OASIS Data Submission Specifications Overview
Version 2.12.0

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1 Introduction

Beginning on January 1, 2015, the submission format for OASIS assessment data changed from fixed-format record layout to Extensible Markup Language (XML). Data is now submitted to a centralized system called the Assessment Submission and Processing (ASAP) system. ZIP files that contain one or more XML files are submitted to ASAP. Each XML file contains data for only one assessment record, and each data element within the XML file corresponds to an active item on the assessment.

New data submission specifications were developed to support the new submission system. This document, as well as a set of supporting files and documents, details these data submission requirements.

All users of the specifications are strongly urged to read through this document carefully.

2 Version History

The table below summarizes the published versions of the data submission specifications, along with their effective dates. As explained in Section 3 of this overview document, the version of the data specifications that applies to a given assessment record is determined by the completion date (M0090_INFO_COMPLETED_DT) that is contained in that record.

Table 1: Data Submission Specifications Version History

Data Specs Version	Effective Start Date	Effective End Date
2.10	01/01/2012	12/31/2014
2.11	01/01/2015	09/30/2015
2.12	10/01/2015	none

The original purpose of Version 2.11 was to support the OASIS-C1 item set which uses ICD-10 diagnosis codes instead of ICD-9 codes. However, due to the delay in the implementation of ICD-10, the OASIS-C1 item set and Version 2.11 of the data specs were changed to revert back to the use of ICD-9 codes. In Version 2.12, ICD-10 diagnosis codes have replaced the ICD-9 diagnosis codes.

3 Version Implementation

Each published version of the data specifications has a version number which is formatted as Vn.nn.nn (e.g., “V1.00.1”. The first portion of the version number (e.g., “1.00”) is referred to as the major version number, and the last portion (e.g., “.1”) is referred to as the minor version number. The major version number is incremented whenever there is a substantive change to the data specifications that requires software changes. Minor version numbers are incremented when minor changes or corrections are made to a major version.

3.1 Implementation of Version 2.10

Since the time that OASIS was initially implemented in 1998, there have been several versions of the data specs. It is possible, therefore, that at any given time records could be received by CMS’s data systems under more than one version of the data specs. Normally, the record’s completion date (M0090_INFO_COMPLETED_DT) controls which version of the data specs applies to that record, as will be described below.

Use of Version 2.10 (or higher) of the data specs and of the XML format is mandatory for every record submitted on or after 01/01/2015 regardless of that record's completion date. No record is accepted into the ASAP system that has a completion date which precedes 01/01/2015 by more than 36 months for an open agency or 24 months for a closed agency. This means that the oldest completion date that can be accepted is around 01/01/2012. The previous version of the data specs before Version 2.10 was V2.00R3, and it was implemented prior to 01/01/2012. Therefore, version 2.10 of the specs only needed to support one item set (OASIS-C). That is why V2.10 was very similar to V2.00R3 (subject to the exceptions described above).

Normally, however, new versions of the data specs will be based upon completion date, rather than submission date. The next section therefore describes the normal versioning procedure and is included in the document for future reference.

3.2 Normal Versioning Procedures

When a new major version of the data specs is published, it will have an associated starting effective date. The version that is in effect when the new specs are published will have an ending effective date on the day before the new version takes effect.

The data specs effective dates, in conjunction with the completion date for a submitted record, determine which version of the data specs applies to the record. The completion date for a submitted record is equal to the date contained in item M0090_INFO_COMPLETED_DT.

When a submitted record is validated by the ASAP system, its completion date is evaluated and is used to load the appropriate set of edits for the specifications in effect on that date. If the submitted record does not conform to those edits, the appropriate warnings or error messages will be issued and the record may be rejected.

Once a new version of the data specs takes effect, data submission software will typically have to handle previous version(s) that apply to records with completion dates that are as much as 36 months in the past. That software must therefore evaluate the completion date for each record, determine which version of the specs applies, and use those specs to validate the record prior to submission. Failure to do this may result in warnings, fatal errors, or unexpected results.

For example, suppose that a new OASIS item is defined and activated in a new version of the data specs. If that new item is submitted for a record with a completion date that precedes the new version of the specs, then that new item will be ignored. It will be ignored because the new item is unknown to the data specs that are in effect and the ASAP system ignores unknown items. If the new item is omitted from a record with a completion date that is on or after the effective date of the new specs, then a fatal error will occur and the record will be rejected. This will occur because the ASAP system will apply the new version of the specs and will see that the new item was not submitted when it was required.

Note that the appropriate data specs version is determined regardless of the submission date. It should also be noted that if a record is being modified (using record modification procedures described later in this document), then the version of the data specs is determined using the completion date of the modified record, just as if it was a new record. As stated above, with the change to the ASAP submission system, the completion date of the submitted record must be within 36 months of the date the record is submitted for an open agency, or within 24 months for a closed agency.

When submitting a record (new record, modification, or inactivation), the SPEC_VRSN_CD item in the control section must be included. The SPEC_VRSN_CD is an informational item which indicates the version of the data specs that was used to create the record. The allowable values of SPEC_VRSN_CD correspond to the major version numbers that have been published, and the submitted value should match one of these values. If it does not, a warning will be issued. Note that if the value submitted does not match the version that is in effect based upon the completion date of the record, no warning will be issued. Furthermore, the value submitted does not affect or control in any way the version of the data specs that is applied to the submitted record. As explained above, this is controlled solely by the completion date of the submitted record.

On rare occasions, a change to the data specs may take effect based upon submission date rather than completion date. When this occurs, it will be noted in the data specs.

4 Overview of Major Changes to Data Specifications

Version 2.10 of the data submission specifications included a number of major changes, as described below.

- **Submission file format.** As noted above, there was a major change in the submission file format. Prior to V2.10, data were submitted using fixed-format ASCII submission files with different submission record types (header, body, and trailer records). Each submission file could contain records for one or more assessments. Beginning with V2.10, data was submitted using files in Extensible Markup Language (XML). Each XML submission file must contain data for one and only one assessment. The XML tags that are used to identify the data for each item correspond to the item labels described above. Thus, if an assessment has a value of "01" (partially impaired) for item M1200_VISION (vision status), the tag would look like this:

  <M1200_VISION>**01**</M1200_VISION>

  The XML file structure will be described in more detail in a later section of this document.

- **Fixed-format layout.** As noted above, HHAs now use XML files to submit data to CMS. However, the data specs also define a fixed-format record layout which is used in other circumstances. This includes calling the HHRG grouper, which accepts a string containing assessment data formatted using the fixed-format layout. In addition, CMS uses the fixed-format layout to produce data extracts for external users.

- **Item Groups.** The data specifications contain a concept (referred to as the "item group") which can have the following values: "control", "assessment", "calculated", and "filler". Assessment items are simply those that are contained in the published item set. Control items are the items that previously would have been on the OASIS header record as well as those items that followed the assessment items in the OASIS body record layout (e.g., the submitted HHRG code, the agency's National Provider Number, etc.). Calculated items are those items that are calculated by the Assessment ASAP system (e.g., patient age, recalculated HHRG code, etc.). Note that calculated items ***should not be included*** in the XML files. Finally, filler items are reserved for future use on the fixed-format record. Filler items **should not be included** in the XML files. Tags not active on an item set and tags not defined by CMS **should not be included** in the XML files.

