Specifications for Determining IRF "75% Rule" Compliance

The Centers for Medicare & Medicaid Services

October 1, 2007

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Revision History

Date	Revisions
09/26/2006	Initial release.
11/02/2006	Fixed errors in Appendix C. The following ICD-9-CM code was ***deleted*** from Appendix C: • 066.4 The following ICD-9-CM codes were ***added*** to Appendix C: • 359.81 • 359.89 • 852.29 In addition, one code (438.40) was out of order in the earlier version and was moved so that the list is in the proper sort order.
10/01/2007	Changes made to Appendix B: • Row 8 (impairment group 0002.1). Changed order of diagnosis codes in Columns C, D, and E so they are in numeric order (no change made to the actual codes listed). • Rows 15 through 23 (impairment groups 0004.110 through 0004.130). Replaced diagnosis code "724.0x" in Column D with diagnosis codes listed in Columns D through G. The purpose of this change is to explicitly list the diagnosis codes implied by "740.0x". This change was made for clarity. There is no change in the actual exclusion diagnosis codes. • Rows 24 through 32 (impairment groups 0004.210 through 0004.230). Deleted diagnosis codes 953.6 and 953.7 in Columns I and J. These are not valid diagnosis codes, but were listed in error in previous versions. Diagnosis code 953.8 was moved to Column I to fill in the space left by the deleted codes. • Rows 53 through 55 (impairment groups codes 00014.1, 0014.2, and 0014.3). Added diagnosis codes in Columns C through G: 808.2, 808.3, 808.59, 808.8, and 808.9. These codes were omitted in error in previous versions. Changes made to Appendix C: • 17 ICD9 codes were added. Eight of these codes have start dates of 10/1/2006, meaning that they apply only to assessment records with a discharge date (Item 40) that is on or after 10/1/2006. Nine of these codes have start dates of 10/01/2007 meaning that they apply only to assessment records with a discharge date (Item 40) that is on or after 10/01/2007. • 220 ICD9 codes were deleted. These ICD9 codes were listed in previous versions, but are not valid ICD9 codes. They were therefore deleted from Appendix C. • Appendix C has a new tab ("Added and deleted codes") that lists the codes that were added and deleted.

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Introduction

CMS has established procedures whereby Regional Offices and Fiscal Intermediaries determine whether facilities qualify as Inpatient Rehabilitation Facilities (IRFs). This determination is made on an annual basis at the beginning of each facility's cost reporting period and remains in effect for the duration of that cost reporting period. The "75% rule" is one criterion that is used to determine if a facility may be classified as an IRF. Application of this rule involves the following general steps:

1. A ***compliance review period*** and a ***compliance threshold*** (or thresholds) are defined based upon the facility's cost reporting period.
2. All IRF-PAI assessments from that review period are selected.
3. Each selected assessment is categorized as either meeting or not meeting IRF criteria based upon the impairment groups and ICD-9-CM codes listed on the assessment.
4. A percentage is calculated based upon the number of selected assessments that met the IRF criteria.
5. If the percentage exceeds a threshold in effect for the review period, then the facility is designated an IRF. Otherwise, it is not designated an IRF. The threshold percentage is being phased in and increases over time from 50% to 75%. Since the threshold will be 75% once the rule is completely phased in, the rule is informally called the "75% Rule".

The purpose of this document is to detail the steps described above in a form that can be followed by software developers and others who wish to replicate CMS's procedures.

Step 1: Define the Compliance Review Period and Threshold(s)

Overview

The table in Appendix A of this document is used to define the compliance review period and threshold(s) which are based upon the facility's cost reporting period. Some compliance review periods consist of a single time span, while others consist of two sub-periods. There are never more than two sub-periods. When there are two sub-periods, they are always contiguous and the first sub-period spans four months and the second sub-period spans eight months. Periods and sub-periods always start on the first day of the month and end on the last day of the month (i.e., they always cover complete months). A compliance threshold is associated with each review period or sub-period.

