30-Day Skilled Nursing Facility Rehospitalization Measure Methodology

Overview

California legislation requires the California Department of Public Health (CDPH) and the California Department of Health Care Services (DHCS) to implement a Skilled Nursing Facility (SNF) Quality and Accountability Supplemental Program (QASP). As part of this statutory requirement, CDPH and DHCS evaluate various areas to expand the SNF QASP measure set.

In December 2014, the National Quality Forum (NQF) endorsed a measure titled PointRight® Pro 30™. This measure is a SNF all-cause, risk-adjusted rehospitalization measure. The measure evaluates the rate at which all patients who enter SNFs from acute hospitals are subsequently rehospitalized during the SNF stay, within 30 days from their admission to the SNF. A SNF's expected rehospitalization rate is compared to their actual rehospitalization rate. The American Health Care Association (AHCA) developed the 30-day risk-adjusted SNF rehospitalization measure to help address the frequent occurrence of rehospitalizations, the high cost, and the negative impact hospitalizations have on nursing home residents. AHCA envisioned the measure being used:

- By providers to benchmark their performance to others and to track their progress in quality improvement efforts.
- By insurance companies to include in payment models and reporting programs.
- By government agencies to include in public reporting (e.g., Centers for Medicare & Medicaid Services' (CMS') Nursing Home Compare, Medicare or Medicaid payment models).

HSAG obtained the PointRight Pro 30 rehospitalization measure code and descriptive information about the measure from AHCA.

Methodology

The measure specifications for the 30-day risk-adjusted SNF rehospitalization measure are provided below.

Numerator: the number of admissions during the SNF stay that are sent back to any hospital (excluding emergency department only visits) for any reason as indicated on the Minimum Data Set (MDS) discharge assessment within 30 days of admission to the facility. This captures both inpatient and observation status admissions.

Denominator: all admissions from an acute hospital to the facility during the 12 month performance period as indicated on the admission MDS assessment (either 5 day or readmission/return SNF prospective payment system [PPS] or 14 day Omnibus Budget Reconciliation Act of 1987 [OBRA] assessment) regardless of payor status and type of hospitalization (inpatient or observation).

Actual Rehospitalization Rate: Calculated by dividing the number of SNF stays sent back to any acute care hospital within 30 days of admission to the facility by the number of admissions to the facility from acute hospitals over the 12 month performance period.

Risk Adjustment

Table 1 displays the clinical variables, and their associated coefficients, that were found to be associated with rehospitalization in the logistic regression model.[1]

Table 1—Risk Adjustment Clinical Characteristics

Clinical Variables	Coefficient Values
Demographic	
Age greater than or equal to 65	0.1770
Male	0.1622
Medicare as Primary Payor	0.5543
Functional Status	
Total bowel incontinence	0.1848
Eating dependent	0.4718
Needs two person assistance in activities of daily living (ADLs)	0.2389
Cognitive impairment (dementia)	0.3327
Prognosis	
End stage prognosis poor	-0.7846
Recently rehospitalized	0.1400
History of respiratory failure	0.1159
Receiving hospice care	-1.5085
Clinical Condition	
Daily Pain	0.0611
Pressure ulcer stage – Stage 2	0.1670
Pressure ulcer stage – Stage 3	0.1334
Pressure ulcer stage – Stage 4	0.1569
Pressure ulcer stage – Unstageable	0.1810
Venous arterial ulcer	0.1862

[1] Please note, the coefficients were rounded to four decimal places for display purposes in the table. AHCA updates the coefficients for the clinical variables once every quarter.