- **Item subset codes.** Prior to V2.10 of the data specs, the type of assessment was determined using item M0100_ASSMT_REASON which defined the record's reason for assessment (RFA). The RFA, in turn, controlled which set of items were included (i.e., "active") on the assessment. In order to make the OASIS data specs compatible with the ASAP system which supports multiple provider settings (nursing homes, inpatient rehabilitation hospitals, etc.) and to allow for expansion, the RFA concept was replaced by the item subset code (ISC). For new records and modification records (where control item TRANS_TYPE_CD is equal to 1 or 2), the ISC is identical to the RFA. Each of the RFAs that are currently in use (e.g., 01=start of care, 03=resumption of care, etc.) have a corresponding ISC which is defined in exactly the same way. Thus, the ISC for a record with an RFA=01 (start of care) is 01. The RFA value used to determine the ISC value is the item M0100_ASSMT_REASON. In addition to the ISCs that correspond to the values of M0100_ASSMT_REASON, there is one additional ISC which is called "XX" and is used for an inactivation (where TRANS_TYPE_CD is equal to 3). Item subset codes are a key part of the data specifications and are explained in more detail in a later section of this document.

- **Active and inactive items.** The OASIS specs have retained the concept of active and inactive items. The ISC controls the set of items that are active for a particular type of assessment. Only active items need to be included in the XML submission file. XML elements for any inactive items should be excluded from the submission file. Inactive or extraneous items should not be included

in the XML file; however, if they are included in an XML file, they are ignored by the ASAP system.

- **IDs assigned to edits.** Each edit (formatting, consistency, etc.) has been assigned a unique ID number. If an edit applies to more than one item, the detailed data specifications report lists the edit ID along with the text of the edit so that it is unambiguously clear that the same edit applies to a set of items. In addition, each edit is systematically listed with every item that is included in the edit. The report that contains an unduplicated list of edits - along with a list of the items to which each edit applies - should assist developers in creating and validating their software. Finally, the edit IDs that are used in the data specifications are used on the ASAP system feedback reports to assist those who wish to reconcile errors and warnings from the two sources.

- **LOINC codes.** In order to promote the use of electronic health records and standardized nomenclature systems, CMS plans to support the optional submission of LOINC codes that are associated with OASIS data items and with each of the responses to those items. At this time, LOINC codes are not available to the ASAP system.

5 Data Specifications Files

Two sets of files are included in the data specifications. The first set consists of reports and documentation that describe the data specifications. The second set is based upon the data dictionary that was used to generate the data specifications. This latter set of files will be useful to software developers. Note that in the file names below, ***Vn.nn.n*** stands for the version and revision number associated with the data specifications. In addition, the file names for draft versions of the documents contain the word “draft” after the version number.

5.1 Reports and Documentation

- **OASIS data specs overview (Vn.nn.n).pdf** The current document.

- **Detailed data specs report (Vn.nn.n).pdf** This report contains detailed data specifications for every item in the data set.

- **Undup edits report by ID (Vn.nn.n).pdf** This report contains an unduplicated list of all edits (formatting rules, consistency checks, etc.) that apply to the item set. It is sorted by the edit ID number.

- **Item change report (Vn.nn.n).pdf** This report lists changes that have been made to items or item responses since the previous release of the same major version of the data specs.

- **Edit change report (Vn.nn.n).pdf** This report lists changes that have been made to edits since the previous release of the same major version of the data specs.

- **HTML data specs (Vn.nn.n).zip** This zip file contains a set of HTML files that display the same information as is in the detailed data specs document. To use these files, unzip them to an empty folder and use a browser to open the file called INDEX.HTML. This will open a two-panel window. The left-hand panel can be used to navigate a list of the OASIS items or of the OASIS edits. When an item or edit is selected, the right-hand panel present detailed information about the entity that was selected. Hyperlinks allow easy navigation among items and edits. This provides a convenient alternative to the PDF version of the data specs.

5.2 Data Dictionary Files

- **OASIS data dictionary (Vn.nn.n).mdb** This is the Microsoft Access database that contains all of the OASIS data dictionary tables that were used to generate the reports listed above. Additional reports are also available in the database.

- **Itm_mstr (Vn.nn.n).csv** A comma-separated value file containing data from the itm_mstr table in the data dictionary. This is the master item table that contains one record for each OASIS item. This table could be useful for programmers who wish to build their own OASIS 3.0 data dictionary.
- **Itm_val (Vn.nn.n).csv** A comma-separated value file containing data from the itm_val table in the data dictionary. This table contains one record for every response option for each OASIS item. This table can also be used in a data dictionary when linked with the item master table described above. It could also be used to generate reports or screens containing the text of each item's response options.
- **Isc_mstr (Vn.nn.n).csv** A comma-separated value file containing data from the isc_mstr table in the data dictionary. This table lists the ISC codes and is useful for generating reports that describe the item subset codes.
- **Isc_val (Vn.nn.n).csv** A comma-separated value file containing data from the isc_val table in the data dictionary. This table lists allowable combinations of the reason-for-assessment items and the ISC code that is associated with each combination. This table can serve as a useful lookup table for converting the reasons for assessment into item subset codes.
- **Itm_sbst (Vn.nn.n).csv** A comma-separated value file containing data from the itm_sbst table in the data dictionary. This table lists one record per assessment item and shows the item subsets for which each item is active, inactive, or state optional. This table can be useful for determining which items are active on a particular type of record.

The fields within each of these tables are described in Appendix A of this document.

5.3 Microsoft Access Reports

As noted above, one of the files that is distributed with the data specifications is the Microsoft Access database that contains the OASIS data dictionary. This database can be used to generate additional reports that are not distributed with the data specifications. The following is a brief description of these reports.

- **Public: data dictionary report.** This report contains a description of each table and field that is part of the data specs data dictionary.
- **Public: data specs report.** This is the same as the data specs report that is part of the distribution package.
- **Public: edit change report.** This is the same as the edit change report that is part of the distribution package.
- **Public: ISC-RFA report.** This report lists all possible combinations of the RFA items and their associated ISCs. It is basehd upon the isc_mstr and isc_val tables.
- **Public: item change report.** This is the same as the item change report that is part of the distribution package.
- **Public: item subset matrix.** This report lists each OASIS item along with the item subsets for which it is active, inactive, or state-optional. It is based upon the itm_sbst table.
- **Public: item-response report.** The report lists each OASIS item along with its corresponding response options.
- **Public: undup edits by ID.** This is an unduplicated list of edits, sorted by edit ID number.
- **Public: undup edits by type.** This is an unduplicated list of edits, sorted by type (none-of-the-above, skip pattern, format, consistency, etc.).

6 Detailed Data Specifications Report

The Detailed Data Specifications Report contains at least one page for every item in the OASIS item set. Each item begins on a new page. The report is divided into six major sections:

1. Basic information.
2. Item subsets for which the item is active and inactive.
3. Allowable responses or values for the item.
4. Fatal and warning edits associated with the item.
5. Supplemental information about the item (this section appears only for certain items).
6. Version notes describing changes to the item and the edits that apply to it.

Each of these sections is described below.

