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# **Analyses to Inform the Use of Standardized Patient Assessment Data Elements in the Inpatient Rehabilitation Facility Prospective Payment System**

## **Report**

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*The findings and conclusions of this report are those of the authors and do not necessarily represent the views of HHS.*



ANALYSES TO INFORM THE USE OF STANDARDIZED PATIENT ASSESSMENT DATA  
ELEMENTS IN THE INPATIENT REHABILITATION FACILITY PROSPECTIVE  
PAYMENT SYSTEM

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## EXECUTIVE SUMMARY

The purpose of this report is to provide analyses to inform the use of standardized patient assessment data elements collected on admission in the Inpatient Rehabilitation Facility Prospective Payment System (IRF PPS). The report summarizes the use of assessment data in the current IRF PPS, describes the process used to substitute standardized patient assessment data elements collected on admission into the IRF PPS, and presents the case-mix groups (CMGs) and payment weights based on those elements. The results presented here are based on the analysis of Fiscal Year (FY) 2017 and FY 2018 data and represent an update and refinement to earlier work using only FY 2017 data (Morley, Silver, Deutsch, & Ingber, 2018).

The analyses were conducted under the assumption that all other aspects of the inpatient rehabilitation facility (IRF) payment system remain unchanged, including the rehabilitation impairment category (RIC) structure, the assignment of comorbidity tiers, and the methodology for calculating the payment weights. The focus of this work was ensuring that the CMGs within RICs accurately reflect patient costs when using standardized patient assessment data elements collected on admission in place of the Functional Independence Measure (FIM™) items.

The data used in these analyses were drawn from the FY 2017 and FY 2018 Medicare Inpatient National Claims History and Inpatient Rehabilitation Facility Patient Assessment Instrument (IRF-PAI) data files. Consistent with the approach used in the development of the current IRF PPS (Carter et al., 2002), RTI International used Classification and Regression Tree (CART) analysis to develop CMGs using standardized patient assessment data elements collected on admission, including motor function, cognitive function, and age. A refinement to the work presented here includes the use of a weighted motor function score, consistent with the current IRF PPS.

The CART models using the standardized patient assessment data elements collected on admission yielded 97 CMGs (including RICs 50 and 51, which remain unchanged). There are 92 CMGs in the FY 2019 IRF PPS. Although the overall number of CMGs is similar, there are small changes in the number of CMGs per RIC. For example, RIC 1 contains 10 CMGs in the FY 2019 IRF PPS, but 7 when using the standardized patient assessment data elements. Motor score emerged as the key function variable in the definition of the CMGs across all RICs. Cognitive function is not used to define the CMGs emerging from the use of the standardized patient assessment data elements, though it was included in the CART modeling.

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# SECTION 1 BACKGROUND

## 1.1 Introduction

The purpose of this report is to provide analyses to inform the use of standardized patient assessment data elements collected on admission in the Inpatient Rehabilitation Facility Prospective Payment System (IRF PPS). The results presented here are based on the analysis of Fiscal Year (FY) 2017 and FY 2018 data and represent an update and refinement to earlier work using FY 2017 data only (Morley, Silver, Deutsch, and Ingber, 2018).

The IRF PPS, implemented in 2002, is based on Functional Independence Measure (FIM™) items collected in the Inpatient Rehabilitation Facility Patient Assessment Instrument (IRF-PAI). In the IRF PPS, patients are assigned to one of 87 case-mix groups (CMGs) on the basis of diagnosis requiring rehabilitation, motor function, cognitive function, and age. An additional five CMGs are used if the patient either dies or is discharged in 3 days or less.

Beginning in October 2016, standardized patient assessment data elements that measure functional status were introduced to the IRF-PAI. Collection of these items began as part of the IRF Quality Reporting Program (QRP). The standardized patient assessment data elements were also introduced to the Minimum Data Set, which is the assessment instrument used for skilled nursing facilities, and the Long-Term Care Hospital Continuity Assessment Record and Evaluation (CARE) data set, which is the assessment instrument used for long-term care hospitals. Standardized patient assessment data elements were introduced to the Outcome and Assessment Information Set (OASIS), the assessment instrument used for home health agencies, beginning in January 2019. The IRF Quality Reporting Program includes four functional outcome measures related to self-care and mobility that are based on standardized patient assessment data elements. These quality measures were finalized in the FY 2016 IRF PPS Final Rule (80 FR 47111 through 47117). Since October 2016, IRF providers have collected both standardized patient assessment data elements and FIM™ items (along with function modifier items that are used to generate FIM™ items). In the FY 2019 IRF PPS Final Rule, CMS finalized the removal of the FIM™ instrument from the IRF-PAI beginning in FY 2020 to reduce burden by eliminating the overlap between the FIM™ items and the standardized patient assessment data elements. This also supports CMS's broader goal of standardizing data collection across PAC settings.

The next sections of this report summarize the use of assessment data in the IRF PPS, describe the process RTI International used to substitute standardized patient assessment data elements collected on admission into the IRF PPS, and present the CMGs and payment weights based on the use of the standardized patient assessment data elements collected on admission.

## 1.2 Overview of the IRF PPS

Under the IRF PPS, Medicare fee-for-service payments are made to IRFs on a per-discharge basis, and patients are assigned to one of 92 CMGs. Of the 92 CMGs, 87 are assigned based on diagnoses requiring rehabilitation, motor function, cognitive function, and age. Five CMGs assignments are based on short-stay status or death during the IRF stay. Data on motor function and cognitive function are obtained from IRF-PAI assessments collected by all IRF providers at admission. The Fiscal Year 2017 IRF-PAI can be found in **Appendix A**.

Each of the diagnosis-based rehabilitation impairment categories (RICs), derived from the admission impairment group code on the IRF-PAI, has a RIC-specific set of CMGs based on the characteristics of the patients in that RIC. The number of CMGs can vary by RIC. For example, in the current IRF PPS, there are 10 CMGs for RIC 1, "stroke," but only 4 CMGs for RIC 14, "cardiac." The CMGs reflect differences in costs by different levels of motor function, cognitive function, and age. **Figure 1** shows the 23 RICs in the IRF PPS.

**Figure 1. RICs in the IRF PPS**

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1. Stroke	14. Cardiac
2. Traumatic brain injury	15. Pulmonary
3. Non-traumatic brain injury	16. Pain syndrome
4. Traumatic spinal cord injury	17. Major multiple trauma without brain or spinal cord injury
5. Non-traumatic spinal cord injury	18. Major multiple trauma with brain or spinal cord injury
6. Neurological	19. Guillain-Barré
7. Fracture of lower extremity	20. Miscellaneous
8. Replacement of lower extremity	21. Burns
9. Other orthopedic	50. Short stay
10. Amputation, lower extremity	51. Expired
11. Amputation, non-lower extremity	
12. Osteoarthritis	
13. Rheumatoid, other arthritis	

---

Payment weights are based on a combination of CMG and comorbidity tier using an established comorbidity list applicable to all CMGs (with the exception of RIC 50, "short stay," and RIC 51, "expired"). There are four comorbidity tiers, each reflecting an increasing level of severity. Each year, CMS updates a national base payment amount (called a standard payment conversion factor) and payment weights for each CMG and comorbidity tier combination. The IRF PPS CMGs and relative weights for Fiscal Year 2019 are shown in **Appendix B**. To derive payment, the standard payment conversion factor is multiplied by the payment weight associated with each CMG. Payments are also adjusted for geographic differences in wages, by the proportion of each facility's care furnished to low-income individuals, by rural status, and by teaching status, as applicable. Finally, patients who are

transferred to another inpatient setting after a below-average length of stay in the IRF (specific to each CMG) are paid for on a per-diem basis.

### **1.3 Use of Assessment Data in the IRF PPS: Motor Function and Cognitive Function**

The IRF PPS uses admission FIM™ items from the IRF-PAI to construct a motor score and a cognitive score. These scores in turn are used for CMG assignment. The FIM™ items used to create the motor score are shown in **Table 1**. The IRF PPS uses a weighted motor score that was developed as part of the initial payment system development work by RAND and CMS (Carter et al., 2002). Rather than applying an equal weight to each FIM™ item to generate a motor score, items are weighted to reflect their relative contribution to costs of care. The weights associated with each item in constructing the motor score are reported in **Table 1**. **Table 2** shows the rating scale for the FIM™ Items. The rating scale reflects a patient’s need for assistance and differentiates between total dependence and complete independence. Activities that did not occur, originally coded to “0,” are recoded to the most dependent level on the rating scale (Level 1, “Total Assistance”), except for toilet transfer, where “0” is recoded to Level 2, “Maximal Assistance.” The range for the motor function score is 12–84 (12 items assessed on a scale of 1–7), with higher scores indicating higher ability.

**Table 1. IRF-PAI FIM™ Items Used in IRF PPS Motor Score**

<b>Item</b>	<b>Number</b>	<b>Weight</b>
Eating	39Aa	0.6
Grooming	39Ba	0.2
Bathing	39Ca	0.9
Dressing—upper	39Da	0.2
Dressing—lower	39Ea	1.4
Toileting	39Fa	1.2
Bladder	39Ga	0.5
Bowel	39Ha	0.2
Bed, chair, wheelchair transfer	39Ia	2.2
Toilet transfer	39Ja	1.4
Walk/wheelchair	39La	1.6
Stairs	39Ma	1.6

SOURCE: IRF-PAI.

**Table 2. FIM™ Levels**

Level
<b>No Helper</b>
7 Complete independence (timely, safely)
6 Modified independence (device)
<b>Helper—Modified Dependence</b>
5 Supervision (subject = 100%)
4 Minimal assistance (subject = 75% or more)
3 Moderate assistance (subject = 50% or more)
<b>Helper—Complete Dependence</b>
2 Maximal assistance (subject = 25% or more)
1 Total assistance (subject less than 25%)
0 Activity does not occur; use this code only at admission

SOURCE: IRF-PAI.

Five cognitive function items based on FIM™ are included in the cognitive score (**Table 3**). To calculate the cognitive score for payment, these items are summed (with equal weighting). The range for the cognitive score is 5–35 (5 items assessed on a scale of 1–7), with higher scores indicating higher ability. The cognitive items use the same rating scale as the motor function items.

**Table 3. IRF-PAI FIM™ Items Used in the IRF PPS Cognitive Score**

Item	Number
Comprehension	39N
Expression	39O
Social interaction	39P
Problem solving	39Q
Memory	39R

SOURCE: IRF-PAI.

## 1.4 Standardized Patient Assessment Data Elements

Beginning in October 2016, Medicare required IRFs to complete standardized patient assessment data elements for Hearing, Speech, and Vision (Section B); Cognitive Patterns (Section C); Functional Abilities and Goals – Self-Care and Mobility (Section GG); and Bladder and Bowel (Section H) on the IRF-PAI. Though the content of the FIM™ items (and

the function modifier items that are used to generate the FIM™ items) overlaps with the standardized patient assessment data elements (e.g., eating, dressing, transfer), the items differ in the specific item definitions and the rating scale used for scoring. Standardized patient assessment data elements and FIM™ items (and the function modifier items that are used to generate the FIM™ items) are both collected within a 3-day period from a patient's admission, but the instructions for assessing patient performance differ. The standardized patient assessment data elements assess a patient's usual performance during the assessment period, in contrast to FIM™ items (and the function modifier items that are used to generate the FIM™ items), which assess a patient's most-dependent status (i.e., lowest score) during the assessment period. The self-care and mobility standardized patient assessment data elements use a six-level rating scale, whereas FIM™ (and the function modifiers that are used to generate the FIM™ items) uses a seven-level scale.

**Tables 4a** and **4b** outline the standardized patient assessment data elements used in RTI's analysis of the IRF PPS, and **Table 5** shows the rating scale for the self-care and mobility data elements. RTI considered all self-care and mobility items in Section GG of the IRF-PAI for inclusion in the motor score and came to the set shown in Table 4a after considering both item multicollinearity and activities attempted at admission. Walking on uneven surfaces, car transfer, steps, and pick up object were not included in the motor score because these activities are less likely to be attempted on admission, as the patient's medical condition or safety concerns may prevent performance of the activity. See **Appendix C** for descriptive statistics on assessment items. Although roll left and right was included in the analyses presented in the 2018 report (Morley et al., 2018), the results of additional analyses identified a high degree of multicollinearity with other standardized patient assessment data elements. This item was inversely correlated with costs after controlling for each of the other self-care and mobility items. Note that all available standardized patient assessment data elements related to cognition were included in the analysis.

Given the differences in the item definitions and rating scales, using the standardized patient assessment data elements in place of FIM™ items requires more than a simple substitution into the current IRF PPS for the purposes of assigning patients to payment groups and computing payments. To incorporate the standardized patient assessment data elements into the payment system analysis, RTI considered the range of available items to construct a motor score and to account for cognition. A single motor score, rather than separate self-care and mobility scores, was used to be consistent with the current IRF PPS and because the analyses are conducted within RICs, that is, primary rehabilitation categories. Differentiating between self-care and mobility scores can be valuable when analyses are conducted in aggregate across diagnoses groups rather than by diagnosis group.

**Table 4a. IRF-PAI Standardized Patient Assessment Data Elements: Motor Score**

Item Number	Item Description	Weight (Total =18)
GG0130A1	Eating	2.7
GG0130B1	Oral hygiene	0.3
GG0130C1	Toileting hygiene	2.0
GG0130E1	Shower/bathe self	0.7
GG0130F1	Upper-body dressing	0.5
GG0130G1	Lower-body dressing	1.0
GG0130H1	Putting on/taking off footwear	1.0
GG0170B1	Sit to lying	0.1
GG0170C1	Lying to sitting on side of bed	0.1
GG0170D1	Sit to stand	1.1
GG0170E1	Chair/bed-to-chair transfer	1.1
GG0170F1	Toilet transfer	1.6
GG0170I1	Walk 10 feet	0.8
GG0170J1	Walk 50 feet with two turns	0.8
GG0170K1	Walk 150 feet	0.8
GG0170M1	One-step curb	1.4
H0350	Bladder continence	1.3
H0400	Bowel continence	0.7

**Table 4b. IRF-PAI Standardized Patient Assessment Data Elements: Cognitive Function**

Item Number	Item Description
BB0700	Expression of ideas and wants
BB0800	Understanding verbal content
C0500	Brief Interview for Mental Status (BIMS) summary score
C0900	Memory/Recall (Staff Assessment)

**Table 5. Self-Care and Mobility Rating Scale for Standardized Patient Assessment Data Elements**

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<b>Self-Care and Mobility Rating Scale</b>
<b>Activities may be completed with or without assistive devices</b>
06. Independent
05. Setup or clean-up assistance
04. Supervision or touching assistance
03. Partial/moderate assistance
02. Substantial/maximal assistance
01. Dependent
<b>If activity was not attempted, code reason</b>
07. Patient refused
09. Not applicable
88. Not attempted because of medical condition or safety concerns

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Source: IRF-PAI

RTI refined the analyses of the FY 2017 and FY 2018 data by incorporating a weighted motor score. A similar approach is part of the current IRF PPS. As part of calculating the weights, RTI conducted analyses to assess the degree of multicollinearity between the standardized patient assessment data elements. RTI identified three pairs of items that are highly correlated: (1) "lower-body dressing" and "putting on/taking off footwear," (2) "sit to lying" and "lying to sitting on side of bed," and (3) "sit to stand" and "chair/bed-to-chair transfer." Weights were calculated for these item pairs (using the average of each pair of item scores), and then each individual item in the pair was assigned half the calculated weight. Similarly, the weight calculation for walking was based on the item "walk 10 feet," and the resulting weight was divided equally across all three walking items.

Note that wheelchair mobility items were not included as separate items in the motor score. The walking items, rather than a combination of the walking and wheelchair items, were used to measure mobility. Patients who do not walk are assigned to the most dependent response category for the walking items to reflect the greater resource use associated with patients who cannot walk. If wheelchair mobility item scores were included, then some wheelchair users would have higher motor scores because they were not completely dependent in wheelchair mobility. By using the walking items only to assess mobility, the motor score reflects increased resource use and need for assistance among patients who do not walk.

RTI generated a set of CMGs based on the standardized patient assessment data elements collected on admission to reflect the differences in items, definitions, and rating scales. Section 2 describes the data used and the complete analytic approach.



## **SECTION 2 ANALYTIC APPROACH**

This section outlines the overall analytic approach for generating case-mix groups (CMGs) and corresponding payment weights using standardized patient assessment data elements collected on admission. The analyses were conducted under the assumption that all other aspects of the inpatient rehabilitation facility (IRF) payment system would remain unchanged, including the rehabilitation impairment category (RIC) structure, the assignment of comorbidity tiers, and the methodology for calculating the payment weights. The only focus of this work was ensuring that the CMGs within RICs would accurately reflect patient costs when using standardized patient assessment data elements collected on admission in place of the Functional Independence Measure (FIM™) items.

### **2.1 Data and Sample**

The data used in these analyses were drawn from the Fiscal Year (FY) 2017 and FY 2018 Medicare Inpatient National Claims History and Inpatient Rehabilitation Facility Patient Assessment Instrument (IRF-PAI) data files. Medicare Cost Report data were used to construct IRF stay-level costs.

The analytic sample included 753,429 observations of IRF claims and matching assessment data (claims data were pulled in January 2019). Assessments were matched to IRF claims where Medicare Part A was the primary payer for the stay and the Medicare Part A payment amount was greater than zero. Claims were matched to IRF-PAI assessments by beneficiary ID (Health Insurance Claim [HIC] number) and admission date. IRF-PAI assessment item 20A (Payment Source) was used to confirm the primary payer.

IRF stays occurring at critical access hospitals were excluded. **Appendix C** contains descriptive statistics on this sample for all IRF-PAI assessments items considered in the current analyses.

