



RUG IV – Reimbursement Calculation Notes

CALCULATION OF TOTAL REHABILITATION THERAPY MINUTES

For Speech-Language Pathology Services (Items at O0400A), Occupational Therapy (Items at O0400B), and Physical Therapy (Items at O0400C), the MDS 3.0 separately captures minutes that the resident was in individual therapy, in concurrent therapy (therapy with one other patient), and in group therapy (part of a group of 3 or more residents) during the last 7 days. For each therapy discipline, total minutes are calculated as follows:

1. **TOTAL MINUTES.** For RUG-IV classification TOTAL MINUTES includes all minutes in individual therapy, one-half of the minutes in concurrent therapy, and all minutes in group therapy.
2. **ADJUSTMENT OF TOTAL MINUTES.** For Medicare Part A there is a limitation that the group minutes cannot exceed 25% of the TOTAL MINUTES. For Medicare Part A, TOTAL MINUTES includes all minutes in individual therapy, one-half of the minutes in concurrent therapy, and minutes in group therapy up to a number of minutes equal to 25% of the final adjusted TOTAL MINUTES. If the group therapy minutes exceeds 25% of the unadjusted TOTAL MINUTES, then the adjusted TOTAL MINUTES equals 133% of the sum of individual minutes and one-half of concurrent minutes.

The group therapy limitation may also be used for other payment systems. If the group adjustment is used, then RUG-IV therapy classification is based on the adjusted TOTAL MINUTES. If the group adjustment is not used, then RUG-IV therapy classification is based on the unadjusted TOTAL MINUTES.

CALCULATION OF REHABILITATION THERAPY DAYS VARIABLES

Three different variables based on the number of rehabilitation therapy days are needed for classification:

1. `i_rehab_types_5days` = number of therapy disciplines (speech, OT, and PT) received for 5 or more days.
2. `i_rehab_types_3days` = number of therapy disciplines (speech, OT, and PT) received for 3 or more days.
3. `i_tot_rehab_days` = total number of days of therapy across the therapy disciplines.

MEDICARE SHORT STAY ASSESSMENT HANDLING

RUG-IV uses an alternative rehabilitation therapy classification when an assessment is a Medicare Short Stay assessment. To be considered as a Medicare Special Short Stay assessment and use the special RUG-IV short stay rehabilitation therapy classification, all of the 7 following conditions must be met:

1. The assessment must be a Start of Therapy OMRA (A0310C = 1 or 3). This assessment may be combined with any OBRA assessment, any scheduled PPS assessment, an End of Therapy OMRA, and/or a Swing Bed clinical change assessment.
2. The Start of Therapy OMRA must be combined with a PPS 5-day (A0310B = 01) or readmission/return assessment (A0310B = 06), or a PPS 5-day or re-admission/return assessment must have been performed earlier in the short stay. The Start of Therapy OMRA should also be combined with a discharge assessment when the resident is discharged from the facility, but not combined with a discharge if the resident dies in the facility or is transferred to Long-Term Care in the facility.
3. The assessment reference date (A2300) must be on the 8th day of a Part A Medicare covered stay or earlier in that stay. That is, the assessment reference date minus the start of Medicare stay date (A2400B) must be 7 days or less.
4. The Medicare Part A covered stay must end on the assessment reference date (A2300) of the Start of Therapy OMRA. That assessment reference date must equal the end of Medicare stay date (A2400C). The end of Medicare stay date is either the discharge date or the date that the residents transitions to long-term care. See the instructions for A2400C in Chapter 3 for more detail.
5. Rehabilitation therapy (speech-language pathology services, or occupational or physical therapy) has started during the last 4 days of the Medicare Part A covered stay. That is, the end of Medicare stay date (A2400C) minus the earliest start date for these 3 therapy disciplines (O0400A5, O0400B5, or O0400C5) must be 3 days or less.
6. Rehabilitation therapy must not have ended before the last day of the Medicare Part A covered stay. That is, at least one of the therapy disciplines must have a dash-filled end of therapy date (O0400A6, O0400B6, or O0400C6) indicating on-going therapy or an end of therapy date equal to the end of covered Medicare stay date (A2400C).
7. The rehabilitation calculation type is Medicare (sRehabType = 'Mcare').

If all 7 conditions are satisfied, set the Medicare Short Stay Indicator (I_Mcare_short_stay) to 1 (yes), otherwise set the indicator to 0 (no) and calculate the average therapy minutes per day.

CALCULATE RESIDENT INTERVIEW PHQ SUMMARY SCORE.

The resident interview PHQ summary score (i_res_PHQ_score) is recalculated from the frequency source items (D0200A2 through D0200I2). This recalculated summary score is used, rather than the summary score (D0300) reported on the MDS 3.0, in case the D0300 value has been miscalculated.