6.1 Basic Item Information

The top section presents basic information about the item under the following headings:

- **Item.** The item identifier (e.g., M1200_VISION).
- **Description.** A brief description of the item (e.g., "sensory status: vision").
- **Item Group.** There are four groups of items:
  - **Control items.** Control items are supplemental items that are included in the submission file and are used to control processing or for other purposes (e.g., the name of the software that was used to produce the submission file, etc.).
  - **Assessment items (abbreviated "asmt" on the report).** Assessment items are items that are part of the complete OASIS Item Set.
  - **Calculated items (abbreviated "calc" on the report).** These items are calculated by the ASAP system, stored in CMS's national database, and are included in fixed-format files that are produced by CMS. ***These items are not submitted and are not to be included on the XML submission files.*** The structure and use of the fixed-format file layout is described in a later section of this document.
  - **Filler items.** Filler is reserved for future use on fixed-format files containing OASIS data. ***These items are not submitted and are not to be included on the XML submission files.*** The structure and use of the fixed-format file layout is described in a later section of this document.
- **LOINC code.** At this time, LOINC codes are not assigned.
- **Item type.** Items are classified into the following types:
  - **Text.** Items are those that contain text (e.g., M0040_PAT_LNAME, patient last name).
  - **Code.** Coded items are those that have a limited number of response options (e.g., M1200_VISION, vision status, has three valid response options).
  - **Number.** Numeric items can contain a range of numeric values (e.g., the pressure ulcer counts in M1308).
  - **Date.** An example of a date item is M0030_START_CARE_DT (start of care date).

  - **ICD.** ICD items contain diagnosis codes (e.g., M1010, inpatient diagnosis). As of version 2.12, the OASIS will begin to use ICD-10 codes instead of ICD-9. ICD items must conform to a specific format that is defined in the data specifications.

- **Max length.** This property shows the maximum number of characters or bytes that the submitted item may contain.

- **Fixed format start-end bytes.** This column displays the start and end bytes that are used to store the item on fixed-format files. The structure and use of the fixed-format file layout is described in a later section of this document.

6.2 Item Subsets

The item subsets section contains two lines: active and inactive. These lines list the ISC codes that apply to the item. For example, item M1200_VISION has the following ISCs listed:

Active: 01,03,04,05

Inactive: 06,07,08,09,XX

This means that M1200 is active on ISCs 01, 03, 04, and 05 (start of care, resumption of care, recertification, and other follow-up) and would therefore always be included in XML files for these types of records. It is inactive for 06, 07, 08, 09, and XX (transfer to inpatient facility without discharge, transfer to inpatient facility with discharge, death at home, discharge from agency, and inactivation) and would not be included in XML files for such records.

6.3 Item Values

The table in the third section of the page lists the allowable values that may be submitted for the item. For example, three values are listed for item M1200_VISION: 00, 01, and 02. For each value, the LOINC code and the text associated with the value are listed. As noted above, at this time LOINC codes are unavailable. The text associated with each item value is taken directly from the OASIS item set, where available. Some values and their associated text are not listed on the item set itself (like "^") and will be discussed in more detail in a later section.

Note that when the text for a response option contains directions for a skip pattern, that text is omitted from the item value listed. For example, for item M1300, option "00" says "No assessment conducted [Go to M1306]". In the data specs report, the "go to" text contained within the brackets is omitted.

6.4 Item Edits

The table in the fourth section of the page lists the fatal and warning edits that are associated with the item. This table contains the following four columns:

- **Edit ID.** Each edit has been assigned a unique edit ID code. These codes begin with the number -3001 and increase sequentially in absolute value. The order of the edit IDs is arbitrary. These edit ID codes will be used on the feedback reports that are produced by the ASAP system. This will make it possible to directly relate an error or warning on the feedback reports with a specific edit in the data specifications.

  Please note that ***in the Detailed Data Specifications Report, edits are listed under every item to which they apply.*** Thus, a given skip pattern edit, for example, will be listed under the item that triggers the skip pattern as well as under every item that may be skipped according to the value of the trigger item. The unique edit IDs unambiguously identify these edits that apply to more than one item.

  A second report described below (the Unduplicated Edit Report), lists each edit only once and references all of the items that each edit applies to. This system of uniquely and unambiguously identifying edits is intended to assist developers in insuring that all required edits are incorporated in their software.

- **Edit Type.** As noted above, there are various types of edits which are described below.
  - **Format.** Format edits specify special rules for formatting item values.
  - **Consistency.** Consistency edits define logical constraints among multiple items.
  - **Skip pattern.** Skip patterns always involve two or more items. The first item in the group is designated the trigger (or gateway) item. The value of the trigger item determines whether the remaining items are answered by the assessor or are skipped. If an item is skipped, it will be blank (have no value). Items that are blank because they are skipped must be denoted with the caret character (^) in the submission file. If an item is not skipped, it will have a value other than the caret character. Item M1330, for example, contains skip pattern edits -3146 and -3147. These edits are related to the trigger item (M1330) and to a set of dependent items (M1332 through M1334). The first edit says that if M1330 is equal to 00 or 03, the dependent items must not be skipped (must not be equal to ^, which is used to represent a blank). The second edit says that if M1330 is equal to 01 or 02, the dependent items must be skipped (must equal ^). All skip patterns follow a similar pattern. Skip pattern edits are listed for every item involved, including both the trigger item and all dependent items. Examples of non-skip pattern consistency edits are date 1 must be greater than date 2 and if item A = 01, then item B must be 05, 06, or 07].
- **Severity.** The severity column describes the impact of violating the edit. There are two possible values:
  - **Fatal.** Violation of a fatal edit will result in rejection of the submission file. Format and skip pattern edits are always fatal. Most consistency edits are fatal, but some are warnings.
  - **Warning.** Violation of a warning edit will result in a warning message on the user feedback report. However, a warning will not prevent the submitted assessment data from being accepted and stored in the ASAP system.
- **Edit Text.** This column contains the text of the edit.

6.5 Supplemental Information

The fifth section of the report is a Supplemental Information table. This table appears for some items. It contains a list of one or more informative messages that provide background information or additional instructions that are related to the item. These messages are not issued by the ASAP system. This table contains the following columns:

- **Info ID.** This is a unique ID that is assigned to the message. Info IDs begin with the number -9001 and increase sequentially in absolute value. The order of the edit IDs is arbitrary.
- **Type.** The type of message is always “Information” for information messages.
- **Text.** This column contains the text of the message.

6.6 Version Changes

The final section of the report lists any changes that were made to the item or the edit since the previous version of the data specs was released. This section will appear only for items where a change has been made. This section will not appear in the initial release of the data specifications, but will be included in subsequent releases.

7 Unduplicated Edit Report

As noted in the previous section, the Detailed Data Specifications Report lists all of the edits that are associated with each item in the OASIS data set. Because most edits apply to multiple items, there is a

great deal of duplication on this report. For this reason, a second report is provided which lists each edit only once. The Unduplicated Edit Report lists each edit as well as the items that it applies to.

For each edit listed, the edit ID, type, and text of the edit are displayed. After this, the items to which the edit applies are listed.

This report should serve as a resource for developers who wish to insure that their software incorporates all required edits and that each of those edits is applied to the proper set of items.

8 Conventions Used in the Data Specification Reports

Certain conventions have been adopted in the data specification reports in order to make them clear and unambiguous. These conventions are described below.

