## IRF Functional Outcome Measure: Change in Self-Care Score for Medical Rehabilitation Patients (NQF #2633) (CMS ID: I009.XX for public reporting)

1. **Calculate the admission Self-Care score** (steps 1.1 through 1.2) using the admission Self-Care score items and valid codes, identified below:

The Self-Care assessment items used for admission Self-Care score calculations are:

* GG0130A1. Eating
* GG0130B1. Oral hygiene
* GG0130C1. Toileting hygiene
* GG0130E1. Shower/bathe self
* GG0130F1. Upper body dressing
* GG0130G1. Lower body dressing
* GG0130H1. Putting on/taking off footwear

Valid codes and code definitions for the coding of the admission Self-Care items are:

* 06 – Independent
* 05 – Setup or clean-up assistance
* 04 – Supervision or touching assistance
* 03 – Partial/moderate assistance
* 02 – Substantial/maximal assistance
* 01 – Dependent
* 07 – Patient refused
* 09 – Not applicable
* 10 – Not attempted due to environmental limitations
* 88 – Not attempted due to medical condition or safety concerns
* - – Not assessed/no information
  1. To obtain the score, use the following procedure:
* If code is between 01 and 06, then use the code as the score.
* If code is 07, 09, 10, or 88, then recode to 01 and use this code as the score.
* If the self-care item is dashed (-) or missing, recode to 01 and use this code as the score.
  1. Sum the scores of the admission self-care items to create an admission self-care score for each stay-level record. Scores can range from 7 to 42, with a higher score indicating greater independence.

1. **Calculate the discharge Self-Care score** (steps 2.1 through 2.2) using the discharge Self-Care score items and valid codes, identified below.

The Self-Care assessment items used for discharge Self-Care score calculations are:

* GG0130A3. Eating
* GG0130B3. Oral hygiene
* GG0130C3. Toileting hygiene
* GG0130E3. Shower/bathe self
* GG0130F3. Upper body dressing
* GG0130G3. Lower body dressing
* GG0130H3. Putting on/taking off footwear

Valid codes and code definitions for the coding of the discharge Self-Care items are:

* 06 – Independent
* 05 – Setup or clean-up assistance
* 04 – Supervision or touching assistance
* 03 – Partial/moderate assistance
* 02 – Substantial/maximal assistance
* 01 – Dependent
* 07 – Patient refused
* 09 – Not applicable
* 10 – Not attempted due to environmental limitations
* 88 – Not attempted due to medical condition or safety concerns
* ^ – Skip pattern
* - – Not assessed/no information
  1. To obtain the score, use the following procedure:
* If code is between 01 and 06, then use code as the score.
* If code is 07, 09, 10, or 88, then recode to 01 and use this code as the score.
* If the self-care item is skipped (^), dashed (-), or missing, recode to 01 and use this code as the score.
  1. Sum the scores of the discharge self-care items to create a discharge self-care score for each stay-level record. Scores can range from 7 to 42, with a higher score indicating greater independence.

1. **Identify excluded stays**. Patient is excluded if any of the following are true (steps 3.1 through 3.5).
   1. Incomplete stays:
      1. Length of stay is less than 3 days: Discharge Date (Item 40) – Admission Date (Item 12) is less than 3 days.
      2. Discharged against medical advice: Patient discharged against medical advice (Item 41 = 1).
      3. Died while in IRF: Was the patient discharged alive (Item 44C = 0).
      4. Medical Emergency: Patient’s discharge destination (Item 44D): Short-term General Hospital (Item 44D = [02]), Long-Term Care Hospital (LTCH) (Item 44D = [63]), Inpatient Psychiatric Facility (Item 44D = [65]), Critical Access Hospital (Item 44D = [66])
   2. Patients who are independent with all self-care activities at the time of admission.

Items used to identify these patient records:

* Eating (Item GG0130A1 = [06]) and;
* Oral hygiene (Item GG0130B1 = [06]) and;
* Toileting hygiene (Item GG0130C1 = [06]) and;
* Shower/bathe self (Item GG0130E1 = [06]) and;
* Upper body dressing (Item GG0130F1 = [06]) and;
* Lower body dressing (Item GG0130G1 = [06]) and;
* Putting on/taking off footwear (Item GG0130H1 = [06]).
  1. Patients in a coma, persistent vegetative state, complete tetraplegia, locked-in state, severe anoxic brain damage, cerebral edema or compression of brain.

