2024 Measure Set Review (MSR):
Final Preliminary Assessment

The following information was sourced in June of 2024 from the Centers for Medicare & Medicaid Services Measures Inventory Tool (CMIT), discussions with CMS program leads, and publicly available CMS datasets (see links below).

I. Measure Information

CMIT ID	Title
00576-01-C-IRFQR	Potentially Preventable Within Stay Readmission Measure for Inpatient Rehabilitation Facilities
Measure Steward	**CMS Program**
Centers for Medicare & Medicaid Services (CMS)	Inpatient Rehabilitation Facility Quality Reporting

Measure Overview
Rationale: This set of outcome measures reflects readmission rates for patients who are readmitted to a short-stay acute-care hospital or a long-term care hospital (LTCH) with a principal diagnosis considered to be unplanned and potentially preventable.
Description: This set of potentially preventable readmission (PPR) measures for post-acute care (PAC) estimates the risk-standardized rate of unplanned, potentially preventable readmissions for patients (Medicare fee-for-service [FFS] beneficiaries) who receive services in one of the following post-acute care provider types: skilled nursing facilities (SNFs), inpatient rehabilitation facilities (IRFs), and LTCHs. This measure is conceptualized uniformly across the PAC settings, in terms of the definition of the PPR outcome, the approach to risk adjustment, and the measure calculation.
Numerator: The numerator is mathematically related to the number of patients in the target population who have the event of a potentially preventable readmission during the IRF stay. The measure does not have a simple form for the numerator and denominator; that is, the risk-adjustment method used does not make the observed number of potentially preventable readmissions the numerator and a predicted number the denominator. Instead, the numerator is the risk-adjusted estimate of the number of potentially preventable readmissions that occurred during the IRF stay. This estimate includes risk adjustment for patient characteristics and a statistical estimate of the facility effect beyond patient mix.
Denominator: The risk-adjusted expected number of potentially preventable readmissions. This estimate includes risk adjustment for patient characteristics with the facility effect removed. The expected number of potentially preventable readmissions is the predicted number of risk-adjusted potentially preventable readmissions if the same patients were treated at the average PAC provider appropriate to the measure.
Exclusions: 1. Patients less than 18 years old. 2. Patients who were not continuously enrolled in Part A FFS Medicare for the 12 months prior to the IRF admission date and during the index IRF stay. 3. Patients who did not have a short-term acute-care stay within 1 day prior to an IRF admission date. 4. Patients discharged against medical advice (AMA). 5. Patients for whom the prior short-term acute-care stay was for nonsurgical treatment of cancer. 6. Patients who were transferred to a federal hospital from the PAC facility. 7. Patients who received care from a provider located outside of the United States, Puerto Rico, or a U.S. territory. 8. IRF stays with

data that are problematic (e.g., anomalous records for hospital stays that overlap wholly or in part or are otherwise erroneous or contradictory).

Measure type: Outcome	**Measure is a composite:** No **Measure is digital and/or an eCQM:** No
Level(s) of analysis/measured entities: Facility/Hospital/Agency	**Care setting:** • Inpatient rehabilitation facilities, • Long-term care hospitals • Skilled nursing facility (SNF)/nursing homes
Risk adjustment and/or stratification: Yes, risk adjustment includes variables such as age, sex, category of principal diagnosis from the prior proximal acute stay, and comorbidities. More information on IRFQR program risk adjustment can be found here.	**Data source(s):** Claims Data
Data collection method: Claims data	**Reporting frequency:** Annually
All required data are collected as part of clinical workflow: Yes	**Reporting overlap with similar/related measures:** Yes, Potentially Preventable 30-Day Post-Discharge Readmission Measure for Inpatient Rehabilitation Facility Quality Reporting Program.
Does this measure fill a statutorily required category for the program? No	**Is this measure included in upcoming rulemaking?** No

| Measure Status	
Current CBE Endorsement Status: Not Endorsed	**CBE Endorsement History:** None

II. Measure Performance

00576-01-C-IRFQR Performance in 2020-2022

For this measure, the MSR evaluation and analysis team reviewed the publicly available dataset Inpatient Rehabilitation Facility - Provider Data and archived Inpatient Rehabilitation Facilities.

Figure 1 is a boxplot that shows the distribution of the performance over the past 3 years (where available). For each performance year, the dots indicate the lower 5th and upper 95th percentiles, and the vertical line is the range between these values (90% of the measure scores are between the dots). The box spans the lower 25th to the upper 75th percentile (50% of the measure scores are within the box). The horizontal line in the box indicates the median score, and the "+" indicates the mean score. This plot can be used to assess overall trends in the score over time.

Interpretation: In the plot below, the median score increases from about 4.2-4.3 in 2020-2021 to about 4.8 in 2022. Over the years assessed, the median and mean scores and ranges remained relatively stable across measured entities.