- On the Detailed Data Specifications report, the "Item Values" table lists all allowable values for each item. If a submission file contains any value for an item other than those listed in this table, a fatal error will occur and the file will be rejected. For example, for item M1200 the values 00, 01, and 02 are listed in the "Item Values" table. If any other value is submitted for M1200, a fatal error will occur. Note that edits may constrain the list of allowable values based upon specific logical conditions (e.g., if Item A has certain values, then only a subset of Item B's values may be allowed). However, it is never allowable to submit a value that is not listed in the "Item Values" table.

- If the item is a numeric item, then the "Item Values" table will not list every individual value (because enumerating all possible values is not practical). Instead, the first two rows of the "Item Values" table will list the minimum and maximum allowable values. Restrictions on the values between the minimum and maximum values are listed in the edits for the item. Any additional rows will list special values that may be submitted. For example, the "Item Values" table for M1308_NBR_PRSULC_STG2 has three rows. The first row lists a value of "00" which is labeled "minimum", the second row lists a value of "99" which is labeled "maximum", and the third row lists a special value (^). M1308_NBR_PRSULC_STG2 has an edit with a format restriction that requires that the numbers be positive integers. Decimal points are not allowed.

- One special value has been reserved for use on certain items:

    - Carets (^) are used in the submission file to indicate that an item has been left blank due to a skip pattern or, for certain text items, that the item has been left blank by the assessor. If an item is active for given type of assessment but has been skipped because it is in a skip pattern, then the XML tags for the item must be included in the XML file and a single caret must be submitted as the value between the element's tags. Note that carets are allowed for only some items, as indicated by the "Item Values" table. Also note that carets have a somewhat different use for the diagnosis and procedure code items. Like other items, a single caret is used to indicate that a given diagnosis or procedure code is entirely blank. For non-blank diagnosis or procedure codes, carets are used to indicate blank characters within the code itself. Please refer to the edits for the diagnosis and procedure code items for more details.

- Where edits refer to values of an item, those values are always enclosed in brackets. For example, an edit might say, "If M0100_ASMT_REASON=[06,07], then if M2410_INPAT_FACILITY is active it must not equal [NA]". This statement means, "If the value of M0100_ASMT_REASON is equal to '06' or the value of M0100_ASMT_REASON is equal to '07', then if M2410_INPAT_FACILITY is active its value must not be equal to 'NA'". The values contained within brackets should be understood to be character literals even though quotation marks have been omitted. Furthermore, when more than one value is listed, they are implicitly connected by a logical "OR". The following summarizes the conventions that are used when specifying values:

    - [1,2,3] means "1" or "2" or "3".

  - [00-15] means “00” through “15” (inclusive).
  - [^] means the caret character, which indicates a blank.
  - “Not equal [^]” refers to any legal value for an item other than the caret character (which indicates a blank).

- The relational edits that are included in the data specifications apply only to items that are active for a particular item subset. Items that are not active on a particular item subset should not be submitted and are not edited even if they are submitted.

  For example, consider an edit that says “If Item A=[1], then all active Items B, C, and D must equal [2]”. This means that if Item A was equal to [1], then any of the items B, C, and D that were active must equal [2]. However, if any of these three items (e.g., Item B) was inactive, it would not be submitted, would not have a value, and would not be edited. The edit would therefore not apply to the inactive item but would continue to apply to the remaining active items, if any. Similarly, if Item A was not active, the entire edit would not apply.

9 XML File Structure

As noted above, OASIS data is now submitted using XML files. XML files must employ ASCII character encoding. Figure 1, below, shows how OASIS XML submission files are structured.

Figure 1: Example OASIS XML File

```
<?xml version="1.0" standalone="yes"?>
<ASSESSMENT>
        <ASMT_SYS_CD>OASIS</ASMT_SYS_CD>
        <TRANS_TYPE_CD>1</TRANS_TYPE_CD>
        <ITM_SBST_CD>01</ITM_SBST_CD>
        <ITM_SET_VRSN_CD>C-082009</ITM_SET_VRSN_CD>
        <SPEC_VRSN_CD>2.10</SPEC_VRSN_CD>
        <CORRECTION_NUM>00</CORRECTION_NUM>
        <STATE_CD>IA</STATE_CD>
        <HHA_AGENCY_ID>1231_B</FAC_ID>
        <NATL_PRVDR_ID>123456789</NATL_PRVDR_ID>
        <SFW_ID>12321345</SFW_ID >
        <SFW_NAME>SOME VENDOR</SFW_NAME >
        <SFW_EMAIL_ADR>SUPPORT@VENDOR.COM</SFW_EMAIL_ADR>
        <SFW_PROD_NAME>OASIS ENTRY SYSTEM</SFW_PROD_NAME>
        <SFW_PROD_VRSN_CD>V2.44</SFW_PROD_VRSN_CD>
        <ACY_DOC_CD>A1334001</ACY_DOC_CD>
        <SUBM_HIPPS_CODE>1AGLV</SUBM_HIPPS_CODE>
        <SUBM_HIPPS_VERSION>12345</SUBM_HIPPS_VERSION>
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        <M0014_BRANCH_STATE>^</M0014_BRANCH_STATE>
        <M0016_BRANCH_ID>N</M0014_BRANCH_ID>
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                .
                .
        <M0090_INFO_COMPLETED_DT>20150312</M0090_INFO_COMPLETED_DT>
        <M0100_ASSMT_REASON>01</M0100_ASSMT_REASON>
                .
                .
                .
        <M1200_VISION LOINC_ITEM="99999-9">01</M1200_VISION>
                .
                .
                .
        <M1300_PRSR_ULCR_RISK_ASMT>00</M1300_PRSR_ULCR_RISK_ASMT>
        <M1302_RISK_OF_PRSR_ULCR>^</M1302_RISK_OF_PRSR_ULCR>
        <M1306_UNHLD_STG2_PRSR_ULCR>1</M1306_UNHLD_STG2_PRSR_ULCR>
        <M1307_OLDST_STG2_AT_DSCHRG>NA</M1307_OLDST_STG2_AT_DSCHRG>
                .
                .
                .
        <M2250_PLAN_SMRY_PRSULC_TRTMT>01</M2250_PLAN_SMRY_PRSULC_TRTMT>
</ASSESSMENT>
```

The XML file depicted in Figure 1 shows only a subset of the elements (items) that might be submitted. The dots are meant to depict additional elements that would be included in the submission file. The example above begins with the standard XML header line which is followed by the <ASSESSMENT> element that contains the data for a single assessment. Only a single assessment may be included in a submission file. If a facility wishes to submit data for multiple assessments during an upload session, separate files must be created for each assessment. These separate files should be zipped together into a single zip file which can then be uploaded.

The ASAP system processes only zip files. Any submitted file that is not a zip file will be rejected. All submission files must be 5 MB or less in size. Any submission file exceeding this size limitation will be rejected by the system. The ZIP file must be a normal compressed file not a super compressed (ZIPX) file. If a ZIP file contains multiple XML files, the ASAP system will sort the data within the ZIP file before processing. This allows proper processing of OASIS records when multiple records are submitted for the same patient, as long as those multiple records are included in the same ZIP file. If multiple records for

the same patient and target date are being submitted at the same time, these records should therefore be included in the same ZIP file. If they are spread across two or more ZIP files, unexpected timing errors may occur.

