## IRF Functional Outcome Measure: Change in Mobility Score for Medical Rehabilitation Patients (NQF #2634) (CMS ID: I010.XX for public reporting)

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

The Mobility assessment items used for admission Mobility score calculations are:

* GG0170A1. Roll left and right
* GG0170B1. Sit to lying
* GG0170C1. Lying to sitting on side of bed
* GG0170D1. Sit to stand
* GG0170E1. Chair/bed-to-chair transfer
* GG0170F1. Toilet transfer
* GG0170G1. Car transfer
* GG0170I1. Walk 10 feet
* GG0170J1. Walk 50 feet with two turns
* GG0170K1. Walk 150 feet
* GG0170L1. Walking 10 feet on uneven surfaces
* GG0170M1. 1 step (curb)
* GG0170N1 4 steps
* GG0170O1 12 steps.
* GG0170P1. Picking up object

Valid codes and code definitions for the coding of the admission Mobility 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: only valid for items GG0170J1 through GG0170L1; GG0170N1, GG0170O1
* - – Not assessed/no information
  1. To obtain the score, use the following procedure
* If GG0170I1 = 07, 09, 10, or 88 AND GG0170I3 = 07, 09, 10, or 88 indicating the patient is not walking on admission and discharge, then recode walking item codes to wheelchair mobility codes as follows:
* Recode admission GG0170I1 to use the code for admission GG0170R1
* Recode admission GG0170J1 to use the code for admission GG0170R1
* Recode admission GG0170K1 to use the code for admission GG0170S1
* Recode admission GG0170L1 to use the code for admission GG0170S1
* 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 mobility item is skipped (^), dashed (-), or missing, recode to 01 and use this code as the score.
  1. Sum the scores of the admission mobility items to create an admission mobility score for each patient stay. Scores can range from 15 – 90, with a higher score indicating greater independence.

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

The Mobility assessment items used for discharge Mobility score calculations are:

* GG0170A3. Roll left and right
* GG0170B3. Sit to lying
* GG0170C3. Lying to sitting on side of bed
* GG0170D3. Sit to stand
* GG0170E3. Chair/bed-to-chair transfer
* GG0170F3. Toilet transfer
* GG0170G3. Car transfer
* GG0170I3. Walk 10 feet
* GG0170J3. Walk 50 feet with two turns
* GG0170K3. Walk 150 feet
* GG0170L3. Walking 10 feet on uneven surfaces
* GG0170M3. 1 step (curb)
* GG0170N3 4 steps
* GG0170O3 12 steps
* GG0170P3. Picking up object

Valid codes and code definitions for the coding of the discharge Mobility 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 GG0170I1 = 07, 09, 10, or 88 AND GG0170I3 = 07, 09, 10, or 88 indicating the patient is not walking on admission and discharge, then recode walking item codes to wheelchair mobility codes as follows:
* Recode discharge GG0170I3 to use the code for discharge GG0170R3
* Recode discharge GG0170J3 to use the code for discharge GG0170R3
* Recode discharge GG0170K3 to use the code for discharge GG0170S3
* Recode discharge GG0170L3 to use the code for discharge GG0170S3
* 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 mobility item is skipped (^), dashed (-), or missing, recode to 01 and use this code as the score.
  1. Sum the scores of the discharge mobility items to create a discharge mobility score for each patient stay. Scores can range from 15 – 90, 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) < 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 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 mobility activities at the time of admission.

Items used to identify these patient records:

* Roll left and right (Item GG0170A1 = [06]) and;
* Sit to lying (Item GG0170B1 = [06]) and;
* Lying to sitting on side of bed (Item GG0170C1 = [06]) and;
* Sit to stand (Item GG0170D1 = [06]) and;
* Chair/bed-to-chair transfer (Item GG0170E1 = [06]) and;
* Toilet transfer (Item GG0170F1 = [06]) and;
* Car transfer (Item GG0170G1 = [06]) and;
* Walk 10 feet (Item GG0170I1 = [06]) and;
* Walk 50 feet with two turns (Item GG0170J1 = [06]) and;
* Walk 150 feet (Item GG0170K1 = [06]) and;
* Walk 10 feet on uneven surfaces (Item GG0170L1 = [06]) and;
* 1 step (curb) (Item GG0170M1 = [06]) and;
* 4 steps (Item GG0170N1 = [06]) and;
* 12 steps (Item GG0170O1 = [06]) and;
* Picking up object (Item GG0170P1 = [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 the *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 the *IRF Measure Calculations and Reporting User’s Manual* **Appendix A**, ***Table A-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 did 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 mobility scores for each stay-level record**. For each stay-level record included, calculate the difference between the admission mobility score (step 1) from the discharge mobility score (step 2). If a patient’s mobility score decreased from admission to discharge, the difference will be a negative value.
3. **Calculate the facility-level average observed change in mobility score**. Calculate an average observed change in mobility score for each IRF as the mean of the observed change in mobility scores for all patients in the facility who are not excluded (identified in step 3).
4. **Calculate the** **national average change in mobility score[[1]](#footnote-1)** as the mean of the observed change in mobility 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 mobility score.**
   1. For each stay-level record, use the intercept and regression coefficients to calculate the expected change in mobility score using the formula below:

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

Where:

* ***Expected change in mobility score*** identifies the expected change in mobility 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 the *IRF Measure Calculations and Reporting User’s Manual* **Appendix A**, ***Table A-5*** and ***Table A-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.

1. **Calculate the facility-level average expected change in mobility score**. Calculate an average expected change in mobility score for each IRF as the mean of the expected change in mobility scores for all patients in the facility.
2. **Calculate the risk-adjusted average change in mobility 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 mobility score to each IRF’s difference value (calculated in step 10.1). This is the risk-adjusted average change in mobility 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)