Alternate Data Submission

Users' Guide

AHRQ Common Formats for Event Reporting – Diagnostic Safety Version 1.0

Change Log

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Table of Contents

1 PSOPPC Data Submission Overview 4
1.1 Background 4
1.2 File Format and Submission Mechanism Supported 4
2 Zip File Naming Convention 4
2.1 File Name Definition 4
2.2 File Name Example 5
3 Validation 6
3.1 Mandatory Prerequisites 6
4 File Structure and Examples 6
4.1 XML Format Submissions 6
4.1.1 XML Schema Definition and File Sample 6
4.1.2 High-Level XML Structure 6
4.1.3 Question and Answer XML Structure 8
4.1.4 XML File Examples 10
4.1.4.1 Header Tag XML Example 10
4.1.4.2 DiagnosticSafety Tag 12
4.1.4.3 Submit Multiple Accurate Diagnoses and DE_MOs 14
4.1.4.4 Provide Additional Information for Answer 16
4.1.4.5 Multiple Answers for One Question 16
4.1.4.6 Submit NullFlavor Answer Value 17
4.2 DSV Format Submissions 17
4.2.1 Download DSV File Sample 18
4.2.2 DSV File Structure 18
4.2.3 DSV File Examples 19
4.2.3.1 Header Section Example 19
4.2.3.2 Diagnostic Safety Event Section Example 19
4.2.3.3 Report Additional Answer Information 20
4.2.3.4 Report Multiple Answers for One Question 20
4.2.3.5 Report NullFlavor Answer Values 21
5 Appendix 22
5.1 Appendix A – Error Message List 22
6 Reference 22

List of Tables

Table 1. File Name Format 5
Table 2. Additional Answer Information 8
Table 3. Header Section Data Elements 10
Table 4. Data Elements Collected Under different XML Tag 12
Table 5. General Error Code and Message Examples 22

List of Figures

Figure 1. High-Level XML Structure Example 7
Figure 2. Question and Answer XML Structure Example 8
Figure 3. Header Section XML File Example 11
Figure 4. Event Level Question XML File Example 14
Figure 5. Provide Additional Information for Answer XML File Example 16
Figure 6. Multiple Answers for One Question XML File Example 17
Figure 7. Submit NullFlavor Answer Value XML File Example 17
Figure 8. DSV File Structure Example 18
Figure 9. Header Section DSV File Example 19
Figure 10. DiagnosticSafety Event Section DSV File Example 20
Figure 11. Report Additional Answer Information DSV File Example 20
Figure 12. Multiple Answers for One Question DSV File Example 21
Figure 13. Report NullFlavor Answer Values DSV File Example 21

1 PSOPPC Data Submission Overview

1.1 Background

The Agency for Healthcare Research and Quality (AHRQ) requires patient safety event (PSE) data to be submitted to the Patient Safety Organization Privacy Protection Center (PSOPPC) in Extensible Markup Language (XML) format, which abides by the Health Level Seven (HL7) Clinical Document Architecture (CDA), Release 2.0 standard.

The Alternate Data Submission mechanism enables the submission of PSE data in simple XML or Delimiter-separated Values (DSV) format. Those XML or DSV files contain only patient safety business-related questions and answers. Submitting organizations do not need to deal with the complexities of CDA XML schema. The PSOPPC will handle the complexities and convert those files into the required CDA XML format.

The Alternate Data Submission process provides the opportunity for healthcare provider organizations to easily create and send submission-ready XML or DSV formatted files directly to their designated PSO. This process will significantly reduce the time required to develop an application to submit the XML or DSV files, and decrease overall debugging time.

1.2 File Format and Submission Mechanism Supported

The PSOPPC will support two data submission formats for the Alternate Data Submission option:

- XML (Extensible Markup Language)
- DSV (Delimiter-separated Values)

The submission mechanism used for submitting in the XML/DSV format is via Secure File Transfer Protocol (SFTP). The SFTP data submission tool is supported because:

- SFTP supports automation
- SFTP accommodates larger volumes of data

2 Zip File Naming Convention

2.1 File Name Definition

Incoming PSE data should be compressed into a zip file, which contains PSE data either in XML or DSV format. Characters in the zip file name are case sensitive and must follow the naming convention defined in Table 1:

- DataFormatName-SubmissionType-CommonFormatsVersionName-PSONumbersubmissionDate-batchSequence-fileVersionNumber.zip

Table 1 provides detailed information for each of the seven sections of the file name.

