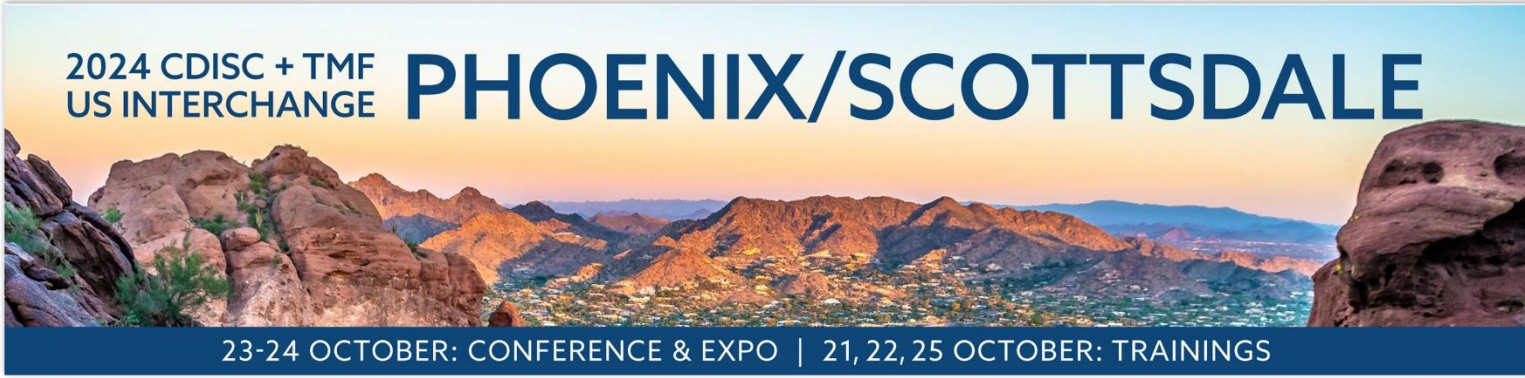


Avoiding Problems with Analysis – Best Practices when Developing an eCOA Data Transfer

Presented by Terek Peterson, MBA
SVP, Customer Experience and Data Science
YPrime

Meet the Speaker

Terek Peterson, MBA

Title: SVP, Customer Experience and Data Science

Organization: YPrime

With over 28 years of extensive clinical research background in bio-pharmaceutical firms and contract research, software, and service enterprises, Terek has led technical teams amidst rigorous regulatory standards and demanding customer timelines. Terek currently oversees the leadership and strategic direction of YPrime's global teams in Customer Experience and Data Science. Focusing on continual improvement, the Customer Experience division encompasses Customer Care, and Logistics operations.

Disclaimer and Disclosures

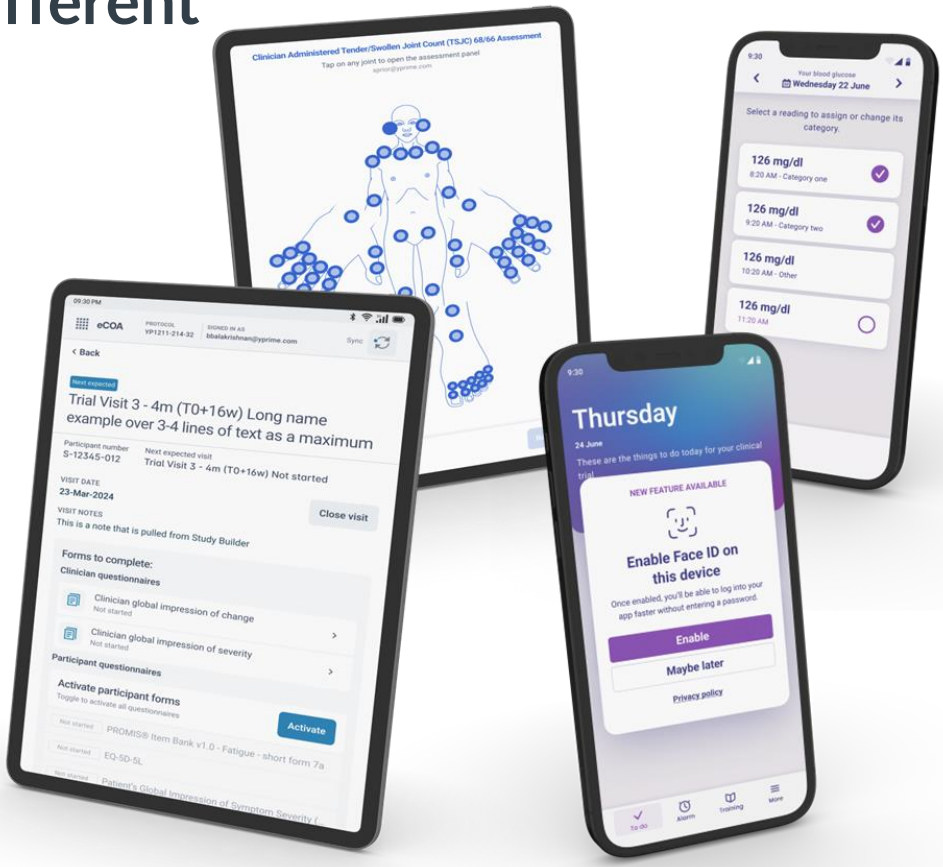
- *The views and opinions expressed in this presentation are those of the author(s) and do not necessarily reflect the official policy or position of CDISC.*