Items used to identify these patient records:

* Impairment Group (Item 21A = [0004.1221 or 0004.1222 or 0004.2221 or 0004.2222]).
* Etiologic Diagnosis A., B, or C (Item 22 = any one of the ICD-10-CM codes listed in *IRF Measure Calculations and Reporting User’s Manual* **Appendix A**, ***Table A-4***).
* Comorbid Condition (Item 24 = any of the ICD-10-CM codes listed in *IRF Measure Calculations and Reporting User’s Manual* **Appendix A**, [***Table A-4***](#TableA_4)).
  1. Patients younger than 21 years: Age in years is calculated based on the truncated difference between admission date (Item 12) and birth date (Item 6); i.e. the difference is not rounded to nearest whole number.
  2. Patients discharged to hospice (home or institutional facility) (Item 44D = 50 or 51).

1. **Determine the included records.** Determine the total number of stay-level records with an IRF-PAI in the measure target period, which do not meet the exclusion criteria. Note that this measure does not have a simple form for the numerator and denominator.
2. **Calculate the observed change in self-care scores for each patient stay-level record**. For each stay-level record included in Step 4, subtract the admission self-care score (step 1) from the discharge self-care score (step 2). If a patient’s self-care score decreased from admission to discharge, the difference will be a negative value.
3. **Calculate the facility-level average observed change in self-care score**. Calculate an average observed change in self-care score for each IRF as the mean of the observed change in self-care scores for all patients in the facility who are not excluded from the measure (identified in Step 3).
4. **Calculate the** **national average change in self-care score[[1]](#footnote-1)** as the mean of the observed change in self-care scores for all patient stays calculated from steps 1-5.

*Note: Because there is limited public accessibility to national assessment data, this document provides a national average observed score based on the reporting period of the regression intercept and coefficients. The national average observed score can be seen in the IRF Measure Calculations and Reporting User’s Manual* ***Table A-1*** *of* [***Appendix A***](#AppendixA) *and the associated Risk Adjustment Appendix File.*

1. **Calculate the expected change in self-care score.**
   1. For each stay-level record, use the intercept and regression coefficients to calculate the expected change in self-care score using the formula below:

**[1]** Expected change in self-care score = β0 + β1(COV1) + . . . + βn(COVn)

Where:

* ***Expected change in self-care score*** identifies the expected change in self-care score for each IRF patient.
* ***β****0*is the regression intercept.
* ***β****1* ***through β****n*are the regression coefficients for the covariates (see Risk Adjustment Appendix File).

See *Quality Measure User’s Manual* **Appendix A**, [***Table A-5***](#TableA_5) and [***Table A-6***](#TableA_6), and the associated Risk Adjustment Appendix File for the regression intercept and coefficients as well as detailed IRF-PAI coding for each risk adjustor.[[2]](#footnote-2) The regression intercept and regression coefficients are values obtained through Generalized Linear Model regression analysis. Please note that the CASPER QM and Provider Preview Reports use fixed regression intercepts and coefficients based on the target period stated in the *IRF Measure Calculations and Reporting User’s Manual* **Appendix A**, ***Table A-5*** *and* ***Table A-6*** and the Risk Adjustment Appendix File.

1. **Calculate the facility-level average expected change in self-care score**. Calculate an average expected change in self-care score for each IRF as the mean of the expected change in self-care scores for all patients in the facility.
2. **Calculate the risk-adjusted average change in self-care score** (steps 10.1 through 10.2).
   1. Subtract the facility-level expected change score from the facility-level observed change score to determine the difference in scores (difference value). A difference value that is 0 indicates the observed and expected scores are equal. An observed minus expected difference value that is higher than 0 (positive) indicates that the observed change score is greater (better) than the expected change score. An observed minus expected difference value that is less than 0 (negative) indicates that the observed change score is lower (worse) than the expected change score.
   2. Add the national average change in self-care score to each IRF’s difference value (calculated in step 10.1). This is the risk-adjusted average change in self-care score.
3. **Round the value to one decimal place**.
   1. If the digit in the second decimal place is 5 or greater, add 1 to the first decimal place, otherwise leave the first decimal place unchanged.
   2. Drop all of the digits following the first decimal place.

1. The national average observed score is calculated using the patient stay as the unit of analysis. [↑](#footnote-ref-1)
2. The regression constant (intercept) and coefficient values have been rounded to four decimal places. When applying these values to the equation to calculate facility-level QM scores, these intercept and coefficient values should be used; do not round to fewer than four decimal places. This is to ensure consistency and accuracy of measure calculations. [↑](#footnote-ref-2)