A hot fix has occurred on 2021-09-28 19:00 Eastern Time to correct the path parameter for the Findings About class in CDASH v1.2 & CDASHIG v2.2. Instead of `/mdr/cdash/1-2/classes/FindingsAboutEventsorInterventions/...`, it is now `/mdr/cdash/1-2/classes/FindingsAbout/...`. The same applies to CDASHIG v2.2, such as `/mdr/cdashig/2-2/classes/FindingsAbout/...`. The dates in `/mdr/cdash/1-2/classes/FindingsAbout/...` and `/mdr/cdashig/2-2/classes/FindingsAbout/...` are also updated.

All access inquiries, technical support tickets, comments, and general CDISC Library questions, please use the CDISC Library Product Inquiry form.

The base URL for the API is:

```
https://library.cdisc.org/api
```

The URL for Data Standards Browser is:

```
https://library.cdisc.org/browser
```

The CDISC Library API generally follows HTTP/1.1's guidelines for status code. Details are here: HTTP Status Codes (Staging).
The REST API uses API key authentication.

Note, support for Basic Auth is deprecated as of the 2020-11-11 release. For an interactive walk-through, refer to the video posted on https://www.cdisc.org/cdisc-library/getting-started, starting at 00:44:38.

Content for CDISC Controlled Terminology P43 is available as a patch release dated 2020-11-06. It consists of contents published on 2020-09-25 plus transactional updates from the version dated 2020-11-06.

An update to the cdm-xml schema file is introduced with CDISC Controlled Terminology P49. Version 1.2.0 of the XML schema file on CDISC GitHubDataExchange-CT repo, at https://github.com/cdisc-org/DataExchange-CT/tree/master/schema/ct-1.2.0.

The following standards have been loaded:

- CDISC Controlled Terminology P19 (2014-09-26) to P50 (2022-06-24)*, a total of 31 quarters with 135 parts
- CDASH v1.1/CDASHUG v1.0, CDASH Model v1.0 to v1.2, CDASHIG v2.0 to v2.2
- SDTM v1.2 to v2.0, SDTMIG v3.1.2 to v3.4, SDTMIG-AP v1.0, SDTMIG-MD v1.0, SDTMIG-MD v1.1
- SENDIG v3.0, SENDIG v3.1.1, SENDIG-DART v1.1, SENDIG-AR v1.0
- ADaM v2.1, ADaMIG v1.0 to v1.3, ADaM ADEAE v1.0, ADaM TTE for BDS v1.0, ADaM OCCDS v1.0 to v1.1, ADaMIG MD v1.0, ADaMIG NCA v1.0
- QRS Supplements to SDTMIG: AIMS*, APACHE II*, ATLAS*, HAM-A*, KFSS*, KPS SCALE*, SIX MIMUTE WALK, CGI, PGI
- Draft content: SENDIG-DART v1.2*

* denotes new contents added as of the 2022-06-28 release

Included in the 2022-06-28 release are:

**Enhancements**

**Feature**

- N/A for this release.

**Contents**

- 2022 Q1 CT packages (P50, dated 2022-06-24): ADEA CT, CDASH CT, Protocol CT, SDTM CT, SEND CT
- QRS Supplements to SDTMIG:
- Abnormal Involuntary Movement Scale Supplement v2.0 (AIMS)
- Acute Physiology and Chronic Health Evaluation II Supplement v1.0 (APACHE II)
- Age, treatment with systemic antibiotics, leukocyte count, serum albumin, and serum creatinine as a measure of renal function Supplement v1.0 (ATLAS)
- Hamilton Anxiety Rating Scale Supplement v2.1 (HAM-A)
- Kurtzke Functional Systems Scores Supplement v2.0 (KFSS)
- Karnofsky Performance Scale Supplement v2.0 (KPS SCALE)
- SENDIG-DART v1.2 (draft)

Data Standards Browser

- Added support to display response metadata for QRS

Corrections & Patches

- N/A for this release.

Deprecations

- N/A for this release.

Enhancements

Feature

- N/A for this release.

Contents

- 2022 Q1 CT packages (P49, dated 2022-03-25): Protocol CT, SDTM CT, SEND CT

Data Standards Browser

- Added support for multiple codelists for ADaMIG.

Corrections & Patches

- N/A for this release.

Deprecations

- N/A for this release.