Table 1. File Name Format

Name	Description	Valid Value and Format
Data Format Name	Specify submission data are in XML format or DSV format	• XML • DSV
Submission Type	Specify submission is Test (T) or Production (P). Test submissions can be deleted later by user from PSOPPC Website, Production submission cannot be deleted.	• T • P
Common Formats Version Name	Common Formats version. This must be an exact match, e.g., DS_1_0.	DS_1_0
PSO Number	AHRQ assigned PSO Number, e.g., P1234. When vendors submit for a PSO, this identifier should specify the PSO Number, not the Vendor Number.	Pxxxx
Submission Date	Specify submission date in numeric format: YYYYMMDD	YYYYMMDD
Batch Sequence	A unique number to distinguish submission batches for a submission date.	From 1 to 999
File Version Number (batch level)	An integer that is incremented to identify updates to a previously submitted file (the first version being 1; the second being 2, etc.). In case the PSO does not provide a file version number in the XML or DSV file, this batch level file version number will be used to generate the CDA XML file.	From 1, 2, 3, etc.

2.2 File Name Example

XML-P-DS_1_0-P0000-20220324-12-0.zip

This file name indicates submission data are in XML format, the “P” represents a production submission, and “DS_1_0” signifies the Common Format version for Diagnostic Safety Version 1.0. PSO “P0000” is submitting the batch, which is dated for 2022-03-24 and is the 12th batch for that day. No batch level file version number is provided in this case.

DSV-T-DS_1_0-P0000-20220324-1-2.zip

This file name indicates submission data are in DSV format, the “T” represents a test submission, and “DS_1_0” indicates the file contains Common Formats – Diagnostic Safety Version 1.0 PSE information. “P0000” indicates the AHRQ-assigned PSO number, followed by the date, and the “1” represents the batch sequence. If no file version number is provided in each PSE report, the number “2” will act as the version number (batch level) to be used to generate the CDA XML file.

3 Validation

3.1 Mandatory Prerequisites

Submitting PSOs or Vendors must complete the following steps before they can take advantage of the Alternate Data Submission service:

1. PSOs and Vendors must exist as an active organization on the PSOPPC Website.
2. PSOs must have a fully executed Data Use Agreement (DUA) with CORMAC, Corp. in its capacity as the PSOPPC. Vendors can only submit data for PSOs holding a fully executed DUA.
3. PSOs and/or Vendors must hold at least one active Level 3 user account.
4. PSOs and/or Vendors must complete the PSOPPC SFTP System Interconnection Agreement and have a valid SFTP account setup.
5. Vendors must be authorized by the PSO to submit data on their behalf. PSOs must submit their Vendor Authorizations to the PSOPPC Help Desk at support@psoppc.org or at (866) 571-7712.

4 File Structure and Examples

When submitting PSE data in XML or DSV format, PSOs only need to provide PSE-related questions and their associated answers. The PSOPPC will handle the complexity to convert the PSE data into compliant CDA XML in accordance with AHRQ requirements.

4.1 XML Format Submissions

4.1.1 XML Schema Definition and File Sample

XML Schema Definition (XSD) is used to describe the file structure and elements for the XML format. The XSD file defines all of the data elements that can be included in the XML file, each element's data type, valid input value and if it's required or not.

You can download the XSD and Alternate Data Submission File Sample from the PSOPPC website Patient Safety Data Submission page under the "Patient Safety Data Submission Process" subsection:

- CFER-DS_V1.0_Alternate_Format_XML_Schema_Definition
- CFER-DS_V1.0_Alternate_Data_Submission_File_Sample

4.1.2 High-Level XML Structure

The list below describes each XML tag of the high-level XML structure.

- **PatientSafetyData** – The root of the document. It contains three tags: docVersion, Header and DiagnosticSafety.
    - **docVersion** – The number that represents the version of an event file, which assists in identifying an updated version of a previously submitted file. If provided

in the file, it must be a positive integer that shall be incremented for subsequent versions. If not provided, the batch level event file version will be used to generate the CDA XML file. If not provided in either the file level or batch level, the file will be rejected.

- **Header** – Contains administrative-level questions.