### **2.2 Classification and Regression Tree Analysis: Using Standardized Patient Assessment Data Elements to Generate CMGs**

Consistent with the approach used in the development of the current IRF PPS (Carter et al., 2002), RTI International used Classification and Regression Tree (CART) analysis to develop CMGs using standardized patient assessment data elements collected on admission, including motor score, cognitive score, and age. CART uses a stepwise process in which the data are split into “nodes,” or groups based on an outcome of interest. In this case, data were grouped using IRF claim costs by identifying the covariate and cut-point at each split that contribute most to the model fit (Morgan, 2014).

The CART approach continues to split the sample until the contribution to model fit of any further splitting falls below a user-determined threshold. RTI set CART parameters to require the following:

- Nodes are no smaller than 100 stays.
- Additional splits yield an 0.5 percentage point increase in explanatory power.

This process results in a “tree” of rules that can be used to assign cases to CMGs.

RTI used a subset of the analytic sample in the CART analysis. The subset is meant to reflect the most-typical cases and therefore excluded beneficiaries who died during the IRF stay, those whose stay lasted 3 days or fewer, and those who were transferred to another inpatient setting. As previously noted, decedents and short stays have separate CMGs under the IRF PPS, whereas transfers with a below-average length of stay are reimbursed using per diem rates. Stays with excessively high cost amounts (where cost is more than 3 standard deviations from the mean) were also excluded so that a small number of very high costs cases would not drive the results. Ultimately, RTI used a sample of 551,503 IRF stays to generate the set of CMGs using standardized patient assessment data elements.

The independent variables used in the CART regression included weighted motor score, cognitive function (specifically memory and communication), and age. The specification of these variables based on the standardized patient assessment data elements is described below. The dependent variable in the CART regression was IRF stay costs. The construction of the cost variable is also described in the following sections. CART models were run separately for each RIC, using the same methodology that was used when the IRF payment system was initially developed. This allows for diagnosis-specific splits on weighted motor score, cognitive function, and age to reflect the characteristics and resource use of the patients within each RIC.

### **2.3 Motor Score Using Standardized Patient Assessment Data Elements**

RTI constructed a weighted motor score using the standardized patient assessment data elements collected on admission presented in **Table 4a (Section 1)**. RTI considered all self-care and mobility items in Section GG of the IRF-PAI for inclusion in the motor score and came to the set shown in Table 4a after considering both item multicollinearity and activities attempted at admission. Walking on uneven surfaces, car transfer, steps, and pick up object were not included in the motor score because these activities are less likely to be attempted on admission, as the patient’s medical condition or safety concerns may prevent performance of the activity. The frequency with which these items are not attempted on admission in the IRF decreases their relevance for predicting costs (see **Appendix C**). Although roll left and right was included in the analyses presented in the 2018 report

(Morley et al., 2018), the results of additional analyses identified a high degree of multicollinearity with other standardized patient assessment data elements. This item was inversely correlated with costs after controlling for each of the other self-care and mobility items.

Each of the motor function items among the standardized patient assessment data elements is scored on a six-point scale, with higher scores indicating greater independence (**Table 5**). Additional codes can be used to indicate why the activity was not attempted. If one of these “activity not attempted” codes was recorded or a dash was entered or a caret because of a skip pattern, the score for that item was recoded to 1 (Dependent) for all items except GG0170F (Toilet Transfer), which was recoded to 2 (Substantial/Maximal Assistance). This recoding approach is consistent with the current recoding approach in the IRF PPS.

The standardized data elements for bladder (H0350) and bowel (H0400) continence were included in the motor score to be consistent with the current Functional Independence Measure (FIM™) motor score used in the IRF payment system. Because the higher response codes reflect more impairment and higher resource use would be associated with higher codes (i.e., 0 = always continent, 4 = always incontinent), scores on the bowel and bladder items were reversed for inclusion in the motor score calculation. Scores were also adjusted so that the minimum score was 1 for bowel and bladder items to be consistent with the minimum score for other items in the motor score.

The item recoding approach for the bowel and bladder items differed from the approach used for the self-care and mobility items. This recoding approach was informed by clinical review and consultation with the IRF-PAI Training Manual. See **Table 6** for a summary of the recoding for H0350 (Bladder Continence) and **Table 7** for a summary of the recoding for H0400 (Bowel Continence). Cases coded as 9 (not applicable, e.g., indwelling catheter) were recoded to “always incontinent” for the bladder item and “frequently incontinent” for the bowel item, and missing codes (i.e., dash use) were recoded to “always continent” for both items. Cases coded as “no urine output” (e.g., renal failure) on the bladder item were recoded to “always continent.” This recoding is consistent with the current approach, because patients who do not void are coded as 7, “complete independence,” for the FIM Bladder item. We also note that use of renal dialysis is accounted for in the comorbidity tiers. Finally, on the bladder item, “always continent” and “stress incontinence only” were combined to a single level representing no incontinence.

**Table 6. Recoding for IRF-PAI Item H0350: Bladder Continence**

	N	Recode for Use in Motor Score			
		4— Always Continent	3— Incontinent Less Than Daily	2— Incontinent Daily	1— Always Incontinent
<b>H0350— Bladder Continence</b>	0—Always continent	X			
	1—Stress incontinence only	X			
	2—Incontinent less than daily		X		
	3—Incontinent daily			X	
	4—Always incontinent				X
	5—No urine output	X			
	9—Not applicable				X
	Missing	X			

**Table 7. Recoding for IRF-PAI Item H0400: Bowel Continence**

	N	Recoded for Use in Motor Score			
		4—Always Continent	3— Occasionally Incontinent	2— Frequently Incontinent	1—Always Incontinent
<b>H0400— Bowel Continence</b>	0—Always continent	X			
	1—Occasionally incontinent		X		
	2—Frequently incontinent			X	
	3—Always incontinent				X
	9—Not rated			X	
	Missing	X			

The motor score used in the CART model was calculated using a weighted sum of the scores for each of the 18 items in **Table 4a**. The range of scores for the motor score is 18 to 104, with a higher score indicating higher functional status and greater level of independence.

The calculation of the weighted motor score is a refinement to the approach presented in the 2018 report (Morley et al., 2018). A similar weighted motor score calculation is part of

the current IRF PPS. As part of calculating the weights, RTI conducted analyses to assess the degree of multicollinearity between the standardized patient assessment data elements items and identified three pairs of items that are very highly correlated: (1) "lower-body dressing" and "putting on/taking off footwear," (2) "sit to lying" and "lying to sitting on side of bed," and (3) "sit to stand" and "chair/bed-to-chair transfer." Weights were calculated for these item pairs, and then each item in the pair was assigned half the calculated weight. Similarly, the weight calculation for walking was based on the item "walk 10 feet," and the resulting weight was divided equally across all three walking items. Note that wheelchair mobility items were not included as separate items in the motor score, but patients who do not walk are assigned to the most dependent response category for the walking items.

RTI calculated weights for the motor items using ordinary least squares regression to estimate the relative importance of each motor item in predicting wage-adjusted costs of care. The model included each motor item (or pair as noted above), as well as age at admission, the communication items sum score (Section BB), and the BIMS (Section C). The coefficients for each item were divided by the mean wage-adjusted cost in the sample to determine their relative size. These values represented the initial weights. The weights were then rescaled to a weighted average of 1 across each of the motor items so the weighted and unweighted motor scores would have the same range. Note that RTI found a high degree of correlation in the weighted and unweighted motor scores (**Appendix D**), but use of the weighted motor score was associated with a small increase the predictive power of the overall model (R-squared 0.3341 unweighted versus 0.3359 weighted; adjusted R-square 0.3338 unweighted versus 0.3355 weighted).

## **2.4 Cognitive Function Using Standardized Patient Assessment Data Elements**

Standardized data elements related to cognitive function are collected in Section B and Section C of the IRF-PAI. Section B contains two items pertaining to communication: item BB0700 measures expression of ideas and wants, and Item BB0800 measures understanding verbal content. Section C contains an item measuring memory, the Brief Interview for Mental Status (BIMS). Though the IRF PPS includes a single cognitive score in the current CMG structure, the data elements in Section B and Section C cannot easily be summed. For this reason, two separate variables were used as independent variables in the CART model: first, a sum score of the two communication items in Section B, and second, memory using the BIMS in Section C.

Each of the communication items in Section B is scored on a 4-point scale, with higher scores indicating greater function. These two items were summed to a single communication score for inclusion in the CART model.

Section C of the IRF-PAI assesses memory using the BIMS. The BIMS consists of interview items and responses that sum to an overall score of 0 to 15, with a higher score indicating better memory skills. If the patient cannot complete the BIMS, a Staff Assessment of Mental Status is completed assessing memory. A three-level scale for memory using BIMS or the Staff Assessment of Mental Status was used in the CART model, as described in **Table 8**.

**Table 8. Memory Using BIMS and Staff Assessment of Mental Status**

Memory Category	BIMS Score	Staff Assessment Details Recalled
1	0–7	0–1
2	8–12	2
3	13–15	3–4

## 2.5 Costs

Costs of care are defined in this analysis as wage-adjusted costs for the IRF stay. IRF costs were calculated in three steps using data from the Medicare claims (Coomer, Ingber, Coots, & Morley, 2017). First, routine costs for the claim were calculated by multiplying the facility-specific routine cost per day (derived from the Cost Report) by the number of utilization days (length of stay) on the claim. The routine costs per day are based on the most up-to-date and complete cost report data available at the time of our analyses, FY 2017. These costs were inflated to reflect 2018 dollars using the inflation factors from the *Inpatient Rehabilitation Facility Prospective Payment System for Federal Fiscal Year 2018 Final Rule*. Claim ancillary costs were calculated by multiplying a set of 14 ancillary cost to charge ratios (derived from the facility-specific Cost Report) by the claim charges for those cost centers and summing. Ancillary costs for 2017 claims were inflated to reflect 2018 dollars; ancillary costs for 2018 claims were calculated with charges from 2018 and therefore not inflated. Finally, total claim cost was calculated as the sum of routine and ancillary costs. Total claim cost was then capped at the 0.5<sup>th</sup> and 99.9<sup>th</sup> percentile for freestanding IRFs and at the 0.2<sup>nd</sup> and 99.9<sup>th</sup> percentiles for IRF units. Wage-adjusted costs were calculated as follows:

$$\text{Wage-Adjusted Cost} = \text{Claim Cost} / (0.293 + 0.707 * \text{Wage Index})$$

where 0.707 is the FY 2018 labor share of total costs of care (Centers for Medicare & Medicaid Services [CMS], 2017).

## 2.6 Results of CART Analysis

For each of the 21 RICs, RTI conducted CART analysis using the dependent variable of wage-adjusted cost of care for the stay, and four independent variables: (1) motor score,

(2) communication (IRF-PAI Section B), (3) memory (IRF-PAI Section C BIMS), and (4) beneficiary age on the date of admission. CART analysis was conducted using R statistical software.

The CART approach continues to split the sample until the contribution to model fit of any further splitting falls below a user-determined threshold. RTI set CART parameters to require the following:

- Nodes are no smaller than 100 stays.
- Additional splits yield an 0.5 percentage point increase in explanatory power (R-squared).

Results of initial regression tree runs for each RIC were reviewed to confirm monotonicity (i.e., that the level of functional limitation and average cost associated with each node increased across nodes within RIC) and consistency with clinical judgement. The R-squared statistics for the regression trees by node are shown in **Appendix E**.

The CART models using the standardized patient assessment data elements collected on admission resulted in 97 CMGs, including RICs 50 (“short stay,” one CMG) and 51 (“expired,” four CMGs), which remained unchanged. The CMGs based on the standardized patient assessment data elements collected on admission and age ranges used to group beneficiaries are presented in **Table 9**. The next section discusses calculation of the payment weights. For reference, the 92 CMGs in the FY 2019 IRF PPS are shown in **Appendix B**.

RTI adjusted the CART-generated trees for two RICs: RIC 12, “osteoarthritis,” and RIC 16, “pain syndrome.” A similar issue was observed in each of these RICs; the communication items emerged as a splitting variable in the CART analysis, but the thresholds for the splits were very high and not in line with clinical expectations. Specifically, the communication item was distinguishing beneficiaries with no impairment from all others (splitting at 6.5 and 7.5 out of 8) and attributing considerably higher cost for a lower level of impairment. Because of the very high threshold for this split, the inconsistency with clinical expectations, and the low number of observations in this RIC, the team removed the splits from the final CMG definitions.

Although the overall number of CMGs is similar to the FY 2019 CMGs using the standardized patient assessment data elements, the number of CMGs per RIC sometimes shifted. For example, RIC 1 contains 10 CMGs in the FY 2019 IRF PPS, but 7 when using the standardized patient assessment data elements. Each of the final CMGs is monotonic within each RIC. For a model using the CMGs based on the standardized patient assessment data elements and comorbidity tiers to predict wage-adjusted costs of care, the r-squared value

is 0.3358; the r-squared value is 0.3169 for the CMGs used in the current IRF PPS. In a model that also controls for the variation between providers, this value increases to 0.5409, compared with 0.5482 using the CMGs from the current IRF PPS. The r-squared value is higher in models controlling for variation between providers. Overall, there is little difference between the model r-squares using the CMGs from the current IRF PPS and the model r-squares using the CMGs based on the standardized patient assessment data elements. The statistics generated from the CART runs for each CMG are shown in **Appendix E**.

Motor score is the key function variable emerging in the definition of the CMGs across all RICs. Though included in the CART modeling, neither the communication items (IRF-PAI Section B) nor the memory items (IRF-PAI Section C BIMS) are reflected in the final CMG definitions. However, cognitive score is included in the CMG definitions for RIC 1, "stroke, and RIC 2, "traumatic brain injury," in the FY 2019 IRF PPS. Though cognitive status is considered an important factor in resource use, current cognitive status items may not sufficiently measure the complexity of cognitive status, which may contribute to these results. Even without the explicit use of cognitive items in the CMG definitions, the function rating scale for the standardized patient assessment data elements may capture aspects of cognitive status; the scale measures need for assistance, including supervision.



**Table 9. CMG Definitions Using Standardized Patient Assessment Data Elements**

RIC	CMG	CMG Description			Relative Weight			
		Rule 1	Rule 2	Rule 3	Tier 1	Tier 2	Tier 3	None
Stroke	0101	Motor ≥ 72.00			1.0619	0.9248	0.8562	0.8152
Stroke	0102	Motor ≥ 63.90	Motor < 72.00		1.3354	1.1631	1.0768	1.0253
Stroke	0103	Motor ≥ 55.90	Motor < 63.90		1.5859	1.3812	1.2787	1.2175
Stroke	0104	Motor ≥ 50.40	Motor < 55.90		1.8612	1.6210	1.5008	1.4289
Stroke	0105	Motor ≥ 40.90	Motor < 50.40		2.2333	1.9450	1.8008	1.7146
Stroke	0106	Motor < 40.90	Age ≥ 84.50		2.4326	2.1186	1.9615	1.8676
Stroke	0107	Motor < 40.90	Age < 84.50		2.8402	2.4736	2.2902	2.1805
Traumatic brain injury	0201	Motor ≥ 65.20			1.3159	1.0824	0.9892	0.9214
Traumatic brain injury	0202	Motor ≥ 55.05	Motor < 65.20		1.6232	1.3351	1.2201	1.1365
Traumatic brain injury	0203	Moto ≥ 49.90	Motor < 55.05		1.8426	1.5156	1.3851	1.2902
Traumatic brain injury	0204	Motor ≥ 34.65	Motor < 49.90		2.1349	1.7560	1.6048	1.4949
Traumatic brain injury	0205	Motor < 34.65			2.6896	2.2123	2.0218	1.8832
Non-traumatic brain injury	0301	Motor ≥ 69.20			1.1831	0.9602	0.8920	0.8326
Non-traumatic brain injury	0302	Motor ≥ 54.40	Motor < 69.20		1.5158	1.2303	1.1428	1.0668
Non-traumatic brain injury	0303	Motor ≥ 44.65	Motor < 54.40		1.8380	1.4917	1.3857	1.2935
Non-traumatic brain injury	0304	Motor < 44.65	Age ≥ 78.50		2.0873	1.6941	1.5737	1.4689
Non-traumatic brain injury	0305	Motor < 44.65	Age < 78.50		2.2569	1.8317	1.7015	1.5883
Traumatic spinal cord injury	0401	Motor ≥ 59.15			1.3469	1.1477	1.0636	0.9766
Traumatic spinal cord injury	0402	Moto ≥ 46.35	Motor < 59.15		1.8182	1.5493	1.4358	1.3184
Traumatic spinal cord injury	0403	Motor ≥ 38.10	Motor < 46.35		2.4146	2.0575	1.9067	1.7508
Traumatic spinal cord injury	0404	Motor < 32.45	Age < 61.50		3.1660	2.6978	2.5001	2.2956
Traumatic spinal cord injury	0405	Motor ≥ 32.45	Motor < 38.10		2.8545	2.4323	2.2541	2.0697
Traumatic spinal cord injury	0406	Motor ≥ 25.65	Motor < 32.45	Age ≥ 61.50	3.2618	2.7794	2.5757	2.3651
Traumatic spinal cord injury	0407	Motor < 25.65	Age ≥ 61.50		4.0436	3.4456	3.1931	2.9319

(continued)

