DS- Disposition

THE ROLE OF ONE DOMAIN

BY J.J. HANTSCH, PAREXEL INC
CDISC

... not just the latest
code schema
a philosophy
of uniformity, of integration, and of completeness
UNIFORMITY

• of the format for variables
  ➢ Dates, Parameter codes, --SEQ, --SPID, etc

• of the design of domains
  ➢ findings, events, interventions each with a style
  ➢ Required, Expected, Permissible
INTEGRATION

• of planned and actual,
  • TE and TV
  • DS and SV

• reported and standardized
  • --ORRES and --STRESN
COMPLETENESS

• Central hub dataset (DM, ADSL)
• All data reported
• Audit trail is clear
• Numeric and character
  ➢ xxDTC, xxDT, xxDY
  ➢ STRESC/N
CDISC-ADAM

• Uniformity
• Integration
• Completeness

ongoing issues for today’s ADaM committee
FUNCTION OF DS

• TE and TV report the planned elements and visits
• SV reports the actual subject visits
• DS reports the actual subject epochs
FUNCTION OF DS (2)

• Just as TV and SV are unblinded info shared with both the subject and the clinical investigator

• TE and DS should be blinded to preserve the double blind (how long is the run-in period, dose escalation or cross-over)

• Double blind means investigator doesn’t know if the subject is on drug A or B
DS IN SDTM IG V3.2

“... include protocol milestones, such as randomization, as well as subject’s completion status or reason for discontinuation for the entire study or each phase or segment of the study, including screening and post-treatment follow-up. ...”
**DS REQUIRED VARIABLES**

- STUDYID
- DOMAIN
- USUBJID
- DSSEQ
- DSTERM
- DSDECOD
- DSCAT
- DSSTDTC
**DS REQUIRED VARIABLES (2)**

- **STUDYID** – study identifier
- **DOMAIN = “DS”**
- **USUBJID** – subject identifier
- **DSSEQ** – a sequence number
**DS REQUIRED VARIABLES (3)**

- **DSTERM** – verbatim name of event or protocol milestone
- **DSDECOD** – controlled term for event or protocol milestone
- **DSCAT** – DISPOSITION EVENT, PROTOCOL MILESTONE, or OTHER EVENT
- **DSSTDTC** – Start date/time of event
BUILDING DS-CHOOSING THE RECORDS

• Start with a schedule of events

• Mark each milestone
  – screening
  – randomization
  – each treatment change
  – end of dosing
  – any follow-up events
  – disposition (EOS)

• Building DS-choosing the records
  • Start with a schedule of events
FOR EXAMPLE, A STUDY SCHEDULE

Screening Visit 1
Randomization visit Visit 2
Run-in dosing one Visit 3
Run-in dosing two Visit 4
Experimental dose 1A Visit 5
Experimental dose 1B Visit 6
Experimental dose 1C Visit 7
Wash-out Period Visit 8
Experimental dose 2A Visit 9
Experimental dose 2B Visit 10
Experimental dose 2C Visit11
Follow-Up Visit Visit 12
MARKING THE STUDY SCHEDULE

<table>
<thead>
<tr>
<th>Marking</th>
<th>Visit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Screening</td>
<td>Visit 1</td>
</tr>
<tr>
<td>Randomization visit</td>
<td>Visit 2</td>
</tr>
<tr>
<td>Run-in dosing one</td>
<td>Visit 3</td>
</tr>
<tr>
<td>Run-in dosing two</td>
<td>Visit 4</td>
</tr>
<tr>
<td>Experimental dose 1A</td>
<td>Visit 5</td>
</tr>
<tr>
<td>Experimental dose 1B</td>
<td>Visit 6</td>
</tr>
<tr>
<td>Experimental dose 1C</td>
<td>Visit 7</td>
</tr>
<tr>
<td>Wash-out Period</td>
<td>Visit 8</td>
</tr>
<tr>
<td>Experimental dose 2A</td>
<td>Visit 9</td>
</tr>
<tr>
<td>Experimental dose 2B</td>
<td>Visit 10</td>
</tr>
<tr>
<td>Experimental dose 2C</td>
<td>Visit11</td>
</tr>
<tr>
<td>Follow-Up Visit</td>
<td>Visit 12</td>
</tr>
</tbody>
</table>
Chose each milestone

• screening 
  visit 1
• randomization  
  visit 2
• each treatment change  
  visits 3, 5, 8, & 9
• disposition (EOS)  
  visit 12 or e.term
SO 7 RECORDS PER SUBJECT?

• Completing subjects *in this study* will have seven (7) unique records in the DS dataset.