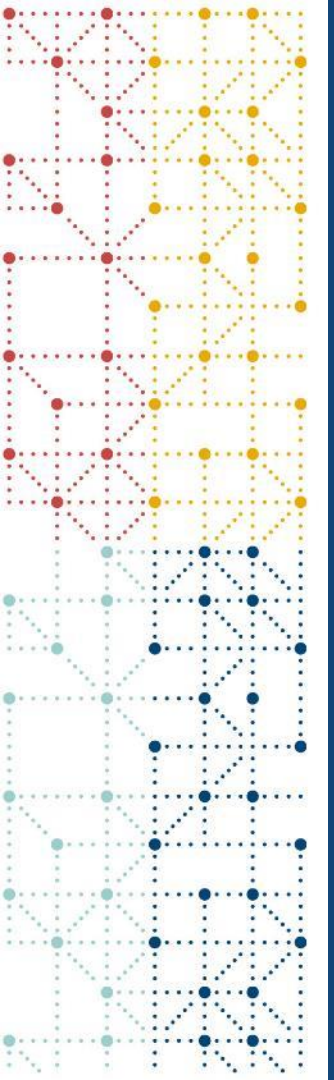
Agenda

1. Accounting for Missing Data --REASND
2. Unscheduled Visits Functionality
3. Strategy for VISITNUM and VISIT for Diary Data
4. Managing Date, Time, and Datetime Variables

What Makes eCOA Data Different

- Collected at a scheduled Visit
  - Generally, on a Tablet
- Collected nearly anywhere at anytime
  - Provisioned or BYOD devices
  - Tablet, Handheld, or Web Portal
- Improves compliance levels
- Motivates and engages patients
- Most countries and languages
- More contemporaneous than Paper PROs





Accounting for Missing Data --REASND

Accounting for missing data and enabling future SDTM population with --REASND

FDA Technical Conformance Guide and SDTMIG v3.4

FDA Technical Conformance Guide section on QS below:

QS Domain (Questionnaires) Some items in an instrument may be logically skipped per the instrument's instructions. Responses for logically skipped items should be (1) recorded and/or scored according to the instructions provided in the instrument's user manual, scoring manual, or other documentation provided by the instrument developer and (2) included in the submission dataset.