The following rules must be followed for naming XML and ZIP submission files:

1. File names for ZIP files cannot exceed 260 characters, including the file extension. A file extension of ".zip" is required.

2. File names for XML files cannot exceed 260 characters, including the file extension. A file extension of ".xml" is recommended, but is not required.

The <ASSESSMENT> beginning tag and the </ASSESSMENT> ending tag are used to enclose the elements for individual items that belong to the assessment. These tags are required. The file must include elements for every item that is active for the type of assessment that is being submitted. Any other elements that are included in the submission file will be ignored by the ASAP system and any data contained in those elements will not be stored in CMS's database. Note: Tags names for any item cannot be longer than 30 characters, excluding the delimiters. If a tag greater than 30 characters is included in the XML file, a system error will be generated and record processing stopped.

The tag for each item corresponds to the item IDs that are listed in the Detailed Data Specifications Report. For example, the beginning tag for item M0100 is <M0100_ASSMT_REASON> and the ending tag is </M0100_ASSMT_REASON>. The submitted value for each item is included within that item's tags. For example, in Figure 1 the value of M0100_ASSMT_REASON is "01". The <ASSESSMENT> beginning tag, the </ASSESSMENT> ending tag, and all intervening tags must be upper case. These tags are required.

For numeric items, leading and trailing zeroes may be omitted. For items that can contain a decimal value, the decimal point must be included if fractional amounts are included, but may be omitted if an integer value is being submitted. For example, item M1310 is used to report the length of a pressure ulcer in centimeters and includes up to one decimal value. The maximum length of the submitted item is 4 including the decimal point. If the value being submitted is 1.2 centimeters, then the following alternatives are acceptable:

<M1310_PRSR_ULCR_LNGTH>**1.2**</M1310_PRSR_ULCR_LNGTH>
<M1310_PRSR_ULCR_LNGTH>**01.2**</M1310_PRSR_ULCR_LNGTH>

If the value being submitted is 1.0 centimeters, then the following alternatives are acceptable:

<M1310_PRSR_ULCR_LNGTH>**1.0**</M1310_PRSR_ULCR_LNGTH>
<M1310_PRSR_ULCR_LNGTH>**1.**</M1310_PRSR_ULCR_LNGTH>
<M1310_PRSR_ULCR_LNGTH>**1**</M1310_PRSR_ULCR_LNGTH>
<M1310_PRSR_ULCR_LNGTH>**01.0**</M1310_PRSR_ULCR_LNGTH>
<M1310_PRSR_ULCR_LNGTH>**01.**</M1310_PRSR_ULCR_LNGTH>
<M1310_PRSR_ULCR_LNGTH>**01**</M1310_PRSR_ULCR_LNGTH>

For items that can contain only an integer value, no decimal point is allowed in the submitted value. For example, item M1308_NBR_PRSULC_STG2 is used to report the current number of Stage II pressure ulcers. This is an positive integer item so, so if there were three Stage II pressure ulcers, only the following values would be accepted:

<M1308_NBR_PRSULC_STG2>**3**<M1308_NBR_PRSULC_STG2>
<M1308_NBR_PRSULC_STG2>**03**<M1308_NBR_PRSULC_STG2>

Note that these rules do not apply to the diagnosis and procedure code items which are not numeric and which have their own specific formatting rules (refer to the specifications for those items for details).

Dates must be submitted in YYYYMMDD format (see item M0090_INFO_COMPLETED_DT in Figure 1 for an example). The exception is a birth date where the day or the month and day may be unknown. If the full birth date is known, it must be submitted as YYYYMMDD like any other date. For example, if the birth date is April 17, 1935, it would be submitted as:

<M0066_PAT_BIRTH_DT>**19350417**</M0066_PAT_BIRTH_DT>

If the year and month were known, but not the day, it would be submitted as:

<M0066_PAT_BIRTH_DT>**193504**</M0066_PAT_BIRTH_DT>

If only the year were known, it would be submitted as:

<M0066_PAT_BIRTH_DT>**1935**</M0066_PAT_BIRTH_DT>

Note that for all items except the diagnosis codes, leading and trailing blanks should be trimmed. In addition, alphabetic text in any item (such as patient name) may be submitted in either upper, lower, or mixed case. The ASAP system will trim leading and trailing blanks on all submitted values except the diagnosis codes and will convert alphabetic text except for the software vendor's e-mail address (SFW_VNDR_EMAIL_ADR) to upper case without issuing any warnings. These converted values will be used on submission feedback reports and other database reports. Thus, users should be aware that even if a text item (such as patient name) is submitted as a lower case string or with leading or trailing blanks, it will appear trimmed and in upper case in the feedback reports.

If the value of an item in the XML file exceeds the 100 characters, the item will not be parsed, a fatal error will be issued, and record processing stopped. Some OASIS items (such as M0040_PAT_LNAME, patient last name) can contain special characters, such as apostrophes. A properly formatted XML file may encode these characters using "entity references". For example, the name "O'NEAL" can be encoded using the "'" entity reference which substitutes for the apostrophe. If this entity reference is used, the name would be encoded as "O'NEAL".

ASAP's use of entity references follows existing XML standards. According to these standards, entity references are required for the less-than and ampersand symbols, but are optional for three other special characters (the greater-than, apostrophe, and quotation-mark symbols). Thus, the last name "O'NEAL" may be submitted either as "O'NEAL" or as "O'NEAL". Note that if an entity reference is used, it must be lower case; using upper case or mixed case characters may result in XML parsing errors or unexpected results.

It is possible that such an item, in its raw, XML form before it is parsed, could violate OASIS edits or the maximum length. For example, a string such as "O'NEAL" could be longer than the maximum allowed length for an item or might contain characters (such as the ampersand) that are not allowed for the item. Such items ***will*** be accepted, however, because the maximum length and other edits are applied ***after*** the XML file has been parsed. The parsing will convert the XML coding of the special characters to the desired character. In the case of A0500C, "O'NEAL" would be parsed to "O'NEAL" before any edits are applied.

Each element may contain either of two attributes: (a) LOINC_ITEM (the LOINC code associated with the item) and (b) LOINC_RESP (the LOINC code associated with the item's response value). These attributes are optional; both, either, or neither of these attributes may be included with each element. No editing of these attributes will occur at this time. If these attributes are included, they must be syntactically correct (according to XML rules). In no other respect will their presence affect the processing of the XML file. LOINC codes that are included in the submission files will not be checked to insure that they correspond to the LOINC codes that are assigned to the items or values. These LOINC attributes are allowed solely to allow software developers to include them in the submission file if they are needed for other purposes. The LOINC attribute tags ("LOINC_ITEM" and "LOINC_RESP") should be upper case for consistency.

Please note that the LOINC code displayed in Figure 1 for M1200_VISION is a fictitious value ("99999-9") that is shown solely for illustrative purposes. This could be replaced with an actual LOINC code, when available.

Figure 1 also illustrates the use of the special character described above: the caret. Item M1300 contains "00" which triggers a skip pattern whereby the items M1302 is skipped and the assessment continues with M1306. It can be seen in Figure 1 that the skipped item, M1302, contains a caret.