• One record per protocol milestone per subject

• Fewer for Screen Failures, Refused Consent or Early Terminators
<table>
<thead>
<tr>
<th>STUDYID</th>
<th>USUBJID</th>
<th>DSSEQ</th>
<th>DSTERM</th>
<th>DSDECOD</th>
<th>DSCAT</th>
<th>DSSTDTC</th>
</tr>
</thead>
<tbody>
<tr>
<td>BOB-101</td>
<td>B101-001</td>
<td>1</td>
<td>Screening</td>
<td>SCREEN</td>
<td>Protocol Milestone</td>
<td>10-22-15</td>
</tr>
<tr>
<td>BOB-101</td>
<td>B101-001</td>
<td>2</td>
<td>Randomization</td>
<td>RANDOM</td>
<td>Protocol Milestone</td>
<td>10-29-15</td>
</tr>
<tr>
<td>BOB-101</td>
<td>B101-001</td>
<td>3</td>
<td>Run In Dose1</td>
<td>DOSING</td>
<td>Protocol Milestone</td>
<td>11-05-15</td>
</tr>
<tr>
<td>BOB-101</td>
<td>B101-001</td>
<td>4</td>
<td>Run In Dose2</td>
<td>DOSING</td>
<td>Protocol Milestone</td>
<td>11-12-15</td>
</tr>
<tr>
<td>BOB-101</td>
<td>B101-002</td>
<td>1</td>
<td>Screening</td>
<td>SCREEN</td>
<td>Protocol Milestone</td>
<td>10-22-15</td>
</tr>
<tr>
<td>BOB-101</td>
<td>B101-002</td>
<td>2</td>
<td>Early Termin</td>
<td>ERLYTRM Disposition Event</td>
<td>10-31-15</td>
<td></td>
</tr>
<tr>
<td>BOB-101</td>
<td>B101-003</td>
<td>1</td>
<td>Screening</td>
<td>SCREEN</td>
<td>Protocol Milestone</td>
<td>10-23-15</td>
</tr>
<tr>
<td>BOB-101</td>
<td>B101-003</td>
<td>2</td>
<td>Randomization</td>
<td>RANDOM</td>
<td>Protocol Milestone</td>
<td>10-30-15</td>
</tr>
<tr>
<td>BOB-101</td>
<td>B101-003</td>
<td>3</td>
<td>Run In Dose1</td>
<td>DOSING</td>
<td>Protocol Milestone</td>
<td>11-06-15</td>
</tr>
<tr>
<td>BOB-101</td>
<td>B101-004</td>
<td>1</td>
<td>Screening</td>
<td>SCREEN</td>
<td>Protocol Milestone</td>
<td>10-24-15</td>
</tr>
<tr>
<td>BOB-101</td>
<td>B101-005</td>
<td>1</td>
<td>Screening</td>
<td>SCREEN</td>
<td>Protocol Milestone</td>
<td>10-25-15</td>
</tr>
<tr>
<td>BOB-101</td>
<td>B101-005</td>
<td>2</td>
<td>Randomization</td>
<td>RANDOM</td>
<td>Protocol Milestone</td>
<td>11-01-15</td>
</tr>
<tr>
<td>BOB-101</td>
<td>B101-005</td>
<td>3</td>
<td>Run In Dose1</td>
<td>DOSING</td>
<td>Protocol Milestone</td>
<td>11-08-15</td>
</tr>
<tr>
<td>BOB-101</td>
<td>B101-006</td>
<td>1</td>
<td>Screening</td>
<td>SCREEN</td>
<td>Protocol Milestone</td>
<td>10-31-15</td>
</tr>
</tbody>
</table>
GREAT!!

How to use it ??
Dear Clinical Operations,

If I could provide you with a list of the status of all of the subjects in each of your clinical trials, broken out by updated (changed) status and totals for each milestone attained in the clinical trial, each time when I receive a refreshed source dataset, would you like that?

Your Statistical Programmer,
WHAT DOES THAT MEAN?

• A simple report (a chippie – *simple for you but adds great value to your company*)

• Run once each time you receive data

• For each study

• Stats about Each Milestone

• Contrast Total and New
<table>
<thead>
<tr>
<th>Protocol Milestone</th>
<th>Visit</th>
<th>Day</th>
<th>Completed</th>
<th>(%)</th>
<th>Newly Completed</th>
<th>(%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Screening</td>
<td>1</td>
<td>-14</td>
<td>26</td>
<td>100%</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Randomization visit</td>
<td>2</td>
<td>-7</td>
<td>25</td>
<td>96%</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Run-in dosing one</td>
<td>3</td>
<td>1</td>
<td>22</td>
<td>85%</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Experimental dose 1A</td>
<td>5</td>
<td>15</td>
<td>21</td>
<td>81%</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Wash-out Period</td>
<td>8</td>
<td>36</td>
<td>21</td>
<td>81%</td>
<td>3</td>
<td>14%</td>
</tr>
<tr>
<td>Experimental dose 2A</td>
<td>9</td>
<td>43</td>
<td>20</td>
<td>77%</td>
<td>5</td>
<td>25%</td>
</tr>
<tr>
<td>Follow-Up Visit</td>
<td>12</td>
<td>64</td>
<td>20</td>
<td>77%</td>
<td>7</td>
<td>35%</td>
</tr>
<tr>
<td>Early Terminated</td>
<td>99</td>
<td>Any</td>
<td>6</td>
<td>23%</td>
<td>1</td>
<td>17%</td>
</tr>
</tbody>
</table>
**PROGRAMMING NEEDS**

- Macro variables - dates of the two data loads
- Sort the new dataset
- Keep the previous version’s dataset
- Compare to new dataset
- Create Flag variable for new milestone
- Tabulate results (proc freq or proc tabulate)
- Save most recent as old
DON’T FORGET

• Display the Date PROMINENTLY

• Identify the Study (Studies)

  »Think: ISS/ ISE

• Identify CURRENT or COMPLETE

• Identify Yourself