Detailed Steps

To determine the compliance review period or sub-periods and the associated threshold(s), follow these steps:

1. Determine the facility's upcoming cost reporting period to review for compliance. Cost reporting periods generally begin on the first day of the month[1]. Let **cost_rpt_period_start** equal the first day of the upcoming cost reporting period.
2. Look in Column A of Appendix A and find the row that corresponds with the first day of the upcoming cost reporting period (**cost_rpt_period_start**).
3. Column B of Appendix A is a flag that indicates whether the compliance reporting period involves sub-periods. Set **rev_period_count** equal to the value in Column B. Column B contains one of the following values:

[1] The algorithm described in this document assumes that the cost reporting period begins on the first day of the month. If this is not the case, the facility cannot use this algorithm and should contact CMS for further instructions.

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1 = No sub-periods involved (only a single compliance reporting period is used).

2 = Two sub-periods involved.

4. Do the following depending upon the value of **rev_period_count**:

4.1. If **rev_period_count**=1 (no sub-periods involved):

4.1.1. Let **rev_period_start** equal the date in Column C (the start of the compliance review period).

4.1.2. Let **rev_period_end** equal the date in Column D (the end of the compliance review period).

4.1.3. Let **rev_period_threshold** equal the value in Column E (the threshold associated with the compliance review period).

4.2. If **rev_period_count**=2 (two sub-periods involved):

4.2.1. Let **rev_subperiod1_start** equal the date in Column F (the start of the first compliance review sub-period).

4.2.2. Let **rev_subperiod1_end** equal the date in Column G (the end of the first compliance review sub-period).

4.2.3. Let **rev_subperiod1_threshold** equal the value in Column H (the threshold associated with the first compliance review sub-period).

4.2.4. Let **rev_subperiod2_start** equal the date in Column I (the start of the second compliance review sub-period).

4.2.5. Let **rev_subperiod2_end** equal the date in Column J (the end of the second compliance review sub-period).

4.2.6. Let **rev_subperiod2_threshold** equal the value in Column K (the threshold associated with the second compliance review sub-period).

Step 2: Select IRF-PAI Assessments

Overview

Step 1 defined the compliance review periods that are used to select IRF-PAI assessments for evaluation. Either one or two periods were defined. If **rev_period_count**=1, then there is a single review period and a single set of IRF-PAI records will be selected. If **rev_period_count**=2, then there are two sub-periods and two sets of IRF-PAI records will be selected.

The facility has the option of having records selected on the basis of either admission dates (Item 12 on the IRF-PAI) or discharge dates (Item 40 on the IRF-PAI). Thus, IRF-PAI records will be selected using one of the following two methods: (a) IRF-PAI records will be selected which have admission dates that fall within the compliance review period(s) defined above ***OR*** (b) IRF-PAI records will be selected which have discharge dates that fall within the compliance review period(s).

In the discussion below, the following notation will be used to designate the record set(s) that are selected.

- **rstRevPeriod**[1] = the set of records that are selected if there is a single compliance review period (if **rev_period_count**=1).
- **rstSubPeriod1** = the set of records that are selected for the first compliance review sub-period (if **rev_period_count**=2).

[1] The "rst" prefix indicates a record set.

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- **rstSubPeriod2** = the set of records that are selected for the second compliance review sub-period (if **rev_period_count**=2).

Detailed Steps

Select Records Based upon Admission Date

If the facility chooses to have IRF-PAI assessments selected based upon **admission dates** (Item 12), do the following:

1. If **rev_period_count**=1 (there is a single compliance review period) then do the following:

   1.1. Select all IRF-PAI assessment records where the admission date (Item 12) is greater than or equal to **rev_period_start** and the admission date (Item 12) is less than or equal to **rev_period_end**.

   1.2. The resulting set of records will be referred to below as **rstRevPeriod.**

2. If **rev_period_count**=2 (there are two compliance review sub-periods) then do the following:

   2.1. Select records for the first sub-period, using the following steps:

      2.1.1. Select all IRF-PAI assessment records where the admission date (Item 12) is greater than or equal to **rev_subperiod1_start** and the admission date (Item 12) is less than or equal to **rev_subperiod1_end**.