- **DiagnosticSafety** – Containing the following three tags:
  - eventLevelQuestions – Contains questions occurring at the event level.
  - AccurateDiagnoses – Contains multiple <AccurateDiagnosis> tags, used to report data for accurate diagnosis question (DE2200). At least one <AccurateDiagnosis> tag shall be included and up to 5 <AccurateDiagnosis> tags can be reported.
  - DE_MOS – Contains multiple <DE_MO> tags, used to report data for Diagnostic Episode with Missed Opportunities (DE_MO). At least one <DE_MO> tag shall be included and up to 10 <DE_MO> tags can be reported.

Figure 1. High-Level XML Structure Example

```
<PatientSafetyData xmlns="http://www.psoppc.org/psodata/DiagnosticSafety">
        <docVersion>1</docVersion>
        <Header>
                <question code="DE1" />
                ...
        </Header>
        <DiagnosticSafety>
                <eventLevelQuestions>
                        <question code="DE2203" />
                        ...
                </eventLevelQuestions>
                <AccurateDiagnoses>
                        <!-- Report up to 5 AccurateDiagnosis -->
                        <AccurateDiagnosis>
                                <question code="DE2200" />
                                ...
                        </AccurateDiagnosis>
                </AccurateDiagnoses>
                <DE_MOS>
                        <!-- Report up to 10 DE-MO -->
                        <DE_MO>
                                <question code="DE2233" />
                                ...
                        </DE_MO>
                        <DE_MO>
                                <question code="DE2233" />
                                ...
                        </DE_MO>
                </DE_MOS>
        </DiagnosticSafety>
</PatientSafetyData>
```

4.1.3 Question and Answer XML Structure

Figure 2 shows the basic question and answer information needed to build an XML-formatted file.

Figure 2. Question and Answer XML Structure Example

```
<question code="dataElementID">
        <answers>
                <answer>
                        <value>answer1 </value>
                        <additionalInfo>more answer info here</additionalInfo>
                </answer>
                <answer>
                       <value>answer2</value>
                </answer>
        </answers>
</question>
```

- Each **question** corresponds to a Data Element ID defined in the “Data Elements” worksheet of the Resource Workbook. A question code tag is required for each question, e.g. <question code=”DE1”>.
- A **question** can have one or more answers according to the definition of the question in the “Data Element” worksheet within the “Multiple Answer Values Allowed for each Data Element” column of the Resource Workbook.
- An **answer** value is required, which can contain an answer code or text data. A **value** tag is mandatory for each answer, e.g. <value>A15</value>. Answer values are defined in the “Answers” tab of the Resource Workbook. If an answer to a question is unknown and the question allow NullFlavor, the NullFlavor value should be provided as the answer. To find out what NullFlavor value to report, reference the Resources Workbook, select the “Data Elements” worksheet, and go to the “Applicable NullFlavor” column.
- The **additionalInfo** tag can be used with an answer value to provide additional answer information for a question. Table 2 below lists all the answers that user can provide additional information:

Table 2. Additional Answer Information

Answer Code	Answer Description	Answer Additional Info
MANY	*For DE2209 and DE2236, provide valid CDC Location Code as Answer Code*	Enter “CDCLocationCode” to indicate the answer value provided is a CDC Location code
A3200	Diagnostic label and ICD-10 code (Include more than one ONLY if relevant to this event). Please specify	Enter ICD-10 diagnostic code

Answer Code	Answer Description	Answer Additional Info
A3203	Describe the accurate (final) explanation of the patient's health problem if it is not an ICD diagnosis. Please specify	Enter ICD-10 diagnostic code
A3353	An inaccurate diagnosis. Please specify diagnostic label and ICD-10 code	Enter ICD-10 diagnostic code
A3209	Yes, but there were delays and/or other problems. Please explain.	Enter text (2000-character limit)
A3212	No. Please explain.	Enter text (2000-character limit)
A3206	Yes, without delay or other problems. (Please specify other details if known, e.g., How communicated, what was communicated)	Enter text (2000-character limit)
A3359	Determination about patient’s diagnosis or medical condition was unclear. Please explain	Enter text (2000-character limit)
A3362	Chief complaint; Please specify	Enter text (2000-character limit)
A3363	Medications and/or allergies; Please specify	Enter text (2000-character limit)
A3365	Other history/information offered or provided by patient/patient’s representative; Please specify	Enter text (2000-character limit)
A3368	Previous documentation in the medical record; Please specify	Enter text (2000-character limit)
A3371	Vital signs; Please specify	Enter text (2000-character limit)
A3374	Physical exam findings; Please specify	Enter text (2000-character limit)
A3377	Lab/pathology results; Please specify	Enter text (2000-character limit)
A3380	Imaging result; Please specify	Enter text (2000-character limit)
A3383	Other Clinical Test results; Please specify	Enter text (2000-character limit)
A3447	Unknown or unclear. Please explain.	Enter text (2000-character limit)
A3476	Ordered test(s) false positive or false negative. Please specify	Enter text (2000-character limit)
A66	Other. Please specify	Enter text (2000-character limit)