10 Item Subset Codes

10.1 Determining the ISC for an OASIS Record

Item subset codes (ISCs) correspond to the various types of OASIS data records. The ISC for a record is determined using two "type-of-record" items:

- TRANS_TYPE_CD Transaction type code
- M0100_ASSMT_REASON Reason for assessment

There are two ways to map the type-of-record items to the ISCs. They can be mapped using logical statements or by enumerating the values of the type-of-record items and the corresponding ISCs. Table 1 below shows the logical mapping, while Table 2 enumerates the possible value combinations.

Table 1: Item Subset Codes – Logical Mapping

ISC	Description	OASIS Type of Record
01	Start of care	TRANS_TYPE_CD=[1,2] and M0100_ASSMT_REASON=[01]
03	Resumption of care	TRANS_TYPE_CD=[1,2] and M0100_ASSMT_REASON=[03]
04	Recertification	TRANS_TYPE_CD=[1,2] and M0100_ASSMT_REASON=[04]
05	Other follow-up	TRANS_TYPE_CD=[1,2] and M0100_ASSMT_REASON=[05]
06	Transfer to inpatient facility-patient not discharged	TRANS_TYPE_CD=[1,2] and M0100_ASSMT_REASON=[06]
07	Transfer to inpatient facility-patient discharged	TRANS_TYPE_CD=[1,2] and M0100_ASSMT_REASON=[07]
08	Death at home	TRANS_TYPE_CD=[1,2] and M0100_ASSMT_REASON=[08]
09	Discharge from agency	TRANS_TYPE_CD=[1,2] and M0100_ASSMT_REASON=[09]
XX	Inactivation	TRANS_TYPE_CD=[3] and M0100_ASSMT_REASON=[01-09]

The first eight rows of Table 1 represent the OASIS ISCs that correspond to item set RFAs, while the last row represents the inactivation ISC ("XX"). The third column of the table shows the logical relationship between the type-of-record items and the ISC values.

Table 2 presents the same information in a different way, by enumerating the 24 combinations of the values of TRANS_TYPE_CD and M0100_ASSMT_REASON and showing the corresponding ISC for each combination. The same information is contained in a lookup table that is supplied with the data specifications. In the Access database, this table is called isc_val. The contents of this table are supplied with the data specs in a comma separated value file called isc_val.csv.

Table 2: Item Subset Codes – Item Value Mapping

ISC	Description	TRANS_TYPE_CD	M0100_ASSMT_REASON
01	Start of care	1-add new record	01-Start of care
03	Resumption of care	1-add new record	03-Resumption of care
04	Recertification	1-add new record	04-Recertification
05	Other follow-up	1-add new record	05-Other follow-up

ISC	Description	TRANS_TYPE_CD	M0100_ASSMT_REASON
06	Transfer to inpatient facility-patient not discharged	1-add new record	06-Transfer to inpatient facility-patient not discharged
07	Transfer to inpatient facility-patient discharged	1-add new record	07-Transfer to inpatient facility-patient discharged
08	Death at home	1-add new record	08-Death at home
09	Discharge from agency	1-add new record	09-Discharge from agency
01	Start of care	2-modify existing record	01-Start of care
03	Resumption of care	2-modify existing record	03-Resumption of care
04	Recertification	2-modify existing record	04-Recertification
05	Other follow-up	2-modify existing record	05-Other follow-up
06	Transfer to inpatient facility-patient not discharged	2-modify existing record	06-Transfer to inpatient facility-patient not discharged
07	Transfer to inpatient facility-patient discharged	2-modify existing record	07-Transfer to inpatient facility-patient discharged
08	Death at home	2-modify existing record	08-Death at home
09	Discharge from agency	2-modify existing record	09-Discharge from agency
XX	Start of care	3-inactivate existing record	01-Start of care
XX	Resumption of care	3-inactivate existing record	03-Resumption of care
XX	Recertification	3-inactivate existing record	04-Recertification
XX	Other follow-up	3-inactivate existing record	05-Other follow-up
XX	Transfer to inpatient facility-patient not discharged	3-inactivate existing record	06-Transfer to inpatient facility-patient not discharged
XX	Transfer to inpatient facility-patient discharged	3-inactivate existing record	07-Transfer to inpatient facility-patient discharged
XX	Death at home	3-inactivate existing record	08-Death at home
XX	Discharge from agency	3-inactivate existing record	09-Discharge from agency

10.2 Determining the OASIS Items Associated with an ISC

Once the ISC has been ascertained, the items that are active and inactive for the OASIS record can be determined. The Access database includes a table called itm_sbst that contains the necessary information. The contents of this table are supplied with the data specs in a comma separated value file called itm_sbst.csv.

This table contains one record for each OASIS submission item, and the columns correspond to the various ISCs. Each item/ISC combination in this table can have one of two values:

x = the item is active on the ISC

blank = the item is inactive on the ISC

Items that are active must be included in the XML submission file. Items that are inactive should be omitted from the XML file; if they are included they will be ignored by the ASAP system.

11 Fixed-Format Record Layout

11.1 Uses for the Fixed-Format Layout

As noted above, HHAs use XML files to submit data to CMS. However, the data specs also define a fixed-format record layout which is used in other circumstances. For example, CMS uses the fixed file format to produce data extracts for external users. The format can also be used to pass data to the HHRG grouper utility that is provided by CMS.

The data specifications provide information about starting and ending bytes for each item in the fixed format record. This information is also contained in the itm_mstr table in the Access database or in the itm_mstr.csv file that is supplied with the data specs. Each item's starting byte, ending byte, and length are contained in the following fields: fixed_rec_strt_byte, fixed_rec_end_byte, and fixed_rec_lngth. The table must be sorted by the field called fixed_rec_srt_id to put items in the order they will appear in the fixed format record.

Note that the table contains items that are not included in XML submission files. The field called itm_grp_cd identifies the item group: "control", "asmt" (assessment), "filler", and "calc" (calculated). Only control and assessment items are to be included in XML submission files. When a record is accepted by the ASAP system, certain calculated values are stored in CMS's national database. These calculated values will be contained in the "calc" items at the end of the fixed-format string. When calling the HHRG grouper, the "filler" and "calc" sections of the record should be filled with spaces (ASCII 32).

11.2 Rules for Creating the Fixed-Format String

In order to enforce standardization, we have developed the rules below that describe how the fixed-format string must be formatted.