SDTMIG v3.4 section 4.5.1.2 Tests Not Done:

Regulatory agencies may require a record for all items on a CRF in QRS datasets (e.g., FT, QS, and clinical classifications in RS)

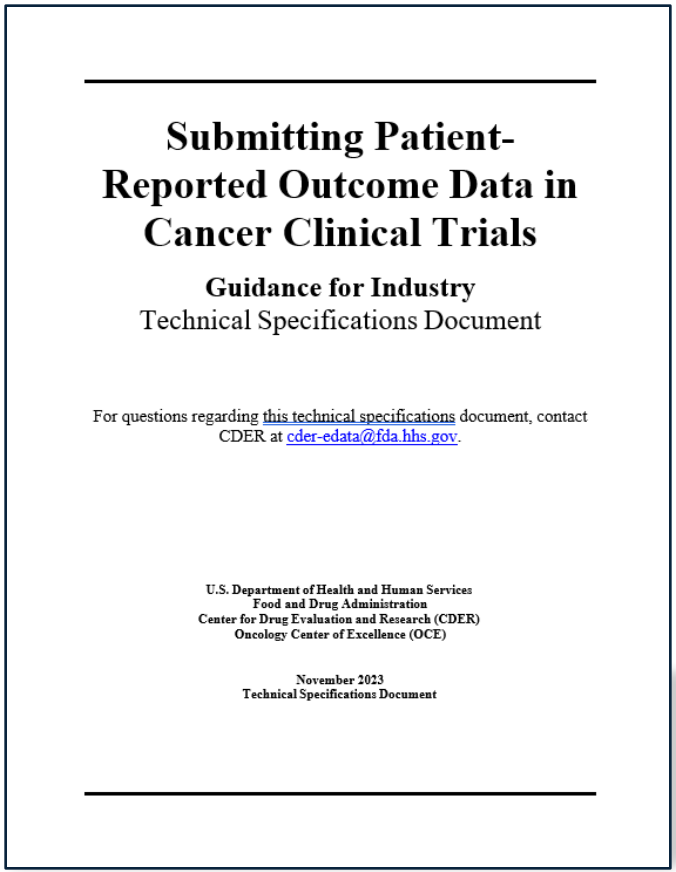
If a record is created for a test not done, --REASND is populated only if a reason was explicitly collected except for QRS logically skipped items.

Submitting Patient-Reported Outcome Data in Cancer Clinical Trials

Section 3.1.1.2 Handling of Missing PRO Data:

QS data should include one record per item per PRO measure per patient per assessment timepoint, regardless of whether an item response is missing

Review Table 2. Recommended QS Representation of Missing PRO Data



Submitting Patient-Reported Outcome Data in Cancer Clinical Trials

Guidance for Industry
Technical Specifications Document

For questions regarding this technical specifications document, contact CDER at cder-edata@fda.hhs.gov.

U.S. Department of Health and Human Services
Food and Drug Administration
Center for Drug Evaluation and Research (CDER)
Oncology Center of Excellence (OCE)

November 2023
Technical Specifications Document

Simple Scenario for REASND

Patient has four ePRO assessments at Visit 4 (PGIS, PGIC, EORTC QLQ-30, EQ-5D-5L)

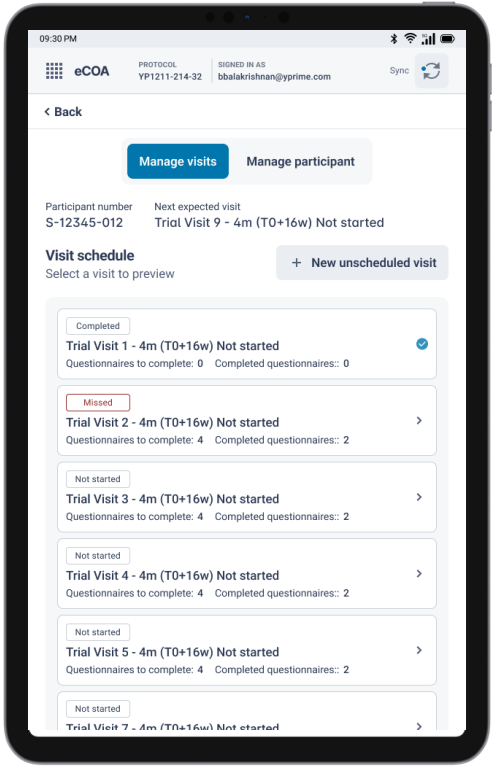
Patient completes PGIS and PGIC but starts QLQ-30 and does not complete as patient is too tired. EQ-5D-5L is not started.

