Why Are There So Many ADaM Documents, and How Do I Know Which to Use?

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20-FEB-2020

Agenda

- **ADaM History**
- **Choosing an ADaMIG**
- **CDISC zip files**
- **Documents to Use**
- **ADaM Future**

ADAM HISTORY

The Early Years

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- In the early 2000s, there was only an ADaM Model document

  - ADaM Fundamental Principles

  - No standard structures

  - Each ADaM member wanted structure to match their own company

  - "Strawman" documents demonstrated various ways to model analysis

- Then SDTM moved to a more vertical Findings structure

  - BDS structure was designed to be similar to SDTM findings

    - Facilitated traceability

- In 2009, a new ADaM model document plus ADaMIG were published

  - Both documents included ADSL and BDS

  - Not complete, but it did cover a lot of what was needed for analysis

ADAM HISTORY

Adolescence

- After releasing ADaMIG v1.0, ADaM began working in sub-teams to develop "Appendix" documents

  – ADaM Statistical Examples (2011)

    ▪ Set of examples that used the BDS structure for common statistical analysis methods

  – ADaM Time-to-Event (2012)

    ▪ Added variables to BDS, and provided examples

  – ADaM for Adverse Events (2012)

    ▪ Something other than BDS was needed for AE analysis

- ADaM + these 3 appendices gave us most of what we needed

    ▪ Challenge: How to transform Adverse Event document into a true structure?

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ADAM HISTORY

The Teen Years

- In 2016

  - OCCDS was created as a third ADaM structure

    - Added new variables and examples to the Adverse Events appendix doc

  - A new ADaMIG was also developed

    - Clarified existing content

    - Added new variables

    - Added table showing which documents to use with which ADaMIG

  - No new ADaM model document

    - Content like ADaM fundamental principles remained unchanged

- Meanwhile, Define-XML was also changing

  - Define-XML v2.0 was released in 2013

  - Analysis Results Metadata extension was released in 2015

    - First time CDISC had a standard way to represent all ADaM metadata needs

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ADAM HISTORY

Early Adulthood

- Issue: ADaM model document metadata examples all look like Define-XML v1
  - 1-page document of important considerations when using the ADaM model document v2.1

- Revamp of website added zip files
  - One zip file for ADaMIG v1.0 and all related documents
  - A second zip file for ADaMIG v1.1 and all related documents

- ADaMIG v1.2 was released in 2019
  - More clarification, including references to other documents
  - A few new variables
  - Update to table showing of documents to use with which ADaMIG
  - A third zip file for ADaMIG v1.2 and all related documents
  - An update to the Important Considerations document

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CHOOSING AN ADAMIG

Will ADaM Be Used For Submission?

References:

https://www.fda.gov/industry/fda-resources-data-standards/study-data-standards-resources

http://www.pmda.go.jp/english/review-services/reviews/0007.html

- Regulatory Data Standards Catalogs specify standards and versions accepted

  – US FDA will accept ADaMIG v1.1

  – Japan PMDA will accept ADaMIG v1.0

- First decision: Which ADaMIG will you use?

  – If submitting to only one agency, use the IG accepted by that agency

  – If submitting to both agencies, you can

  A. Submit to both countries using the same data in the same standard ADaMIG.

      ◆ Because ADaMIG v1.0 and ADaMIG v1.1 are similar, it is possible to call each the other version and still run automated checks on it

      ◆ May require more explanation in the Analysis Data Reviewers Guide (ADRG) section 7 to explain conformance rule messages

  B. Submit a request to the USFDA to use ADaMIG v1.0 rather than ADaMIG v1.1

      ◆ If allowed, then submit to both countries using ADaMIG v1.0.

  C. Create two different sets of data, one in each version of the ADaMIG that each country wants.

My Recommendation

CHOOSING AN ADAMIG

Once an ADaMIG is Chosen

References:

https://www.cdisc.org/standards/foundational/adam

- ADaMIG v1.1
- ADaMIG v1.2

- ADaMIG v1.1 and 1.2 include a table with this content:

Document	ADaMIG v1.0	ADaMIG v1.1	ADaMIG v1.2
Analysis Data Model (ADaM) v2.1, December 2009	Foundational document for ADaMIG v1.0	Applicable	Applicable
ADaM Examples in Commonly Used Statistical Analysis Methods v1.0, December 2011	Written for ADaMIG v1.0	Applicable	Applicable
The ADaM Basic Data Structure for Time-to-Event Analyses v1.0, May 2012	Written for ADaMIG v1.0	Applicable	Applicable
ADaM Data Structure for Adverse Event Analysis v1.0, May 2012	Written for ADaMIG v1.0	Superseded by OCCDS v1.0	Superseded by OCCDS v1.0
ADaM Occurrence Data Structure (OCCDS) v1.0, February, 2016	Not written for ADaMIG v1.0	Written for ADaMIG v1.1	Applicable
CDISC ADaM Conformance Rules v2.0, March 2019	Applicable	Applicable	Mostly applicable
Define-XML v2.0, March 2013	Applicable	Applicable	Applicable
Analysis Results Metadata Specification for Define-XML Version 2 v1.0, January 2015	Applicable	Applicable	Applicable