1. The string must be 3,258 bytes in length.
2. The last three bytes of the string must contain the following characters:
    a. Byte 3,256 must contain the percent sign ("%") to indicate the end of data.
    b. Byte 3,257 must contain a carriage return character (ASCII 013).
    c. Byte 3,258 must contain a line feed character (ASCII 010).
3. Except for the three items listed above, all items that are defined as calculated items (that belong to the item group called "Calc") should be left blank. These calculated items will be populated in export files that are created by CMS for various purposes.
4. Any items belonging to the item group called "Filler" should be left blank. Data for each item must be contained within the start and end bytes defined in the data specifications.
5. OASIS items that are inactive on a particular record should be filled with blanks. Any data contained in the fields for inactive items will be ignored.
6. OASIS items that are active on assessment record but are blank due to a skip pattern must contain a single caret (^). If the length of the item is greater than 1 byte, then the single caret must be left justified and the remaining bytes in the field must be filled with blanks. For example, if item M1040=[01], then item M1045 must be skipped (equal to [^]). If these two items were ***active*** for a given assessment, then item M1045, which is a two-byte item, would contain "^ " (a caret followed by a space). On the other hand, if both of these items were ***inactive*** on a given record, then both would be blank filled.
7. The rules below define formatting rules that are specific to each of the different data types.
    a. **Code items**. The value inserted in the fixed-format record for a coded item must match exactly one of the values allowed in the data specifications for that item. For example, item M1040 is a two-byte coded item that allows the following values: [00,01,NA]. The value inserted in the item's two-byte position in the fixed-format record must match exactly one of

the three values listed. For example, it is not acceptable to insert " 1" (blank followed by a "1") or "1 " ("1" followed by a blank) for a value of "01". For a few items, the allowed values that are listed are shorter than the length of the item. For example, the data specs version code, SPEC_VRSN_CD, lists an allowed value of "2.10" even though the item is 10 bytes in length. In these cases, left-justify and blank fill the value (i.e., put "2.10" followed by six blanks in the item's location in the fixed-format record).

b. **Date items**. All date items are eight bytes in length and are coded as YYYYMMDD. These date values must be inserted in the fixed-format string exactly as coded. For example, if a date item contained "20141108" (11/08/2014), then "20141108" must be inserted in the appropriate bytes in the fixed-format string. There is one exceptional case:

   i. Item M0066_PAT_BIRTH_DT (birth date) can have a missing day (in which case it is coded YYYYMM), or a missing month and day (in which case it is coded YYYY). In these cases, left-justify the coded value and fill the remainder of the field with blanks. For example, if the date of birth was coded as "1920" (i.e., the month and year were unknown), then the item's location in the fixed-format record must contain "1920 " ("1920" followed by 4 blanks). Note that any fixed-format file that is created by CMS, the birth date will not contain a partial date because the month and/or day will be imputed where necessary. Note: All flat files produced from the QIES national database will have a complete birth date item. When only the year is submitted, the ASAP system defaults to July 2 for the month and day. When only the year and month are submitted, the ASAP system defaults to 15 for the day.

c. **ICD items**. The ICD diagnosis and procedure codes have specific coding requirements that are described in detail in the data specs. These coding requirements do not allow for left- or right-trimming of the items. Characters of the ICD code must be in specific positions within the item and carets (which stand for blanks) are an integral part of the coded item. These items must be inserted in the fixed-format record exactly as coded and in conformance with the rules described in the data specs. For example, if such an item contained the value "^^123.4^", then that exact value would be inserted in the item's location in the fixed-format string.

d. **Number items**. The value inserted in the fixed-format string for a numeric item must match exactly one of the values (or the range of values) allowed in the data specifications for that item. This means that numeric values must be right-justified and zero-filled. For example, the pressure ulcer counts contained in item M1308 can have the following values: [00-99,^]. If the value for on of these items is "01", then "01" must be inserted in the item's location in the fixed-format record; "1 " (one followed by a blank) or " 1" (a blank followed by one) are not allowed. As with other items, however, special codes (caret) must be left-justified and blank filled. Therefore, if the value for one of these items is "^", then "^ " (caret followed by a blank(s)) must be inserted in the fixed format record.

   The fixed-format numeric values for items that contain decimals (e.g., item M1310_PRSR_ULCR_LNGTH) must also match exactly the values listed in the data specs. For example, if M1310_PRSR_ULCR_LNGTH had a value of "01.0", then "01.0" must be inserted in the item's location in the fixed format record. Alternative representations which omit zeroes or the decimal are not allowed.

   Note that these rules differ from the rules that apply to XML submission files. For example, if the value for one of the pressure ulcer counts in M1308 was "01", a value of either "01" or "1" may be submitted in an XML file. However, for the fixed-format record, a value of "01" must be used. Similarly, if the value of M1310_PRSR_ULCR_LNGTH is equal to "01.0", then values such as "1", "1.", "1.0" may be submitted in the XML file. However, the value "01.0" must be used in the fixed-format record.

e. **Text items**. Text items (such as M0040_PAT_LNAME, patient last name) can have a large set of possible values and the data specifications therefore cannot delineate all allowed values. Furthermore, the values for these items can be shorter than the maximum allowed length. Text values must therefore be left-justified and blank filled in the fixed-format record.

For example, if a patient's last name is "Smith", then "SMITH " ("SMITH" followed by 13 spaces) must be inserted in the item's location in the fixed-format record. For consistency, all text items (except SFW_VNDR_EMAIL_ADR, software vendor email address) should be converted to upper case before inserting them in the fixed-format record, although this is not required. It is acceptable to use lower case characters for SFW_VNDR_EMAIL_ADR, since email addresses are typically lower case.

12 Additional Documentation

In order to understand the submission process completely, software developers will need information that is not contained within the data specs themselves or in the current document. This additional information is available in the OASIS Guidance Manual that is published by CMS. The user's manual contains information about topics such as submission timing, record sequencing rules, and record modification and inactivation procedures.

Appendix A: Data Dictionary Files

As noted above, the data dictionary that was used to produce the data specifications are distributed to assist software developers. The first of these files is the Microsoft Access database (MDB file) that was used to store the data dictionary tables. In addition, the data dictionary tables are distributed as a set of comma-separated value (CSV) files. The most useful tables that are contained in the database are described in Table A1 below.

Table A1: Database Table Descriptions

Table Name	Description
isc_mstr	Master table containing one record for every item subset code (ISC).
isc_val	Detail table that lists the values of the reason for record items that are associated with each item subset code (ISC). This table is linked to the isc_mstr table using the isc_mstr_key field.
itm_mstr	Master table containing one record for every item that is contained in the OASIS item set.
itm_val	Detail table that contains one record for every value (response option) that is allowed for each item. This table is linked to the itm_mstr table using the itm_mstr_key field.
rltn_mstr	Contains one record for every edit or information message.
rltn_itms	Contains one record for every edit or information message ID associated with each item.
rltn_itm_txt	Contains one record for every edit or information message that is associated with every item. This table was used to generate the detailed data specifications report, the unduplicated edits report, and the supplemental information report.

Table A2 below describes the fields that are contained in each of the database tables described above.

