Drill Hierarchy controls in the upper right-hand corner, users can drill up or down to different granularities. See the Time Drill Hierarchy section under Power BI Functionality for more detail on time period granularities.
- PPR Chain and PPR Paid over Time (Middle):** PPR Chains are plotted as bars with the left-hand y-axis. The PPR Paid line is plotted on the right-hand y-axis title “PPR Paid”. Similar to PPR Chain vs. Benchmark Chains over Time, this plot also leverages Time Drill Hierarchy. See the Time Drill Hierarchy section under Power BI Functionality for more detail on time period granularities.
- \$\$\$ Paid, PPR Status (Upper Right):** Total Paid is split by PPR and Non-PPR claims.
- Percent of OA and IA by Discharge Status Type (Right):** Discharge status split their qualifying claims by initial admissions (IA) and only admissions (OA). The discharge status types are sorted by count of IAs in descending order by default.

- **Readmission Metrics by Service Line (Lower Right)** – This table summarizes qualifying claims, PPR chains, Benchmark chains, and Excess chains by service line. Using the filter bar on the left-hand side of the view and Data Export Options, users can download data as .csv or .xlsx files from this table.

Hospital Detail View

The Hospital Detail View, which is **populated only for hospital users**, summarizes the IAs and PPRs at the discharge level for MYs 2019-2020. See Figure 3 below for an example window view.

**Figure 3: Hospital Detail View**

The screenshot shows the 'Hospital Detail View' interface. On the left, there are three filter sections: 'PPR Period', 'Attributed Service Line Description', and 'Attributed HMO', each with a dropdown menu set to 'All'. The top right of the interface displays the title 'IA and PPR Claims Details'. Below this is a table with the following columns: 'PPR Period', 'Admit Type', 'PPR Chain Number', and 'PPR Chain Position'. The table contains 30 rows of data, alternating between PPR and IA claim types. The PPR chain numbers range from E\_1146 to F\_1020, and the chain positions range from 1 to 3. A pagination bar at the bottom left shows a left arrow and a progress indicator.

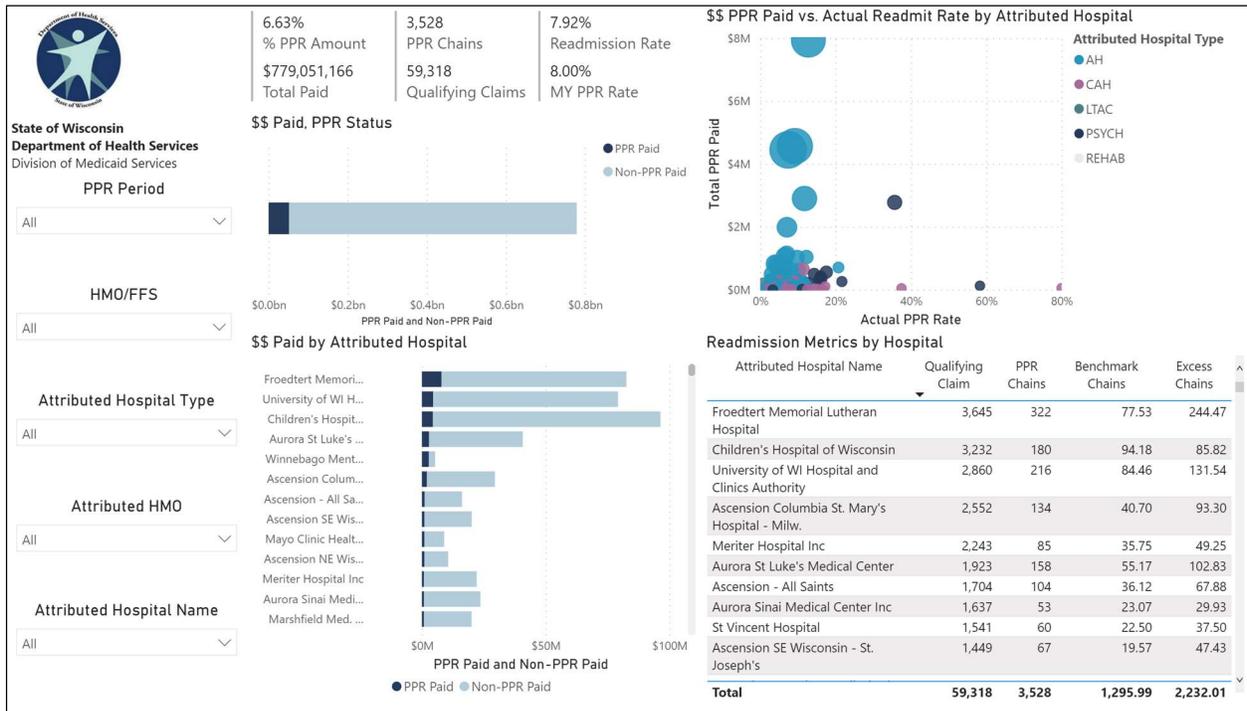
PPR Period	Admit Type	PPR Chain Number	PPR Chain Position
10/01/2020 - 09/30/2021	PPR	E_1146	2
10/01/2019 - 09/30/2020	PPR	E_1405	3
10/01/2019 - 09/30/2020	PPR	E_1656	2
10/01/2019 - 09/30/2020	PPR	E_2250	2
10/01/2019 - 09/30/2020	PPR	E_2401	2
10/01/2019 - 09/30/2020	PPR	E_2986	2
10/01/2019 - 09/30/2020	PPR	E_3173	2
10/01/2019 - 09/30/2020	PPR	E_3306	3
10/01/2019 - 09/30/2020	PPR	E_3368	2
10/01/2020 - 09/30/2021	PPR	E_403	2
10/01/2019 - 09/30/2020	PPR	E_4173	2
10/01/2019 - 09/30/2020	PPR	E_4224	3
10/01/2019 - 09/30/2020	PPR	E_4336	3
10/01/2020 - 09/30/2021	PPR	E_5105	2
10/01/2019 - 09/30/2020	PPR	E_5205	3
10/01/2019 - 09/30/2020	PPR	E_5501	2
10/01/2019 - 09/30/2020	PPR	E_5656	3
10/01/2019 - 09/30/2020	PPR	E_5989	2
10/01/2019 - 09/30/2020	PPR	E_6036	2
10/01/2019 - 09/30/2020	PPR	E_904	2
10/01/2019 - 09/30/2020	IA	F_1000	1
10/01/2019 - 09/30/2020	PPR	F_1000	2
10/01/2019 - 09/30/2020	IA	F_1001	1
10/01/2019 - 09/30/2020	PPR	F_1001	2
10/01/2019 - 09/30/2020	IA	F_1003	1
10/01/2019 - 09/30/2020	PPR	F_1003	2
10/01/2019 - 09/30/2020	IA	F_1008	1
10/01/2019 - 09/30/2020	PPR	F_1008	2
10/01/2019 - 09/30/2020	IA	F_102	1
10/01/2019 - 09/30/2020	PPR	F_102	2
10/01/2019 - 09/30/2020	IA	F_1020	1

