Preparing for Retirement of Bonnie v1.6
(Quality Data Model Logic-Based Bonnie)

Summary

The Bonnie team will retire the Quality Data Model (QDM) logic-based Bonnie (Bonnie v1.6) on June 1, 2019. Clinical Quality Language (CQL) logic-based Bonnie will continue to be supported on bonnie.healthit.gov (Bonnie v3.0) and bonnie-prior.healthit.gov (Bonnie v2.3). Moving forward, the Bonnie team will maintain the most up-to-date version of Bonnie and the previous year's version of Bonnie.

Current **(until Oct 2018)**	**Production** Bonnie v2.3 (CQL) bonnie.healthit.gov	**Prior** Bonnie v1.6 (QDM Logic) bonnie.prior.healthit.gov	
Transition Period **(Oct 2018–June 2019)**	**Production** Bonnie v3.0 (CQL) bonnie.healthit.gov	**Prior** Bonnie v2.3 (CQL) bonnie.prior.healthit.gov	**Prior** Bonnie v1.6 (QDM Logic) bonnie-qdm.healthit.gov
Fully Transitioned **(June 2019–on)**	**Production** Bonnie v3.(x) (CQL) bonnie.healthit.gov	**Prior** Bonnie v2.3 (CQL) bonnie.prior.healthit.gov	

This document provides guidance on how you can prepare for this transition by explaining how to request test case transfers from QDM logic-based Bonnie to CQL-based Bonnie and by showing how to manually export test case artifacts using Bonnie export features.

Transferring Test Cases

To make a transfer request, <u>search for open Bonnie issues with the issue type of "Task"</u> on the Office of the National Coordinator for Health Information Technology (<u>ONC) JIRA site</u>. Find the transfer task for the appropriate month and follow the instructions for making the request. A representative transfer task is <u>BONNIE-456</u>, which managed transfer requests for June 2018.

The following example shows a transfer request posted to an earlier Bonnie transfer ticket:

```
Bonnie v1.6
Email: eCQMTestCases@lantanagroup.com
CMS ID: 570v0
HQMF: DD210E96-1D9E-4AFA-A522-63597AF05F34

Bonnie v2.0
Email: eCQMTestCases@lantanagroup.com
CMS ID: 570v0
HQMF: DD210E96-1D9E-4AFA-A522-63597AF05F34
```

To make a transfer request, provide the account and eCQM information for both the QDM logic-based Bonnie and the CQL-based Bonnie. The eCQM information includes the HQMF Set ID of the electronic clinical quality measure (eCQM). The instructions on the JIRA ticket explain how to find this information within the Bonnie tool. This information is also available within the human-readable HTML export of the measure.
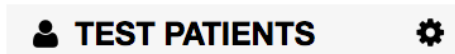
Because the CQL-based Bonnie requires an eCQM to receive test cases, you must have an eCQM uploaded on the CQL-based Bonnie to make the transfer. This eCQM need not be fully formed. If you do not have time to fully draft the CQL for the eCQM whose patients you want to transfer, you can create a basic CQL package to hold the test cases until you can fully draft a CQL representation of the eCQM.

The Bonnie team will perform monthly transfers of test cases from the QDM logic-based Bonnie to the CQL-based Bonnie from June 1, 2019 until September 1, 2019. Bonnie will copy all test cases associated with a specific eCQM on the QDM logic-based Bonnie to an eCQM on the CQL-based Bonnie. Test cases already associated with the destination eCQM on the CQL-based Bonnie will not be affected.

How to Export Artifacts

Bonnie allows users to create two export artifacts: a Quality Reporting Document Architecture (QRDA) export and an Excel Export. These exports may help users keep information about how their test cases calculated in the QDM logic version of Bonnie. To access these export types, follow these steps:

1. Open the eCQM you would like to export.
2. Click the gear icon next to "Test Patients" in the upper right-hand corner:

3. Select the export type (QRDA or Excel) you would like to use:

QRDA Exports

The QRDA export contains the following artifacts:

- A summary page of the overall eCQM calculation and the results for each test case

- Metadata and medical history for each test case:

Cypress Certification Patient Test Record: John Smith

Patient	John Smith	Sex	Male
Date of birth	March 21st, 2002 08:00	Date of expiration	
Race	Other	Ethnicity	Not Hispanic or Latino
Insurance Providers		Patient IDs	57d9995cf081f3584c00020f Cypress
Contact info			

Document Id	57d9995cf081f3584c00020f 2.16.840.1.113883.3.72		
Document Created:	October 12th, 2018 12:46		
Author	Auto Generated		
Contact info	Tel: +1-781-271-3000		
Document maintained by	Cypress		
Contact info	202 Burlington Rd. Bedford, MA 01730 Tel: +1-781-271-3000		

Diagnoses

Description	Codes	Time	Status	Results	Fields
Diagnosis	SNOMED-CT: 14183003 ICD-9-CM: 296.20 ICD-10-CM: F32.0	September 14th, 2012 08:00 - September 14th, 2012 08:15			

Encounters

Description	Codes	Time	Status	Results	Fields
Encounter	SNOMED-CT: 12843005	September 14th, 2012 08:00 - September 14th, 2012 08:15	performed		