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CDISC ZIP FILES

ADaMIG Release Packages

Reference:

https://www.cdisc.org/standards/foundational/adam

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ADaMIG v1.0 release package includes the following documents:

- ADaM v2.1 (17-Dec-2009)

- ADaMIG v1.0 (17-Dec-2009)

- ADaM Basic Data Structure (BDS) for Time-to-Event (TTE) Analyses v1.0 (08-May-2012)

- CDISC ADaM Structure for Adverse Event Analyses (10-May-2012)

- ADaM Examples in Commonly Used Statistical Analysis Methods (16-Dec-2011)

- ADaM Conformance Rules v2.0 (01-Mar-2019)

- Analysis Results Metadata (ARM) v1.0 for Define-XML v2.0 (30-Jan-2015)*

- Important Considerations When Using ADaM v2.1 (03-Oct-2019)

* *Note that CDISC assumes the use of Define-XML v2.0. If you use Define-XML v2.1, then the Define-XML v2.1 document replaces the need for Analysis Results Metadata (ARM) v1.0 for Define-XML v2.0. Because Define-XML v1.0 is quite old, it is not recommended for use.*

CDISC ZIP FILES

ADaMIG Release Packages

ADaMIG v1.1 release package includes the following documents:

- ADaM v2.1 (17-Dec-2009)

- ADaMIG v1.1 (12-Feb-2016)

- ADaM Basic Data Structure (BDS) for Time-to-Event (TTE) Analyses v1.0 (08-May-2012)

- ADaM Structure for Occurrence Data (OCCDS) v1.0 (12-Feb-2016)

- ADaM Examples in Commonly Used Statistical Analysis Methods (16-Dec-2011)

- ADaM Conformance Rules v2.0 (01-Mar-2019)

- Analysis Results Metadata (ARM) v1.0 for Define-XML v2.0 (30-Jan-2015)*

- Important Considerations When Using ADaM v2.1 (03-Oct-2019)

Reference:

https://www.cdisc.org/standards/foundational/adam

* *Note that CDISC assumes the use of Define-XML v2.0. If you use Define-XML v2.1, then the Define-XML v2.1 document replaces the need for Analysis Results Metadata (ARM) v1.0 for Define-XML v2.0. Because Define-XML v1.0 is quite old, it is not recommended for use.*

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CDISC ZIP FILES

ADaMIG Release Packages

ADaMIG v1.2 release package includes the following documents:

- ADaM v2.1 (17-Dec-2009)

- ADaMIG v1.2 (03-Oct-2019)

- ADaM Basic Data Structure (BDS) for Time-to-Event (TTE) Analyses v1.0 (08-May-2012)

- ADaM Structure for Occurrence Data (OCCDS) v1.0 (12-Feb-2016)

- ADaM Examples in Commonly Used Statistical Analysis Methods (16-Dec-2011)

- ADaM Conformance Rules v2.0 (01-Mar-2019)

- Analysis Results Metadata (ARM) v1.0 for Define-XML v2.0 (30-Jan-2015)*

- Important Considerations When Using ADaM v2.1 (03-Oct-2019)

Reference:

https://www.cdisc.org/standards/foundational/adam

*   Note that CDISC assumes the use of Define-XML v2.0. If you use Define-XML v2.1, then the Define-XML v2.1 document replaces the need for Analysis Results Metadata (ARM) v1.0 for Define-XML v2.0. Because Define-XML v1.0 is quite old, it is not recommended for use.

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DOCUMENTS TO USE

My Recommendation

- All ADaM programmers should be familiar with
  - **ADaM v2.1** (noting outdated section 5 examples)
    - Plus **Important Considerations When Using ADaM v2.1** (1-page doc)
  - One of **ADaMIG v1.0, v1.1, or v1.2**
  - One of
    - **OCCDS** (if using ADaMIG v1.1 or 1.2)
    - **Adverse Event doc** (if using ADaMIG v1.0)

- Plus any specialty ADaM documents
  - **Statistical Examples doc** (read TOC and any sections that apply)
  - **Time-to-Event doc** (only read if doing survival analysis)

- Plus related Define-XML documents, either
  - **Define-XML v2.0** and **ARM extension**
  - **Define-XML v2.1**

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ADAM FUTURE

Into Adulthood

- The ADaM team is currently working on finalizing several documents for release in 2020 and 2021

  – ADaM Data Structures for Integration

  – ADaMIG for Non-Compartmental (PK) Analysis

  – ADaMIG for Medical Devices

  – OCCDS v1.1

  – ADaM Traceability Examples

  – ADaM for Oncology

  – Updated ADaM metadata

- Once these documents are complete, the team is planning to step back and consolidate the multiple ADaM documents into a small set of large documents

  – Until then, we will need to manage even more separate documents!

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Questions?

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