CALCULATE STAFF ASSESSMENT PHQ SUMMARY SCORE.

The staff assessment PHQ summary score (i_stf_PHQ_score) is recalculated from the frequency source items (D0500A2 through D0500J2). This recalculated summary score is used, rather than the summary score (D0600) reported on the MDS 3.0, in case the D0600 value has been miscalculated.

Note that staff PHQ source items can have missing values of blank (staff PHQ assessment skipped because resident PHQ interview was successfully completed) or dash (not assessed). For this reason, the staff assessment PHQ summary code logic here involves proration for 1 or 2 missing values and a missing score of 99 for 3 or more missing items.



SET DEPRESSION INDICATOR.

The depression indicator (l_depression) is set on the basis of the resident interview PHQ score or the staff assessment PHQ score.

CALCULATE COUNT OF RESTORATIVE NURSING SERVICES RECEIVED FOR 6 OR MORE DAYS.

Add one to the restorative nursing count (i_nursing_cnt) for each of the following conditions that are satisfied.

1. Either urinary toileting program (H0200C) or bowel toileting program (H0500) currently in use.
2. Either O0500A (passive ROM) or O0500B (active ROM) for 6 or more days.
3. O0500C (splint or brace assistance) for 6 or more days.
4. O0500D (bed mobility) or O0500F (walking training) for 6 or more days.
5. O0500E (transfer training) for 6 or more days.
6. O0500G (dressing or grooming training) for 6 or more days.
7. O0500H (eating or swallowing training) for 6 or more days.
8. O0500I (amputation/Prosthesis care) for 6 or more days.
9. O0500J (communication training) for 6 or more days.

SET RESTORATIVE NURSING INDICATOR.

The restorative nursing indicator (l_nursing) is set if the restorative nursing count (i_nursing_cnt) is 2 or more.

DETERMINE LEVEL OF EXTENSIVE SERVICES.

The 3 extensive services are as follows:

- O0100E2 Tracheostomy care while a resident
- O0100F2 Ventilator or respirator while a resident
- O0100M2 Infection isolation while a resident

Level of extensive services (i_ext_serv_level) is determined as follows:

- Level = 3 if BOTH tracheostomy care AND ventilator/respirator
- Level = 2 if EITHER tracheostomy care OR ventilator/respirator
- Level = 1 if infection isolation WITHOUT tracheostomy care AND WITHOUT ventilator/respirator
- Level = 0 if NO tracheostomy care AND NO ventilator/respirator AND NO infection isolation

DETERMINE EXTENSIVE SERVICES CATEGORY CLASSIFICATION.

The resident is classified in the Special Extensive Services Category (l_ext_serv) if there is one or more of the extensive services are received (i_ext_serv_level >= 1) and the ADL score (i_adl_tot) is 2 or more.



DETERMINE REHABILITATION THERAPY SERVICES CATEGORY CLASSIFICATION.

There are 5 rehabilitation therapy services categories based on therapy intensity:

- Ultra High Intensity
- Very High Intensity
- High Intensity
- Medium Intensity
- Low Intensity

Ultra High Intensity Criteria

The resident qualifies for ultra high intensity if either (1) or (2) is satisfied)

1. In the last 7 days all 3 of the following conditions are satisfied:
Total Therapy Minutes (calculated above) of 720 minutes or more ($n_tot_rehab_min \geq 720$),
AND
One discipline (O0400A4, O0400B4 or O0400C4) for at least 5 days ($i_rehab_type_5days \geq 1$),
AND
A second discipline (O0400A4, O0400B4 or O0400C4) for at least 3 days ($i_rehab_type_3days \geq 2$).
2. If this is a Medicare Short Stay Assessment ($l_Mcare_short_stay = 1$) and the following condition is satisfied:
Medicare Short Stay Average Therapy Minutes of 144 minutes or more ($n_avg_rehab_min \geq 144$).

Very High Intensity Criteria

The resident qualifies for very high intensity if either (1) or (2) is satisfied)

1. In the last 7 days both of the following conditions are satisfied:
Total Therapy Minutes (calculated above) of 500 minutes or more ($n_tot_rehab_min \geq 500$),
AND
One discipline (O0400A4, O0400B4 or O0400C4) for at least 5 days ($i_rehab_type_5days \geq 1$).
2. If this is a Medicare Short Stay Assessment ($l_Mcare_short_stay = 1$) and the following condition is satisfied:
Medicare Short Stay Average Therapy Minutes of 100 minutes or more ($n_avg_rehab_min \geq 100$).