How should Reason Not Done be captured?

- Once for Visit 4 for missing data –OR–
- Each ePRO should have a different reason

What if there are 11 eCOA assessments (ClinRO & ePRO)?

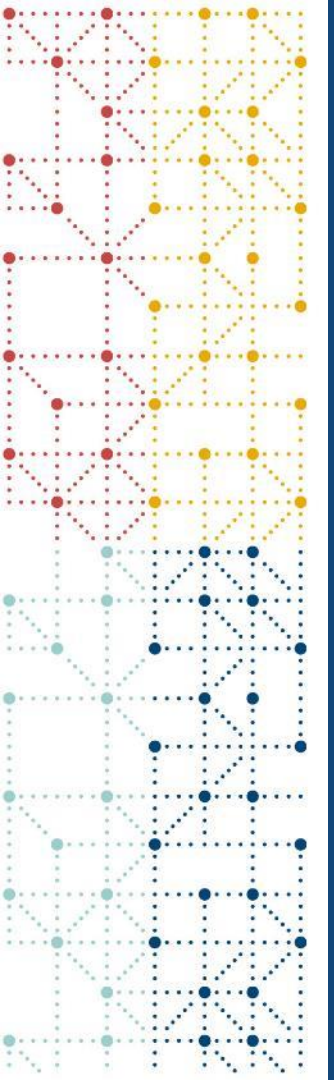
- Once for Visit 4 to indicate missing data –OR–
- Each assessment should have a different reason



Recommendations

What are recommendations for REASND and STAT in QS type domains

- Capture within the product and not derive
- Database scheme may not easy support deriving post hoc
- Present to site or patient at time of collection
- If the PRO data are used to evaluate clinical benefit, ADQS.AREASND may be populated for phantom records where DTYPE = ‘PHANTOM’
- If business rule logic does not allow partially completed questionnaires this may have to change to allow for QSREASND
- Start with End in Mind to determine best approach to data collection



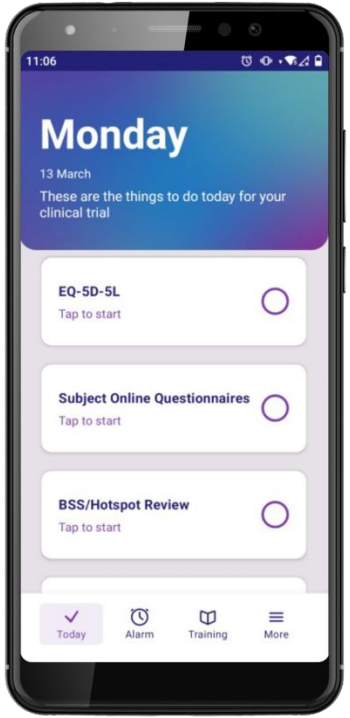
Unscheduled Visits Functionality

Incorporating functionality for unscheduled visits, regardless of protocol specifications

Data Collection Can Occur Outside of Schedule

Protocol does not account for unscheduled visits, but they do occur:

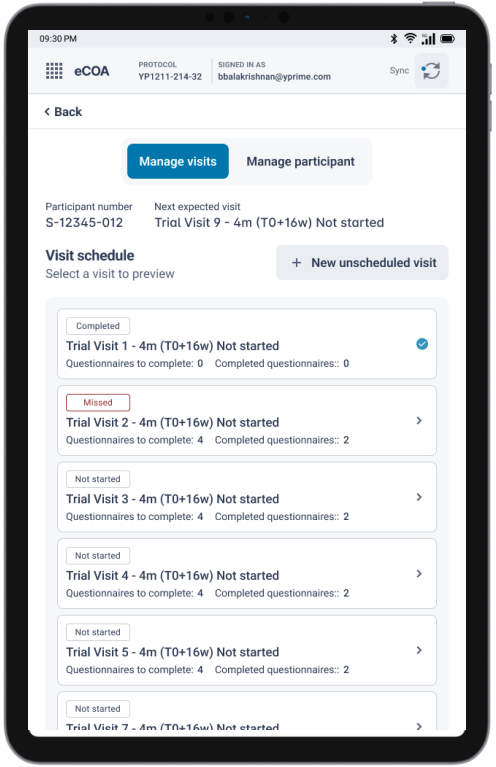
- Is the eCOA platform ready to handle unscheduled visits regardless of protocol?
- How does the system allow for entry?
  - Call to Helpdesk
  - Data clarification form (DCF)
  - Backup option in a Web Portal
  - On the device
- How is data stored once entered?
  - Windowing of Visits difficult at entry
  - Assign VISITNUM value, fix in SDTM or ADaM