Answer Code	Answer Description	Answer Additional Info
A66	Other setting not listed above. Please specify	Enter text (2000-character limit)
A66	Other. Please explain	Enter text (2000-character limit)
OTH	Additional gender category or other, please specify	Enter text (2000-character limit)
OTH	Something else, please describe	Enter text (2000-character limit)

4.1.4 XML File Examples

4.1.4.1 Header Tag XML Example

The <Header> Tag is required for Diagnostic Safety Version 1.0. Table 3 lists all four data elements shall be reported under this tag:

Table 3. Header Section Data Elements

Data Element ID	Description
DE1	Provider ID
DE4	PSO ID
DE2	Event ID
DE30	Report Date

Figure 3 provides an example of the Header Section of an XML-formatted file including all of the required questions (data elements) and answer values.

Figure 3. Header Section XML File Example

```
<Header>
	<!-- Provider ID -->
	<question code="DE1">
		<answers>
			<answer>
				<value>Provider_02</value>
			</answer>
		</answers>
	</question>
	<!-- Event ID -->
	<question code="DE2">
		<answers>
			<answer>
				<value>Event_0067</value>
			</answer>
		</answers>
	</question>
	<!-- PSO OID -->
	<question code="DE4">
		<answers>
			<answer>
				<value>P0000</value>
			</answer>
		</answers>
	</question>
	<!-- Report date -->
	<question code="DE30">
		<answers>
			<answer>
				<value>20221004</value>
			</answer>
		</answers>
	</question>
</Header>
```

4.1.4.2 DiagnosticSafety Tag

The <DiagnosticSafety> tag is required for CFER-DS Version 1.0 and consists of three sub tags: <eventLevelQuestions>, <AccurateDiagnoses> and <DE_MOS>. Table 4 lists Data Element and under which xml tag it should be reported:

Table 4. Data Elements Collected Under different XML Tag

Tag	Sub Tag	Data Element ID	Data Element Description
<eventLevelQuestions>	N/A	DE2203	Accurate diagnosis date
<eventLevelQuestions>	N/A	DE2206	Accurate diagnosis communicated
<eventLevelQuestions>	N/A	DE2209	Accurate diagnosis setting
<eventLevelQuestions>	N/A	DE2212	Accurate diagnosis inpatient setting
<eventLevelQuestions>	N/A	DE2215	Time to accurate diagnosis
<eventLevelQuestions>	N/A	DE2218	Diagnostic episode count
<eventLevelQuestions>	N/A	DE2221	Circumstances prompting discovery
<eventLevelQuestions>	N/A	DE2224	Clinical data discovered
<eventLevelQuestions>	N/A	DE2227	Patient initiated discovery
<eventLevelQuestions>	N/A	DE2230	Cause of death determination
<eventLevelQuestions>	N/A	DE2281	Impact on medical condition
<eventLevelQuestions>	N/A	DE2284	Duration of impact on medical condition
<eventLevelQuestions>	N/A	DE2287	Other impact
<eventLevelQuestions>	N/A	DE45	Patient age range
<eventLevelQuestions>	N/A	DE48	Hispanic or Latino ethnicity
<eventLevelQuestions>	N/A	DE51	Patient race
<eventLevelQuestions>	N/A	DE1106	Patient sex assigned at birth
<eventLevelQuestions>	N/A	DE1107	Patient gender identity
<eventLevelQuestions>	N/A	DE1108	Patient sexual orientation
<eventLevelQuestions>	N/A	DE1110	Patient preferred language
<eventLevelQuestions>	N/A	DE81	Reporter job or position
<eventLevelQuestions>	N/A	DE84	Type of healthcare professional reporter
<eventLevelQuestions>	N/A	DE2290	Staff providing Missed Opportunity information
<AccurateDiagnoses>	<AccurateDiagnosis>	DE2200	Accurate diagnosis explanation
<DE-MOS>	<DE-MO>	DE2233	Level of certainty about Missed Opportunities
<DE-MOS>	<DE-MO>	DE2236	Setting of Diagnostic Episode with Missed Opportunities