      2.1.2. The resulting set of records will be referred to below as **rstSubPeriod1**.

   2.2. Select records for the second sub-period, using the following steps:

      2.2.1. Select all IRF-PAI assessment records where the admission date (Item 12) is greater than or equal to **rev_subperiod2_start** and the admission date (Item 12) is less than or equal to **rev_subperiod2_end**.

      2.2.2. The resulting set of records will be referred to below as **rstSubPeriod2**.

Select Records Based upon Discharge Date

If the facility chooses to have IRF-PAI assessments selected based upon **discharge dates** (Item 40), do the following:

1. If **rev_period_count**=1 (there is a single compliance review period) then do the following:

   1.1. Select all IRF-PAI assessment records where the discharge date (Item 40) is greater than or equal to **rev_period_start** and the discharge date (Item 40) is less than or equal to **rev_period_end**.

   1.2. The resulting set of records will be referred to below as **rstRevPeriod.**

2. If **rev_period_count**=2 (there are two compliance review sub-periods) then do the following:

   2.1. Select records for the first sub-period, using the following steps:

      2.1.1. Select all IRF-PAI assessment records where the discharge date (Item 40) is greater than or equal to **rev_subperiod1_start** and the discharge date (Item 40) is less than or equal to **rev_subperiod1_end**.

      2.1.2. The resulting set of records will be referred to below as **rstSubPeriod1**.

   2.2. Select records for the second sub-period, using the following steps:

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2.2.1. Select all IRF-PAI assessment records where the discharge date (Item 40) is greater than or equal to **rev_subperiod2_start** and the discharge date (Item 40) is less than or equal to **rev_subperiod2_end**.

2.2.2. The resulting set of records will be referred to below as **rstSubPeriod2**.

Step 3: Categorize Each IRF-PAI Record That Was Selected

Overview

Once the record set(s) have been selected, each IRF-PAI assessment record is evaluated and categorized as either meeting or not meeting IRF presumptive compliance criteria based upon the impairment groups and ICD9 codes listed on the assessment. Each IRF-PAI record is categorized as either passing or failing the criteria using the tables in Appendices B and C. Thus, after applying the tests in Appendices B and C, the record will be assigned one of two mutually exclusive statuses: passed or failed.

An IRF-PAI assessment record can pass the tests either on the basis of its impairment group codes or on the basis of diagnosis codes (etiological diagnosis codes or comorbid conditions). Appendix B lists qualifying impairment group codes. Appendix C lists qualifying diagnosis codes.

Appendix B lists impairment group codes that meet the presumptive compliance criteria (Column A). Column B contains a flag indicating whether the resident's age must be 85 or above for the matching impairment group. Columns C through K list diagnosis codes which cause the record to fail if they match the assessment's etiological diagnosis code.

After a record is compared with the criteria in Appendix B, it will have one of three statuses: passed, failed, or undetermined. These statuses are assigned as follows:

Failed. The record qualifies as "failed" (does not meet the presumptive compliance criteria) if ***all of the following conditions*** are true:

- Either the admission or discharge impairment group code (IRF-PAI Item 21) matches one of the codes in Column A of Appendix B.
- If any of the cells in Columns C through K of the matching row of Appendix B are non-blank, the etiological diagnosis code (Item 22) of the IRF-PAI record ***matches*** any of the listed codes.

Passed. The record qualifies as "passed" (meets the presumptive compliance criteria) if ***all of the following conditions*** are true:

- Either the admission or discharge impairment group code (IRF-PAI Item 21) matches one of the codes in Column A of Appendix B.
- If any of the cells in Columns C through K of the matching row of Appendix B are non-blank, the etiological diagnosis code (Item 22) of the IRF-PAI record ***does not*** match any of the listed codes.
- If Column B of the matching row in Appendix B is equal to "yes", the resident's age at admission was 85 or above.

Undetermined. The record's status will be "undetermined" if it has not been assigned a "passed" or "failed" status according to the tests described above.