Recommendations

What are recommendations for Unscheduled visits

- Windowing is tricky at data collection
- Since assessments may vary at a visit, a set of assessments needs to assigned
- After entry, the data may need to be reassigned through DCF
- Preemptively determine values for VISITNUM and VISIT in collected data for easier SDTM creation
  - VISIT – “UNSCH”
  - VISITNUM – 9999, 8888
- If possible, build the availability of Unscheduled visits on device



Strategy for VISITNUM and VISIT for Diary Data

Planning the strategy for VISITNUM and VISIT in diary and unscheduled data

Appropriate Visit Values for Diary Data

Diary data is generally collected every day by patients on an eCOA device (provisioned or BYOD)

- Data collected once or multiple times a day per schedule, or event driven
- Occurs between Visits
- Windowing raw data to a Visit should not be done on the collected data

What should be the Visit Name and Number for Daily Diary Data?

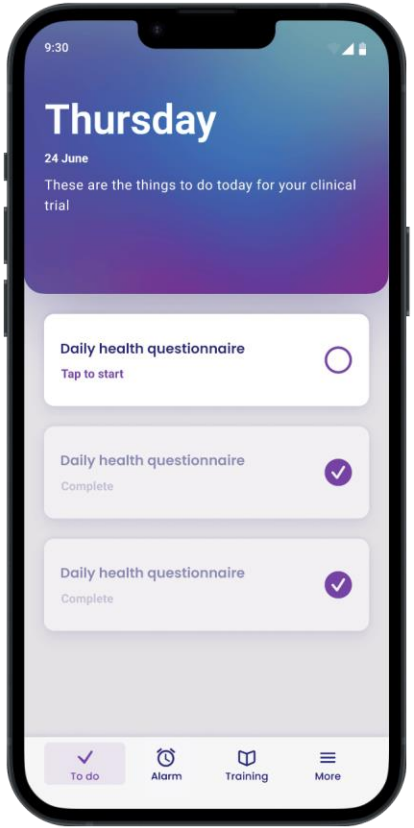
What is the Visit Name and Number for Daily Diary Data?

Data transfers have been rejected due to incorrect configuration of conformance engines

- VISIT for Diary Data is Blank or Null
- VISIT is not in accepted visit list for protocol
- VISIT is setup to be Required (no Nulls)

Not all data has to have a visit number or name

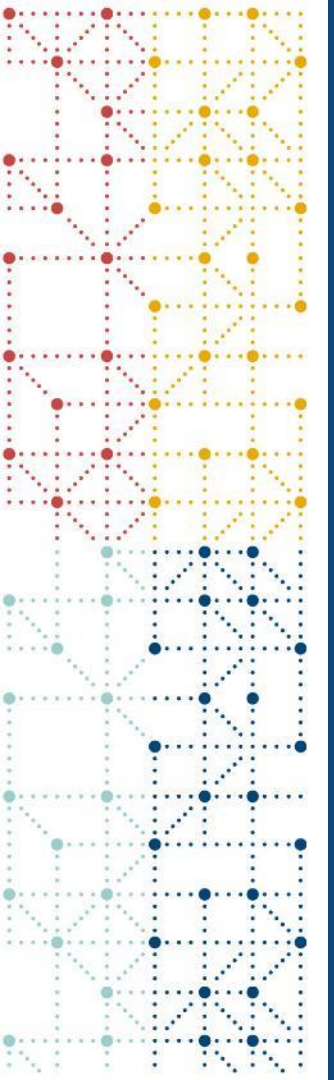
- Per SDTMIG v3.4,
  - VISITNUM is Exp so should generally be populated but allowed to have null records
  - VISIT is Perm so allowed to have null records