Clinical Variables	Coefficient Values
Diabetic foot ulcer	0.1459
Diagnoses	
Anemia	0.0923
Asthma	0.1033
Diabetes	0.0462
History of heart failure	0.2004
History of sepsis	0.0891
History of viral hepatitis	0.4017
History of internal bleeding	0.8920
Services and Treatments	
Dialysis	0.6038
Insulin prescribed	0.1777
Ostomy care	0.3263
Cancer chemotherapy	0.6001
Receiving radiation therapy	0.6111
Continue to receive IV medication	0.1880
Continue to receive oxygen	0.3395
Continued tracheostomy care	0.1336

Risk-Adjusted Rehospitalization Rate: a facility's expected rehospitalization rate was compared to the actual rehospitalization rate and that ratio was multiplied by the state average.

$$\frac{Actual\ Rehospitalization}{Expected\ Rehospitalization} \times State\ Average = Risk\ Adjusted\ Rate$$

The risk adjustment formula is a similar method used by CMS to calculate hospitals' 30-day readmission rate reported on Hospital Compare. Also, this similar calculation method has been endorsed by NQF and is used to calculate the rehospitalization rate that CMS uses to assess payment penalties to hospitals.

Risk-adjusted rates were not reported for facilities with less than 30 admissions in the denominator.

State Average

The state average was calculated as the sum of all rehospitalizations across all nursing facilities divided by the sum of all admissions from hospitals across all nursing facilities during the performance period. For the facility-level results, HSAG used the California state average (16.360 percent) which was calculated from the MDS data (July 1, 2014 – June 30, 2015 reporting period) to calculate the risk-adjusted rehospitalization rate. HSAG was unable to use a national average for this calculation, as AHCA has not released the national average percentage for this measure.

Data Completeness Rate

AHCA's program evaluates the MDS data to determine whether an individual's final discharge status was available for all admissions. A data completeness rate was calculated as the percentage of admission assessments that have either an MDS discharge assessment or a quarterly MDS assessment within the 120 days of admission. If an admission was missing a discharge or quarterly assessment within 120 days, the record was considered incomplete and dropped. Adjusted rehospitalization rates were not reported if the data completeness rate was less than 95 percent, since the adjusted rate may not be sufficiently accurate or stable.

Results Calculations

HSAG calculated the rehospitalization rates using MDS 3.0 data with entry dates from July 1, 2014 through June 30, 2015. Per a recommendation from AHCA, HSAG also included data from July 1, 2013 through September 30, 2015 (i.e., two years plus one quarter of data) to ensure there was sufficient data available for data preparation and calculation of the data completeness rate.

The PointRight Pro 30 code generated output with facility-level statistics for the 12-month reporting period (i.e., July 1, 2014 – June 30, 2015). The facility-level results summarize the total number of admissions, data completeness, and rehospitalization rates (observed, expected, and adjusted) for each facility. The "MDS_ID" field was the primary ID used for each facility, which is unique by state and facility but may be linked to one or more CCN associated with that facility.

An adjusted rehospitalization rate was only calculated if the data completeness rate was greater than or equal to 95 percent and the number of admissions was greater than or equal to 30.

Point Allocation Distribution

HSAG will use the following point allocation for the 30-day SNF rehospitalization measure:

- If a facility was performing worse than the Statewide average, the facility would receive no points for the measure.
- If the facility was performing at or better than the Statewide average, but performing below the 75th percentile for the measure, the facility would receive half of the possible points for the measure.
- If the facility was performing at or better than the 75th percentile for the measure, the facility would receive all of the possible points.

A facility's performance on the measure was not evaluated or scored if the facility did not meet the minimum denominator size threshold for that measure or a risk-adjusted rate could not be calculated.

Color coding was used throughout the facility-level results worksheet to indicate how the facility performed compared to defined benchmarks. Cells in the facility-specific worksheet were assigned a red, light green, or dark green shading to indicate the following:

- *Red shading:* the facility did not meet the Statewide average and would not receive any points for the measure.
- *Light green shading:* the facility met or exceeded the Statewide average, but did not meet the 75th percentile, and would receive half of the possible points for the measure.
- *Dark green shading:* the facility met or exceeded the 75th percentile and would receive all possible points for the measure.