**Table 9. CMG Definitions Using Standardized Patient Assessment Data Elements (continued)**

RIC	CMG	CMG Description			Relative Weight			
		Rule 1	Rule 2	Rule 3	Tier 1	Tier 2	Tier 3	None
Non-traumatic spinal cord injury	0501	Motor ≥ 60.70			1.3019	1.0564	0.9906	0.9048
Non-traumatic spinal cord injury	0502	Motor ≥ 48.90	Motor < 60.70		1.7346	1.4075	1.3198	1.2055
Non-traumatic spinal cord injury	0503	Motor ≥ 40.40	Motor < 48.90		2.2683	1.8406	1.7259	1.5764
Non-traumatic spinal cord injury	0504	Motor < 40.40			2.8297	2.2961	2.1530	1.9666
Neurological	0601	Motor ≥ 66.60			1.3267	1.0265	0.9678	0.8781
Neurological	0602	Motor ≥ 53.90	Motor < 66.60		1.6480	1.2750	1.2022	1.0908
Neurological	0603	Motor ≥ 44.50	Motor < 53.90		1.9518	1.5101	1.4238	1.2918
Neurological	0604	Motor < 44.50			2.2464	1.7380	1.6387	1.4868
Fracture of lower extremity	0701	Motor ≥ 62.65			1.2794	1.0312	0.9863	0.8968
Fracture of lower extremity	0702	Motor ≥ 52.50	Motor < 62.65		1.6238	1.3089	1.2519	1.1383
Fracture of lower extremity	0703	Motor ≥ 44.00	Motor < 52.50		1.9191	1.5469	1.4795	1.3452
Fracture of lower extremity	0704	Motor < 44.00			2.1286	1.7157	1.6410	1.4921
Replacement of lower-extremity joint	0801	Motor ≥ 69.00			1.0169	0.8507	0.7719	0.7148
Replacement of lower-extremity joint	0802	Motor ≥ 56.80	Motor < 69.00		1.2485	1.0444	0.9477	0.8776
Replacement of lower-extremity joint	0803	Motor ≥ 45.45	Motor < 56.80		1.5244	1.2752	1.1571	1.0716
Replacement of lower-extremity joint	0804	Motor < 45.45			1.8673	1.5621	1.4175	1.3127
Other orthopedic	0901	Motor ≥ 64.95			1.2142	0.9706	0.9040	0.8322
Other orthopedic	0902	Motor ≥ 52.70	Motor < 64.95		1.5326	1.2251	1.1411	1.0504
Other orthopedic	0903	Motor ≥ 44.50	Motor < 52.70		1.8104	1.4471	1.3479	1.2408
Other orthopedic	0904	Motor < 44.50			2.0421	1.6324	1.5204	1.3996
Amputation lower extremity	1001	Motor ≥ 64.00			1.3062	1.1101	1.0101	0.9273
Amputation lower extremity	1002	Motor ≥ 51.90	Motor < 64.00		1.6752	1.4237	1.2954	1.1893
Amputation lower extremity	1003	Motor ≥ 46.00	Motor < 51.90		1.9319	1.6419	1.4939	1.3716
Amputation lower extremity	1004	Motor < 46.00			2.1597	1.8354	1.6701	1.5332

(continued)

**Table 9. CMG Definitions Using Standardized Patient Assessment Data Elements (continued)**

RIC	CMG	CMG Description			Relative Weight			
		Rule 1	Rule 2	Rule 3	Tier 1	Tier 2	Tier 3	None
Amputation non-lower extremity	1101	Motor ≥ 58.60			1.4170	1.1613	1.0781	0.9074
Amputation non-lower extremity	1102	Motor ≥ 51.05	Motor < 58.60		1.8127	1.4856	1.3792	1.1608
Amputation non-lower extremity	1103	Motor < 51.05			2.0274	1.6616	1.5426	1.2983
Osteoarthritis	1201	Motor ≥ 59.45			1.3177	1.0136	0.9807	0.9023
Osteoarthritis	1202	Motor ≥ 49.90	Motor < 59.45	Age ≥ 81.50	1.6088	1.2376	1.1974	1.1017
Osteoarthritis	1203	Motor ≥ 49.90	Motor < 59.45	Age < 81.50	1.6351	1.2578	1.2170	1.1197
Osteoarthritis	1204	Motor < 49.90			1.8585	1.4297	1.3833	1.2727
Rheumatoid other arthritis	1301	Motor ≥ 64.35			1.1632	0.9757	0.9217	0.8541
Rheumatoid other arthritis	1302	Motor ≥ 49.45	Motor < 64.35		1.4774	1.2394	1.1708	1.0848
Rheumatoid other arthritis	1303	Motor < 49.45	Age ≥ 73.50		1.8461	1.5486	1.4629	1.3555
Rheumatoid other arthritis	1304	Motor < 49.45	Age < 73.50		1.9350	1.6232	1.5334	1.4208
Cardiac	1401	Motor ≥ 68.80			1.1626	0.9450	0.8778	0.7879
Cardiac	1402	Motor ≥ 59.10	Motor < 68.80		1.4251	1.1584	1.0760	0.9658
Cardiac	1403	Motor ≥ 48.60	Motor < 59.10		1.6815	1.3668	1.2696	1.1396
Cardiac	1404	Motor < 48.60			1.9763	1.6065	1.4922	1.3394
Pulmonary	1501	Motor ≥ 69.70			1.2419	1.0543	0.9813	0.9318
Pulmonary	1502	Motor ≥ 57.15	Motor < 69.70		1.5077	1.2799	1.1913	1.1312
Pulmonary	1503	Motor ≥ 44.60	Motor < 57.15		1.7841	1.5145	1.4096	1.3386
Pulmonary	1504	Motor < 44.60			2.0487	1.7391	1.6187	1.5371
Pain syndrome	1601	Motor ≥ 65.55			1.1679	0.9313	0.8775	0.8092
Pain syndrome	1602	Motor ≥ 56.65	Motor < 65.55		1.4665	1.1694	1.1019	1.0160
Pain syndrome	1603	Motor < 56.65	Age ≥ 71.50		1.7158	1.3682	1.2893	1.1888
Pain syndrome	1604	Motor < 56.65	Age < 71.50		1.7564	1.4006	1.3197	1.2169

(continued)

**Table 9. CMG Definitions Using Standardized Patient Assessment Data Elements (continued)**

RIC	CMG	CMG Description			Relative Weight			
		Rule 1	Rule 2	Rule 3	Tier 1	Tier 2	Tier 3	None
Major multiple trauma without brain or spinal cord injury	1701	Motor $\geq$ 59.70			1.3943	1.0931	1.0271	0.9379
Major multiple trauma without brain or spinal cord injury	1702	Motor $\geq$ 47.00	Motor < 59.70		1.8097	1.4187	1.3331	1.2173
Major multiple trauma without brain or spinal cord injury	1703	Motor $\geq$ 37.80	Motor < 47.00		2.1547	1.6892	1.5872	1.4494
Major multiple trauma without brain or spinal cord injury	1704	Motor < 37.80			2.3848	1.8696	1.7567	1.6042
Major multiple trauma with brain or spinal cord injury	1801	Motor $\geq$ 71.60			1.0749	0.9247	0.8435	0.7703
Major multiple trauma with brain or spinal cord injury	1802	Motor $\geq$ 56.30	Motor < 71.60		1.4822	1.2751	1.1632	1.0623
Major multiple trauma with brain or spinal cord injury	1803	Motor $\geq$ 43.40	Motor < 56.30		1.9134	1.6460	1.5015	1.3712
Major multiple trauma with brain or spinal cord injury	1804	Motor $\geq$ 38.55	Motor < 43.40		2.2702	1.9530	1.7815	1.6270
Major multiple trauma with brain or spinal cord injury	1805	Motor $\geq$ 30.30	Motor < 38.55		2.6189	2.2530	2.0552	1.8769
Major multiple trauma with brain or spinal cord injury	1806	Motor < 30.30			3.4786	2.9925	2.7299	2.4930
Guillain-Barré	1901	Motor $\geq$ 60.85			1.2923	1.0458	1.0194	0.9800
Guillain-Barré	1902	Motor $\geq$ 49.80	Motor < 60.85		1.8782	1.5199	1.4816	1.4244
Guillain-Barré	1903	Motor $\geq$ 40.80	Motor < 49.80		2.5312	2.0483	1.9967	1.9196
Guillain-Barré	1904	Motor < 40.80			3.5306	2.8571	2.7850	2.6775

(continued)

**Table 9. CMG Definitions Using Standardized Patient Assessment Data Elements (continued)**

RIC	CMG	CMG Description			Relative Weight			
		Rule 1	Rule 2	Rule 3	Tier 1	Tier 2	Tier 3	None
Miscellaneous	2001	Motor $\geq$ 65.95			1.2374	1.0001	0.9368	0.8491
Miscellaneous	2002	Motor $\geq$ 55.30	Motor < 65.95		1.5236	1.2315	1.1535	1.0455
Miscellaneous	2003	Motor $\geq$ 46.80	Motor < 55.30		1.7648	1.4264	1.3361	1.2110
Miscellaneous	2004	Motor < 46.80	Age $\geq$ 78.50		1.9471	1.5737	1.4740	1.3360
Miscellaneous	2005	Motor < 46.80	Age < 78.50		2.0925	1.6912	1.5841	1.4358
Burns	2101	Motor $\geq$ 53.90			1.5396	1.2552	1.1924	1.0556
Burns	2102	Motor < 53.90			2.1835	1.7802	1.6912	1.4970
Short stay	5001							0.1815
Mortality (orthopedic) LOS $\leq$ 13	5101							0.5698
Mortality (orthopedic) LOS $\geq$ 14	5102							1.7898
Mortality (non-orthopedic) LOS $\leq$ 15	5103							0.6737
Mortality (non-orthopedic) LOS $\geq$ 16	5104							2.1977

Note: LOS = length of stay.

## **2.7 Payment Weight Calculations for Standardized Patient Data Element–Based CMGs**

After generating new CMGs using the standardized patient assessment data elements collected at admission, RTI calculated payment weights for these groups. Payment weights are calculated for each CMG and comorbidity tier combination. Standardized payment amounts can then be calculated by multiplying the standard payment conversion factor by the relative weight associated with the CMG and comorbidity tier combination. CMS recalibrates these weights on an annual basis using cost report data for IRF stays from the prior year. RTI implemented the same approach to calculating payment weights as CMS uses in the current IRF PPS. The sections below describe the process.

### *Average Length of Stay*

To calculate payment weights, first, the average length of stay (LOS) for every combination of CMG and comorbidity tier was calculated. This is done using an iterative process, where outlier cases with a length of stay more than three standard deviations from the mean are trimmed after each iteration. This process is repeated over five iterations, at which point the average length of stay is stabilized.

### *Comorbidity-Adjusted Costs*

The second step of this process involves removing the effect of comorbidities from the wage-adjusted cost of care for each IRF stay. The effect of comorbidities on cost was estimated using ordinary least squares regression with provider fixed effects. The dependent variable in this analysis was log-transformed, wage-adjusted costs for the IRF stay. The model controlled for RIC, CMG (nested within RIC), and an interaction between RIC and comorbidity tier that accounted for a differential effect of comorbidities across RICs. Short transfers (defined as a transfer with a length of stay less than the average for that CMG and tier) and cases with log-transformed costs of care more than three standard deviations from the overall mean were excluded to reduce the effect of extreme value cases in the model. The cost of care for each case assigned to a comorbidity tier was then divided by the exponentiated regression coefficient for the corresponding RIC-tier combination to estimate what the stay's cost of care would have been without comorbidities (tier-adjusted).

### *Calculating CMG-Level Relative Weights*

The third step of this process estimates the relative payment weight for every CMG using the tier-adjusted costs of care. These weights are calculated using the Hospital-Specific Relative Value (HSRV) methodology described in detail in earlier work (Carter et al., 2002). The HSRV methodology uses an iterative process to determine the relative costliness of the IRF stays assigned to a particular CMG while adjusting for the relative costliness of the providers who cared for those patients. For example, consider two patients assigned to the same CMG with the same total costs of care. If patient A was treated at an IRF with higher

average costs of care than patient B, patient A would have a lower relative cost under the HSRV approach. The case-mix index (CMI), or relative costliness of each provider, is determined by the average cost of care across all of the provider's patients. Short transfers are included in this step and given reduced weight in the calculation.

The weight for each case is set to 1 for all cases except short transfers, where weight equals the following:

$$\text{Case Weight} = (\text{LOS} + 0.5) / \text{Average LOS}$$

The CMG-level payment weight is initially calculated as follows:

$$\text{Pmt. Weight} = \text{sum}(\text{Cost of Care}) / \text{sum}(\text{Case Weight})$$

CMI is then calculated for each provider as a function of payment weights and case weights:

$$\text{CMI} = \text{sum}(\text{Pmt. Weight}) / \text{sum}(\text{Case Weight})$$

The CMG-level payment weight for each stay is then multiplied by the CMI for the provider in which the stay occurred, which yields a new CMG-level average payment weight, and subsequently, a new value for the CMI for each provider. This process is repeated over five iterations, at which point the values for CMG-level payment weight and CMI stabilize. At this stage, the case-weighted average payment weight across all cases is equal to 1.

### *Calculating Comorbidity-Level Weights*

The final step in this process is adjusting the newly calculated payment weight for the effect of comorbidities. Essentially, the process used to remove the effect of comorbidities in the earlier step is reversed. The CMG-level payment weights are multiplied by the exponentiated RIC-Tier-level regression coefficients, which were initially used to estimate the tier-adjusted costs of care, to calculate a payment weight for every combination of CMG and comorbidity tier. The same tier-level multiplier is applied to every CMG within a RIC. For example, the RIC-Tier multiplier for RIC 1 ("stroke") Tier B is approximately 1.31. Therefore, the payment weights for each CMGs under RIC 1 are multiplied by 1.31 to generate payment weights for patients assigned to comorbidity Tier B in each CMG in RIC 1.

### *Budget Neutrality Adjustment*

Because costs of care can vary from year to year, CMS typically adjusts the final payment weights to ensure budget neutrality across years. To make this adjustment, first, the case-weighted average payment weight is calculated across all cases for the new and current payment weights. Next, the new payment weights are multiplied by the ratio of the case-weighted average of the legacy weights to the new weights.

$$\text{Budget Neutral Factor} = \frac{\text{sum(Pmt. Weights Current)}/\text{sum(Case Weights Current)}}{\text{sum(Pmt. Weights New)}/\text{sum(Case Weights New)}}$$

$$\text{Budget Neutral Weight} = \text{Pmt. Weight} * \text{Budget Neutral Factor}$$

The final list of payment weights by CMG and comorbidity tier is presented in **Table 9**. **Table 10** presents descriptive statistics of the budget-neutral payment weights using standardized patient assessment data elements and the FY19 IRF PPS payment weights at the RIC level. At the RIC level, the changes in mean weight are relatively small.



**Table 10. Comparison of RIC-Level Average Payment Weights**

RIC		Payment Weights Using Standardized Patient Assessment Data Elements				FY 2019 IRF PPS Payment Weights				Obs.
		Mean	Std. Dev.	Minimum	Maximum	Mean	Std. Dev.	Minimum	Maximum	
1	Stroke	1.565	0.499	0.8152	2.8402	1.559	0.508	0.6451	2.7655	150,349
2	Traumatic brain injury	1.381	0.389	0.9214	2.6896	1.377	0.391	0.5527	2.4863	24,264
3	Non-traumatic brain injury	1.321	0.318	0.8326	2.2569	1.327	0.320	0.8135	2.1203	54,219
4	Traumatic spinal cord injury	1.949	0.764	0.9766	4.0436	1.946	0.785	0.6855	3.6175	5,673
5	Non-traumatic spinal cord injury	1.465	0.467	0.9048	2.8297	1.456	0.448	0.6070	2.6996	30,152
6	Neurological	1.331	0.301	0.8781	2.2464	1.350	0.316	0.6948	2.2148	107,287
7	Fracture of lower extremity	1.341	0.256	0.8968	2.1286	1.333	0.251	0.7171	1.9907	77,032
8	Replacement of lower extremity joint	0.995	0.207	0.7148	1.8673	0.995	0.219	0.5754	1.8691	31,477
9	Other orthopedic	1.187	0.235	0.8322	2.0421	1.199	0.252	0.6894	2.0372	58,644
10	Amputation lower extremity	1.510	0.342	0.9273	2.1597	1.493	0.335	0.7584	2.0247	19,125
11	Amputation non-lower extremity	1.418	0.330	0.9074	2.0274	1.395	0.320	0.8832	1.9208	832
12	Osteoarthritis	1.151	0.188	0.9023	1.8585	1.173	0.196	0.7877	1.7067	1,566
13	Rheumatoid other arthritis	1.208	0.251	0.8541	1.9350	1.208	0.223	0.8342	1.7337	1,794
14	Cardiac	1.173	0.262	0.7879	1.9763	1.169	0.263	0.6103	1.8581	42,789
15	Pulmonary	1.261	0.244	0.9318	2.0487	1.258	0.260	0.7596	1.9395	14,992
16	Pain syndrome	1.091	0.192	0.8092	1.4006	1.099	0.212	0.7954	1.8637	2,302
17	Major multiple trauma without brain or spinal cord injury	1.369	0.283	0.9379	2.3848	1.391	0.298	0.8196	2.3097	13,884
18	Major multiple trauma with brain or spinal cord injury	1.606	0.580	0.7703	3.4786	1.608	0.498	0.7943	2.6145	3,727

(continued)

**Table 10. Comparison of RIC-Level Average Payment Weights (continued)**

RIC	Payment Weights Using Standardized Patient Assessment Data Elements				FY 2019 IRF PPS Payment Weights				Obs.
	Mean	Std. Dev.	Minimum	Maximum	Mean	Std. Dev.	Minimum	Maximum	
19 Guillain-Barré	1.971	0.773	0.9800	3.5306	1.951	0.827	0.9096	4.2669	1,479
20 Miscellaneous	1.239	0.273	0.8491	2.0925	1.241	0.276	0.6500	1.9734	92,936
21 Burns	1.450	0.328	1.0556	2.1835	1.468	0.167	1.3168	1.9075	440
50 Short stay	0.181	0.000	0.1815		0.160	0.000	0.1599		17,241
51 Mortality	0.833	0.477	0.5698	2.1977	0.947	0.403	0.7539	2.1145	1,225
Total	1.321	0.422			1.321	0.428			753,429

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**APPENDIX A**  
**IRF PATIENT ASSESSMENT INSTRUMENT**

### PRA Disclosure Statement\*

According to the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number. The valid OMB control number for this information collection is **0938-0842**. The time required to complete this information collection is estimated to average **54.5 minutes** per response, including the time to review instructions, search existing data resources, gather the data needed, and complete and review the information collection. If you have comments concerning the accuracy of the time estimate(s) or suggestions for improving this form, please write to: CMS, 7500 Security Boulevard, Attn: PRA Reports Clearance Officer, Mail Stop C4-26-05, Baltimore, Maryland 21244-1850.