For system maintenance status, use this endpoint to obtain a flag indicating whether CDISC Library is under maintenance and a related system message:

```
/mdr/maintenance
```

For example,

```
{
  "maintenanceMode": true,
  "maintenanceMessage": "CDISC Library is currently under a scheduled maintenance."
}
```

For a machine-readable method to obtain a full listing of products loaded into the metadata repository use:

```
/mdr/products
```

Or, by product group:

```
/mdr/products/{product-group}
```

where product-group is one of these values:
Included in the 2020-02-14 release are two new endpoints, designed to provide high-level information about CDISC Library. These endpoints support both JSON and XML media types.

First, `/mdr/about` returns the URL for on-line API Documentation and Release Notes. It also includes a hypermedia link to a list of the product groups with their most recent update dates, as described below.

```
/mdr/about
```

`/mdr/lastupdated` returns dates of last updated, organized by CDISC product group.

```
/mdr/lastupdated
```

For example:

```
/mdr/about example output

{
  "_links": {
    "self": {
      "href": "/mdr/about",
      "title": "Information About CDISC Library",
      "type": "About CDISC Library"
    },
    "lastupdated": {
      "href": "/mdr/lastupdated",
      "title": "Last Update Date of CDISC Library Products",
      "type": "About CDISC Library"
    }
  },
  "release-notes": "https://wiki.cdisc.org/display/LIBSUPRT/Release+Notes",
  "api-documentation": "https://www.cdisc.org/cdisc-library/api-documentation"
}
```

```
/mdr/lastupdated example output

{
  "_links": {
    "self": {
      "href": "/mdr/lastupdated",
      "title": "Last Update Date of CDISC Library Products",
      "type": "About CDISC Library"
    }
  },
  "overall": "2020-02-14",
  "data-analysis": "2020-02-14",
  "data-collection": "2020-02-14",
  "data-tabulation": "2019-11-18",
  "terminology": "2020-02-14"
}
```

Media Type

Added to the 2021-06-28 release is the support for ODM-XML, as a beta functionality. The media type for ODM-XML is application/odm+xml. For CDASHIG, users will receive an ODM v1.3.2 document as the response payload. For ADaMIG, SDTMIG, and SENDIG, user will receive a Define-XML v2.1 document.
ODM-XML, CSV and Excel Workbook media types are only available at the top-level of a foundational standard. When requesting them at levels in any lower hierarchy, the API will return an HTTP 406 Not Acceptable status code.

CDISC Controlled Terminology in ODM-XML format is not yet supported. This is currently accessible through NCI EVS FTP site, here: https://evs.nci.nih.gov/ftp1/CDISC.

For example, a cURL snippet to obtain ADaM OCCDS v1.0 (lines #1-3), SDTMIG v3.3 (lines #5-7) in ODM format. The outputs are in Define-XML v2.1:

```
curl -X GET \
  https://library.cdisc.org/api/mdr/adam/adam-occds-1-0 \
  -H 'Accept: application/odm+xml'
curl -X GET \
  https://library.cdisc.org/api/mdr/sdtmig/3-3 \
  -H 'Accept: application/odm+xml'
```

Another cURL snippet to obtain CDASHIG v2.1 in ODM format. The output is in ODM v1.3.2:

```
curl -X GET \
  https://library.cdisc.org/api/mdr/cdashig/2-1 \
  -H 'Accept: application/odm+xml'
```

Below is a cURL snippet to obtain ADaM OCCDS v1.0 (lines #1-3), SDTMIG v3.3 (lines #5-7), and Controlled Terminology P38 (lines #9-11) in CSV format:

```
curl -X GET \
  https://library.cdisc.org/api/mdr/adam/adam-occds-1-0 \
  -H 'Accept: text/csv'
curl -X GET \
  https://library.cdisc.org/api/mdr/sdtmig/3-3 \
  -H 'Accept: text/csv'
curl -X GET \
  -H 'Accept: text/csv'
```

Similarly, a cURL snippet to obtain ADaM OCCDS v1.0 (lines #1-3), SDTMIG v3.3 (lines #5-7), and Controlled Terminology P38 (lines #9-11) in Excel Workbook format:

```
curl -X GET \
  https://library.cdisc.org/api/mdr/adam/adam-occds-1-0 \
  -H 'Accept: application/vnd.ms-excel'
curl -X GET \
  https://library.cdisc.org/api/mdr/sdtmig/3-3 \
  -H 'Accept: application/vnd.ms-excel'
curl -X GET \
  -H 'Accept: application/vnd.ms-excel'
```

**Draft Contents**
Starting 2021-03-30, users can access draft contents through CDISC Library. Draft contents are point-in-time snapshots, before they become official publication. Although may not be suitable for production use, draft contents are helpful toward evaluation and public reviews.