Recommendations

What are recommendations for VISITNUM and VISIT for Daily Diary Data

- VISITNUM is Expected and VISIT is Permissible so can both contain null values
  - Update conformance/compliance engines for data transfer
- If needed populate VISITNUM
  - Indicator value 996
- If needed populate VISIT with
  - LOGS
  - DIARY
- Most appropriate timing variable may be a date (--DTC, --STDTC) or some other timing variable (--DY)



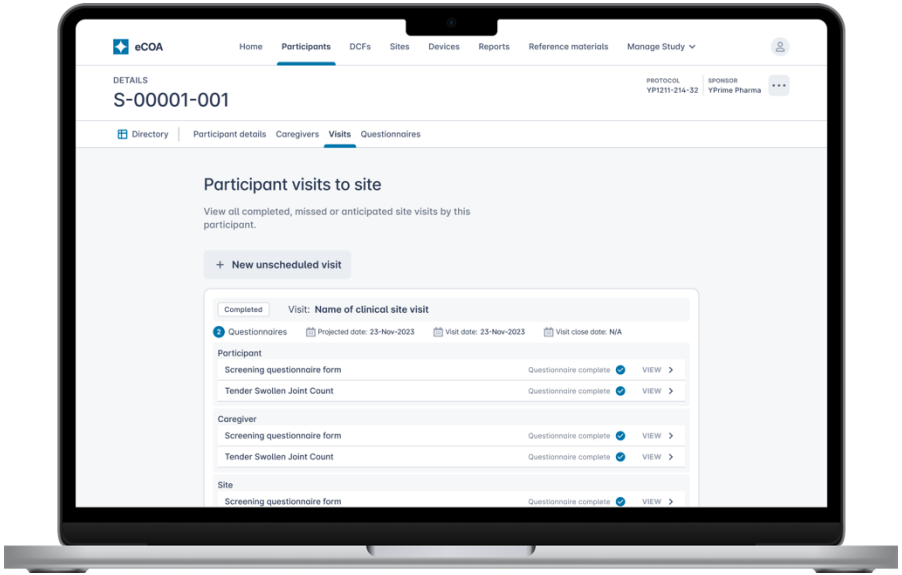
Managing Date, Time, and Datetime Variables

Managing date, time, and datetime variables efficiently for SDTM QS compliance, aligning with eCOA data's multiple time-related entries

Multiple Date, Time, and Datetime Variables

eCOA has a Few Important Date, Time, and Datetime Variables

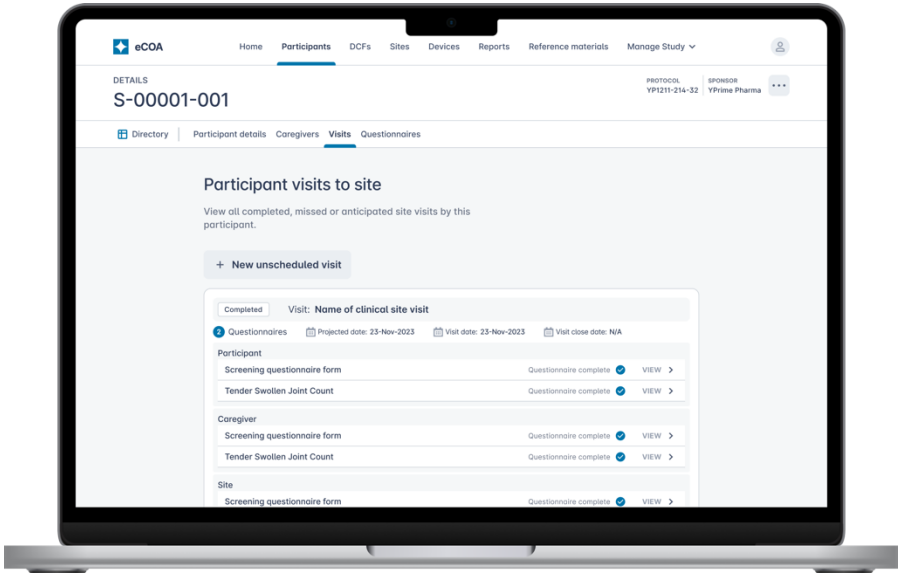
- Diary Date
  - Date of assessment collection; Date of truth
  - Time may not be present or applicable
- Started Datetime
  - Datetime of when assessment was started
  - Data clarifications should not include time
- Completed Datetime
  - Datetime of when assessment was completed
  - Data clarifications should not include time
- Transmission Datetime
  - Datetime of sync to database when data from device is transmitted
  - Maybe greater than Completed Datetime if completed without Wi-Fi or Cellular