\*This statement applies to the 2015 release of the IRF-PAI (version 1.3) and not to any additional burden related to the addition of new data elements added for the purpose of informing CMS' newly adopted measures, which were finalized through the FY 2016 IRF PPS Final Rule, including those quality measures related to the IMPACT Act of 2014.

**INPATIENT REHABILITATION FACILITY - PATIENT ASSESSMENT INSTRUMENT**

Identification Information*	Payer Information*																													
<p>1. Facility Information</p> <p>A. Facility Name _____</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>B. Facility Medicare Provider Number _____</p> <p>2. Patient Medicare Number _____</p> <p>3. Patient Medicaid Number _____</p> <p>4. Patient First Name _____</p> <p>5A. Patient Last Name _____</p> <p>5B. Patient Identification Number _____</p> <p>6. Birth Date _____</p> <p style="text-align: right;">MM / DD / YYYY</p> <p>7. Social Security Number _____</p> <p>8. Gender (1 - Male; 2 - Female) _____</p> <p>9. Race/Ethnicity (Check all that apply)</p> <p style="padding-left: 40px;">American Indian or Alaska Native A. _____</p> <p style="padding-left: 80px;">Asian B. _____</p> <p style="padding-left: 40px;">Black or African American C. _____</p> <p style="padding-left: 40px;">Hispanic or Latino D. _____</p> <p style="padding-left: 40px;">Native Hawaiian or Other Pacific Islander E. _____</p> <p style="padding-left: 40px;">White F. _____</p> <p>10. Marital Status _____</p> <p>(1 - Never Married; 2 - Married; 3 - Widowed; 4 - Separated; 5 - Divorced)</p> <p>11. Zip Code of Patient's Pre-Hospital Residence _____</p> <p>12. Admission Date _____</p> <p style="text-align: right;">MM / DD / YYYY</p> <p>13. Assessment Reference Date _____</p> <p style="text-align: right;">MM / DD / YYYY</p> <p>14. Admission Class _____</p> <p>(1 - Initial Rehab; 2 - Evaluation; 3 - Readmission; 4 - Unplanned Discharge; 5 - Continuing Rehabilitation)</p> <p>15A. Admit From _____</p> <p>(01 - Home (private home/apt., board/care, assisted living, group home, transitional living); 02 - Short-term General Hospital; 03 - Skilled Nursing Facility (SNF); 04 - Intermediate care; 06 - Home under care of organized home health service organization; 50 - Hospice (home); 51 - Hospice (institutional facility); 61 - Swing bed; 62 - Another Inpatient Rehabilitation Facility; 63 - Long-Term Care Hospital (LTCH); 64 - Medicaid Nursing Facility; 65 - Inpatient Psychiatric Facility; 66 - Critical Access Hospital; 99 - Not Listed)</p> <p>16A. Pre-hospital Living Setting _____</p> <p>Use codes from 15A. Admit From</p> <p>17. Pre-hospital Living With _____</p> <p>(Code only if item 16A is 01 - Home: Code using 01 - Alone; 02 - Family/Relatives; 03 - Friends; 04 - Attendant; 05 - Other)</p> <p>18. DELETED</p> <p>19. DELETED</p>	<p>20. Payment Source _____</p> <p>(02 - Medicare Fee For Service; 51 - Medicare-Medicare Advantage; 99 - Not Listed)</p> <p>A. Primary Source _____</p> <p>B. Secondary Source _____</p> <tr style="background-color: black; color: white;"> <th colspan="2" style="text-align: center;">Medical Information*</th> </tr> <p>21. Impairment Group _____</p> <p style="text-align: right;">Admission      Discharge</p> <p>Condition requiring admission to rehabilitation; code according to Appendix A.</p> <p>22. Etiologic Diagnosis _____</p> <p>(Use ICD codes to indicate the etiologic problem) A. _____</p> <p>that led to the condition for which the patient is receiving B. _____</p> <p>rehabilitation) C. _____</p> <p>23. Date of Onset of Impairment _____</p> <p style="text-align: right;">MM / DD / YYYY</p> <p>24. Comorbid Conditions</p> <p>Use ICD codes to enter comorbid medical conditions</p> <table style="width: 100%; border: none;"> <tr> <td>A. _____</td> <td>J. _____</td> <td>S. _____</td> </tr> <tr> <td>B. _____</td> <td>K. _____</td> <td>T. _____</td> </tr> <tr> <td>C. _____</td> <td>L. _____</td> <td>U. _____</td> </tr> <tr> <td>D. _____</td> <td>M. _____</td> <td>V. _____</td> </tr> <tr> <td>E. _____</td> <td>N. _____</td> <td>W. _____</td> </tr> <tr> <td>F. _____</td> <td>O. _____</td> <td>X. _____</td> </tr> <tr> <td>G. _____</td> <td>P. _____</td> <td>Y. _____</td> </tr> <tr> <td>H. _____</td> <td>Q. _____</td> <td></td> </tr> <tr> <td>I. _____</td> <td>R. _____</td> <td></td> </tr> </table> <p>24A. Are there any arthritis conditions recorded in items #21, #22, or #24 that meet all of the regulatory requirements for IRF classification (in 42 CFR 412.29(b)(2)(x), (xi), and (xii))? _____</p> <p style="text-align: right;">(0 - No; 1 - Yes)</p> <p>25. DELETED</p> <p>26. DELETED</p> <p>Height and Weight _____</p> <p>(While measuring if the number is X.1-X.4 round down, X.5 or greater round up)</p> <p>25A. Height on admission (in inches) _____</p> <p>26A. Weight on admission (in pounds) _____</p> <p>Measure weight consistently, according to standard facility practice (e.g., in a.m. after voiding, with shoes off, etc.)</p> <p>27. Swallowing Status _____</p> <p style="text-align: right;">Admission      Discharge</p> <p>3- <u>Regular Food</u>: solids and liquids swallowed safely without supervision or modified food consistency</p> <p>2- <u>Modified Food Consistency/Supervision</u>: subject requires modified food consistency and/or needs supervision for safety</p> <p>1- <u>Tube/Parenteral Feeding</u>: tube/parenteral feeding used wholly or partially as a means of sustenance</p> <p>28. DELETED</p>	Medical Information*		A. _____	J. _____	S. _____	B. _____	K. _____	T. _____	C. _____	L. _____	U. _____	D. _____	M. _____	V. _____	E. _____	N. _____	W. _____	F. _____	O. _____	X. _____	G. _____	P. _____	Y. _____	H. _____	Q. _____		I. _____	R. _____	
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Function Modifiers*	39. FIM™ Instrument*																																																																																																																																																																																																	
<p><b>Complete the following specific functional items prior to scoring the FIM™ Instrument:</b></p> <table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 80%;"></th> <th style="width: 10%; text-align: center;">Admission</th> <th style="width: 10%; text-align: center;">Discharge</th> </tr> </thead> <tbody> <tr> <td>29. Bladder Level of Assistance (Score using FIM Levels 1 - 7)</td> <td style="text-align: center;"><input type="checkbox"/></td> <td style="text-align: center;"><input type="checkbox"/></td> </tr> <tr> <td>30. Bladder Frequency of Accidents (Score as below) 7 - No accidents 6 - No accidents; uses device such as a catheter 5 - One accident in the past 7 days 4 - Two accidents in the past 7 days 3 - Three accidents in the past 7 days 2 - Four accidents in the past 7 days 1 - Five or more accidents in the past 7 days <i>Enter in Item 39G (Bladder) the lower (more dependent) score from Items 29 and 30 above</i></td> <td style="text-align: center;"><input type="checkbox"/></td> <td style="text-align: center;"><input type="checkbox"/></td> </tr> <tr> <th style="width: 80%;"></th> <th style="width: 10%; text-align: center;">Admission</th> <th style="width: 10%; text-align: center;">Discharge</th> </tr> <tr> <td>31. Bowel Level of Assistance (Score using FIM Levels 1 - 7)</td> <td style="text-align: center;"><input type="checkbox"/></td> <td style="text-align: center;"><input type="checkbox"/></td> </tr> <tr> <td>32. 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Shower Transfer (Score Items 33 and 34 using FIM Levels 1 - 7; use 0 if activity does not occur) <i>See training manual for scoring of Item 39K (Tub/Shower Transfer)</i></td> <td style="text-align: center;"><input type="checkbox"/></td> <td style="text-align: center;"><input type="checkbox"/></td> </tr> <tr> <th style="width: 80%;"></th> <th style="width: 10%; text-align: center;">Admission</th> <th style="width: 10%; text-align: center;">Discharge</th> </tr> <tr> <td>35. Distance Walked</td> <td style="text-align: center;"><input type="checkbox"/></td> <td style="text-align: center;"><input type="checkbox"/></td> </tr> <tr> <td>36. Distance Traveled in Wheelchair <i>(Code items 35 and 36 using: 3 - 150 feet; 2 - 50 to 149 feet; 1 - Less than 50 feet; 0 - activity does not occur)</i></td> <td style="text-align: center;"><input type="checkbox"/></td> <td style="text-align: center;"><input type="checkbox"/></td> </tr> <tr> <th style="width: 80%;"></th> <th style="width: 10%; text-align: center;">Admission</th> <th style="width: 10%; text-align: center;">Discharge</th> </tr> <tr> <td>37. Walk</td> <td style="text-align: center;"><input type="checkbox"/></td> <td style="text-align: center;"><input type="checkbox"/></td> </tr> <tr> <td>38. Wheelchair <i>(Score Items 37 and 38 using FIM Levels 1 - 7; 0 if activity does not occur) See training manual for scoring of Item 39L (Walk/Wheelchair)</i></td> <td style="text-align: center;"><input type="checkbox"/></td> <td style="text-align: center;"><input type="checkbox"/></td> </tr> </tbody> </table>		Admission	Discharge	29. 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Problem Solving</td> <td style="text-align: center;"><input type="checkbox"/></td> <td style="text-align: center;"><input type="checkbox"/></td> <td style="text-align: center;"><input type="checkbox"/></td> </tr> <tr> <td>R. Memory</td> <td style="text-align: center;"><input type="checkbox"/></td> <td style="text-align: center;"><input type="checkbox"/></td> <td style="text-align: center;"><input type="checkbox"/></td> </tr> <tr> <td colspan="4"><b>FIM LEVELS</b></td> </tr> <tr> <td colspan="4"><i>No Helper</i></td> </tr> <tr> <td colspan="4">7 Complete Independence (Timely, Safely)</td> </tr> <tr> <td colspan="4">6 Modified Independence (Device)</td> </tr> <tr> <td colspan="4"><i>Helper - Modified Dependence</i></td> </tr> <tr> <td colspan="4">5 Supervision (Subject = 100%)</td> </tr> <tr> <td colspan="4">4 Minimal Assistance (Subject = 75% or more)</td> </tr> <tr> <td colspan="4">3 Moderate Assistance (Subject = 50% or more)</td> </tr> <tr> <td colspan="4"><i>Helper - Complete Dependence</i></td> </tr> <tr> <td colspan="4">2 Maximal Assistance (Subject = 25% or more)</td> </tr> <tr> <td colspan="4">1 Total Assistance (Subject less than 25%)</td> </tr> <tr> <td colspan="4">0 Activity does not occur; Use this code only at admission</td> </tr> </tbody> </table>		Admission	Discharge	Goal	<b>SELF-CARE</b>				A. 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	Admission	Discharge																																																																																																																																																																																																
29. Bladder Level of Assistance (Score using FIM Levels 1 - 7)	<input type="checkbox"/>	<input type="checkbox"/>																																																																																																																																																																																																
30. Bladder Frequency of Accidents (Score as below) 7 - No accidents 6 - No accidents; uses device such as a catheter 5 - One accident in the past 7 days 4 - Two accidents in the past 7 days 3 - Three accidents in the past 7 days 2 - Four accidents in the past 7 days 1 - Five or more accidents in the past 7 days <i>Enter in Item 39G (Bladder) the lower (more dependent) score from Items 29 and 30 above</i>	<input type="checkbox"/>	<input type="checkbox"/>																																																																																																																																																																																																
	Admission	Discharge																																																																																																																																																																																																
31. Bowel Level of Assistance (Score using FIM Levels 1 - 7)	<input type="checkbox"/>	<input type="checkbox"/>																																																																																																																																																																																																
32. Bowel Frequency of Accidents (Score as below) 7 - No accidents 6 - No accidents; uses device such as an ostomy 5 - One accident in the past 7 days 4 - Two accidents in the past 7 days 3 - Three accidents in the past 7 days 2 - Four accidents in the past 7 days 1 - Five or more accidents in the past 7 days <i>Enter in Item 39H (Bowel) the lower (more dependent) score of Items 31 and 32 above.</i>	<input type="checkbox"/>	<input type="checkbox"/>																																																																																																																																																																																																
	Admission	Discharge																																																																																																																																																																																																
33. Tub Transfer	<input type="checkbox"/>	<input type="checkbox"/>																																																																																																																																																																																																
34. Shower Transfer (Score Items 33 and 34 using FIM Levels 1 - 7; use 0 if activity does not occur) <i>See training manual for scoring of Item 39K (Tub/Shower Transfer)</i>	<input type="checkbox"/>	<input type="checkbox"/>																																																																																																																																																																																																
	Admission	Discharge																																																																																																																																																																																																
35. Distance Walked	<input type="checkbox"/>	<input type="checkbox"/>																																																																																																																																																																																																
36. Distance Traveled in Wheelchair <i>(Code items 35 and 36 using: 3 - 150 feet; 2 - 50 to 149 feet; 1 - Less than 50 feet; 0 - activity does not occur)</i>	<input type="checkbox"/>	<input type="checkbox"/>																																																																																																																																																																																																
	Admission	Discharge																																																																																																																																																																																																
37. Walk	<input type="checkbox"/>	<input type="checkbox"/>																																																																																																																																																																																																
38. Wheelchair <i>(Score Items 37 and 38 using FIM Levels 1 - 7; 0 if activity does not occur) See training manual for scoring of Item 39L (Walk/Wheelchair)</i>	<input type="checkbox"/>	<input type="checkbox"/>																																																																																																																																																																																																
	Admission	Discharge	Goal																																																																																																																																																																																															
<b>SELF-CARE</b>																																																																																																																																																																																																		
A. Eating	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>																																																																																																																																																																																															
B. Grooming	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>																																																																																																																																																																																															
C. Bathing	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>																																																																																																																																																																																															
D. Dressing - Upper	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>																																																																																																																																																																																															
E. Dressing - Lower	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>																																																																																																																																																																																															
F. Toileting	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>																																																																																																																																																																																															
<b>SPHINCTER CONTROL</b>																																																																																																																																																																																																		
G. Bladder	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>																																																																																																																																																																																															
H. Bowel	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>																																																																																																																																																																																															
<b>TRANSFERS</b>																																																																																																																																																																																																		
I. Bed, Chair, Wheelchair	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>																																																																																																																																																																																															
J. Toilet	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>																																																																																																																																																																																															
K. Tub, Shower	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>																																																																																																																																																																																															
<b>LOCOMOTION</b>																																																																																																																																																																																																		
L. Walk/Wheelchair	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>																																																																																																																																																																																															
M. Stairs	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>																																																																																																																																																																																															
<b>COMMUNICATION</b>																																																																																																																																																																																																		
N. Comprehension	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>																																																																																																																																																																																															
O. Expression	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>																																																																																																																																																																																															
<b>SOCIAL COGNITION</b>																																																																																																																																																																																																		
P. Social Interaction	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>																																																																																																																																																																																															
Q. Problem Solving	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>																																																																																																																																																																																															
R. Memory	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>																																																																																																																																																																																															
<b>FIM LEVELS</b>																																																																																																																																																																																																		
<i>No Helper</i>																																																																																																																																																																																																		
7 Complete Independence (Timely, Safely)																																																																																																																																																																																																		
6 Modified Independence (Device)																																																																																																																																																																																																		
<i>Helper - Modified Dependence</i>																																																																																																																																																																																																		
5 Supervision (Subject = 100%)																																																																																																																																																																																																		
4 Minimal Assistance (Subject = 75% or more)																																																																																																																																																																																																		
3 Moderate Assistance (Subject = 50% or more)																																																																																																																																																																																																		
<i>Helper - Complete Dependence</i>																																																																																																																																																																																																		
2 Maximal Assistance (Subject = 25% or more)																																																																																																																																																																																																		
1 Total Assistance (Subject less than 25%)																																																																																																																																																																																																		
0 Activity does not occur; Use this code only at admission																																																																																																																																																																																																		

