



RESOURCE AND PATIENT MANAGEMENT SYSTEM

# **Consolidated-Clinical Document Architecture (CCDA)**

(BCCD)

**Data Portability Manual  
For Site Manager Use Only**

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## Preface

The purpose of this manual is to provide data information about Data Portability documents generated by the Consolidated-Clinical Document Architecture (CCDA) v1.0 (BCCD) package. The BCCD package is designed to generate industry standard Continuity of Care Documents (CCD) in Health Level 7 (HL7) CCDA format, following the July 2012 Draft Standard for Trial Use (DSTU) standard, further restricted by Meaningful Use 2 (MU2) requirements.

It is expected that sites will rarely, if ever, need to generate data portability documents. Because of the potential system performance impact of generating large numbers of data portability documents, this document will be provided only on request.

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## 1.0 Introduction

The CCDA (BCCD) application is a component of the IHS Resource and Patient Management System (RPMS). The application provides facilities for generating industry standard Clinical Summary, Transitions of Care, Data Portability export summary, and CCD documents that meet the HL7 July 2012 DSTU standard and Meaningful Use 2 specifications.

Clinical Summary and Transitions of Care documents can be requested via the EHR application, as described in the CCDA user manual. The CCDA user manual also contains information for configuring the application to upload CCD documents to the IHS HIE repository. Because it is anticipated that the sites will rarely, if ever, need to generate Data Portability documents, instructions for generating these documents have been omitted from the user manual and are, instead, contained in this manual.

## 2.0 Generating Data Portability Documents

### 2.1 Setup

When data portability documents are generated, they are stored as XML files in an operating system directory. The location of these files is specified at the time the documents are requested with the default directory path being the value in the FILE EXPORT PATH (#2) field in the RPMS SITE (#9999999.39) file.

Before running the generation process, determine which directory the documents are to be generated in and create the directory, if necessary. When selecting or creating the directory, keep in mind that the data portability files will contain sensitive data, so it should be a directory with appropriate permissions. In addition, if data portability documents will be created for all patients, the directory must be of sufficient size to hold all created documents.

After selecting and creating (if necessary) the directory, follow the steps in Section 2.2 to generate a document for one patient. Follow the steps in Section 0 to generate documents for all patients in the system.

### 2.2 Generate Document for One Patient

1. Log in to RPMS as a user with the %All role, the XUPROG security key, the XUMGR security key, and FileMan programmer access.
2. From the RPMS menu, enter **Programmer Mode**.
3. At the programmer mode prompt, type **DO EXPORT^BCCDDPT** to access the data portability API.
4. At the “ENTER OUTPUT DIRECTORY” prompt, enter the directory where documents will be output, determined in Section 2.1.
5. At the “DO YOU WANT TO EXPORT ‘ONE’ OR ‘ALL’ PATIENTS” prompt, type **O**.
6. At the “ENTER NAME, SSN, DOB OR CHART#” prompt, enter the patient for whom you want to generate a document.
7. The application will create a data portability document request, and then return to the “DO YOU WANT TO EXPORT ‘ONE’ OR ‘ALL’ PATIENTS” prompt. You may request more documents or type a caret (^) to exit.

```
>do EXPORT^BCCDDPT
```

```
ENTER OUTPUT DIRECTORY: H:\CCDA\DP
```

```

DO YOU WANT TO EXPORT 'ONE' OR 'ALL' PATIENTS: ONE// ONE

ENTER NAME, SSN, DOB OR CHART#: SAMPLE,PATIENT
SAMPLE,PATIENT ABC          <A>   F 01-01-1950 XXX-XX-0000  ADB
100300
                                                    DB
100301
                                                    URA
100302

An Export Summary request has been scheduled for patient SAMPLE,PATIENT ABC

DO YOU WANT TO EXPORT 'ONE' OR 'ALL' PATIENTS: ONE// ^

```

Figure 2-1: Requesting a data portability document for one patient

## 2.3 Generate Documents for All Patients

1. Log in to RPMS as a user with the %All role.
2. From the RPMS menu, enter **Programmer Mode**.
3. At the programmer mode prompt, type **DO EXPORT^BCCDDPT** to access the data portability API.
4. At the “ENTER OUTPUT DIRECTORY” prompt, enter the directory where documents will be output, as determined in Section 2.1.
5. At the “DO YOU WANT TO EXPORT ‘ONE’ OR ‘ALL’ PATIENTS” prompt, type **A**.
6. At the “Export All Patients?” prompt, enter **Y**.
7. The application will create data portability document request for all the patients in the system. This may take several minutes or longer, depending on the number of patients in RPMS.

```

>do EXPORT^BCCDDPT

ENTER OUTPUT DIRECTORY: H:\CCDA\DP

DO YOU WANT TO EXPORT 'ONE' OR 'ALL' PATIENTS: ONE// ALL

It is estimated that you will need approximately 3.79 gigabytes
of disk space in the output directory.  In addition, you will need
enough space in your CCDA database to hold the requests and the
audit log.  Make sure you have enough disk and database space to create
requests for all patients.

Generation of Data Portability documents for all patients may take
in excess of two days.  It may also make extensive use of system resources.