If the record's status is "passed" or "failed", no further tests are applied. If its status is "undetermined", Appendix C is used to assign a final status. Appendix C lists ICD-9-CM codes which qualify an IRF-PAI record as "passed". If either the etiological diagnosis code (Item 22) or ***any*** of the comorbid condition codes (Item 24 A through J) matches any of the codes listed in Column A of Appendix C, then the IRF-PAI record's status is "passed". If the record does not match any of the ICD-9-CM codes listed in Appendix C, its status is "failed".

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Note that Appendix B and C contain "effective date" columns (with start and end dates). If these entries for a code are non-blank, then that code is applied to an IRF-PAI record only if the record's discharge date (Item 40) is greater than or equal to the start date and less than or equal to the end date. If the start and end date in the appendix are blank, then that code applies to all IRF-PAI records regardless of their discharge date.

Detailed Steps

After completing record selection (see Step 2, above), there will be either one set of records (**rstRevPeriod**) or two sets of records (**rstSubPeriod1** and **rstSubPeriod2**). Perform the following steps for each record in each of the record sets that are applicable:

1. Initialize variables from IRF-PAI record.

    1.1. Initialize the record's presumptive compliance status (**pc_status)** to -1 ("undetermined").

    1.2. Compute the patient's age at admission. Set **pt_age** to the number of complete years between the admission date (Item 12) and the patient's birth date (Item 6).

    1.3. Set **disch_date** (discharge date) equal to Item 40.

    1.4. Set **impair_group_admit** (impairment group at admission) equal to the admission impairment group indicated in Item 21.

    1.5. Set **impair_group_disch** (impairment group at discharge) equal to the discharge impairment group indicated in Item 21.

    1.6. Set **etiolog_dx** (etiological diagnosis code) equal to Item 22.

    1.7. Set **comorbid_a** equal to Item 24A.

    1.8. Set **comorbid_b** equal to Item 24B.

    1.9. Set **comorbid_c** equal to Item 24C.

    1.10. Set **comorbid_d** equal to Item 24D.

    1.11. Set **comorbid_e** equal to Item 24E.

    1.12. Set **comorbid_f** equal to Item 24F.

    1.13. Set **comorbid_g** equal to Item 24G.

    1.14. Set **comorbid_h** equal to Item 24H.

    1.15. Set **comorbid_i** equal to Item 24I.

    1.16. Set **comorbid_j** equal to Item 24J.

2. Determine whether the ***admission impairment group*** passes or fails the criteria in Appendix B.

    2.1. Initialize **pc_status_test1** equal to -1 (undetermined).

    2.2. Loop through the rows in Appendix B and look for a row with the proper effective dates that matches the admission impairment group. In order to match, a row in Appendix B must pass ***all*** of the following tests:

        2.2.1. **impair_grp_admit** is equal to Column A of Appendix B, ***and***

        2.2.2. ***either*** (Column L ***and*** Column M of Appendix B are blank) ***or***
        (**disch_date** is greater than or equal to Column L of Appendix B ***and*** **disch_date** is less than or equal to Column M of Appendix B).

    2.3. If a row in Appendix B passes the tests in the previous step, then do the following:

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2.3.1. If any of the Columns C through K in Appendix B are non-blank and if **etiolog_dx** matches any of those codes, then set **pc_status_test1** to 0 (failed)[1].

2.3.2. If **pc_status_test1**=-1 (if the codes in Column C through K were all blank or **etiolog_dx** did not match any of the codes), then do the following:

2.3.2.1. If Column B of Appendix B is blank, then the record passes (set **pc_status_test1** to 1).

2.3.2.2. If Column B of Appendix B="yes" and **pt_age**>=85, then the record passes (set **pc_status_test1** to 1).

3. Determine whether the ***discharge impairment group*** passes or fails the criteria in Appendix B.

3.1. Initialize **pc_status_test2** equal to -1 (undetermined).

3.2. Loop through the rows in Appendix B and look for a row with the proper effective dates that matches the discharge impairment group. In order to match, a row in Appendix B must pass ***all*** of the following tests:

3.2.1. **impair_grp_disch** is equal to Column A of Appendix B, ***and***

3.2.2. ***either*** (Column L ***and*** Column M of Appendix B are blank) ***or***
(**disch_date** is greater than or equal to Column L of Appendix B ***and*** **disch_date** is less than or equal to Column M of Appendix B).