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Discharge Information*	Therapy Information																																																												
<p>40. Discharge Date <span style="float: right;">____/____/____ MM / DD / YYYY</span></p> <p>41. Patient discharged against medical advice? <span style="float: right;">_____ (0 - No; 1 - Yes)</span></p> <p>42. Program Interruption(s) <span style="float: right;">_____ (0 - No; 1 - Yes)</span></p> <p>43. Program Interruption Dates (Code only if item 42 is 1 - Yes)</p> <table style="width: 100%; border: none;"> <tr> <td style="width: 50%; vertical-align: top;"> <p>A. 1<sup>st</sup> Interruption Date  <input style="width: 100%; height: 20px;" type="text"/>                      MM / DD / YYYY</p> </td> <td style="width: 50%; vertical-align: top;"> <p>B. 1<sup>st</sup> Return Date  <input style="width: 100%; height: 20px;" type="text"/>                      MM / DD / YYYY</p> </td> </tr> <tr> <td style="vertical-align: top;"> <p>C. 2<sup>nd</sup> Interruption Date  <input style="width: 100%; height: 20px;" type="text"/>                      MM / DD / YYYY</p> </td> <td style="vertical-align: top;"> <p>D. 2<sup>nd</sup> Return Date  <input style="width: 100%; height: 20px;" type="text"/>                      MM / DD / YYYY</p> </td> </tr> <tr> <td style="vertical-align: top;"> <p>E. 3<sup>rd</sup> Interruption Date  <input style="width: 100%; height: 20px;" type="text"/>                      MM / DD / YYYY</p> </td> <td style="vertical-align: top;"> <p>F. 3<sup>rd</sup> Return Date  <input style="width: 100%; height: 20px;" type="text"/>                      MM / DD / YYYY</p> </td> </tr> </table> <p>44C. Was the patient discharged alive? <span style="float: right;">_____ (0 - No; 1 - Yes)</span></p> <p>44D. Patient's discharge destination/living setting, using codes below: (answer only if 44C = 1; if 44C = 0, skip to item 46)  <span style="float: right;">_____</span>  <i>(01 - Home (private home/apt., board/care, assisted living, group home, transitional living); 02 - Short-term General Hospital; 03 - Skilled Nursing Facility (SNF); 04 - Intermediate care; 06 - Home under care of organized home health service organization; 50 - Hospice (home); 51 - Hospice (institutional facility); 61 - Swing bed; 62 - Another Inpatient Rehabilitation Facility; 63 - Long-Term Care Hospital (LTCH); 64 - Medicaid Nursing Facility; 65 - Inpatient Psychiatric Facility; 66 - Critical Access Hospital; 99 - Not Listed)</i></p> <p>45. Discharge to Living With <span style="float: right;">_____</span>  <i>(Code only if item 44C is 1 - Yes and 44D is 01 - Home; Code using 1 - Alone; 2 - Family / Relatives; 3 - Friends; 4 - Attendant; 5 - Other)</i></p> <p>46. Diagnosis for Interruption or Death <span style="float: right;">_____</span>  <i>(Code using ICD code)</i></p> <p>47. Complications during rehabilitation stay  <i>(Use ICD codes to specify up to six conditions that began with this rehabilitation stay)</i></p> <table style="width: 100%; border: none;"> <tr> <td style="width: 50%;">A. _____</td> <td style="width: 50%;">B. _____</td> </tr> <tr> <td>C. _____</td> <td>D. _____</td> </tr> <tr> <td>E. _____</td> <td>F. _____</td> </tr> </table>	<p>A. 1<sup>st</sup> Interruption Date  <input style="width: 100%; height: 20px;" type="text"/>                      MM / DD / YYYY</p>	<p>B. 1<sup>st</sup> Return Date  <input style="width: 100%; height: 20px;" type="text"/>                      MM / DD / YYYY</p>	<p>C. 2<sup>nd</sup> Interruption Date  <input style="width: 100%; height: 20px;" type="text"/>                      MM / DD / YYYY</p>	<p>D. 2<sup>nd</sup> Return Date  <input style="width: 100%; height: 20px;" type="text"/>                      MM / DD / YYYY</p>	<p>E. 3<sup>rd</sup> Interruption Date  <input style="width: 100%; height: 20px;" type="text"/>                      MM / DD / YYYY</p>	<p>F. 3<sup>rd</sup> Return Date  <input style="width: 100%; height: 20px;" type="text"/>                      MM / DD / YYYY</p>	A. _____	B. _____	C. _____	D. _____	E. _____	F. _____	<p><b>O0401. Week 1: Total Number of Minutes Provided</b></p> <p>O0401A: Physical Therapy</p> <table style="width: 100%; border: none;"> <tr><td>a. Total minutes of individual therapy</td><td style="text-align: right;">_____</td></tr> <tr><td>b. Total minutes of concurrent therapy</td><td style="text-align: right;">_____</td></tr> <tr><td>c. Total minutes of group therapy</td><td style="text-align: right;">_____</td></tr> <tr><td>d. Total minutes of co-treatment therapy</td><td style="text-align: right;">_____</td></tr> </table> <p>O0401B: Occupational Therapy</p> <table style="width: 100%; border: none;"> <tr><td>a. Total minutes of individual therapy</td><td style="text-align: right;">_____</td></tr> <tr><td>b. Total minutes of concurrent therapy</td><td style="text-align: right;">_____</td></tr> <tr><td>c. Total minutes of group therapy</td><td style="text-align: right;">_____</td></tr> <tr><td>d. 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Total minutes of group therapy</td><td style="text-align: right;">_____</td></tr> <tr><td>d. Total minutes of co-treatment therapy</td><td style="text-align: right;">_____</td></tr> </table> <p>O0402B: Occupational Therapy</p> <table style="width: 100%; border: none;"> <tr><td>a. Total minutes of individual therapy</td><td style="text-align: right;">_____</td></tr> <tr><td>b. Total minutes of concurrent therapy</td><td style="text-align: right;">_____</td></tr> <tr><td>c. Total minutes of group therapy</td><td style="text-align: right;">_____</td></tr> <tr><td>d. Total minutes of co-treatment therapy</td><td style="text-align: right;">_____</td></tr> </table> <p>O0402C: Speech-Language Pathology</p> <table style="width: 100%; border: none;"> <tr><td>a. Total minutes of individual therapy</td><td style="text-align: right;">_____</td></tr> <tr><td>b. Total minutes of concurrent therapy</td><td style="text-align: right;">_____</td></tr> <tr><td>c. 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Total minutes of group therapy	_____	d. Total minutes of co-treatment therapy	_____	a. Total minutes of individual therapy	_____	b. Total minutes of concurrent therapy	_____	c. Total minutes of group therapy	_____	d. Total minutes of co-treatment therapy	_____
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Patient \_\_\_\_\_ Identifier \_\_\_\_\_ Date \_\_\_\_\_

# INPATIENT REHABILITATION FACILITY - PATIENT ASSESSMENT INSTRUMENT

## QUALITY INDICATORS

### ADMISSION

#### Section B Hearing, Speech, and Vision

##### BB0700. Expression of Ideas and Wants (3-day assessment period)

- |   |   |
|---|---|
| Enter Code<br><input style="width: 100%;" type="text"/> | <p><b>Expression of Ideas and Wants</b> (consider both verbal and non-verbal expression and excluding language barriers)</p> <p>4. Expresses complex messages <b>without difficulty</b> and with speech that is clear and easy to understand</p> <p>3. Exhibits some <b>difficulty</b> with expressing needs and ideas (e.g., some words or finishing thoughts) or speech is not clear</p> <p>2. <b>Frequently</b> exhibits difficulty with expressing needs and ideas</p> <p>1. <b>Rarely/Never</b> expresses self or speech is very difficult to understand</p> |
|---|---|

##### BB0800. Understanding Verbal Content (3-day assessment period)

- |   |  |
|---|--|
| Enter Code<br><input style="width: 100%;" type="text"/> | <p><b>Understanding Verbal Content</b> (with hearing aid or device, if used and excluding language barriers)</p> <p>4. <b>Understands:</b> Clear comprehension without cues or repetitions</p> <p>3. <b>Usually Understands:</b> Understands most conversations, but misses some part/intent of message. Requires cues at times to understand</p> <p>2. <b>Sometimes Understands:</b> Understands only basic conversations or simple, direct phrases. Frequently requires cues to understand</p> <p>1. <b>Rarely/Never Understands</b></p> |
|---|--|

#### Section C Cognitive Patterns

##### C0100. Should Brief Interview for Mental Status (C0200-C0500) be conducted? (3-day assessment period)

Attempt to conduct interview with all patients.

- |   |   |
|---|---|
| Enter Code<br><input style="width: 100%;" type="text"/> | <p>0. <b>No</b> (patient is rarely/never understood) → <i>Skip to C0900. Memory/Recall Ability</i></p> <p>1. <b>Yes</b> → <i>Continue to C0200. Repetition of Three Words</i></p> |
|---|---|

##### Brief Interview for Mental Status (BIMS)

##### C0200. Repetition of Three Words

**Ask patient:** "I am going to say three words for you to remember. Please repeat the words after I have said all three. The words are: **sock, blue and bed**. Now tell me the three words."

- |   |   |
|---|---|
| Enter Code<br><input style="width: 100%;" type="text"/> | <p><b>Number of words repeated by patient after first attempt:</b></p> <p>3. <b>Three</b></p> <p>2. <b>Two</b></p> <p>1. <b>One</b></p> <p>0. <b>None</b></p> |
|---|---|

After the patient's first attempt say: "I will repeat each of the three words with a cue and ask you about them later: *sock, something to wear; blue, a color; bed, a piece of furniture.*" You may repeat the words up to two more times.

Patient \_\_\_\_\_

Identifier \_\_\_\_\_

Date \_\_\_\_\_

## Section C Cognitive Patterns

### Brief Interview for Mental Status (BIMS) - Continued

#### C0300. Temporal Orientation: Year, Month, Day

Enter Code <input type="checkbox"/>	<b>A. Ask patient:</b> "Please tell me what year it is right now." Patient's answer is: 3. <b>Correct</b> 2. <b>Missed by 1 year</b> 1. <b>Missed by 2 to 5 years</b> 0. <b>Missed by more than 5 years or no answer</b>
Enter Code <input type="checkbox"/>	<b>B. Ask patient:</b> "What month are we in right now?" Patient's answer is: 2. <b>Accurate within 5 days</b> 1. <b>Missed by 6 days to 1 month</b> 0. <b>Missed by more than 1 month or no answer</b>
Enter Code <input type="checkbox"/>	<b>C. Ask patient:</b> "What day of the week is today?" Patient's answer is: 1. <b>Correct</b> 0. <b>Incorrect or no answer</b>

#### C0400. Recall

Enter Code <input type="checkbox"/>	<b>Ask patient:</b> "Let's go back to the first question. What were those three words that I asked you to repeat?" If unable to remember a word, give cue (i.e., something to wear; a color; a piece of furniture) for that word. <b>A. Recalls "sock?"</b> 2. <b>Yes</b> , no cue required 1. <b>Yes</b> , after cueing ("something to wear") 0. <b>No</b> , could not recall
Enter Code <input type="checkbox"/>	<b>B. Recalls "blue?"</b> 2. <b>Yes</b> , no cue required 1. <b>Yes</b> , after cueing ("a color") 0. <b>No</b> , could not recall
Enter Code <input type="checkbox"/>	<b>C. Recalls "bed?"</b> 2. <b>Yes</b> , no cue required 1. <b>Yes</b> , after cueing ("a piece of furniture") 0. <b>No</b> , could not recall

#### C0500. BIMS Summary Score

Enter Score <input type="text"/>	<b>Add scores</b> for questions C0200-C0400 and fill in total score (00-15) <b>Enter 99 if the patient was unable to complete the interview</b>
-------------------------------------	--

#### C0600. Should the Staff Assessment for Mental Status (C0900) be Conducted?

Enter Code <input type="checkbox"/>	0. <b>No</b> (patient was able to complete Brief Interview for Mental Status) → <i>Skip to GG0100. Prior Functioning: Everyday Activities</i> 1. <b>Yes</b> (patient was unable to complete Brief Interview for Mental Status) → <i>Continue to C0900. Memory/Recall Ability</i>
--	---

#### Staff Assessment for Mental Status

Do not conduct if Brief Interview for Mental Status (C0200-C0500) was completed.

#### C0900. Memory/Recall Ability

↓ Check all that the patient was normally able to recall

<input type="checkbox"/>	<b>A. Current season</b>
<input type="checkbox"/>	<b>B. Location of own room</b>
<input type="checkbox"/>	<b>C. Staff names and faces</b>
<input type="checkbox"/>	<b>E. That he or she is in a hospital/hospital unit</b>
<input type="checkbox"/>	<b>Z. None of the above</b> were recalled

Patient \_\_\_\_\_

Identifier \_\_\_\_\_

Date \_\_\_\_\_

**Section GG****Functional Abilities and Goals**

**GG0100. Prior Functioning: Everyday Activities.** Indicate the patient's usual ability with everyday activities prior to the current illness, exacerbation, or injury.

↓ Enter Codes in Boxes	
3. <b>Independent</b> - Patient completed the activities by him/herself, with or without an assistive device, with no assistance from a helper.	<input type="checkbox"/> <b>A. Self-Care:</b> Code the patient's need for assistance with bathing, dressing, using the toilet, or eating prior to the current illness, exacerbation, or injury.
2. <b>Needed Some Help</b> - Patient needed partial assistance from another person to complete activities.	<input type="checkbox"/> <b>B. Indoor Mobility (Ambulation):</b> Code the patient's need for assistance with walking from room to room (with or without a device such as cane, crutch, or walker) prior to the current illness, exacerbation, or injury.
1. <b>Dependent</b> - A helper completed the activities for the patient.	<input type="checkbox"/> <b>C. Stairs:</b> Code the patient's need for assistance with internal or external stairs (with or without a device such as cane, crutch, or walker) prior to the current illness, exacerbation, or injury.
8. <b>Unknown</b>	
9. <b>Not Applicable</b>	<input type="checkbox"/> <b>D. Functional Cognition:</b> Code the patient's need for assistance with planning regular tasks, such as shopping or remembering to take medication prior to the current illness, exacerbation, or injury.

**GG0110. Prior Device Use.** Indicate devices and aids used by the patient prior to the current illness, exacerbation, or injury.

↓ Check all that apply	
<input type="checkbox"/>	<b>A. Manual wheelchair</b>
<input type="checkbox"/>	<b>B. Motorized wheelchair or scooter</b>
<input type="checkbox"/>	<b>C. Mechanical lift</b>
<input type="checkbox"/>	<b>D. Walker</b>
<input type="checkbox"/>	<b>E. Orthotics/Prosthetics</b>
<input type="checkbox"/>	<b>Z. None of the above</b>

Patient \_\_\_\_\_

Identifier \_\_\_\_\_

Date \_\_\_\_\_

**Section GG**

**Functional Abilities and Goals**

**GG0130. Self-Care** (3-day assessment period)

**Code the patient's usual performance at admission for each activity using the 6-point scale. If activity was not attempted at admission, code the reason. Code the patient's discharge goal(s) using the 6-point scale. Do not use codes 07, 09, or 88 to code discharge goal(s).**

**CODING:**

**Safety and Quality of Performance** - If helper assistance is required because patient's performance is unsafe or of poor quality, score according to amount of assistance provided.

*Activities may be completed with or without assistive devices.*

- 06. **Independent** - Patient completes the activity by him/herself with no assistance from a helper.
- 05. **Setup or clean-up assistance** - Helper SETS UP or CLEANS UP; patient completes activity. Helper assists only prior to or following the activity.
- 04. **Supervision or touching assistance** - Helper provides VERBAL CUES or TOUCHING/STEADYING assistance as patient completes activity. Assistance may be provided throughout the activity or intermittently.
- 03. **Partial/moderate assistance** - Helper does LESS THAN HALF the effort. Helper lifts, holds or supports trunk or limbs, but provides less than half the effort.
- 02. **Substantial/maximal assistance** - Helper does MORE THAN HALF the effort. Helper lifts or holds trunk or limbs and provides more than half the effort.
- 01. **Dependent** - Helper does ALL of the effort. Patient does none of the effort to complete the activity. Or, the assistance of 2 or more helpers is required for the patient to complete the activity.

**If activity was not attempted, code reason:**

- 07. **Patient refused**
- 09. **Not applicable**
- 88. Not attempted due to **medical condition or safety concerns**

1. Admission Performance	2. Discharge Goal	
↓ Enter Codes in Boxes ↓		
<input type="text"/>	<input type="text"/>	<b>A. Eating:</b> The ability to use suitable utensils to bring food to the mouth and swallow food once the meal is presented on a table/tray. Includes modified food consistency.
<input type="text"/>	<input type="text"/>	<b>B. Oral hygiene:</b> The ability to use suitable items to clean teeth. [Dentures (if applicable): The ability to remove and replace dentures from and to the mouth, and manage equipment for soaking and rinsing them.]
<input type="text"/>	<input type="text"/>	<b>C. Toileting hygiene:</b> The ability to maintain perineal hygiene, adjust clothes before and after using the toilet, commode, bedpan or urinal. If managing an ostomy, include wiping the opening but not managing equipment.
<input type="text"/>	<input type="text"/>	<b>E. Shower/bathe self:</b> The ability to bathe self in shower or tub, including washing, rinsing, and drying self. Does not include transferring in/out of tub/shower.
<input type="text"/>	<input type="text"/>	<b>F. Upper body dressing:</b> The ability to put on and remove shirt or pajama top; includes buttoning, if applicable.
<input type="text"/>	<input type="text"/>	<b>G. Lower body dressing:</b> The ability to dress and undress below the waist, including fasteners; does not include footwear.
<input type="text"/>	<input type="text"/>	<b>H. Putting on/taking off footwear:</b> The ability to put on and take off socks and shoes or other footwear that is appropriate for safe mobility.

**Section GG Functional Abilities and Goals**

**GG0170. Mobility** (3-day assessment period)

**Code the patient's usual performance at admission for each activity using the 6-point scale. If activity was not attempted at admission, code the reason. Code the patient's discharge goal(s) using the 6-point scale. Do not use codes 07, 09, or 88 to code discharge goal(s).**

**CODING:**

**Safety and Quality of Performance** - If helper assistance is required because patient's performance is unsafe or of poor quality, score according to amount of assistance provided.

*Activities may be completed with or without assistive devices.*

- 06. **Independent** - Patient completes the activity by him/herself with no assistance from a helper.
- 05. **Setup or clean-up assistance** - Helper SETS UP or CLEANS UP; patient completes activity. Helper assists only prior to or following the activity.
- 04. **Supervision or touching assistance** - Helper provides VERBAL CUES or TOUCHING/STEADYING assistance as patient completes activity. Assistance may be provided throughout the activity or intermittently.
- 03. **Partial/moderate assistance** - Helper does LESS THAN HALF the effort. Helper lifts, holds or supports trunk or limbs, but provides less than half the effort.
- 02. **Substantial/maximal assistance** - Helper does MORE THAN HALF the effort. Helper lifts or holds trunk or limbs and provides more than half the effort.
- 01. **Dependent** - Helper does ALL of the effort. Patient does none of the effort to complete the activity. Or, the assistance of 2 or more helpers is required for the patient to complete the activity.