High Intensity Criteria

The resident qualifies for high intensity if either (1) or (2) is satisfied)

1. In the last 7 days both of the following conditions are satisfied:
Total Therapy Minutes (calculated above) of 325 minutes or more ($n_tot_rehab_min \geq 325$),
AND
One discipline (O0400A4, O0400B4 or O0400C4) for at least 5 days ($i_rehab_type_5days \geq 1$).
2. If this is a Medicare Short Stay Assessment ($l_Mcare_short_stay = 1$) and the following condition is satisfied:
Medicare Short Stay Average Therapy Minutes of 65 minutes or more ($n_avg_rehab_min \geq 65$).

Medium Intensity Criteria

The resident qualifies for medium intensity if either (1) or (2) is satisfied)

1. In the last 7 days both of the following conditions are satisfied:
Total Therapy Minutes (calculated above) of 150 minutes or more ($n_tot_rehab_min \geq 150$),
AND
The total days for the 3 disciplines (O0400A4, plus O0400B4 plus O0400C4) is 5 or more ($i_tot_rehab_days \geq 5$).
2. If this is a Medicare Short Stay Assessment ($l_Mcare_short_stay = 1$) and the following condition is satisfied:
Medicare Short Stay Average Therapy Minutes of 30 minutes or more ($n_avg_rehab_min \geq 30$).

Low Intensity Criteria

The resident qualifies for low intensity if either (1) or (2) is satisfied)

1. In the last 7 days all three of the following conditions are satisfied:
Total Therapy Minutes (calculated above) of 45 minutes or more ($n_tot_rehab_min \geq 45$),
AND
The total days for the 3 disciplines (O0400A4, plus O0400B4 plus O0400C4) is 3 or more ($i_tot_rehab_days \geq 3$),
AND
2 or more restorative nursing services received for 6 or more days for at least 15 minutes a day ($i_rnursing_cnt \geq 2$).
2. If this is a Medicare Short Stay Assessment ($l_Mcare_short_stay = 1$) and the following condition is satisfied:
Medicare Short Stay Average Therapy Minutes of 15 minutes or more ($n_avg_rehab_min \geq 15$).



DETERMINE SPECIAL CARE HIGH CLASSIFICATION.

The resident has a Special Care High condition (l_sp_hi_cond) if any of the following 7 conditions is present:

1. Comatose (B0100) and all self-performance late-loss ADLs (G0110A1, G0110B1, G0110H1, and G0110I1) are completely dependent or activity did occur.
2. Septicemia (I2100).
3. Diabetes (I2900) with BOTH insulin injections (N0350A) for all 7 days
AND
insulin order changes (N0350B) on 2 or more days.
4. Quadriplegia (I5100) with ADL score (i_adl_tot) of 5 or more.
5. Chronic obstructive pulmonary disease (I6200) and shortness of breath (J1100C) when lying flat.
6. Fever (J1550A) and one of the following:
 - Pneumonia (I2000)
 - Vomiting (J1550B)
 - Any weight loss (K0300)
 - Feeding tube (K0500B) with either:
 - 51% or more total calories (K0700A)**OR**
 - 26% to 50% of total calories (K0700A) and 501 cc or more per day (K0700B)
7. Respiratory therapy (O0400D2) for all 7 days

The resident is classified in the Special Care High Category (l_special_high) if there is one or more Special High conditions and the ADL score (i_adl_tot) is 2 or more.

DETERMINE SPECIAL CARE LOW CLASSIFICATION.

The resident has a Special Care Low condition if any of the following 12 conditions is satisfied:

1. Cerebral palsy (I4400) with ADL score (i_adl_tot) of 5 or more.
2. Multiple sclerosis (I5200), with ADL score of 5 or more.
3. Parkinson's disease (I5300) with ADL score of 5 or more.
4. Respiratory failure (I6300) and oxygen therapy (O0100C2) while a resident.
5. Feeding tube (K0500B) with either:
 - 51% or more total calories (K0700A)**OR**
 - 26% to 50% of total calories (K0700A) and 501 cc or more per day (K0700B).
6. 2 or more Stage 2 pressure ulcers (M0300B1) with 2 or more Special Low selected skin treatments (see below).
7. Any Stage 3 or 4 pressure ulcer (M0300C1, M0300D1, and M0300F1) with 2 or more Special Low selected skin treatments (see below).
8. 2 or more venous/arterial ulcers (M1030) with 2 or more Special Low selected skin treatments (see below).
9. 1 Stage 2 pressure ulcer (M0300B1) and 1 venous/arterial ulcer (M1030) with 2 or more Special Low selected skin treatments (see below).
10. Foot infection (M1040A), diabetic foot ulcer (M1040B) or other open lesion of foot (M1040C) with application of dressings to the feet (M1200I).
11. Radiation treatment while a resident (O0100B2).
12. Dialysis treatment while a resident (O0100J2).

