Questionnaires, Ratings, and Scales (QRS) are very common in clinical trial protocols. CDISC has published many supplements to provide users information on how to structure the QRS data in a standard format using SDTM. Users can view the normative information regarding relevant CDISC Controlled Terminology (CT) codelists and terms, and how they map and apply in SDTM datasets. CDISC Library provides users a machine-readable version of this normative information, such as the exact CT term to use in the SDTM --CAT variable, an item’s --TEST and --TESTCD, one-to-one pairing of --TEST and --TESTCD, ordering of items, and lastly, response codelists and terms for each applicable item.

For full details about QRS Supplements to SDTMIG, visit https://www.cdisc.org/foundational/qrs.
Metadata for the QRS supplements loaded in CDISC Library are listed below, with short name (--CAT) in parentheses:

**Loaded 2021-06-28**
- 6 Minute Walk Test Supplement v1.0 (SIX MINUTE WALK)
- Clinical Global Impression Supplement v2.1 (CGI)
- Patient Global Impression Supplement v1.1 (PGI)

**Loaded 2022-06-27**
- 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)

In this short video is a walkthrough of how to access QRS metadata using the Data Standards Browser and download an Excel export.

These are generic API query templates for requesting QRS metadata:

```
/mdr/products/QrsInstrument
/mdr/qrs/instruments/{instrument}/versions/{version}
/mdr/qrs/instruments/{instrument}/versions/{version}/responseGroups
/mdr/qrs/instruments/{instrument}/versions/{version}/responseGroups/{responseGroup}
/mdr/qrs/instruments/{instrument}/versions/{version}/items
/mdr/qrs/instruments/{instrument}/versions/{version}/items/{item}
/mdr/root/qrs/instruments/{instrument}
```

**Line #1:** Gets a list of all QRS instruments loaded into CDISC Library.

**Line #2:** Gets the full set of metadata for a given QRS instrument and version. This includes all items. Response metadata is included for each applicable item.

**Line #3:** Gets a list of hypermedia links to all response groups for a given QRS instrument and version.

**Line #4:** Gets metadata for a response group in a given QRS instrument and version.
Line #5: Gets a list of hypermedia links to all items for a given QRS instrument and version.

Line #6: Gets metadata for an item in a given QRS instrument and version. Response metadata is included where applicable.

Line #7: Gets a list of versions given a QRS instrument.

For full API documentation, visit [https://www.cdisc.org/cdisc-library/api-documentation](https://www.cdisc.org/cdisc-library/api-documentation).

CDISC Library supports CT codetable export for QRS metadata. Refer to FAQ below.

C-code refers to the concept identifier assigned by NCI EVS. For example, C135738 is the c-code assigned to term CGI, which is a member of the QSCAT codelist. CT submission values and other textual attributes may change from publication to publication. Moreover, the use of root codelists and terms in the API response provide users maximum flexibility for choosing an appropriate CT package, i.e., by following the hypermedia links to the desirable quarterly CT publication.

Yes. Response codelists and terms are new additions to the SDTM CT package, starting in Q2 2021 publication. This set of CT will be integrated into applicable QRS instruments.

Note that not all QRS instruments have response codelists, such as CGI. Therefore, /mdr/qrs/instruments/CGI02/versions/2-1/responseGroups will produce an HTTP error.

Also note that not all items within a QRS instrument have response codelists. For example, an item's value domain may be just a discrete numerical value (or, a write-in number). SIX MINUTE WALK is a prime example.

In the CDISC Library API for QRS, users can find endpoints dedicated to response groups. Response groups are unique sets of responses in a given QRS instrument and version. Take AIMS Supplement v2.0 example. This version of the AIMS Supplement has 12 items. Each of the first seven items share one common set of responses and the eighth and ninth items share a common set of responses. The tenth item, AIMS0110, has a unique set of responses, and the last two items, AIMS0111 and 12, share a common set of responses.