**If activity was not attempted, code reason:**

- 07. **Patient refused**
- 09. **Not applicable**
- 88. Not attempted due to **medical condition or safety concerns**

1. Admission Performance	2. Discharge Goal	
↓ Enter Codes in Boxes ↓		
<input type="text"/>	<input type="text"/>	<b>A. Roll left and right:</b> The ability to roll from lying on back to left and right side, and return to lying on back.
<input type="text"/>	<input type="text"/>	<b>B. Sit to lying:</b> The ability to move from sitting on side of bed to lying flat on the bed.
<input type="text"/>	<input type="text"/>	<b>C. Lying to sitting on side of bed:</b> The ability to safely move from lying on the back to sitting on the side of the bed with feet flat on the floor, and with no back support.
<input type="text"/>	<input type="text"/>	<b>D. Sit to stand:</b> The ability to safely come to a standing position from sitting in a chair or on the side of the bed.
<input type="text"/>	<input type="text"/>	<b>E. Chair/bed-to-chair transfer:</b> The ability to safely transfer to and from a bed to a chair (or wheelchair).
<input type="text"/>	<input type="text"/>	<b>F. Toilet transfer:</b> The ability to safely get on and off a toilet or commode.
<input type="text"/>	<input type="text"/>	<b>G. Car transfer:</b> The ability to transfer in and out of a car or van on the passenger side. Does not include the ability to open/close door or fasten seat belt.
<input type="text"/>	<input type="text"/>	<p><b>H1. Does the patient walk?</b></p> <p>0. <b>No</b>, and walking goal <b>is not</b> clinically indicated → <i>Skip to GG0170Q1. Does the patient use a wheelchair/scooter?</i></p> <p>1. <b>No</b>, and walking goal <b>is</b> clinically indicated → <i>Code the patient's discharge goal(s) for items GG0170I, J, K, L, M, N, O, and P. For admission performance, skip to GG0170Q1. Does the patient use a wheelchair/scooter?</i></p> <p>2. <b>Yes</b> → <i>Continue to GG0170I. Walk 10 feet</i></p>
<input type="text"/>	<input type="text"/>	<b>I. Walk 10 feet:</b> Once standing, the ability to walk at least 10 feet in a room, corridor or similar space.
<input type="text"/>	<input type="text"/>	<b>J. Walk 50 feet with two turns:</b> Once standing, the ability to walk at least 50 feet and make two turns.
<input type="text"/>	<input type="text"/>	<b>K. Walk 150 feet:</b> Once standing, the ability to walk at least 150 feet in a corridor or similar space.

**Section GG Functional Abilities and Goals**

**GG0170. Mobility (3-day assessment period) - Continued**

**Code the patient's usual performance at admission for each activity using the 6-point scale. If activity was not attempted at admission, code the reason. Code the patient's discharge goal(s) using the 6-point scale. Do not use codes 07, 09, or 88 to code discharge goal(s).**

**CODING:**

**Safety and Quality of Performance** - If helper assistance is required because patient's performance is unsafe or of poor quality, score according to amount of assistance provided.

*Activities may be completed with or without assistive devices.*

- 06. **Independent** - Patient completes the activity by him/herself with no assistance from a helper.
- 05. **Setup or clean-up assistance** - Helper SETS UP or CLEANS UP; patient completes activity. Helper assists only prior to or following the activity.
- 04. **Supervision or touching assistance** - Helper provides VERBAL CUES or TOUCHING/STEADYING assistance as patient completes activity. Assistance may be provided throughout the activity or intermittently.
- 03. **Partial/moderate assistance** - Helper does LESS THAN HALF the effort. Helper lifts, holds or supports trunk or limbs, but provides less than half the effort.
- 02. **Substantial/maximal assistance** - Helper does MORE THAN HALF the effort. Helper lifts or holds trunk or limbs and provides more than half the effort.
- 01. **Dependent** - Helper does ALL of the effort. Patient does none of the effort to complete the activity. Or, the assistance of 2 or more helpers is required for the patient to complete the activity.

**If activity was not attempted, code the reason:**

- 07. **Patient refused**
- 09. **Not applicable**
- 88. Not attempted due to **medical condition or safety concerns**

1. Admission Performance	2. Discharge Goal	
↓ Enter Codes in Boxes ↓		
<input type="text"/>	<input type="text"/>	<b>L. Walking 10 feet on uneven surfaces:</b> The ability to walk 10 feet on uneven or sloping surfaces, such as grass or gravel.
<input type="text"/>	<input type="text"/>	<b>M. 1 step (curb):</b> The ability to step over a curb or up and down one step.
<input type="text"/>	<input type="text"/>	<b>N. 4 steps:</b> The ability to go up and down four steps with or without a rail.
<input type="text"/>	<input type="text"/>	<b>O. 12 steps:</b> The ability to go up and down 12 steps with or without a rail.
<input type="text"/>	<input type="text"/>	<b>P. Picking up object:</b> The ability to bend/stoop from a standing position to pick up a small object, such as a spoon, from the floor.
<input type="text"/>	<input type="text"/>	<b>Q1. Does the patient use a wheelchair/scooter?</b> 0. <b>No</b> → Skip to H0350. Bladder Continence 1. <b>Yes</b> → Continue to GG0170R. Wheel 50 feet with two turns
<input type="text"/>	<input type="text"/>	<b>R. Wheel 50 feet with two turns:</b> Once seated in wheelchair/scooter, the ability to wheel at least 50 feet and make two turns.
<input type="text"/>	<input type="text"/>	<b>RR1. Indicate the type of wheelchair/scooter used.</b> 1. <b>Manual</b> 2. <b>Motorized</b>
<input type="text"/>	<input type="text"/>	<b>S. Wheel 150 feet:</b> Once seated in wheelchair/scooter, the ability to wheel at least 150 feet in a corridor or similar space.
<input type="text"/>	<input type="text"/>	<b>SS1. Indicate the type of wheelchair/scooter used.</b> 1. <b>Manual</b> 2. <b>Motorized</b>

Patient \_\_\_\_\_

Identifier \_\_\_\_\_

Date \_\_\_\_\_

## Section H Bladder and Bowel

### H0350. Bladder Continence (3-day assessment period)

Enter Code

**Bladder continence** - Select the one category that best describes the patient.

0. **Always continent** (no documented incontinence)
1. **Stress incontinence only**
2. **Incontinent less than daily** (e.g., once or twice during the 3-day assessment period)
3. **Incontinent daily** (at least once a day)
4. **Always incontinent**
5. **No urine output** (e.g., renal failure)
9. **Not applicable** (e.g., indwelling catheter)

### H0400. Bowel Continence (3-day assessment period)

Enter Code

**Bowel continence** - Select the one category that best describes the patient.

0. **Always continent**
1. **Occasionally incontinent** (one episode of bowel incontinence)
2. **Frequently incontinent** (2 or more episodes of bowel incontinence, but at least one continent bowel movement)
3. **Always incontinent** (no episodes of continent bowel movements)
9. **Not rated**, patient had an ostomy or did not have a bowel movement for the entire 3 days

## Section I Active Diagnoses

### Comorbidities and Co-existing Conditions



Check all that apply

- I0900. Peripheral Vascular Disease (PVD) or Peripheral Arterial Disease (PAD)**
- I2900. Diabetes Mellitus (DM)** (e.g., diabetic retinopathy, nephropathy, and neuropathy)
- I7900. None of the above**

## Section J Health Conditions

### J1750. History of Falls

Enter Code

Has the patient had two or more falls in the past year or any fall with injury in the past year?

0. **No**
1. **Yes**
8. **Unknown**

### J2000. Prior Surgery

Enter Code

Did the patient have major surgery during the 100 days prior to admission?

0. **No**
1. **Yes**
8. **Unknown**

## Section K Swallowing/Nutritional Status

### K0110. Swallowing/Nutritional Status (3-day assessment period) Indicate the patient's usual ability to swallow.



Check all that apply

- A. Regular food** - Solids and liquids swallowed safely without supervision or modified food or liquid consistency.
- B. Modified food consistency/supervision** - Patient requires modified food or liquid consistency and/or needs supervision during eating for safety.
- C. Tube/parenteral feeding** - Tube/parenteral feeding used wholly or partially as a means of sustenance.



Patient \_\_\_\_\_

Identifier \_\_\_\_\_

Date \_\_\_\_\_

**Section M****Skin Conditions**

Report based on highest stage of existing ulcer(s) at its worst; do not "reverse" stage

**M0210. Unhealed Pressure Ulcer(s)**

Enter Code  **Does this patient have one or more unhealed pressure ulcer(s) at Stage 1 or higher?**  
 0. **No** → Skip to O0100. Special Treatments, Procedures, and Programs  
 1. **Yes** → Continue to M0300. Current Number of Unhealed Pressure Ulcers at Each Stage

**M0300. Current Number of Unhealed Pressure Ulcers at Each Stage**

Enter Number  **A. Stage 1:** Intact skin with non-blanchable redness of a localized area usually over a bony prominence. Darkly pigmented skin may not have a visible blanching; in dark skin tones only it may appear with persistent blue or purple hues.  
**Number of Stage 1 pressure ulcers**

Enter Number  **B. Stage 2:** Partial thickness loss of dermis presenting as a shallow open ulcer with a red or pink wound bed, without slough. May also present as an intact or open/ruptured blister.  
**1. Number of Stage 2 pressure ulcers**

Enter Number  **C. Stage 3:** Full thickness tissue loss. Subcutaneous fat may be visible but bone, tendon or muscle is not exposed. Slough may be present but does not obscure the depth of tissue loss. May include undermining and tunneling.  
**1. Number of Stage 3 pressure ulcers**

Enter Number  **D. Stage 4:** Full thickness tissue loss with exposed bone, tendon or muscle. Slough or eschar may be present on some parts of the wound bed. Often includes undermining and tunneling.  
**1. Number of Stage 4 pressure ulcers**

Enter Number  **E. Unstageable - Non-removable dressing:** Known but not stageable due to non-removable dressing/device  
**1. Number of unstageable pressure ulcers due to non-removable dressing/device**

Enter Number  **F. Unstageable - Slough and/or eschar:** Known but not stageable due to coverage of wound bed by slough and/or eschar  
**1. Number of unstageable pressure ulcers due to coverage of wound bed by slough and/or eschar**

Enter Number  **G. Unstageable - Deep tissue injury:** Suspected deep tissue injury in evolution  
**1. Number of unstageable pressure ulcers with suspected deep tissue injury in evolution**

**Section O****Special Treatments, Procedures, and Programs****O0100. Special Treatments, Procedures, and Programs**

↓ Check if treatment applies at admission

**N. Total Parenteral Nutrition**

Patient \_\_\_\_\_

Identifier \_\_\_\_\_

Date \_\_\_\_\_

## DISCHARGE

### Section GG

### Functional Abilities and Goals

#### GG0130. Self-Care (3-day assessment period)

**Code the patient's usual performance at discharge for each activity using the 6-point scale. If activity was not attempted at discharge, code the reason.**

#### CODING:

**Safety and Quality of Performance** - If helper assistance is required because patient's performance is unsafe or of poor quality, score according to amount of assistance provided.

*Activities may be completed with or without assistive devices.*

- 06. **Independent** - Patient completes the activity by him/herself with no assistance from a helper.
- 05. **Setup or clean-up assistance** - Helper SETS UP or CLEANS UP; patient completes activity. Helper assists only prior to or following the activity.
- 04. **Supervision or touching assistance** - Helper provides VERBAL CUES or TOUCHING/STEADYING assistance as patient completes activity. Assistance may be provided throughout the activity or intermittently.
- 03. **Partial/moderate assistance** - Helper does LESS THAN HALF the effort. Helper lifts, holds or supports trunk or limbs, but provides less than half the effort.
- 02. **Substantial/maximal assistance** - Helper does MORE THAN HALF the effort. Helper lifts or holds trunk or limbs and provides more than half the effort.
- 01. **Dependent** - Helper does ALL of the effort. Patient does none of the effort to complete the activity. Or, the assistance of 2 or more helpers is required for the patient to complete the activity.

**If activity was not attempted, code the reason:**

- 07. **Patient refused**
- 09. **Not applicable**
- 88. Not attempted due to **medical condition or safety concerns**

3. Discharge Performance	
Enter Codes in Boxes ↓	
<input style="width: 50px; height: 20px;" type="text"/>	<b>A. Eating:</b> The ability to use suitable utensils to bring food to the mouth and swallow food once the meal is presented on a table/tray. Includes modified food consistency.
<input style="width: 50px; height: 20px;" type="text"/>	<b>B. Oral hygiene:</b> The ability to use suitable items to clean teeth. [Dentures (if applicable): The ability to remove and replace dentures from and to the mouth, and manage equipment for soaking and rinsing them.]
<input style="width: 50px; height: 20px;" type="text"/>	<b>C. Toileting hygiene:</b> The ability to maintain perineal hygiene, adjust clothes before and after using the toilet, commode, bedpan or urinal. If managing an ostomy, include wiping the opening but not managing equipment.
<input style="width: 50px; height: 20px;" type="text"/>	<b>E. Shower/bathe self:</b> The ability to bathe self in shower or tub, including washing, rinsing, and drying self. Does not include transferring in/out of tub/shower.
<input style="width: 50px; height: 20px;" type="text"/>	<b>F. Upper body dressing:</b> The ability to put on and remove shirt or pajama top; includes buttoning, if applicable.
<input style="width: 50px; height: 20px;" type="text"/>	<b>G. Lower body dressing:</b> The ability to dress and undress below the waist, including fasteners; does not include footwear.
<input style="width: 50px; height: 20px;" type="text"/>	<b>H. Putting on/taking off footwear:</b> The ability to put on and take off socks and shoes or other footwear that is appropriate for safe mobility.

Patient \_\_\_\_\_

Identifier \_\_\_\_\_

Date \_\_\_\_\_

**Section GG**

**Functional Abilities and Goals**

**GG0170. Mobility** (3-day assessment period)

**Code the patient's usual performance at discharge for each activity using the 6-point scale. If activity was not attempted at discharge, code the reason.**

**CODING:**

**Safety and Quality of Performance** - If helper assistance is required because patient's performance is unsafe or of poor quality, score according to amount of assistance provided.

*Activities may be completed with or without assistive devices.*

- 06. **Independent** - Patient completes the activity by him/herself with no assistance from a helper.
- 05. **Setup or clean-up assistance** - Helper SETS UP or CLEANS UP; patient completes activity. Helper assists only prior to or following the activity.
- 04. **Supervision or touching assistance** - Helper provides VERBAL CUES or TOUCHING/STEADYING assistance as patient completes activity. Assistance may be provided throughout the activity or intermittently.
- 03. **Partial/moderate assistance** - Helper does LESS THAN HALF the effort. Helper lifts, holds or supports trunk or limbs, but provides less than half the effort.
- 02. **Substantial/maximal assistance** - Helper does MORE THAN HALF the effort. Helper lifts or holds trunk or limbs and provides more than half the effort.
- 01. **Dependent** - Helper does ALL of the effort. Patient does none of the effort to complete the activity. Or, the assistance of 2 or more helpers is required for the patient to complete the activity.

**If activity was not attempted, code the reason:**

- 07. **Patient refused**
- 09. **Not applicable**
- 88. Not attempted due to **medical condition or safety concerns**

3. Discharge Performance	
Enter Codes in Boxes ↓	
[ ]	<b>A. Roll left and right:</b> The ability to roll from lying on back to left and right side, and return to lying on back.
[ ]	<b>B. Sit to lying:</b> The ability to move from sitting on side of bed to lying flat on the bed.
[ ]	<b>C. Lying to sitting on side of bed:</b> The ability to safely move from lying on the back to sitting on the side of the bed with feet flat on the floor, and with no back support.
[ ]	<b>D. Sit to stand:</b> The ability to safely come to a standing position from sitting in a chair or on the side of the bed.
[ ]	<b>E. Chair/bed-to-chair transfer:</b> The ability to safely transfer to and from a bed to a chair (or wheelchair).
[ ]	<b>F. Toilet transfer:</b> The ability to safely get on and off a toilet or commode.
[ ]	<b>G. Car transfer:</b> The ability to transfer in and out of a car or van on the passenger side. Does not include the ability to open/close door or fasten seat belt.
[ ]	<b>H3. Does the patient walk?</b> 0. <b>No</b> → Skip to GG0170Q3. Does the patient use a wheelchair/scooter? 2. <b>Yes</b> → Continue to GG0170I. Walk 10 feet
[ ]	<b>I. Walk 10 feet:</b> Once standing, the ability to walk at least 10 feet in a room, corridor or similar space
[ ]	<b>J. Walk 50 feet with two turns:</b> Once standing, the ability to walk at least 50 feet and make two turns
[ ]	<b>K. Walk 150 feet:</b> Once standing, the ability to walk at least 150 feet in a corridor or similar space

Patient \_\_\_\_\_

Identifier \_\_\_\_\_

Date \_\_\_\_\_

**Section GG**

**Functional Abilities and Goals**

**GG0170. Mobility** (3-day assessment period) - Continued

**Code the patient's usual performance at discharge for each activity using the 6-point scale. If activity was not attempted at discharge, code the reason.**

**CODING:**

**Safety and Quality of Performance** - If helper assistance is required because patient's performance is unsafe or of poor quality, score according to amount of assistance provided.

*Activities may be completed with or without assistive devices.*

- 06. **Independent** - Patient completes the activity by him/herself with no assistance from a helper.
- 05. **Setup or clean-up assistance** - Helper SETS UP or CLEANS UP; patient completes activity. Helper assists only prior to or following the activity.
- 04. **Supervision or touching assistance** - Helper provides VERBAL CUES or TOUCHING/STEADYING assistance as patient completes activity. Assistance may be provided throughout the activity or intermittently.
- 03. **Partial/moderate assistance** - Helper does LESS THAN HALF the effort. Helper lifts, holds or supports trunk or limbs, but provides less than half the effort.
- 02. **Substantial/maximal assistance** - Helper does MORE THAN HALF the effort. Helper lifts or holds trunk or limbs and provides more than half the effort.
- 01. **Dependent** - Helper does ALL of the effort. Patient does none of the effort to complete the activity. Or, the assistance of 2 or more helpers is required for the patient to complete the activity.