```

```

Please make sure that your system is not overloaded while this process is
running as this may impact system performance.

Export All Patients? No// Y (Yes)
Queueing records.....

Export Summaries queued for 30,000 patients.

```

Figure 2-2: Requesting a data portability document for all patients

## 2.4 Viewing Data Portability Documents

The data portability documents will be placed in the directory specified at the “ENTER OUTPUT DIRECTORY” prompt as they are generated. The files are in XML format. If they are opened in a text editor or word processor, the raw XML will display, as shown in Figure 2-3.

```

CCD_20130819_150238_793_47949 - ss.xml - Notepad
File Edit Format View Help
<?xml version="1.0"?>
<?xml-stylesheet type="text/xsl" href="CDA.xsl"?>
<ClinicalDocument xmlns="urn:h17-org:v3" xmlns:sdtc="urn:h17-org:sdtc" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xsi:schemaLocation="urn:h17-org:v3 CDA.xsd">
  <!-- DRN=5478; VEM=3732199; QID=47949; visittype=outpatient -->
  <realmcode code="US"/></realmcode>
  <typeid root="2.16.840.1.113883.1.3" extension="POCD_HD000040"/></typeid>
  <templateid root="2.16.840.1.113883.10.20.22.1.1" assigningAuthorityName="US Realm"/></templateid>
  <templateid root="2.16.840.1.113883.10.20.22.1.2" assigningAuthorityName="CCD"/></templateid>
  <id root="188EE0E6-4429-47C6-825F-F12F8DF0E62E"/></id>
  <code code="34133-9" codeSystem="2.16.840.1.113883.6.1" codeSystemName="LOINC" displayName="Summarization of Episode Note"/>
  </code>
  <title>Continuity of Care Document from 2011 DEMO HOSPITAL</title>
  <effectiveTime value="20130819150236-0600"/></effectiveTime>
  <confidentialitycode code="N" codeSystem="2.16.840.1.113883.5.25" codeSystemName="HL7 Confidentiality code"
  displayName="Normal"/>
  </confidentialitycode>
  <languagecode code="en-US"/></languagecode>
  <recordTarget xmlns="urn:h17-org:v3" xmlns:sdtc="urn:h17-org:sdtc">
    <patientRole>
      <id root="2.16.840.1.113883.3.454.90310.16061.2.1" extension="8999_P4321"/></id>
      <id root="2.16.840.1.113883.3.454.90310.16061.2.2" extension="UAS: 123456"/></id>
      <addr>
        <state>AL</state>
        <city>MYTOWN</city>
        <postalCode>12345</postalCode>
        <streetAddressLine>100 MAIN ST.</streetAddressLine>
      </addr>
      <telecom value="tel:+1-555-555-4602" use="HP"/>
      </telecom>
      <telecom value="tel:+1-555-999-7789" use="WP"/>
      </telecom>
      <patient>
        <name>
          <family>PATIENT</family>
          <given>TEST</given>
        </name>
        <administrativeGenderCode code="F" codeSystem="2.16.840.1.113883.1.11.1" codeSystemName="Administrative Gender (HL7
v3)" displayName="Female"/>
        </administrativeGenderCode>
        <birthTime value="19800101"/></birthTime>
        <maritalStatusCode code="M" codeSystem="2.16.840.1.113883.1.11.12212" codeSystemName="HL7 MaritalStatus"
        displayName="Married"/>
        </maritalStatusCode>
        <raceCode xmlns="urn:h17-org:sdtc" code="1002-5" codeSystem="2.16.840.1.113883.1.11.14914" codeSystemName="Race"
        displayName="American Indian or Alaska Native"/>
        </raceCode>
        <ethnicGroupCode code="2186-5" codeSystem="2.16.840.1.114222.4.11.837" codeSystemName="Ethnicity value"
        displayName="Not Hispanic or Latino"/>
        </ethnicGroupCode>
        <languageCommunication>
          <languageCode code="en"/></languageCode>

```

Figure 2-3: Data portability document viewed in a text editor

To see a human-readable view of the document, use a style sheet to transform the document into a web page by following the steps in this section.