Tag	Sub Tag	Data Element ID	Data Element Description
<DE-MOS>	<DE-MO>	DE2239	Inpatient setting of Diagnostic Episode with Missed Opportunities
<DE-MOS>	<DE-MO>	DE2242	Diagnostic Episode with Missed Opportunities diagnosis or explanation
<DE-MOS>	<DE-MO>	DE2245	Accurate diagnosis included in differential in Diagnostic Episode with Missed Opportunities
<DE-MOS>	<DE-MO>	DE2248	Follow up plan in Diagnostic Episode with Missed Opportunities
<DE-MOS>	<DE-MO>	DE2250	Key information in existence at time of Diagnostic Episode with Missed Opportunities
<DE-MOS>	<DE-MO>	DE2251	Key information type and description
<DE-MOS>	<DE-MO>	DE2252	Key information that was an incidental finding
<DE-MOS>	<DE-MO>	DE2254	Diagnostic process(es) involving Missed Opportunities
<DE-MOS>	<DE-MO>	DE2257	History process access to care factors
<DE-MOS>	<DE-MO>	DE2260	History process factors
<DE-MOS>	<DE-MO>	DE2261	Vital signs process factors
<DE-MOS>	<DE-MO>	DE2262	Vital signs process access to care factors
<DE-MOS>	<DE-MO>	DE2263	Physical exam process factors
<DE-MOS>	<DE-MO>	DE2264	Physical exam process access to care factors
<DE-MOS>	<DE-MO>	DE2266	Lab tests process factors
<DE-MOS>	<DE-MO>	DE2267	Lab tests process access to care factors
<DE-MOS>	<DE-MO>	DE2269	Imaging process factors
<DE-MOS>	<DE-MO>	DE2270	Imaging process access to care factors
<DE-MOS>	<DE-MO>	DE2271	Other clinical tests process factors
<DE-MOS>	<DE-MO>	DE2272	Other clinical tests process access to care factors
<DE-MOS>	<DE-MO>	DE2273	Consult process factors
<DE-MOS>	<DE-MO>	DE2274	Consult process access to care factors
<DE-MOS>	<DE-MO>	DE2275	Follow up process factors
<DE-MOS>	<DE-MO>	DE2276	Follow up process access to care factors
<DE-MOS>	<DE-MO>	DE2278	Overall diagnostic assessment
<DE-MOS>	<DE-MO>	DE2279	Overall diagnostic assessment detail
<DE-MOS>	<DE-MO>	DE2296	Organizational contributing factors

Figure 4 shows how to structure event level questions and answers using <eventLevelQuestions> tag.

Figure 4. Event Level Question XML File Example

```
<DiagnosticSafety>
    <eventLevelQuestions>
        <!-- Event level DEs goes here -->

        <!-- Accurate diagnosis date -->
        <question code="DE2203">
            <answers>
                <answer>
                    <value>20220813</value>
                </answer>
            </answers>
        </question>

        <!-- Accurate diagnosis communicated -->
        <question code="DE2206">
            <answers>
                <answer>
                    <value>A3206</value>
                </answer>
            </answers>
        </question>

        <!-- Other impact, answer with NullFlavor -->
        <question code="DE2287">
            <answers>
                <answer>
                    <value>UNK</value>
                </answer>
            </answers>
        </question>
        …

    </eventLevelQuestions>
<DiagnosticSafety>
```

4.1.4.3 Submit Multiple Accurate Diagnoses and DE_MOs

Each Diagnostic Safety Report can submit a maximum of 5 accurate diagnoses, and 10 Diagnostic Episode with Missed Opportunities (DE_MO).

Figure 5 shows how to structure questions and answers using the < AccurateDiagnosis> and <DE_MO> tag.