**If activity was not attempted, code the reason:**

- 07. **Patient refused**
- 09. **Not applicable**
- 88. Not attempted due to **medical condition or safety concerns**

<b>3. Discharge Performance</b>	
<b>Enter Codes in Boxes</b> ↓	
<input type="text"/>	<b>L. Walking 10 feet on uneven surfaces:</b> The ability to walk 10 feet on uneven or sloping surfaces, such as grass or gravel.
<input type="text"/>	<b>M. 1 step (curb):</b> The ability to step over a curb or up and down one step.
<input type="text"/>	<b>N. 4 steps:</b> The ability to go up and down four steps with or without a rail.
<input type="text"/>	<b>O. 12 steps:</b> The ability to go up and down 12 steps with or without a rail.
<input type="text"/>	<b>P. Picking up object:</b> The ability to bend/stoop from a standing position to pick up a small object, such as a spoon, from the floor.
<input type="text"/>	<b>Q3. Does the patient use a wheelchair/scooter?</b> 0. <b>No</b> → Skip to J1800. Any Falls Since Admission 1. <b>Yes</b> → Continue to GG0170R. Wheel 50 feet with two turns
<input type="text"/>	<b>R. Wheel 50 feet with two turns:</b> Once seated in wheelchair/scooter, the ability to wheel at least 50 feet and make two turns.
<input type="text"/>	<b>RR3. Indicate the type of wheelchair/scooter used.</b> 1. <b>Manual</b> 2. <b>Motorized</b>
<input type="text"/>	<b>S. Wheel 150 feet:</b> Once seated in wheelchair/scooter, the ability to wheel at least 150 feet in a corridor or similar space.
<input type="text"/>	<b>SS3. Indicate the type of wheelchair/scooter used.</b> 1. <b>Manual</b> 2. <b>Motorized</b>

Patient \_\_\_\_\_

Identifier \_\_\_\_\_

Date \_\_\_\_\_

**Section J****Health Conditions****J1800. Any Falls Since Admission**

Enter Code <input type="checkbox"/>	Has the patient <b>had any falls since admission?</b> 0. <b>No</b> → Skip to M0210. Unhealed Pressure Ulcer(s) 1. <b>Yes</b> → Continue to J1900. Number of Falls Since Admission
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**J1900. Number of Falls Since Admission**

<b>CODING:</b> 0. None 1. One 2. Two or more	↓ Enter Codes in Boxes	
	<input type="checkbox"/>	<b>A. No injury:</b> No evidence of any injury is noted on physical assessment by the nurse or primary care clinician; no complaints of pain or injury by the patient; no change in the patient's behavior is noted after the fall
	<input type="checkbox"/>	<b>B. Injury (except major):</b> Skin tears, abrasions, lacerations, superficial bruises, hematomas and sprains; or any fall-related injury that causes the patient to complain of pain
	<input type="checkbox"/>	<b>C. Major injury:</b> Bone fractures, joint dislocations, closed head injuries with altered consciousness, subdural hematoma

**Section M****Skin Conditions**

Report based on highest stage of existing ulcer(s) at its worst; do not "reverse" stage

**M0210. Unhealed Pressure Ulcer(s)**

Enter Code <input type="checkbox"/>	<b>Does this patient have one or more unhealed pressure ulcer(s) at Stage 1 or higher?</b> 0. <b>No</b> → Skip to M0900A. Healed Pressure Ulcer(s) 1. <b>Yes</b> → Continue to M0300. Current Number of Unhealed Pressure Ulcers at Each Stage
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**M0300. Current Number of Unhealed Pressure Ulcers at Each Stage**

Enter Number <input type="checkbox"/>	<b>A. Stage 1:</b> Intact skin with non-blanchable redness of a localized area usually over a bony prominence. Darkly pigmented skin may not have a visible blanching; in dark skin tones only it may appear with persistent blue or purple hues. <b>Number of Stage 1 pressure ulcers</b>
Enter Number <input type="checkbox"/>	<b>B. Stage 2:</b> Partial thickness loss of dermis presenting as a shallow open ulcer with a red or pink wound bed, without slough. May also present as an intact or open/ruptured blister. <b>1. Number of Stage 2 pressure ulcers</b> <i>If 0</i> → Skip to M0300C. Stage 3 <b>2. Number of <u>these</u> Stage 2 pressure ulcers that were present upon admission</b> - enter how many were noted at the time of admission
Enter Number <input type="checkbox"/>	
Enter Number <input type="checkbox"/>	<b>C. Stage 3:</b> Full thickness tissue loss. Subcutaneous fat may be visible but bone, tendon or muscle is not exposed. Slough may be present but does not obscure the depth of tissue loss. May include undermining and tunneling. <b>1. Number of Stage 3 pressure ulcers</b> <i>If 0</i> → Skip to M0300D. Stage 4 <b>2. Number of <u>these</u> Stage 3 pressure ulcers that were present upon admission</b> - enter how many were noted at the time of admission
Enter Number <input type="checkbox"/>	

Patient \_\_\_\_\_

Identifier \_\_\_\_\_

Date \_\_\_\_\_

**Section M**

**Skin Conditions**

**M0300. Current Number of Unhealed Pressure Ulcers at Each Stage - Continued**

Enter Number <input type="text"/>	<p><b>D. Stage 4:</b> Full thickness tissue loss with exposed bone, tendon or muscle. Slough or eschar may be present on some parts of the wound bed. Often includes undermining and tunneling.</p> <p><b>1. Number of Stage 4 pressure ulcers</b>  <i>If 0 → Skip to M0300E. Unstageable - Non-removable dressing</i></p> <p><b>2. Number of these Stage 4 pressure ulcers that were present upon admission</b> - enter how many were noted at the time of admission</p>
Enter Number <input type="text"/>	<p><b>E. Unstageable - Non-removable dressing:</b> Known but not stageable due to non-removable dressing/device</p> <p><b>1. Number of unstageable pressure ulcers due to non-removable dressing/device</b>  <i>If 0 → Skip to M0300F. Unstageable - Slough and/or eschar</i></p> <p><b>2. Number of these unstageable pressure ulcers that were present upon admission</b> - enter how many were noted at the time of admission</p>
Enter Number <input type="text"/>	<p><b>F. Unstageable - Slough and/or eschar:</b> Known but not stageable due to coverage of wound bed by slough and/or eschar</p> <p><b>1. Number of unstageable pressure ulcers due to coverage of wound bed by slough and/or eschar</b>  <i>If 0 → Skip to M0300G. Unstageable - Deep tissue injury</i></p> <p><b>2. Number of these unstageable pressure ulcers that were present upon admission</b> - enter how many were noted at the time of admission</p>
Enter Number <input type="text"/>	<p><b>G. Unstageable - Deep tissue injury:</b> Suspected deep tissue injury in evolution</p> <p><b>1. Number of unstageable pressure ulcers with suspected deep tissue injury in evolution</b>  <i>If 0 → Skip to M0800. Worsening in Pressure Ulcer Status Since Admission</i></p> <p><b>2. Number of these unstageable pressure ulcers that were present upon admission</b> - enter how many were noted at the time of admission</p>

**M0800. Worsening in Pressure Ulcer Status Since Admission**

Indicate the number of current pressure ulcers that were **not present or were at a lesser stage** on admission.  
 If no current pressure ulcer at a given stage, enter 0.

Enter Number <input type="text"/>	<b>A. Stage 2</b>
Enter Number <input type="text"/>	<b>B. Stage 3</b>
Enter Number <input type="text"/>	<b>C. Stage 4</b>
Enter Number <input type="text"/>	<b>D. Unstageable - Non-removable dressing</b>
Enter Number <input type="text"/>	<b>E. Unstageable - Slough and/or eschar</b>
Enter Number <input type="text"/>	<b>F. Unstageable - Deep tissue injury</b>

Patient \_\_\_\_\_

Identifier \_\_\_\_\_

Date \_\_\_\_\_

**Section M****Skin Conditions****M0900. Healed Pressure Ulcer(s)**

Indicate the number of pressure ulcers that were: (a) present on **Admission**; and (b) have completely closed (resurfaced with epithelium) upon **Discharge**. If there are no healed pressure ulcers noted at a given stage, enter 0.

Enter Number

**A. Stage 1**

Enter Number

**B. Stage 2**

Enter Number

**C. Stage 3**

Enter Number

**D. Stage 4****Section O****Special Treatments, Procedures, and Programs****O0250. Influenza Vaccine - Refer to current version of IRF-PAI Training Manual for current influenza vaccination season and reporting period.**

Enter Code

**A. Did the patient receive the influenza vaccine *in this facility* for this year's influenza vaccination season?**

0. **No** → Skip to O0250C. If influenza vaccine not received, state reason  
 1. **Yes** → Continue to O0250B. Date influenza vaccine received

**B. Date influenza vaccine received** → Complete date and skip to Z0400A. Signature of Persons Completing the Assessment

**M M D D Y Y Y Y**

Enter Code

**C. If influenza vaccine not received, state reason:**

1. **Patient not in this facility** during this year's influenza vaccination season
2. **Received outside of this facility**
3. **Not eligible** - medical contraindication
4. **Offered and declined**
5. **Not offered**
6. **Inability to obtain influenza vaccine** due to a declared shortage
9. **None of the above**

**Item Z0400A. Signature of Persons Completing the Assessment\***

I certify that the accompanying information accurately reflects patient assessment information for this patient and that I collected or coordinated collection of this information on the dates specified. To the best of my knowledge, this information was collected in accordance with applicable Medicare and Medicaid requirements. I understand that this information is used as a basis for ensuring that patients receive appropriate and quality care, and as a basis for payment from federal funds. I further understand that payment of such federal funds and continued participation in the government-funded health care programs is conditioned on the accuracy and truthfulness of this information, and that I may be personally subject to or may subject my organization to substantial criminal, civil, and/or administrative penalties for submitting false information.

Signature	Title	Date Information is Provided	Time
A.			
B.			
C.			
D.			
E.			
F.			
G.			
H.			
I.			
J.			
K.			
L.			



## APPENDIX B

### FY 2019 IRF PPS CMGS AND PAYMENT WEIGHTS

CMG	CMG Description (M = Motor, C = Cognitive, A = Age)	Relative Weight			
		Tier 1	Tier 2	Tier 3	None
0101	Stroke M > 51.05	0.8465	0.7365	0.6747	0.6451
0102	Stroke M > 44.45 and M < 51.05 and C > 18.5	1.0706	0.9315	0.8533	0.8159
0103	Stroke M > 44.45 and M < 51.05 and C < 18.5	1.2391	1.0781	0.9876	0.9443
0104	Stroke M > 38.85 and M < 44.45	1.2938	1.1257	1.0312	0.9860
0105	Stroke M > 34.25 and M < 38.85	1.4871	1.2938	1.1852	1.1333
0106	Stroke M > 30.05 and M < 34.25	1.6628	1.4467	1.3253	1.2673
0107	Stroke M > 26.15 and M < 30.05	1.8653	1.6229	1.4867	1.4216
0108	Stroke M < 26.15 and A > 84.5	2.3056	2.0060	1.8376	1.7572
0109	Stroke M > 22.35 and M < 26.15 and A < 84.5	2.0857	1.8147	1.6624	1.5896
0110	Stroke M < 22.35 and A < 84.5	2.7655	2.4060	2.2041	2.1076
0201	Traumatic brain injury M > 53.35 and C > 23.5	0.8235	0.6628	0.5922	0.5527
0202	Traumatic brain injury M > 44.25 and M < 53.35 and C > 23.5	1.1508	0.9263	0.8275	0.7724
0203	Traumatic brain injury M > 44.25 and C < 23.5	1.2723	1.0240	0.9149	0.8539
0204	Traumatic brain injury M > 40.65 and M < 44.25	1.3841	1.1141	0.9953	0.9290
0205	Traumatic brain injury M > 28.75 and M < 40.65	1.6330	1.3143	1.1743	1.0960
0206	Traumatic brain injury M > 22.05 and M < 28.75	1.9661	1.5825	1.4139	1.3196
0207	Traumatic brain injury M < 22.05	2.4863	2.0012	1.7879	1.6687
0301	Non-traumatic brain injury M > 41.05	1.1727	0.9483	0.8703	0.8135
0302	Non-traumatic brain injury M > 35.05 and M < 41.05	1.4347	1.1603	1.0648	0.9953
0303	Non-traumatic brain injury M > 26.15 and M < 35.05	1.6572	1.3402	1.2300	1.1496

*Analyses to Inform the Potential Use of Standardized Patient Assessment Data Elements in the Inpatient Rehabilitation Facility Prospective Payment System*

CMG	CMG Description (M = Motor, C = Cognitive, A = Age)	Relative Weight			
		Tier 1	Tier 2	Tier 3	None
0304	Non-traumatic brain injury M < 26.15	2.1203	1.7147	1.5737	1.4709
0401	Traumatic spinal cord injury M > 48.45	1.0040	0.8097	0.7490	0.6855
0402	Traumatic spinal cord injury M > 30.35 and M < 48.45	1.4873	1.1996	1.1096	1.0155
0403	Traumatic spinal cord injury M > 16.05 and M < 30.35	2.3688	1.9105	1.7673	1.6175
0404	Traumatic spinal cord injury M < 16.05 and A > 63.5	4.0377	3.2566	3.0125	2.7571
0405	Traumatic spinal cord injury M < 16.05 and A < 63.5	3.6175	2.9177	2.6989	2.4701
0501	Non-traumatic spinal cord injury M > 51.35	0.9171	0.7145	0.6605	0.6070
0502	Non-traumatic spinal cord injury M > 40.15 and M < 51.35	1.2182	0.9491	0.8774	0.8063
0503	Non-traumatic spinal cord injury M > 31.25 and M < 40.15	1.5156	1.1809	1.0916	1.0031
0504	Non-traumatic spinal cord injury M > 29.25 and M < 31.25	1.7426	1.3577	1.2551	1.1533
0505	Non-traumatic spinal cord injury M > 23.75 and M < 29.25	1.9957	1.5550	1.4374	1.3209
0506	Non-traumatic spinal cord injury M < 23.75	2.6996	2.1034	1.9443	1.7867
0601	Neurological M > 47.75	1.0736	0.8242	0.7624	0.6948
0602	Neurological M > 37.35 and M < 47.75	1.3920	1.0686	0.9884	0.9008
0603	Neurological M > 25.85 and M < 37.35	1.7124	1.3146	1.2159	1.1082
0604	Neurological M < 25.85	2.2148	1.7003	1.5727	1.4334
0701	Fracture of lower extremity M > 42.15	1.0280	0.8387	0.7948	0.7171
0702	Fracture of lower extremity M > 34.15 and M < 42.15	1.3083	1.0674	1.0115	0.9127
0703	Fracture of lower extremity M > 28.15 and M < 34.15	1.5600	1.2728	1.2062	1.0883
0704	Fracture of lower extremity M < 28.15	1.9907	1.6242	1.5392	1.3888
0801	Replacement of lower extremity joint M > 49.55	0.8391	0.6841	0.6185	0.5754

*Analyses to Inform the Potential Use of Standardized Patient Assessment Data Elements in the Inpatient Rehabilitation Facility Prospective Payment System*

CMG	CMG Description (M = Motor, C = Cognitive, A = Age)	Relative Weight			
		Tier 1	Tier 2	Tier 3	None
0802	Replacement of lower extremity joint M > 37.05 and M < 49.55	1.0766	0.8777	0.7936	0.7382
0803	Replacement of lower extremity joint M > 28.65 and M < 37.05 and A > 83.5	1.4123	1.1514	1.0410	0.9684
0804	Replacement of lower extremity joint M > 28.65 and M < 37.05 and A < 83.5	1.2727	1.0376	0.9381	0.8727
0805	Replacement of lower extremity joint M > 22.05 and M < 28.65	1.5169	1.2367	1.1181	1.0401
0806	Replacement of lower extremity joint M < 22.05	1.8691	1.5238	1.3777	1.2816
0901	Other orthopedic M > 44.75	1.0283	0.8073	0.7481	0.6894
0902	Other orthopedic M > 34.35 and M < 44.75	1.3030	1.0230	0.9479	0.8736
0903	Other orthopedic M > 24.15 and M < 34.35	1.6262	1.2768	1.1831	1.0903
0904	Other orthopedic M < 24.15	2.0372	1.5995	1.4821	1.3659
1001	Amputation, lower extremity M > 47.65	1.0941	0.9260	0.8226	0.7584
1002	Amputation, lower extremity M > 36.25 and M < 47.65	1.3984	1.1835	1.0513	0.9693
1003	Amputation, lower extremity M < 36.25	2.0247	1.7136	1.5222	1.4034
1101	Amputation, non-lower extremity M > 36.35	1.3618	1.0044	1.0044	0.8832
1102	Amputation, non-lower extremity M < 36.35	1.9208	1.4167	1.4167	1.2458
1201	Osteoarthritis M > 37.65	1.1125	0.9541	0.8710	0.7877
1202	Osteoarthritis M > 30.75 and M < 37.65	1.4092	1.2085	1.1032	0.9978
1203	Osteoarthritis M < 30.75	1.7067	1.4637	1.3361	1.2084
1301	Rheumatoid, other arthritis M > 36.35	1.0977	0.9523	0.8893	0.8342
1302	Rheumatoid, other arthritis M > 26.15 and M < 36.35	1.4355	1.2454	1.1630	1.0909
1303	Rheumatoid, other arthritis M < 26.15	1.7337	1.5041	1.4046	1.3175
1401	Cardiac M > 48.85	0.9226	0.7511	0.6772	0.6103