1. Obtain a copy of **CDA.xsl** style sheet. If you do not have this file, you may request it from the Software Quality Assurance (SQA) team.
2. Place the CDA.xsl style sheet file in the data portability directory.

- Open the data portability document in a web browser, such as Internet Explorer. The browser will display a human-readable version of the document, as shown in Figure 2-4. If you get an error, such as the one in Figure 2-5, verify that the CDA.xsl file is in the same directory as the document you are opening.

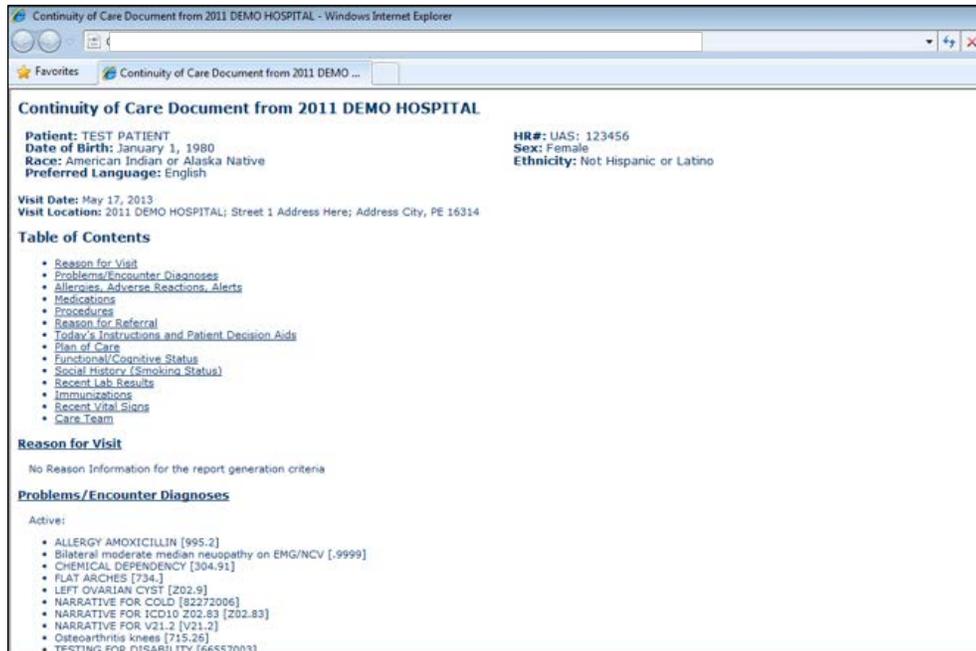


Figure 2-4: Sample data portability document in human-readable format

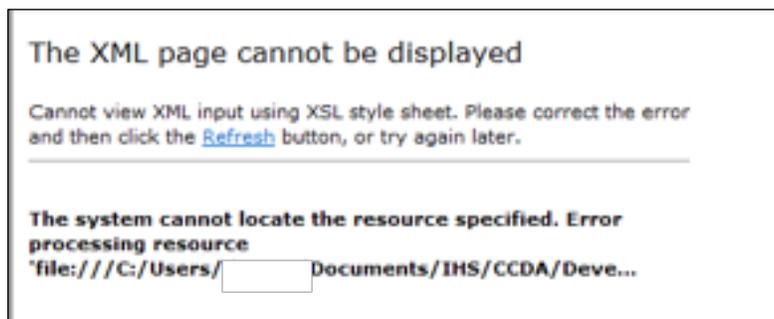


Figure 2-5: Sample error—viewing a document without a style sheet

## Glossary

### **API**

Application Programming Interface; an interface provided by a software application to allow other applications to interact with it.

### **BCCD**

RPMS namespace for CCDA files, routines, and classes.

### **XML**

Extensible Markup Language; a set of rules for encoding data in a machine-readable form.

## Acronym List

Acronym	Term Meaning
API	Application Programming Interface
CCD	Continuity of Care Documents
CCDA	Consolidated Clinical Document Architecture
DSTU	Draft Standard for Trial Use
EHR	Electronic Health Record
HIE	Health Information Exchange
HL7	Health Level Seven
IHS	Indian Health Service
MU2	Meaningful Use 2
RPMS	Resource and Patient Management System
SQA	Software Quality Assurance
XML	Extensible Markup Language

## Contact Information

If you have any questions or comments regarding this distribution, please contact the OIT Help Desk (IHS).

**Phone:** (888) 830-7280 (toll free)

**Web:** <http://www.ihs.gov/helpdesk/>

**Email:** [support@ihs.gov](mailto:support@ihs.gov)