Figure 5. Submit Multiple Accurate Diagnoses and DE_MOs XML File Example

```
<DiagnosticSafety>
    …
     <AccurateDiagnoses>
          <!-- Accurate Diagnosis entry 1 starts -->
          <AccurateDiagnosis>
                    <question code="DE2200">
                              <answers>
                                        <answer>
                                                  <value>A3200</value>
                                                  <additionalInfo>G06.1</additionalInfo>
                                        </answer>
                              </answers>
                    </question>
          </AccurateDiagnosis>
          <!-- Accurate Diagnosis entry 2 starts -->
          <AccurateDiagnosis>
                    <question code="DE2200">
                              <answers>
                                        <answer>
                                                  <value>A3200</value>
                                                  <additionalInfo>G06.3</additionalInfo>
                                        </answer>
                              </answers>
                    </question>
          </AccurateDiagnosis>
    </AccurateDiagnoses>
    <DE_MOS>
          <!-- DE_MO entry 1 starts -->
          <DE_MO>
                    <question code="DE2233">
                              <answers>
                                        <answer>
                                                  <value>A3344</value>
                                        </answer>
                              </answers>
                    </question>
          </DE_MO>
          <!-- DE_MO entry 2 starts -->
          <DE_MO>
                    <question code="DE2233">
                              <answers>
                                        <answer>
                                                  <value>A3347</value>
                                        </answer>
                              </answers>
                    </question>
          </DE_MO>
    </DE_MOS>
<DiagnosticSafety>
```

4.1.4.4 Provide Additional Information for Answer

Additional answer information is collected for answer codes or NullFlavors. See Table 2. Additional Answer Information for a list of Answers that require additional information. Figure 5 provides an XML file example on how to provide **AdditionalInfo** for a question.

Figure 5. Provide Additional Information for Answer XML File Example

```
<!-- Accurate diagnosis explanation, answer with additional information -->
<question code="DE2200">
    <answers>
        <answer>
                <value>A3203</value>
                <additionalInfo>diagnosis information</additionalInfo>
        <answer>
    </answers>
</question>
<!-- Accurate diagnosis setting, answer with additional information -->
<question code="DE2209">
    <answers>
        <answer>
                <value>1018-1</value>
                <additionalInfo>CDCLocationCode</additionalInfo>
        </answer>
    </answers>
</question>

<!-- Diagnostic Episode with Missed Opportunities diagnosis or explanation -->
<question code="DE2242">
    <answers>
        <answer>
                <value>A3353</value>
                <!--comma separated ICD-10 CM codes, report up to 10 codes -->
                <additionalInfo>M54.5, M54.2</additionalInfo>
        </answer>
    </answers>
</question>
```

4.1.4.5 Multiple Answers for One Question

Some Questions (Data Element) permit the submission of multiple answers. To identify the specific data elements that accept multiple answers, refer to the Resources Workbook, select the “Data Elements” worksheet, and locate the “Multiple Answer Values Allowed for each Data Element” column. Figure 6 shows how to structure an XML file when submitting multiple answer values for one question.

Figure 6. Multiple Answers for One Question XML File Example

```
<question code="DE2221">
    <answers>
        <answer>
            <value>A3290</value>
        </answer>
        <answer>
            <value>A66</value>
            <additionalInfo>diagnosis information</additionalInfo>
        </answer>
    </answers>
</question>
```

4.1.4.6 Submit NullFlavor Answer Value

Based on CFER-DS V1.0 specifications, some data elements allow for the submission of "NullFlavor" as an answer value. Refer to the Resources Workbook, select the "Data Elements" worksheet, and go to the "Applicable NullFlavor" column to identify which data elements allow NullFlavor as answer value. Figure 7 shows how to submit "NullFlavor" for a data element.

Figure 7. Submit NullFlavor Answer Value XML File Example

```
<question code="DE2287">
    <answers>
        <answer>
            <value>UNK</value>
        </answer>
    </answers>
</question>

<!-- Patient sexual orientation -->
<question code="DE1108">
    <answers>
        <answer>
            <value>OTH</value>
            <additionalInfo>This is sample text</additionalInfo>
        </answer>
    </answers>
</question>
```

4.2 DSV Format Submissions

DSV-formatted files are defined with a fixed number of columns, with each column representing a specific field, and each row representing the information associated with each question (data element). This simple DSV file structure is defined in a way that is easy to understand, and flexible enough to accommodate all data elements required for different AHRQ Common Formats.