*Analyses to Inform the Potential Use of Standardized Patient Assessment Data Elements in the Inpatient Rehabilitation Facility Prospective Payment System*

CMG	CMG Description (M = Motor, C = Cognitive, A = Age)	Relative Weight			
		Tier 1	Tier 2	Tier 3	None
1402	Cardiac M > 38.55 and M < 48.85	1.2379	1.0079	0.9086	0.8189
1403	Cardiac M > 31.15 and M < 38.55	1.4752	1.2011	1.0828	0.9759
1404	Cardiac M < 31.15	1.8581	1.5129	1.3639	1.2292
1501	Pulmonary M > 49.25	1.0145	0.8753	0.7927	0.7596
1502	Pulmonary M > 39.05 and M < 49.25	1.2970	1.1191	1.0134	0.9711
1503	Pulmonary M > 29.15 and M < 39.05	1.5391	1.3280	1.2026	1.1524
1504	Pulmonary M < 29.15	1.9395	1.6735	1.5155	1.4522
1601	Pain syndrome M > 37.15	1.2123	0.9280	0.8814	0.7954
1602	Pain syndrome M > 26.75 and M < 37.15	1.5361	1.1758	1.1169	1.0079
1603	Pain syndrome M < 26.75	1.8637	1.4266	1.3551	1.2228
1701	Major multiple trauma without brain or spinal cord injury M > 39.25	1.2825	0.9724	0.9103	0.8196
1702	Major multiple trauma without brain or spinal cord injury M > 31.05 and M < 39.25	1.5510	1.1760	1.1009	0.9912
1703	Major multiple trauma without brain or spinal cord injury M > 25.55 and M < 31.05	1.8097	1.3722	1.2846	1.1565
1704	Major multiple trauma without brain or spinal cord injury M < 25.55	2.3097	1.7513	1.6395	1.4761
1801	Major multiple trauma with brain or spinal cord injury M > 40.85	1.1285	1.0063	0.8504	0.7943
1802	Major multiple trauma with brain or spinal cord injury M > 23.05 and M < 40.85	1.6639	1.4838	1.2539	1.1712
1803	Major multiple trauma with brain or spinal cord injury M < 23.05	2.6145	2.3315	1.9703	1.8403
1901	Guillain-Barré M > 35.95	1.4000	1.0049	0.9440	0.9096

*Analyses to Inform the Potential Use of Standardized Patient Assessment Data Elements in the Inpatient Rehabilitation Facility Prospective Payment System*

CMG	CMG Description (M = Motor, C = Cognitive, A = Age)	Relative Weight			
		Tier 1	Tier 2	Tier 3	None
1902	Guillain-Barré M > 18.05 and M < 35.95	2.4651	1.7694	1.6622	1.6017
1903	Guillain-Barré M < 18.05	4.2669	3.0627	2.8772	2.7725
2001	Miscellaneous M > 49.15	0.9693	0.7709	0.7160	0.6500
2002	Miscellaneous M > 38.75 and M < 49.15	1.2597	1.0018	0.9306	0.8448
2003	Miscellaneous M > 27.85 and M < 38.75	1.5484	1.2314	1.1438	1.0384
2004	Miscellaneous M < 27.85	1.9734	1.5695	1.4578	1.3234
2101	Burns M > 0	1.9075	1.5493	1.4963	1.3168
5001	Short-stay cases, length of stay is 3 days or fewer				0.1599
5101	Expired, orthopedic, length of stay is 13 days or fewer				0.7539
5102	Expired, orthopedic, length of stay is 14 days or more				1.6493
5103	Expired, not orthopedic, length of stay is 15 days or fewer				0.8091
5104	Expired, not orthopedic, length of stay is 16 days or more				2.1145

SOURCE: Inpatient Rehabilitation Facility Prospective Payment System for Fiscal Year 2019; Final Rule.

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**APPENDIX C**  
**STANDARDIZED PATIENT ASSESSMENT DATA ELEMENTS AND**  
**FUNCTIONAL INDEPENDENCE MEASURE (FIM™) ITEM**  
**DESCRIPTIVES**

**Table C-1. Standardized Patient Assessment Data Elements: Motor Score—Section GG**

<b>Motor Score—Section GG (Range 19–110)</b>	<b>Mean</b>	<b>SD</b>
Motor Score	53.10	14.11

**Table C-2. Standardized Patient Assessment Data Elements: Motor Items—Section GG**

<b>Motor Items—Section GG</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	<b>9</b>	<b>88</b>	<b>Missing</b>
GG0130A1 Admission Performance Eating	20,882	15,096	35,351	105,306	336,551	219,023	3,336	3,706	14,004	174
GG0130B1 Admission Performance Oral Hygiene	23,644	26,418	76,331	195,678	353,861	45,630	14,764	2,973	13,895	235
GG0130C1 Admission Performance Toileting Hygiene	167,306	160,889	160,006	165,403	31,484	21,849	14,099	7,414	24,737	242
GG0130E1 Admission Performance Bathing	68,331	146,503	320,108	126,825	22,669	3,638	22,987	3,872	38,195	301
GG0130F1 Admission Performance Upper Body Dressing	52,673	102,077	213,826	165,023	187,442	11,256	6,458	3,960	10,491	223
GG0130G1 Admission Performance Lower Body Dressing	194,261	234,005	172,632	110,765	19,187	4,134	6,025	2,296	9,935	189
GG0130H1 Admission Performance Footwear	280,305	186,164	111,820	88,664	50,360	6,968	6,625	5,525	16,767	231
GG0170A1 Admission Performance Roll Left Right Code	37,635	89,566	214,930	259,028	30,235	80,483	5,451	2,860	33,030	211
GG0170B1 Admission Performance Sit to Lying Code	54,445	116,409	257,269	238,251	23,468	42,713	3,651	2,212	14,816	195
GG0170C1 Admission Performance Lying to Sit Code	53,291	126,969	264,393	229,044	21,938	40,155	3,299	1,707	12,441	192
GG0170D1 Admission Performance Sit to Stand Code	68,626	109,089	311,605	214,692	7,856	7,328	2,728	3,535	27,784	186
GG0170E1 Admission Performance Chair/Bed to Chair Transfer Code	96,094	129,894	314,762	185,692	6,605	4,430	2,305	785	12,682	180

(continued)



**Table C-2. Standardized Patient Assessment Data Elements: Motor Items—Section GG (continued)**

<b>Motor Items—Section GG</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	<b>9</b>	<b>88</b>	<b>Missing</b>
GG0170F1 Admission Performance Toilet Transfer Code	89,826	113,921	269,997	182,774	8,958	6,154	14,747	9,624	57,162	266
GG0170G1 Admission Performance Car Transfer Code	17,364	26,081	104,438	70,152	2,229	2,336	13,843	57,812	458,756	418
GG0170I1 Admission Performance Walk 10 Feet Code	66,091	31,791	234,649	219,530	5,119	3,646	3,675	1,390	63,391	124,147
GG0170J1 Admission Performance Walk 50 Feet Code	35,669	10,320	140,858	171,497	4,300	2,736	7,109	5,744	251,011	124,185
GG0170K1 Admission Performance Walk 150 Feet Code	28,721	5,022	52,277	93,215	3,240	2,313	9,744	12,470	422,195	124,232
GG0170L1 Admission Performance Walk 10 Feet on Uneven Surface	17,936	6,257	73,272	70,215	1,555	1,593	6,996	14,477	436,854	124,274
GG0170M1 Admission Performance 1 Step Code	26,004	17,868	131,882	97,741	1,962	1,622	11,391	11,582	329,161	124,216
GG0170N1 Admission Performance 4 Steps Code	19,551	9,359	108,537	101,394	2,139	1,678	11,914	17,923	356,690	124,244
GG0170O1 Admission Performance 12 Steps Code	17,572	2,944	20,561	37,243	1,335	1,497	14,124	33,591	500,271	124,291
GG0170P1 Admission Performance Pick Up Object Code	31,753	24,811	58,483	69,991	3,787	4,931	6,581	13,478	415,333	124,281

The findings and conclusions of this report are those of the authors and do not necessarily represent the views of HHS.

**Table C-3. Standardized Patient Assessment Data Elements: Bowel and Bladder—Section H**

<b>Bowel and Bladder— Section H</b>	<b>0</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>9</b>	<b>Missing</b>
H0350 Urinary Continence Code	426,855	38,491	100,310	74,735	46,251	9,279	57,404	104
H0400 Bowel Continence Code	547,546	73,768	41,531	47,326			43,152	106

**Table C-4. Standardized Patient Assessment Data Elements: BIMS (Memory)—Section C**

<b>BIMS (Memory)—Section C (Range 1–15)</b>	<b>Mean</b>	<b>SD</b>	<b>Not Completed</b>	<b>Missing</b>
C0500 Brief Interview for Mental Status (BIMS)	14.22	12.34	5,386	40,357

**Table C-5. Standardized Patient Assessment Data Elements: BIMS (Memory) Staff Assessment—Section C**

<b>BIMS (Memory) Staff Assessment—Section C</b>	<b>0</b>	<b>1</b>	<b>Missing</b>
C0900A Staff Assessment of Mental Status—Recalls Current Season Code	36,413	16,579	700,437
C0900B Staff Assessment of Mental Status—Recalls Location of Room Code	42,056	10,892	700,481
C0900C Staff Assessment of Mental Status—Recalls Staff Name Code	41,573	11,385	700,471
C0900E Staff Assessment of Mental Status—Recalls Hospital Code	28,185	24,843	700,401
C0900Z Staff Assessment of Mental Status—Recalls None of Above Code	27,983	25,056	700,390

**Table C-6. Standardized Patient Assessment Data Elements: Communication—Section B**

<b>Communication—Section B</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>Missing</b>
BB0700 Expression Idea Want Code: Admission	19,876	62,833	284,505	385,691	524
BB0800 Understands Other Code: Admission	12,130	70,055	294,171	376,549	524

**Table C-7. FIM™ Items Used in IRF PPS: FIM™ Motor Score**

FIM™ Motor Score (Range 12–84)	Mean	SD
Motor Score	28.35	10.46

**Table C-8. FIM™ Items Used in IRF PPS: Motor Items—FIM™**

Motor Items—FIM™	0	1	2	3	4	5	6	7
39AA Self-Care—Eating: Admission	2,078	55,033	16,644	22,871	72,213	468,110	59,801	56,679
39BA Self-Care—Grooming: Admission	6,078	97,110	40,815	77,957	196,536	321,675	7,318	5,940
39CA Self-Care—Bathing: Admission	32,678	158,576	109,945	216,439	184,622	49,064	1,652	453
39DA Self-Care—Dressing Upper: Admission	13,669	163,105	77,341	113,135	191,340	189,949	2,627	2,263
39EA Self-Care—Dressing Lower: Admission	9,650	380,964	133,841	98,370	104,916	24,427	853	408
39FA Self-Care—Toileting: Admission	13,071	334,977	129,223	103,151	136,957	32,107	2,928	1,015
39GA Sphincter Control—Bladder: Admission	0	333,829	53,653	56,256	61,463	147,701	50,144	50,383
39HA Sphincter Control—Bowel: Admission	0	216,266	50,914	48,635	54,836	103,039	238,382	41,357
39IA Transfers—Bed	3,347	248,044	150,990	188,631	150,678	10,805	710	224
39JA Transfers—Toilet: Admission	32,347	188,505	139,968	179,035	194,405	17,475	1,427	267
39LA Locomotion—Walk/Wheelchair: Admission	48,404	386,578	194,925	10,556	82,617	26,389	3,595	365
39MA Locomotion—Stairs: Admission	396,892	134,731	172,674	3,409	34,762	9,854	985	122

**Table C-9. FIM™ Items Used in IRF PPS: FIM™ Cognitive Score**

FIM™ Cognitive Score (Range 5–35)	Mean	SD
Cognitive Score	21.87	6.89

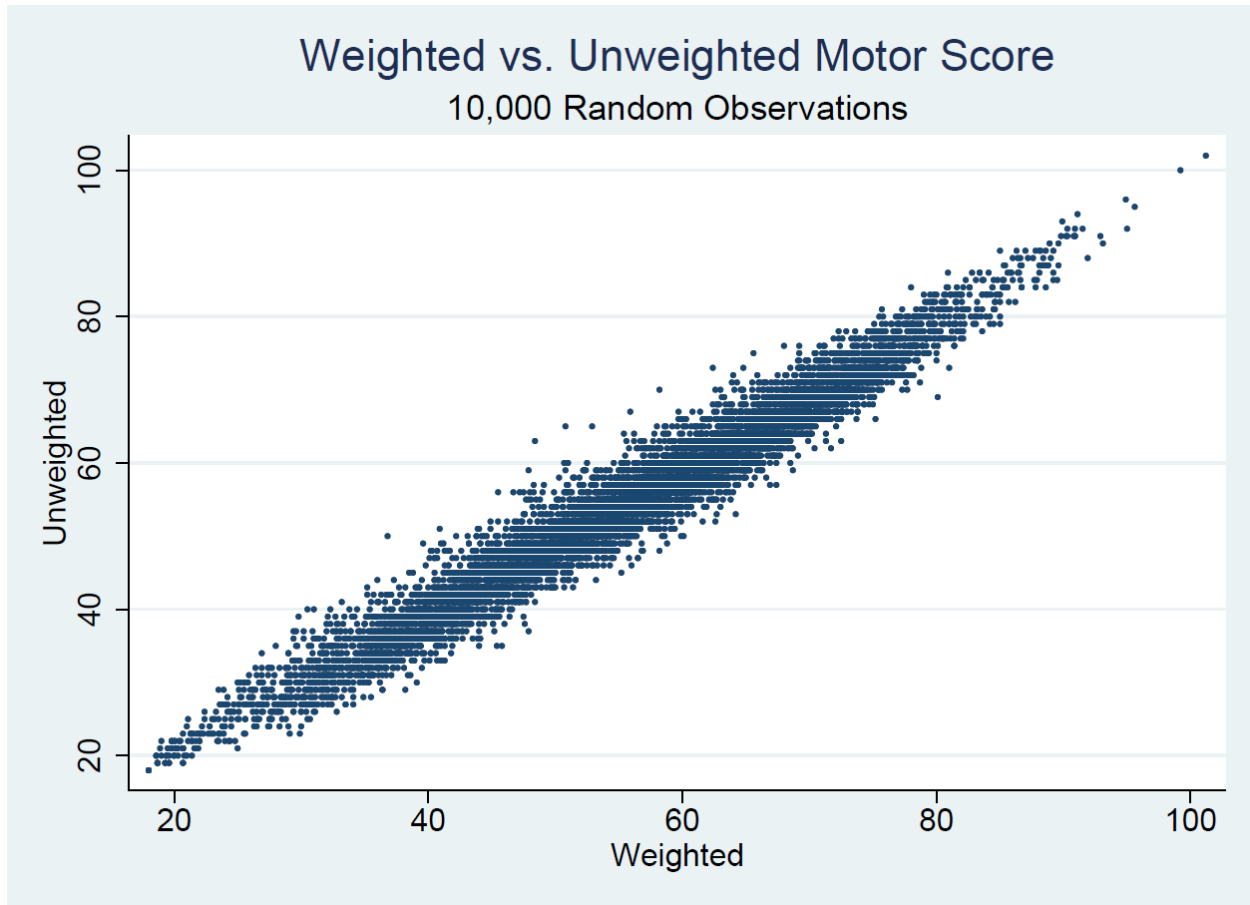
**Table C-10. FIM™ Items Used in IRF PPS: Cognitive Items—FIM™**

<b>Cognitive Items— FIM™</b>	<b>0</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>
39NA Communication— Comprehension: Admission	0	23,136	50,978	98,690	154,278	218,118	161,404	46,825
39OA Communication— Expression: Admission	0	28,871	49,548	88,480	139,394	210,460	160,410	76,266
39PA Social Cognition— Social Interaction: Admission	0	23,188	39,791	77,302	127,890	219,800	185,887	79,571
39QA Social Cognition— Problem Solving: Admission	0	63,077	89,052	141,293	177,209	182,356	74,546	25,896
39RA Social Cognition— Memory: Admission	0	52,391	90,174	134,972	163,918	179,623	96,201	36,150

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## APPENDIX D CORRELATION OF WEIGHTED VERSUS UNWEIGHTED MOTOR SCORE

Figure D-1. Weighted vs. Unweighted Motor Score



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## APPENDIX E CROSS VALIDATED R-SQUARED BY RIC

**Table E-1. Cross Validated R-Squared from CART Models by RIC**

RIC	RIC Description	Split Number					
		1	2	3	4	5	6
1	Stroke	0.234	0.270	0.291	0.300	0.303	0.308
2	Traumatic brain injury	0.155	0.176	0.208	0.211		
3	Non-traumatic brain injury	0.129	0.149	0.166	0.172		
4	Traumatic spinal cord injury	0.223	0.253	0.272	0.293	0.297	0.308
5	Non-traumatic spinal cord injury	0.206	0.236	0.253			
6	Neurological	0.114	0.131	0.149			
7	Fracture of lower extremity	0.106	0.127	0.139			
8	Replacement of lower extremity	0.101	0.128	0.143			
9	Other orthopedic	0.101	0.122	0.134			
10	Amputation, lower extremity	0.091	0.120	0.125			
11	Amputation, non-lower extremity	0.045	0.062	1.000			
12	Osteoarthritis	0.060	0.097	0.094	0.110	0.115	
13	Rheumatoid, other arthritis	0.133	0.141	0.148			
14	Cardiac	0.095	0.112	0.125			
15	Pulmonary	0.093	0.108	0.125			
16	Pain syndrome	0.060	0.078	0.092	0.088		
17	Major multiple trauma without brain or spinal cord injury	0.109	0.145	0.152			
18	Major multiple trauma with brain or spinal cord injury	0.202	0.225	0.275	0.278	0.291	
19	Guillain-Barré	0.325	0.349	0.388			
20	Miscellaneous	0.098	0.115	0.127	0.131		
21	Burns	-0.008	1.000	1.000			

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