



SI04

Practical Application of Multiple Screenings/Enrollments

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Introduction

- ▶ Multiple screenings and enrollments have become common for several reasons, including rare diseases with smaller patient pools.
- ▶ Some major challenges of SDTM mapping of rescreening records are:
 - Multiple consent dates
 - Different screening numbers for the same subject
 - Requirement of consistent USUBJID within and across studies for a submission
- ▶ This paper gives an overview of how we handled SDTM mapping, following FDA guidelines, for our studies that allowed multiple screenings.

FDA TCG, October 2022

“If a single subject is screened and/or enrolled more than once in a study, then the subject’s SUBJID should be different for each unique screening or enrollment. For a study with multiple screenings and/or multiple enrollments per subject, SUBJID should be included in other related domains besides DM even though it may cause validation errors.”

“For subjects with multiple enrollments within a single study, the primary enrollment should be submitted in DM. Additional enrollments should be included in a custom domain with a similar structure to DM. ”

Example study: Rainbow

A patient can initially screen under subject number “Unicorn1”

Patient can fail screening and re-screen under subject number “Unicorn2”.

When the patient is screening under “Unicorn2”, their previously screened number “Unicorn1” is collected on the informed consent page.

Informed consent raw data:

Study Name	Subject Number	Informed Consent Date	Previous Subject Number
Rainbow	Unicorn1	Jan 1 2020	
Rainbow	Unicorn2	Jan 1 2021	Unicorn1

Often, subjects have lab/vital signs visits before they are determined to be screen failures

Vital Signs raw data:

Study Name	Subject Number	height	weight	temp	Visit date
Rainbow	Unicorn1	170	56	97	Jan 2 2020
Rainbow	Unicorn2	170	57	97.5	Jan 2 2021

Our solution

- ▶ Include *SUBJID* in any domain that includes previously failed screening records. This will contain the screening number at the time of that visit.
- ▶ To aid in visibility, we also include *xxGRPID*: null or contains the value “PREVIOUS SCREENING ATTEMPT”. Allows for easy filtering for screen failure records downstream. Example: ISS and other pooling as well

SDTM.VS:

STUDYID	USUBJID	SUBJID	VSGRPID	VSTEST	VSTESTCD	VSORRES	VSDTC
RAINBOW	RAINBOW-UNICORN2	Unicorn1	PREVIOUS SCREENING ATTEMPT	Height	HEIGHT	170	2020-01-02
RAINBOW	RAINBOW-UNICORN2	Unicorn1	PREVIOUS SCREENING ATTEMPT	Weight	WEIGHT	56	2020-01-02
RAINBOW	RAINBOW-UNICORN2	Unicorn1	PREVIOUS SCREENING ATTEMPT	Temperature	TEMP	97	2020-01-02
RAINBOW	RAINBOW-UNICORN2	Unicorn2		Height	HEIGHT	170	2021-01-02
RAINBOW	RAINBOW-UNICORN2	Unicorn2		Weight	WEIGHT	57	2021-01-02
RAINBOW	RAINBOW-UNICORN2	Unicorn2		Temperature	TEMP	97.5	2021-01-02

Our solution

- ▶ Create a custom domain (YD – Demographics of Previous Screenings) that is similar in structure to DM, to include all previously failed screening attempts
- ▶ Only created if there is at least one subject that has screened more than once. Will only contain records from previously failed screenings. All records will have SUBJID populated and can be uniquely identified using SUBJID.

SDTM.YD:

STUDYID	USUBJID	SUBJID	RFICDTC	AGE	SEX	RACE	ARMCD	ARM
RAINBOW	RAINBOW-UNICORN2	Unicorn1	2020-01-01	63	F	ASIAN	SCRNFAIL	Screen Failure
RAINBOW	RAINBOW-UNICORN43	Unicorn40	2022-03-25	35	F	WHITE	SCRNFAIL	Screen Failure
RAINBOW	RAINBOW-UNICORN55	Unicorn54	2022-04-07	41	M	BLACK OR AFRICAN AMERICAN	SCRNFAIL	Screen Failure
RAINBOW	RAINBOW-UNICORN67	Unicorn62	2022-05-18	54	F	WHITE	SCRNFAIL	Screen Failure
RAINBOW	RAINBOW-UNICORN70	Unicorn68	2022-07-23	61	M	ASIAN	SCRNFAIL	Screen Failure
RAINBOW	RAINBOW-UNICORN85	Unicorn84	2022-10-12	29	F	WHITE	SCRNFAIL	Screen Failure

P21

- ▶ Including the previously failed screening records in the SDTM produces a few expected P21 issues.
- ▶ Associated reasonings are included in the SDTM Reviewer's Guide
- ▶ Include table linking each SUBJID for a single subject to that subject's USUBJID with explanations included in the SDRG

Source Pinnacle 21 ID Message			SDRG comment
DS			
SD0058	Variable appears in dataset, but is not in SDTM model		SUBJID added to reflect the subject number associated with the screening attempt for each record
SD1088	DSSTDY variable value is not populated		Records are from previously failed screening attempts. DY variables for screen failure records will remain null
SD1319	DSSTDTC is before RFICDTC		Records are from previously failed screening attempts. Informed consent date for successful screening attempt is post event date
SD1201	Duplicate records in DS domain		Not true duplicates. Records are from previous screening attempt. SUBJID/GRPID can be used to differentiate
LB			
SD0058	Variable appears in dataset, but is not in SDTM model		SUBJID added to reflect the subject number associated with the screening attempt for each record
SD1084	LBDY variable value is not populated		Records are from previously failed screening attempts. DY variables for screen failure records will remain null
SD1117	Duplicate records		Not true duplicates. Records are from previous screening attempt. SUBJID/GRPID can be used to differentiate
SE			
SD0058	Variable appears in dataset, but is not in SDTM model		SUBJID added to reflect the subject number associated with the screening attempt for each record
SD1088	SESTDY variable value is not populated		Records are from previously failed screening attempts. DY variables for screen failure records will remain null
SD1092	SEENDY variable value is not populated		Records are from previously failed screening attempts. DY variables for screen failure records will remain null
SD1076	Model permissible variable added into standard domain		SUBJID added to reflect the subject number associated with the screening attempt for each record
SV			
SD0058	Variable appears in dataset, but is not in SDTM model		SUBJID added to reflect the subject number associated with the screening attempt for each record
SD1088	SVSTDY variable value is not populated		Records are from previously failed screening attempts. DY variables for screen failure records will remain null
SD1092	SVENDY variable value is not populated		Records are from previously failed screening attempts. DY variables for screen failure records will remain null
SD1076	Model permissible variable added into standard domain		SUBJID added to reflect the subject number associated with the screening attempt for each record
VS			
SD0058	Variable appears in dataset, but is not in SDTM model		SUBJID added to reflect the subject number associated with the screening attempt for each record
SD1084	VSDY variable value is not populated		Records are from previously failed screening attempts. DY variables for screen failure records will remain null
YD			
SD9999	Dataset YD class not recognized		Subjects had multiple screenings. The successful/most recent screening is included in DM and previously failed screenings are in YD, a custom domain with a structure similar to DM

CDISC draft domain - DC

- ▶ DC - Demographics for Multiple Participations
- ▶ Contains all variables in DM plus FOCID and DCSEQ
- ▶ DC will contain all records in DM in addition to the previously failed screening records. This is the main point of difference with our YD domain.
- ▶ DC domain expected to finalize in SDTM IG 4.0. Addition of SUBJID to domains other than DM also expected.

Thanks!

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Questions?