- QRDA file for each test case:

```xml
▼<ClinicalDocument xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xmlns="urn:hl7-org:v3" xmlns:voc="urn:hl7-org:v3/voc" xmlns:sdtc="urn:hl7-org:sdtc">
    <!-- QRDA Header -->
    <realmCode code="US"/>
    <typeId root="2.16.840.1.113883.1.3" extension="POCD_HD000040"/>
    <!-- US Realm Header Template Id -->
    <templateId root="2.16.840.1.113883.10.20.22.1.1" extension="2015-08-01"/>
    <!-- QRDA templateId -->
    <templateId root="2.16.840.1.113883.10.20.24.1.1" extension="2016-02-01"/>
    <!-- QDM-based QRDA templateId -->
    <templateId root="2.16.840.1.113883.10.20.24.1.2" extension="2016-02-01"/>
  ▼<!--
      This is the globally unique identifier for this QRDA document
    -->
    <id root="ccf897d0-b04a-0136-05f1-0ed547e6c17c"/>
    <!-- QRDA document type code -->
    <code code="55182-0" codeSystem="2.16.840.1.113883.6.1" codeSystemName="LOINC" displayName="Quality Measure Report"/>
    <title>QRDA Incidence Report</title>
    <!-- This is the document creation time -->
    <effectiveTime value="20181012124645"/>
    <confidentialityCode code="N" codeSystem="2.16.840.1.113883.5.25"/>
    <languageCode code="en"/>
    <!-- reported patient -->
  ▼<recordTarget>
    ▼<patientRole>
        <id extension="0b202ee06462502ffc78ec0957080bf6" root="Bonnie"/>
      ▼<addr use="HP">
          <streetAddressLine>202 Burlington Rd.</streetAddressLine>
          <city>Bedford</city>
          <state>MA</state>
          <postalCode>01730</postalCode>
          <country>US</country>
        </addr>
        <telecom use="WP" value="tel:+1-781-271-3000"/>
      ▼<patient>
        ▼<name>
            <given>John</given>
            <family>Smith</family>
          </name>
          <administrativeGenderCode code="M" codeSystem="2.16.840.1.113883.5.1" codeSystemName="HL7 AdministrativeGender"/>
          <birthTime value="20020321080000"/>
          <raceCode code="2131-1" displayName="Other" codeSystemName="CDC Race and Ethnicity" codeSystem="2.16.840.1.113883.6.238"/>
          <ethnicGroupCode code="2186-5" displayName="Not Hispanic or Latino" codeSystemName="CDC Race and Ethnicity" codeSystem="2.16.840.1.113883.6.238"/>
        ▼<languageCommunication>
            <templateId root="2.16.840.1.113883.3.88.11.83.2" assigningAuthorityName="HITSP/C83"/>
            <templateId root="1.3.6.1.4.1.19376.1.5.3.1.2.1" assigningAuthorityName="IHE/PCC"/>
            <languageCode code="eng"/>
          </languageCommunication>
        </patient>
      </patientRole>
    </recordTarget>
```

Excel Exports

The Excel export consists of an Excel document with separate sheets for each population set or stratification:

- Each row contains test case metadata along with expected results, actual results, and the evaluation for the test case for each of the QDM logic statements (TRUE/FALSE).
- A test case with actual results that differ from the expected results is displayed in red text:

Expected			Actual												Patient Characteristic Birthdate: Birth Date >= 6 years starts before start of "Measurement Period"	Patient Characteristic Birthdate: Birth Date < 17 years starts before start of "Measurement Period"	Diagnosis: Major Depressive Disorder- Active overlaps Occurrence A: $MDDEncounters177	Occurrence A: $MDDEncounters177	Union of Encounter, Performed: Office Visit Encounter, Performed: Outpatient Consultation Encounter, Performed: Face-to-Face Interaction Encounter, Performed: Psych Visit – Diagnostic Evaluation Encounter, Performed: Psych Visit - Family Psychotherapy Encounter, Performed: Psychoanalysis Encounter, Performed: Group Psychotherapy Encounter, Performed: Psych Visit - Psychotherapy during "Measurement Period"
IPP	DENOM	NUMER	IPP	DENOM	NUMER	notes	first	last	birthdate	expired	deathdate	ethnicity	race	gender					
1	1	0	1	1	0		John	Smith	03/21/2002	FALSE		Not Hispanic o	Other	M	TRUE	TRUE	TRUE	TRUE	TRUE
1	1	0	1	1	0		Jane	Smith	01/01/2000	FALSE		Not Hispanic o	American India	F	TRUE	TRUE	TRUE	TRUE	TRUE
1	1	0	1	1	0		Barry	Jones	03/14/2003	FALSE		Not Hispanic o	American India	M	TRUE	TRUE	TRUE	TRUE	TRUE
1	0	0	0	0	0	Another last n	Roger		05/12/1994	FALSE		Not Hispanic o	American India	M	TRUE	FALSE	TRUE	TRUE	TRUE
0	0	0	0	0	0	1 Person			01/01/1970	FALSE		Not Hispanic o	American India	M	TRUE	FALSE	FALSE	FALSE	FALSE

For any questions on Bonnie or the Bonnie transition, please consult the bonnie-feedback listserv or submit an issue through the ONC JIRA site.