Table A2: Database Field Descriptions

Table	Field	Data Type	Field Size	Description
isc_mstr	isc_mstr_key	Number	4	primary key
isc_mstr	isc_id	Text	10	isc ID code
isc_mstr	isc_txt	Text	55	isc description
isc_val	isc_id_key	Number	4	primary key for table
isc_val	isc_id	Text	10	isc id code
isc_val	isc_mstr_key	Number	4	foreign key
isc_val	trans_type_cd_val	Text	2	transaction type code value
isc_val	trans_type_cd_txt	Text	30	transaction type code text
isc_val	m0100_assmt_reason_val	Text	2	reason for assessment value
isc_val	m0100_assmt_reason_txt	Text	80	reason for assessment text
itm_mstr	itm_mstr_key	Number	4	primary key
itm_mstr	sys_cd	Text	10	"MDS", "OASIS", "IRF-PAI", "CARE","HOSPICE"
itm_mstr	itm_srt_id	Number	4	item sort sequence (e.g., 121.50)
itm_mstr	itm_id	Text	30	item ID code (e.g., "C0100")
itm_mstr	itm_db_id	Text	30	item database ID (e.g., "C0100_HEARG")

Table	Field	Data Type	Field Size	Description
itm_mstr	itm_shrt_label	Text	50	item short label (e.g., "Hearing")
itm_mstr	itm_sect_srt_id	Text	2	item section sort ID (e.g., "01", "02")
itm_mstr	itm_sect_label	Text	10	item section label (e.g., "A")
itm_mstr	itm_grp_cd	Text	10	"Asmt","Control","State" (section S)
itm_mstr	itm_loinc_id	Text	20	LOINC item code
itm_mstr	itm_type_cd	Text	10	"Text", "Date", "Code", "Number","ICD9"
itm_mstr	fixed_rec_srt_id	Number	4	item sort sequence for fixed-format record
itm_mstr	fixed_rec_strt_byte	Number	4	Starting byte for fixed format record (e.g., export record)
itm_mstr	fixed_rec_end_byte	Number	4	Ending byte for fixed format record (e.g., export record)
itm_mstr	fixed_strt_end_bytes	Text	10	String showing start and end bytes
itm_mstr	fixed_rec_lngth	Number	4	Field length for fixed format record (e.g., export record)
itm_mstr	itm_vrsn_notes	Memo	0	Notes describing changes since previous specs version
itm_mstr	isc_active	Text	80	ISC list: item is active
itm_mstr	isc_inactive	Text	80	ISC list: item not active
itm_mstr	isc_01	Text	1	x=active on 01 (SOC), null otherwise
itm_mstr	isc_03	Text	1	x=active on 03 (ROC), null otherwise
itm_mstr	isc_04	Text	1	x=active on 04 (recert), null otherwise
itm_mstr	isc_05	Text	1	x=active on 05 (other follow-up), null otherwise
itm_mstr	isc_06	Text	1	x=active on 06 (transfer, no dc), null otherwise
itm_mstr	isc_07	Text	1	x=active on 07 (transfer with dc), null otherwise
itm_mstr	isc_08	Text	1	x=active on 08 (death at home), null otherwise
itm_mstr	isc_09	Text	1	x=active on 09 (discharge), null otherwise
itm_mstr	isc_XX	Text	1	x=active on XX (inactivation), null otherwise
itm_val	itm_val_key	Number	4	primary key
itm_val	itm_mstr_key	Number	4	foreign key
itm_val	val_srt_id	Number	4	value sort order within item
itm_val	itm_id	Text	30	item ID code (e.g., "C0100")
itm_val	val_id	Text	20	item value (e.g., "2")
itm_val	val_txt	Text	255	text associated with value (e.g., "Female")
itm_val	val_loinc_id	Text	20	LOINC value code
rltn_itm_txt	rltn_itm_txt_key	Number	4	primary key
rltn_itm_txt	itm_mstr_key	Number	4	foreign key
rltn_itm_txt	itm_id	Text	30	ID for item involved in relation
rltn_itm_txt	itm_srt_id	Number	4	Sort ID for item involved in relation
rltn_itm_txt	rltn_key	Number	4	foreign key
rltn_itm_txt	rltn_src_cd	Text	5	source of text: G=generated, M=manual

Table	Field	Data Type	Field Size	Description
rltn_itm_txt	rltn_id	Text	10	ID that identifies relation
rltn_itm_txt	rltn_srt_id	Text	10	relation sort ID
rltn_itm_txt	rltn_type_cd	Text	10	"NOA"=none of the above, "SKIP"=skip pattern, "FORMAT", "OTHER"
rltn_itm_txt	rltn_type_txt	Text	20	type of relation
rltn_itm_txt	rltn_svrty	Text	10	severity ("Fatal", "Warning")
rltn_itm_txt	rltn_txt	Memo	0	relationship text
rltn_itm_txt	rltn_vrsn_notes	Memo	0	notes describing edit changes since previous specs version
rltn_itm_txt	itm_vrsn_notes	Memo	0	notes describing item changes since previous specs version
rltn_itms	rltn_itm_key	Number	4	primary key
rltn_itms	rltn_key	Number	4	foreign key
rltn_itms	rltn_itm	Text	30	item included in relation
rltn_mstr	rltn_key	Number	4	primary key
rltn_mstr	rltn_id	Text	10	relation text ID code
rltn_mstr	rltn_srt_id	Text	10	relation sort ID
rltn_mstr	rltn_type_cd	Text	10	"NOA"=none of the above, "SKIP"=skip pattern, "FORMAT", "OTHER"
rltn_mstr	rltn_type_txt	Text	20	type of relationship
rltn_mstr	rltn_svrty	Text	10	severity (Fatal, Warning)
rltn_mstr	rltn_txt	Memo	0	relationship text
rltn_mstr	rltn_vrsn_notes	Memo	0	notes describing changes since previous specs version

Appendix B: Item Subset Code Combinations

Table B1 below enumerates the 24 combinations of the values of TRANS_TYPE_CD and M0100_ASSMT_REASON and shows the corresponding ISC for each combination. The same information is contained in a lookup table that is supplied with the data specifications. In the Access database, this table is called isc_val. The contents of this table are supplied with the data specs in a comma separated value file called isc_val.csv.

Table B1: Database Field Descriptions

ISC	Description	TRANS_TYPE_CD	M0100_ASSMT_REASON
01	Start of care	1-add new record	01-Start of care
03	Resumption of care	1-add new record	03-Resumption of care
04	Recertification	1-add new record	04-Recertification
05	Other follow-up	1-add new record	05-Other follow-up
06	Transfer to inpatient facility-patient not discharged	1-add new record	06-Transfer to inpatient facility-patient not discharged
07	Transfer to inpatient facility-patient discharged	1-add new record	07-Transfer to inpatient facility-patient discharged
08	Death at home	1-add new record	08-Death at home
09	Discharge from agency	1-add new record	09-Discharge from agency
01	Start of care	2-modify existing record	01-Start of care
03	Resumption of care	2-modify existing record	03-Resumption of care
04	Recertification	2-modify existing record	04-Recertification
05	Other follow-up	2-modify existing record	05-Other follow-up
06	Transfer to inpatient facility-patient not discharged	2-modify existing record	06-Transfer to inpatient facility-patient not discharged
07	Transfer to inpatient facility-patient discharged	2-modify existing record	07-Transfer to inpatient facility-patient discharged
08	Death at home	2-modify existing record	08-Death at home
09	Discharge from agency	2-modify existing record	09-Discharge from agency
XX	Start of care	3-inactivate existing record	01-Start of care
XX	Resumption of care	3-inactivate existing record	03-Resumption of care
XX	Recertification	3-inactivate existing record	04-Recertification
XX	Other follow-up	3-inactivate existing record	05-Other follow-up
XX	Transfer to inpatient facility-patient not discharged	3-inactivate existing record	06-Transfer to inpatient facility-patient not discharged
XX	Transfer to inpatient facility-patient discharged	3-inactivate existing record	07-Transfer to inpatient facility-patient discharged
XX	Death at home	3-inactivate existing record	08-Death at home
XX	Discharge from agency	3-inactivate existing record	09-Discharge from agency