CDISC Library matches the correct response group to each item.

```
--TESTCD = "AIMS0101" --TEST = "AIMS01-Muscles of Facial Expression"

--TESTCD = "AIMS0102" --TEST = "AIMS01-Lips and Perioral Area"

--TESTCD = "AIMS0103" --TEST = "AIMS01-Jaw"

--TESTCD = "AIMS0104" --TEST = "AIMS01-Tongue"

--TESTCD = "AIMS0105" --TEST = "AIMS01-Upper Extremities"

--TESTCD = "AIMS0106" --TEST = "AIMS01-Lower Extremities"

--TESTCD = "AIMS0107" --TEST = "AIMS01-Neck, Shoulders, Hips"
```

<table>
<thead>
<tr>
<th>ORRES</th>
<th>STRESC</th>
</tr>
</thead>
<tbody>
<tr>
<td>None</td>
<td>0</td>
</tr>
<tr>
<td>Minimal, may be extreme normal</td>
<td>1</td>
</tr>
<tr>
<td>Mild</td>
<td>2</td>
</tr>
<tr>
<td>Moderate</td>
<td>3</td>
</tr>
<tr>
<td>Severe</td>
<td>4</td>
</tr>
</tbody>
</table>

```
--TESTCD = "AIMS0108" --TEST = "AIMS01-Severity of Abnormal Movements"

--TESTCD = "AIMS0109" --TEST = "AIMS01-Incapacitation due Abn Movements"
```

<table>
<thead>
<tr>
<th>ORRES</th>
<th>STRESC</th>
</tr>
</thead>
<tbody>
<tr>
<td>None, Normal</td>
<td>0</td>
</tr>
<tr>
<td>Minimal</td>
<td>1</td>
</tr>
<tr>
<td>Mild</td>
<td>2</td>
</tr>
<tr>
<td>Moderate</td>
<td>3</td>
</tr>
<tr>
<td>Severe</td>
<td>4</td>
</tr>
</tbody>
</table>

```
--TESTCD = "AIMS0110" --TEST = "AIMS01-Patient Awareness Abn Movements"
```

<table>
<thead>
<tr>
<th>ORRES</th>
<th>STRESC</th>
</tr>
</thead>
<tbody>
<tr>
<td>No awareness</td>
<td>0</td>
</tr>
<tr>
<td>Aware, no distress</td>
<td>1</td>
</tr>
</tbody>
</table>
Aware, mild distress 2
Aware, moderate distress 3
Aware, severe distress 4

--TESTCD = "AIMS0111" --TEST = "AIMS01-Current Problems Teeth/Dentures"
--TESTCD = "AIMS0112" --TEST = "AIMS01-Patient Usually Wear Dentures"

| --ORRES | --STRES |  |
|---------|---------|-
| No      | 0       |  |
| Yes     | 1       |  |

Note that, when accessing this via the API, an HTTP error will be returned when a version of QRS instrument does not contain any response groups.

Yes. In the Data Standards Browser, users can find QRS instruments arranged by their category, i.e., Clinical Classification (CC), Functional Test (FT), and Questionnaire (QS).

Yes. Users can export a QRS instrument from CDISC Library to Excel. The multi-tabbed layout is designed to show relationships from an instrument, to items, and finally to responses. It also aims to provide linkages between published terms across multiple codelists. This metadata can be helpful for CRF building, data mapping, and other data tasks. For details, users can find a Read Me in an Excel export.

To obtain an Excel export, users can either use the Export button on the Data Standard Browser, or specify Excel media type at the top-level QRS endpoint. An example for CGI02 v2.1, in cURL:

curl -X GET
  https://library.cdisc.org/api/mdr/qrs/instruments/CGI02/versions/2-1
  --header 'api-key: abcdef0123456789abcdef0123456789'
  -H 'Accept: application/vnd.ms-excel'

CDISC will be working with the ADQRS team to formalize the metadata. Further details will be furnished.