3.3. If a row in Appendix B passes the tests in the previous step, then do the following:

3.3.1. If any of the Columns C through K in Appendix B are non-blank and if **etiolog_dx** matches any of those codes, then set **pc_status_test2** to 0 (failed)[2].

3.3.2. If **pc_status_test2**=-1 (if the codes in Column C through K were all blank or **etiolog_dx** did not match any of the codes), then do the following:

3.3.2.1. If Column B of Appendix B is blank, then the record passes (set **pc_status_test2** to 1).

3.3.2.2. If Column B of Appendix B="yes" and **pt_age**>=85, then the record passes (set **pc_status_test2** to 1).

4. If the record's status is 'undetermined" (if it did not pass or fail the previous tests), then determine whether the etiological diagnosis code or any of the comorbidity codes pass the criteria in Appendix C.

4.1. If **pc_status_test1**=0 (failed) or **pc_status_test2**=0 (failed), then **pc_status**=0 (failed).

4.2. If **pc_status_test1**=1 (passed) and **pc_status_test2**<>0 (not failed), then **pc_status**=1 (passed).

4.3. If **pc_status_test1**<>0 (not failed) and **pc_status_test2**=1 (passed), then **pc_status**=1 (passed).

4.4. If **pc_status**=-1 (undetermined), then do the following:

4.4.1. Initialize **pc_status_test3** to 0 (zero).

4.4.2. Loop through the rows in Appendix C and look for a row with the proper effective dates that matches the etiological diagnosis code or any of the comorbidity codes. Set **pc_status_test3** equal to 1 if ***all of the following tests are passed*** for ***any*** row in Appendix C:

4.4.2.1. ((**etiolog_dx** is equal to Column A of Appendix C) ***or***
(**comorbid_a** is equal to Column A of Appendix C) ***or***

[1] Note that some codes in Columns C through K contain the character "x". This character stands for all digits from 0 through 9, inclusive. For example, the code 724.0x stands for 724.00, 724.01, 724.02, … 724.09.

[2] Note that some codes in Columns C through K contain the character "x". This character stands for all digits from 0 through 9, inclusive. For example, the code 724.0x stands for 724.00, 724.01, 724.02, … 724.09.

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(**comorbid_b** is equal to Column A of Appendix C) ***or***
(**comorbid_c** is equal to Column A of Appendix C) ***or***
(**comorbid_d** is equal to Column A of Appendix C) ***or***
(**comorbid_e** is equal to Column A of Appendix C) ***or***
(**comorbid_f** is equal to Column A of Appendix C) ***or***
(**comorbid_g** is equal to Column A of Appendix C) ***or***
(**comorbid_h** is equal to Column A of Appendix C) ***or***
(**comorbid_i** is equal to Column A of Appendix C) ***or***
(**comorbid_j** is equal to Column A of Appendix C)), ***and***

4.4.2.2. ***either*** (Column B ***and*** Column C of Appendix C are blank) ***or*** (**disch_date** is greater than or equal to Column B of Appendix C ***and*** **disch_date** is less than or equal to Column C of Appendix C).

4.4.3. If **pc_status_test3**=1, then set **pc_status**=1, otherwise set **pc_status**=0.

Step 4: Determine the Compliance Percentage

Overview

For each set of IRF-PAI records that were selected in Step 2, a percentage is computed which reflects the proportion of records that passed the presumptive compliance criteria described in Step 3. If there was a single compliance review period, then a single compliance percentage is computed. If there are two sub-periods, then percentages are computed separately for each one.