Using the filters on the left side of the screen and the Data Export Options, users can pull data down as .csv or .xlsx files from this window.

HMO View

The HMO View summarizes the PPR chain data by HMO for MYs 2019-2020. See Figure 4 below for an example window view.

Figure 4: HMO View



The HMO View includes the following metrics:

- **High Level Numbers (Top)** – Starting at the top and middle of the page, the left-most vertical stack of numbers identifies percent of Total Paid that is attributed to PPR claims. The middle vertical tallies the number of PPR chains and qualifying claims. The right-most vertical aggregates the readmission rate and MY PPR rate.
- **\$\$\$ Paid, PPR Status (Middle)** – This bar charts identifies the proportion of Total Paid that is split between PPR and Non-PPR.
- **\$\$\$ Paid by Attributed Hospital (bottom)** – The hospital where the IA occurred is listed as a horizontal stacked bar in descending order by PPR paid. Each hospital’s bar is split by PPR and Non-PPR paid to identify hospitals that have disproportionate PPR paid sums when compared to Non-PPR paid.
- **\$\$\$ PPR Paid vs. Actual Readmit Rate by Attributed Hospital (Upper Right)** – Every point on this scatter plot represents a hospital. The x-axis charts Actual PPR Rate and the y-axis measures Total PPR Paid. The points are colored by their hospital type (e.g. PSYCH, REHAB, or LTAC). They are sized by total allowed.
- **Readmission Metrics by Hospital (Lower Right)** – The table aggregates readmissions metrics by hospital. Using Data Export Options, users can download .csv or .xlsx versions of the table.



## Data Dictionary

The MY 2020 quarterly readmission results were developed using data from the sources described below.

- *Attributed APR DRG*: the diagnosis related group attributed to the initial admission
- *Attributed HMO*: the patient's HMO at the time of the initial admission
- *Attributed Hospital*: the hospital where the initial admission occurred
- *Attributed Hospital Type*: the type of hospital where the initial admission occurred
- *Attributed Service Line Description*: the patient grouping or population at the time of the initial admission
- *BCP*: BadgerCare Plus
- *Benchmark Chains*: the expected number of PPR chains as reported from the 3M software
- *Excess Chains*: the difference between PPR chains and Benchmark chains
- *FFS*: Fee-for-Service
- *HMO*: Health Maintenance Organization
- *IA*: initial admission
- *MY*: Measurement Year
- *OA*: only admission
- *PPR*: potentially preventable readmission
- *PPR Chain Number*: the unique identifier of the PPR Chain
- *PPR Chain Position*: the position in the PPR chain for that claim. Chain positions of "1" are initial admissions. Chain position larger than "1" are potentially preventable readmissions.
- *PPR Period*: time period in which the initial admission occurred
- *PPR Rate*: the number of readmission claims divided by the number of qualifying claims
- *Readmit Rate*: the number of initial admissions divided by the total of initial and only admissions.
- *SSI*: Supplemental Security Income

## Caveats and Limitations

*The services provided for this project were performed under the signed contract between Milliman and the State of Wisconsin Department of Health Services (DHS) effective February 3, 2021.*

*This draft 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) 2020 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.*

*Milliman makes no representations or warranties regarding the contents of this correspondence to third parties. Likewise, third parties are instructed that they are to place no reliance upon this correspondence prepared for DHS by Milliman that would result in the creation of any duty or liability under any theory of law by Milliman or its employees to third parties.*

*Milliman has developed certain models to estimate the values included in this report. The intent of the models is to provide hospitals and HMOs with preliminary estimates of MY 2020 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 and in compliance with generally accepted actuarial practice and relevant actuarial standards of practice (ASOP).*

*The models rely on data and information as input to the models. We have relied upon certain data and information provided by CMS, 3M, 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.*

*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.*

***MY 2020 readmission results shown in the PPR dashboard 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 2020.***

*Guidelines issued by the American Academy of Actuaries require actuaries to include their professional qualifications in all actuarial communications. Peter Hallum is a member of the American Academy of Actuaries and meets the qualification standards for performing the analyses in this report.*



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