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
00575-02-C-LTCHQR	Potentially Preventable 30-Day Post-Discharge Readmission Measure for Long-Term Care Hospital (LTCH) Quality Reporting Program (QRP)
Measure Steward	**CMS Program**
Centers for Medicare & Medicaid Services (CMS)	Long-Term Care Hospital Quality Reporting

Measure Overview
Rationale: The peer-reviewed literature specific to potentially preventable readmissions following LTCH discharge is limited. However, MedPAC has estimated that 76% of 30-day readmissions for Medicare beneficiaries overall were due to five potentially preventable conditions (heart failure, electrolyte imbalance, respiratory infection, sepsis, and urinary tract infection).
Description: This measure is one of a set of potentially preventable readmission (PPR) measures for post-acute care (PAC) that 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 long-term care hospitals (LTCH). 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 in the 30-day post-discharge window. 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 within 30 days from discharge. 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: Patients/residents who died during the SNF/IRF/LTCH stay. Patients/residents less than 18 years old. Patients/residents who were transferred at the end of a stay to another SNF/IRF/LTCH or short-term acute care hospital. Patients/residents who were not continuously enrolled in Part A FFS Medicare for the 12 months prior to the SNF/IRF/LTCH admission date,

and at least 30 days after SNF/IRF/LTCH discharge date. Patients/residents who did not have a short-term acute-care stay within 30 days prior to a SNF/IRF/LTCH admission date. Patients/residents discharged against medical advice (AMA). Patients/residents for whom the prior short-term acute-care stay was for nonsurgical treatment of cancer. Patients/residents who were transferred to a federal hospital from the PAC facility. Patients/residents who received care from a provider located outside of the United States, Puerto Rico, or a U.S. territory. SNF/IRF/LTCH 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 entity: Facility/Hospital/Agency	**Care setting:** • Inpatient rehabilitation facility (IRF) • Long-term care hospital • Skilled nursing facility (SNF)/Nursing Home
Risk adjustment and/or stratification: Yes, risk adjusted for variables including age, sex, comorbidities, and other variables outlined here.	**Data source(s):** Claims data
Data collection method: Claims data review	**Reporting frequency:** Annually
All required data are collected as part of clinical workflow: Yes, routinely collected in claims data.	**Reporting overlap with similar/related measures:** One of four measure variations assessing 30-day post discharge readmission across PAC/LTC settings. Includes 00575-02-C-LTCHQR, 00575-01-C-IRFQR, 00575-03-C-SNFQRP, and 00575-04-C-HHQR.
Does this measure fill a statutorily required category for the program? Yes, this topic area is required by IMPACT Act.	**Is this measure included in upcoming rulemaking?** No

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

## II. Measure Performance

00575-02-C-LTCHQR Performance in 2020-2022

For this measure, the MSR evaluation and analysis team reviewed the publicly available dataset Long-Term Care Hospital - Provider Data and archived Long-term care hospitals.

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.

Interpretation: This plot can be used to assess overall trends in the score over time. In the plot below, the median score decreases very slightly from about 19.7 in 2020 to about 19 in 2021 to about 18.5 in 2022. Performance across these years in terms of median scores and range in performance across entities was stable.

Figure 1. Boxplot of Measure Score by Year
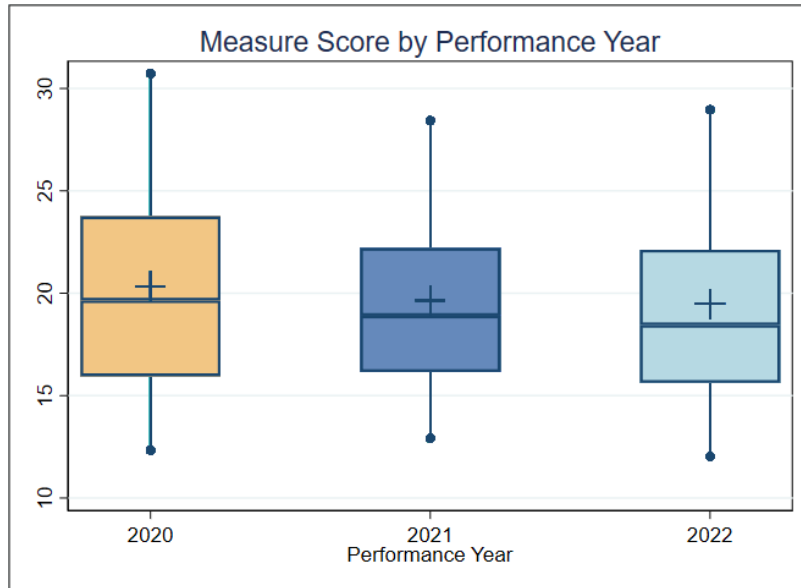
Importance Table

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 (15.7), 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 13,536. If Deciles 4-10 performed at the benchmark of 15.7, there would be an estimated 22% fewer adverse events (about 10,564).

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)	19.5 (6.3)	7.0	11.7	13.9	15.7	16.8	18.0	19.2	20.4	22.2	24.8	32.5	70.8
Entities	322	1	33	32	32	32	32	33	32	32	32	32	1
Total Patients	70,171	178	8,250	6,847	7,560	6,481	7,316	6,834	5,992	7,038	7,434	6,419	34

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	218	28	59	100	125	153	181	209	239	275	340	503	783
Mean Reliability	84.5	45.9	69.4	78.5	79.3	83.2	84.1	88.0	88.2	90.0	91.4	93.2	97.0
Entities	322	1	33	32	32	32	32	33	32	32	32	32	1
Total Patients	70,171	28	1,950	3,213	4,003	4,893	5,778	6,909	7,660	8,811	10,866	16,088	783

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
84.5	8.8	37.5	65.4	75.9	80.9	83.7	85.6	87.6	89.1	90.6	92.2	94.3	97.3	9.6

Interpretation: The overall variation between entities (as estimated by the variance of the measure scores) is high relative to the variation within each entity. Nearly all entities have an estimated reliability of greater than 60%, suggesting that this measure is effective in differentiating entities by quality of performance.