The resident is classified in the Special Care Low Category (l_special_low) if there is one or more Special Low conditions and the ADL score (i_adl_tot) is 2 or more.



Special Low Category Selected Skin Treatment Count (i_SL_skin_tx_cnt). Add 1 to this count for each of the following conditions that is satisfied:

- a. Pressure relieving chair (M1200A) and/or bed (M1200B).
- b. Turning/repositioning (M1200C).
- c. Nutrition or hydration intervention (M1200D).
- d. Ulcer care (M1200E).
- e. Application of dressings (not to feet) (M1200G).
- f. Application of ointments (not to feet) (M1200H).

DETERMINE CLINICALLY COMPLEX CLASSIFICATION.

The resident qualifies for Clinically Complex if any of the following 11 conditions is satisfied:

1. Pneumonia (I2000).
2. Hemiplegia/hemiparesis (I4900) with ADL score (i_adl_tot) of 5 or more.
3. Surgical wounds (M1040E) or open lesions (M1040D) with any Clinically Complex selected skin treatment (see below).
4. Burns (M1040F).
5. Chemotherapy while a resident (O0100A2).
6. Oxygen therapy while a resident (O0100C2).
7. IV medications while a resident (O0100H2).
8. Transfusions while a resident (O0100I2).
9. Resident receives extensive services (i_ext_serv_level >= 1) with ADL score (i_adl_tot) of 0 or 1.
10. Resident has a special care high condition (i_sp_high_cond >= 1) with ADL score (i_adl_tot) of 0 or 1.
11. Resident has a special care low condition (i_sp_low_cond >= 1) with ADL score (i_adl_tot) of 0 or 1.

Clinically Complex Category Selected Skin Treatment Count (i_CC_skin_tx_cnt).

Add 1 to this count for each of the following conditions that are satisfied:

- a. Surgical wound care (M1200F).
- b. Application of dressing (not to feet) (M1200G).
- c. Application of ointments (not to feet) (M1200H).



DETERMINE BEHAVIORAL SYMPTOMS AND COGNITIVE PERFORMANCE CLASSIFICATION.

This category includes residents with cognitive impairment or behavioral symptoms and an ADL score of 5 or less.

The resident qualifies for the Behavior Symptoms and Cognitive Performance Classification according to the following logic:

- A. If the BIMS Brief Interview for Mental Status Summary Score (C0500) is 9 or less, the resident is cognitive impaired. The BIMS score is in item C0500.

Note that the BIMS summary score was not recalculated from the component items (C0200 through C0400C). If the interview was successfully completed with the resident attempting to answer each item, then the summary score in C0500 will equal the sum of the component items. However if the resident does not respond to any component item, this item will be coded as 0 but the assessor will code the summary score as 99 indicating the interview was not successfully completed.

- B. If the BIMS summary score is greater than 9 and not 99, the resident is not cognitively impaired.
- C. If the BIMS was not conducted (C0100 = 0) or the BIMS score is 99 (indicating that all interview items could not be completed), then the RUG-IV Cognitive Performance Scale (CPS) based on staff interview is used to assess cognitive impairment. The CPS Scale indicates cognitive impairment if any of the following 3 conditions are satisfied:
 - 1. The resident is comatose (B0100=1) and completely ADL dependent or ADL did not occur for all 4 late-loss ADLS (G0110A1, G0110B1, G0110H1, G010I1 all = 4 or 8).
 - 2. The resident has severely impaired cognitive skills (C1000 = 3).
 - 3. Two or more of the following impairment indicators are present
 - a. Problem being understood (B0700 > 0).
 - b. Short-term memory problem (C0700 = 1).
 - c. Cognitive skills problem (C1000 > 0).

AND

One or more of the following severe impairment indicators are present:

- i. Severe problem being understood (B0700 >= 2).
 - ii. Severe cognitive skills problem (C1000 >= 2).
- D. D. The resident has behavior symptoms if any of the following 7 conditions are satisfied:
 - 1. The resident has hallucinations (E0100A = 1).
 - 2. The resident has delusions (E0100B = 1).
 - 3. The resident displays physical behavioral symptoms directed toward others on 4 or more of 7 days (E0200A = 2 or 3).
 - 4. The resident displays verbal behavioral symptoms directed toward others on 4 or more of 7 days (E0200B = 2 or 3).
 - 5. The resident displays other behavioral symptoms not directed toward others on 4 or more of 7 days (E0200C = 2 or 3).
 - 6. The resident displays rejection of care on 4 or more of 7 days (E0800 = 2 or 3).
 - 7. The resident displays wandering on 4 or more of 7 days (E0900 = 2 or 3).