Detailed Steps

After completing record selection (see Step 2, above), there will be either one set of records (**rstRevPeriod**) or two sets of records (**rstSubPeriod1** and **rstSubPeriod2**). Perform the following steps to compute percentages for each of the record sets:

1. If **rev_period_count**=1 (if there was a single compliance review period), then do the following:

   1.1. Set **num_recs** equal to the number of records in **rstRevPeriod**.

   1.2. Set **num_passed** equal to the number of records in **rstRevPeriod** where **pc_status**=1.

   1.3. If **num_recs** > 0, then set **pct_passed** equal to **num_passed** / **num_recs** * 100. Otherwise, set **pct_passed** to 0.00.

2. If **rev_period_count**=2 (if there were two compliance review sub-periods), then do the following:

   2.1. Compute the percentage for sub-period 1.

   2.1.1. Set **num_recs1** equal to the number of records in **rstRevSubPeriod1**.

   2.1.2. Set **num_passed1** equal to the number of records in **rstRevSubPeriod1** where **pc_status**=1.

   2.1.3. If **num_recs1** > 0, then set **pct_passed1** equal to **num_passed1** / **num_recs1** * 100. Otherwise, set **pct_passed1** to 0.00.

   2.2. Compute the percentage for sub-period 2.

   2.2.1. Set **num_recs2** equal to the number of records in **rstRevSubPeriod2**.

   2.2.2. Set **num_passed2** equal to the number of records in **rstRevSubPeriod2** where **pc_status**=1.

   2.2.3. If **num_recs2** > 0, then set **pct_passed2** equal to **num_passed2** / **num_recs2** * 100. Otherwise, set **pct_passed2** to 0.00.

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Step 5: Determine Whether the Facility Meets the IRF Criteria

Overview

If there is a single compliance review period, then the compliance percentage for that period is compared with the threshold obtained in Step 1 above. If the compliance percentage is greater than or equal to the threshold, then the facility passes the IRF presumptive compliance criteria. If no IRF-PAI records exist for the review period, then the percentage is not computed and the facility does not pass the IRF presumptive compliance criteria.

If there are two compliance sub-periods, then the compliance percentage for each sub-period is compared with its corresponding threshold that was obtained in Step 1 above. If the percentage in each sub-period is greater than or equal to its corresponding threshold, then the facility passes the IRF presumptive compliance criteria. If the percentage in ***either*** sub-period falls below its corresponding threshold, then the facility fails the IRF presumptive compliance criteria. If no IRF-PAI records exist for one of the two sub-periods, then the percentage for that sub-period is not computed and its threshold is ignored; the determination is made on the basis of the percentage and threshold for the remaining sub-period. If no IRF-PAI records exist for either review sub-period, then the percentages are not computed and the facility does not pass the IRF presumptive compliance criteria.

Detailed Steps

1. If **rev_period_count**=1 (if there was a single compliance review period), then do the following:

   1.1. If **num_recs** = 0, then the facility does not pass the IRF presumptive compliance criteria.

   1.2. If **num_recs** > 0, and **pct_passed** >= **rev_period_threshold**, then the facility ***passes*** the IRF presumptive compliance criteria. Otherwise, the facility fails.

2. If **rev_period_count**=2 (if there were two compliance review sub-periods), then do the following:

   2.1. If **num_recs1** = 0 and **num_recs2** = 0, then the facility does not pass the IRF presumptive compliance criteria.

   2.2. If **num_recs1** = 0 and **num_recs2** > 0, then do the following:

      2.2.1. If **pct_passed2** > **rev_subperiod2_threshold**, then the facility ***passes*** the IRF presumptive compliance criteria. Otherwise, the facility fails.

   2.3. If **num_recs1** > 0 and **num_recs2** = 0, then do the following:

      2.3.1. If **pct_passed1** > **rev_subperiod1_threshold**, then the facility ***passes*** the IRF presumptive compliance criteria. Otherwise, the facility fails.

   2.4. If **num_recs1** > 0 and **num_recs2** > 0, then do the following:

      2.4.1. If **pct_passed1** > **rev_subperiod1_threshold** ***AND*** **pct_passed2** > **rev_subperiod2_threshold**, then the facility ***passes*** the IRF presumptive compliance criteria. Otherwise, the facility fails.

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