4.2.1 Download DSV File Sample

You can download the Alternate Data Submission File Sample from the PSOPPC website Patient Safety Data Submission page under the "Patient Safety Data Submission Process" subsection:

- CFER-DS_V1.0_Alternate_Data_Submission_File_Sample

4.2.2 DSV File Structure

DSV Format:

The DSV file format is defined to contain 7 columns with pipe symbol '|' as delimiter:

Record ID | Doc Version | Section Name |Question Code |Answer Value | Answer Additional Info | Question Group ID

Figure 8 shows the 7columns data format example for reporting a Diagnostic Safety event.

Figure 8. DSV File Structure Example

```
104|1|Header|DE4|P0000||1
104|1|Header|DE1|event-id||1
104|1|Header|DE2|provider-id||1
104|1|Header|DE30|20220117||1
104|1|DiagnosticSafety|DE2203|20220813||1
104|1|DiagnosticSafety|DE2206|A3206||1
104|1|DiagnosticSafety|DE2209|A3224||1
...
```

DSV File Columns Detailed Description:

- Character **'|'** is chosen as the delimiter between the fields to reduce the risk of interference with characters in the data.
- **Record ID** – This is a mandatory field. Ideally, this field should contain a unique system generated Report ID, and each ID identifies a specific Patient Safety Report from the user's system. Each row in the DSV file with the same Record ID will be considered as data for the same Patient Safety report.
- **Doc Version** – The number that represents the version of a Patient Safety Report, which assists in identifying an updated version of a previously submitted report. If provided in the file, it must be a positive integer that shall be incremented for subsequent versions. If not provided, the batch level report version will be used by the PSOPPC system. If not provided in either the file level or batch level, the report file will be rejected.
- **Section Name** – Diagnostic safety data are grouped into two sections, and each section contains a group of questions and answers. The Section Name is case sensitive, and it must be an exact match as defined below. Four data elements (DE1, DE2, DE4, DE30) shall be

reported under the “Header” section, all other data elements shall be reported under the “DiagnosticSafety” section.
    - Header
    - DiagnosticSafety
- **Question Code (Data Element)** – This field is required. It should contain an AHRQ-defined Diagnostic Safety Common Format data element, such as DE4, DE2203 etc., refer to the CFER-DS version 1.0 **Resources Workbook** for all data element specifications.
- **Answer Value** – This field is required. It should contain either a valid answer code or text answers for the reported data element. If “NullFlavor” is applicable to the question, the NullFlavor value should be provided here. Refer to the CFER-DS version 1.0 **Resources Workbook** for all data element and answer specifications.
- **Answer Additional Info** – This field is used to provide additional answer information, such as ICD-10 code, standard code system type and additional text description for the answer value provided.
- **Question Group ID –** This field is used to group related questions together when reporting multiple “Accurate Diagnosis ICD code” and “Diagnostic Episode with Missed Opportunities (DE_MO)”. ***Note: do not leave this field blank, it must be populated with a value (a default value can be “1”).*** The Question Group ID can be any character or number, but it must have the same value for all the questions belonging to the same group.

Report Multiple Answer Choice Question – For questions that allow more than one answer values. Each answer value must be reported on a separate row, and all other fields (i.e., Record ID, Section Name, Question Code, etc.) will remain the same.

4.2.3 DSV File Examples

4.2.3.1 Header Section Example

Figure 9 shows all questions needed to be reported in the Header section. There is no additional information needed for any of the questions and answers here, so that field is left blank.

Figure 9. Header Section DSV File Example

```
104|1|Header|DE1|Provider_01||1
104|1|Header|DE2|Event_01||1
104|1|Header|DE4|P0000||1
104|1|Header|DE30|20221004||1
```

4.2.3.2 Diagnostic Safety Event Section Example

Figure 10 shows how to report multiple “Accurate Diagnosis ICD code” and “Diagnostic Episode with Missed Opportunities (DE_MO)”. In this example, Question Group ID is used to group questions that belong to the same DE_MO.