**Controlled Terminology**
Whenever mid-cycle revision to CDISC Controlled Terminology publication is necessary, only the latest corrected information will appear in the metadata repository.

The earliest CDISC Controlled Terminology publication loaded into the metadata repository is P19 (2014-09-26). With that, _links/priorVersion will not be part of the API response when querying P19 packages. CDISC will evaluate loading prior publications based on demand and requests.

For CDISC Controlled Terminology, NCI EVS publishes synonyms in a semi-colon separated list. In the metadata repository, they are decoded into individual entries. In rare cases where synonyms are non-unique for any given term, only distinct synonyms will appear in the metadata repository.

When querying using the API, lexicographic order is applied to synonyms listing in the response. For example, this is a response excerpt when querying the term Left Ventricular Maximum Positive dP/dt (C120916):
In the CDISC Controlled Terminology Protocol package, where the Codelist Extensible (Yes/No) attribute reads "NA", they are treated as null in the metadata repository.

**CDASH**

All instances of "N/A" in CDASH publications are treated as null in the metadata repository.

An exception is the "Controlled Terminology Codelist Name" column exported in the CSV and Excel formats to preserve original sequence of codelist values as shown in the published document. In the CDASH Model v1.0 and the CDASHIG v2.0, the CDASH team applied the class concept to all domains. Identifier and timing variables were assigned class Identifier and Timing respectively as an attribute. In order to offer one common API design for all CDASH products, it was necessary to apply this class concept to CDASHIG v1.1 domains. In consequence, "Common variables" (identifier and visit timing variables in Sections 5.1, 5.2) were also instantiated to all CDASHIG v1.1 domains.

These changes were presented to and approved by the CDISC Global Governance Committee. For these changes, a new version indicator, 1.1.1, is given in the metadata repository.

The CDASH products include different types of mappings:

- CDASH model class variables to SDTM class variables
- CDASH model class variables to SDTM dataset variables
- CDASH model domain variables to SDTM dataset variables
- CDASH model domain variables to SDTMIG dataset variables
- CDASHIG domain fields to SDTMIG dataset variables
- CDASHIG domain fields to SDTM class variables
- CDASHIG scenario fields to SDTMIG dataset variables

To accommodate the different types of mapping targets, three JSON array attributes had to be defined:

- sdtmClassMappingTargets
- sdtmDatasetMappingTargets
- sdtmigDatasetMappingTargets

For CDASH Model v1.2 and CDASHIG v2.2, where applicable:

- Class description is added using definitions from CDISC CT.
- Domain description is added using definitions from CDISC CT.
- Class name is adjusted from "Findings About" to "Findings about Events and Interventions" to match source content, i.e., CDISC Wiki space.

**SDTM**

Variables in the SDTM occasionally have expanded text to describe a variable's role. This text is stored in "roleDescription" in the metadata repository. Otherwise, "roleDescription" matches "role", where "role" has a set of controlled values. Below is an example for the SDTM v1.5 variable SVUPDES:

```json
{
  "ordinal": "11",
  "name": "SVUPDES",
  "label": "Description of Unplanned Visit",
  "description": "Description of what happened to the subject during an unplanned visit. Null for protocol-defined visits."
}
```

Some Implementation Guide variables have multiple CDISC Controlled Terminology codelists. Therefore, an array object is used to output codelist metadata in an API response. For example, this is an excerpt when querying the SENDIG v3.1 variable MISTRESC:

```json
{
  "conceptId": "C120916",
  "submissionValue": "Left Ventricular Maximum Positive dP/dt",
  "definition": "The maximum rate of positive pressure change over time within the left ventricle (systole).",
  "preferredTerm": "Left Ventricular Maximum Positive dP/dt",
  "synonyms": [
    "+dPdt",
    "Left Ventricular Maximum Positive dP/dt",
    "dPdt Maximum"
  ]
}
```

In the CDISC Controlled Terminology Protocol package, where the Codelist Extensible (Yes/No) attribute reads "NA", they are treated as null in the metadata repository.
To promote consistency, the label "ISO 3166-1 Alpha-3" is used whenever this external country codelist is referenced. Similarly, "ISO 21090 NullFlavor enumeration" is used for null flavors.