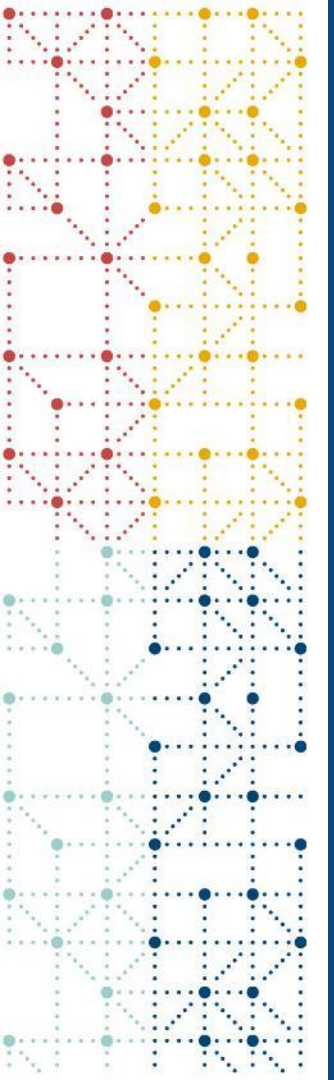


Recommendations

What are recommendations for use of date and datetime variables

- Questionnaires, Ratings, and Scales (QRS) use domains (FT, QS, RS)
- For --DTC, if time is not provided in Diary Datetime use Started or Completed Datetime
- See SDTM v1.7 to add Started and Completed datetime variables
  - --STDTC
  - --ENDTC
- Compare --DTC versus --STDTC and --ENDTC before using Time portion





Conclusion

Conclusion

Overall recommendations:

- When implementing Reason Not Done consider patient and site burden to balance data needed with FDA requirements
- Unscheduled visit functionality should be included for most studies
- VISITNUM and VISIT can be left blank for Diary data and should not be derived. Populating values if needed
- Additional datetime variables Started and Completed should be included in data transfer but may represent time of data change if date is different to Diary Date

Thank You!

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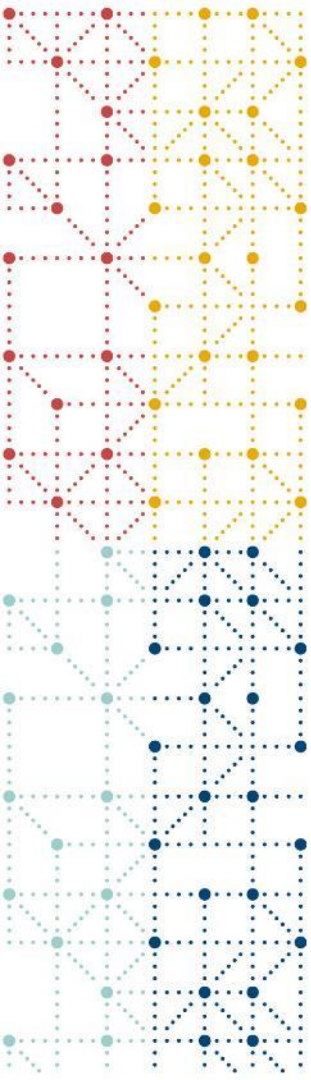

Backup Slides