Figure 1. Boxplot of Measure Score by Year
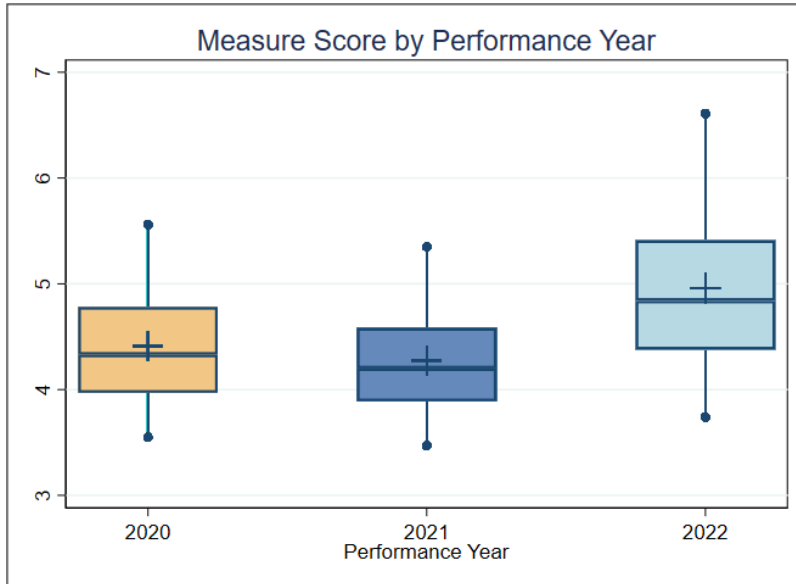
Importance Table

This table shows the relative spread of the scores and how many patients are impacted. Often the lowest or highest deciles (which, by definition, each represent 10% of the entities) may represent a disproportionately higher or lower percentage of patients. If the lowest decile contains only 5% of the patients for example, it suggests that low patient population may be related to low scores.

Interpretation of measure scores: The table can also be used to evaluate the impact of improving the score. It is common practice to use the performance of the top 20% of the entities as a benchmark. Here, 20% of the entities perform better than the 3rd Decile (4.4), which could be considered the benchmark. The number of adverse events for each decile can be estimated by multiplying the total patients by the corresponding rate. Here the estimated total number of adverse events across all deciles is 30,331. If Deciles 4-10 performed at the benchmark of 4.4, there would be an estimated 15% fewer adverse events (about 25,793).

Table 1. Importance (Decile by measure score, 2022)

Data Type	Overall	Min	Decile 1	Decile 2	Decile 3	Decile 4	Decile 5	Decile 6	Decile 7	Decile 8	Decile 9	Decile 10	Max
Mean Score (SD)	4.96 (0.87)	2.8	3.7	4.2	4.4	4.6	4.7	4.9	5.1	5.4	5.8	6.8	9.4
Entities	1,069	1	107	107	107	107	107	107	107	107	107	106	1
Total Patients	599,241	468	67,679	50,092	48,489	48,725	50,007	54,118	57,066	66,492	80,220	76,353	641

Reliability Tables

Two tables are used to summarize reliability. For Table 2, entities are sorted by patient volume, and the average reliability is reported along with the number of entities and average number and total patients for each decile. These tables can be used to assess the impact of population size on the reliability of an entity's measure score. In cases where reliability has a strong relationship to population size, reliability will be the lowest at Decile 1 and progressively increase up to Decile 10.

For Table 3, entities are sorted by reliability, and the average reliability by decile is reported. Mean, standard deviation, minimum and maximum reliability, and inter-quartile range (IQR) are also included. This table can be used to see the distribution of the reliability of the entities. A measure score is generally considered reliable when the reliability for at least 70% of the individual entities is above 60%.

Table 2. Reliability (Decile by denominator – target population size)

Data Type	Overall	Min	Decile 1	Decile 2	Decile 3	Decile 4	Decile 5	Decile 6	Decile 7	Decile 8	Decile 9	Decile 10	Max
Mean Target Population Size	561	28	82	152	209	259	323	414	542	747	1,076	1,814	5,121
Mean Reliability	55.6	47.2	39.8	45.5	46.1	49.5	52.7	55.9	57.8	63.4	68.6	76.8	88.3
Entities	1,069	1	107	107	107	107	107	107	107	107	107	106	1
Total Patients	599,241	28	8,819	16,250	22,324	27,706	34,540	44,324	58,028	79,882	115,110	192,258	5,121

Table 3. Mean reliability (By reliability decile)

Mean	SD	Min	Decile 1	Decile 2	Decile 3	Decile 4	Decile 5	Decile 6	Decile 7	Decile 8	Decile 9	Decile 10	Max	IQR
55.6	13.0	23.1	34.8	42.0	45.9	49.6	52.9	56.4	60.3	64.8	70.4	79.1	90.7	18.9

Interpretation: The overall variation between entities (as estimated by the variance of the measure scores) is somewhat low relative to the variation within each entity (as estimated by the square of ¼ of the difference between the upper and lower limit). About 65% of the entities have an estimated reliability of less than 60%, suggesting that this measure may not be effective in differentiating entities by quality of performance.