Figure 10. DiagnosticSafety Event Section DSV File Example

```
### Report three DE2200, question group ID are 1, 2 and 3
104|1|DiagnosticSafety|DE2200|A3200|G06.1|1
104|1|DiagnosticSafety|DE2200|A3203|This is description 1|2
104|1|DiagnosticSafety|DE2200|A3203|This is description 2|3
…
### Start of DE-MO 1, group ID is “DE_MO1”
104|1|DiagnosticSafety|DE2233|A3350||DE_MO1
104|1|DiagnosticSafety|DE2236|A3224||DE_MO1
104|1|DiagnosticSafety|DE2239|A3245||DE_MO1
104|1|DiagnosticSafety|DE2242|A3356|M54.5|DE_MO1
…
104|1|DiagnosticSafety|DE2276|A3420||DE_MO1
104|1|DiagnosticSafety|DE2278|A15||DE_MO1
104|1|DiagnosticSafety|DE2279|A3593||DE_MO1
104|1|DiagnosticSafety|DE2296|A3635||DE_MO1

### Start of DE-MO 2, question group ID is “DE_MO2”
104|1|DiagnosticSafety|DE2233|A3350||DE_MO2
104|1|DiagnosticSafety|DE2236|A3224||DE-MO2
104|1|DiagnosticSafety|DE2239|A3245||DE-MO2
104|1|DiagnosticSafety|DE2242|A3356|M54.5|DE_MO2
…
104|1|DiagnosticSafety|DE2276|A3420||DE_MO2
104|1|DiagnosticSafety|DE2278|A15||DE_MO2
104|1|DiagnosticSafety|DE2279|A3593||DE_MO2
104|1|DiagnosticSafety|DE2296|A3635||DE_MO2
```

4.2.3.3 Report Additional Answer Information

Figure 11 shows how to report additional answer information for DE2200 with answer code A3203.

Figure 11. Report Additional Answer Information DSV File Example

```
104|1|DiagnosticSafety|DE2200 |A3203 |Free Text|1
```

4.2.3.4 Report Multiple Answers for One Question

Figure 12 shows how to report two Answers for Question DE2221. Each answer value is on a separate row. Refer to the CFER-DS version 1.0 **Resources Workbook** “Data Elements”

worksheet, “Multiple Answer Values Allowed for each Data Element” column, to identify which data element allow multiple answers.

Figure 12. Multiple Answers for One Question DSV File Example

```
104|1|DiagnosticSafety|DE2221|A3290||1
104|1|DiagnosticSafety|DE2221|A66|Free Text|1
```

4.2.3.5 Report NullFlavor Answer Values

Some data elements allow for the submission of a NullFlavor answer value. Figure 13 shows how to report the applicable NullFlavor value “ASKU” for DE1107, the second example shows DE1107 with NullFlavor "OTH" answer value as well as the additional information that is required. Refer to the CFER-DS version 1.0 **Resources Workbook** “Data Elements” worksheet, “Applicable NullFlavor” column, for data element applicable NullFlavor specification.

Figure 13. Report NullFlavor Answer Values DSV File Example

```
104|1|DiagnosticSafety|DE1107|ASKU||1

104|1|DiagnosticSafety|DE1107|OTH|Free Text|1
```

5 Appendix

5.1 Appendix A – Error Message List

Table 5 includes general error code and message examples for both XML and DSV formats.

Table 5. General Error Code and Message Examples

Error Code	Error Message
CDA-1100	XML is not valid according to schema.
CDA-1102	PSO ID is not valid. Question Code: DE4; Section: Header
CDA-1107	File version is not valid. It must be provided at batch level or file level. It must be an integer greater than 0.
CDA-1202	Multiple question groups provided. Section, Header, only supports one question group.
CDA-1204	Same section is repeated. Only one is allowed. Section: Header
CDA-1301	Question is not supported. Question Code: DE2201; Section: DiagnosticSafety
CDA-1307	Question cannot be repeated. Question Code: DE2206; Section: DiagnosticSafety
CDA-1400	Answer is not provided for the question. Question Code: DE4; Section: Header
CDA-1401	Answer is not valid for the question. Question Code: DE2221; Section: DiagnosticSafety
CDA-1405	Multiple answers are provided for the question. The question supports only one answer. Question Code: DE4; Section: Header

6 Reference

- AHRQ Common Formats: PSOPPC: https://www.psoppc.org/psoppc_web/publicpages/commonFormatsOverview
- AHRQ PSO Program Website: http://www.pso.ahrq.gov/
- Extensible Markup Language: http://www.w3.org/XML
- XML Path Language (XPath): http://www.w3.org/TR/xpath/
- HL7 OID Registry main page: http://www.hl7.org/oid/index.cfm
- International Classification of Diseases, Ninth Revision, Clinical Modification (ICD-10-CM): http://www.cdc.gov/nchs/icd/icd10cm.htm