



Define VLM Character Codelist Creation

CODING TIPS AND TRICKS FOR DEFINE VALUE LEVEL METADATA

Overview

- ▶ Variables separated within each PARAMCD by possible values
- ▶ 3 overall types: integer, character, float
- ▶ Subdivided by Derivation
- ▶ Further divided by length of float or list of potential character values

Parameter Value List - ADVS [AVAL]					
Variable	Where	Type	Length / Display Format	Controlled Terms or Format	Source / Derivation / Comment
AVAL	PARAMCD IN ("HEIGHT" (Height (cm)), "WEIGHT" (Weight (kg)), "WEIGHTS" (Weight (kg) Screen), "WSTCIR" (Waist Circumference (cm)), "WSTCIRS" (Waist Circumference (cm) Screen))	float	5		Derived: Numeric VS.VSSTRESC
AVAL	PARAMCD IN ("SPSYSBP" (10 Minute Supine Systolic Blood Pressure (mmHg)), "STDIABP" (1 Minute Sitting Diastolic Blood Pressure (mmHg)), "STPULSE" (1 Minute Sitting Pulse Rate (bpm)), "STSYSBP" (1 Minute Sitting Systolic Blood Pressure (mmHg)), "PSDIABP" (3 Minutes After Standing Diastolic Blood Pressure (mmHg)), "PSPULSE" (3 Minutes After Standing Pulse Rate (bpm)), "PSSYSBP" (3 Minutes After Standing Systolic Blood Pressure (mmHg)), "SDDIABP" (Immediately After Standing Diastolic Blood Pressure (mmHg)), "SDPULSE" (Immediately After Standing Pulse Rate (bpm)), "SDSYSBP" (Immediately After Standing Systolic Blood Pressure (mmHg)), "SPDIABP" (10 Minute Supine Diastolic Blood Pressure (mmHg)), "SPPULSE" (10 Minute Supine Pulse Rate (bpm)))	integer	3		Derived: Numeric VS.VSSTRESC

Character Variable VLM

- ▶ Grouped by Parameters
- ▶ Each grouping of parameters with non-missing values for the variable is assigned a unique Codelist

Parameter Value List - ADVS [CRIT1]

Variable	Where	Type	Length / Display Format	Controlled Terms or Format	Source / Derivation / Comment
CRIT1	PARAMCD IN ("PSDIABP" (3 Minutes After Standing Diastolic Blood Pressure (mmHg)) , "SDDIABP" (Immediately After Standing Diastolic Blood Pressure (mmHg)) , "STDIABP" (1 Minute Sitting Diastolic Blood Pressure (mmHg)))	text	33	[">=105 mmHg and >=15 mmHg increase"] < ADVS CRIT1 Codelist AA >	Derived: IQVIA CRIT1 VLM Derivation.
CRIT1	PARAMCD IN ("SDPULSE" (Immediately After Standing Pulse Rate (bpm)) , "SPPULSE" (10 Minute Supine Pulse Rate (bpm)) , "STPULSE" (1 Minute Sitting Pulse Rate (bpm)) , "PSPULSE" (3 Minutes After Standing Pulse Rate (bpm)))	text	31	[">=120 bpm and >=15 bpm increase"] < ADVS CRIT1 Codelist AB >	Derived: IQVIA CRIT1 VLM Derivation.
CRIT1	PARAMCD IN ("WEIGHT" (Weight (kg)) , "WEIGHTS" (Weight (kg) Screen))	text	13	[">=7% increase"] < ADVS CRIT1 Codelist AC >	Derived: IQVIA CRIT1 VLM Derivation.

Codelists in Define Document

WhereClause:

ID	Dataset	Variable	Comparator	Value
ADVS.CRIT1.PSDIABP-STDIABP	ADVS	PARAMCD	IN	PSDIABP, SDDIABP, STDIABP
ADVS.CRIT1.PSPULSE-STPULSE	ADVS	PARAMCD	IN	SDPULSE, SPPULSE, STPULSE, PSPULSE
ADVS.CRIT1.WEIGHT-WEIGHTS	ADVS	PARAMCD	IN	WEIGHT, WEIGHTS

ValueLevel:

Dataset	Variable	Where Clause	Type	Length	Codelist
ADVS	CRIT1	ADVS.CRIT1.PSDIABP-STDIABP	ext	33	ADVS-CRIT1-CL-AA
ADVS	CRIT1	ADVS.CRIT1.PSPULSE-STPULSE	ext	31	ADVS-CRIT1-CL-AB
ADVS	CRIT1	ADVS.CRIT1.WEIGHT-WEIGHTS	ext	13	ADVS-CRIT1-CL-AC

Codelists:

ID	NAME	Data Type	TERM
ADVS-CRIT1-CL-AA	ADVS CRIT1 Codelist AA	text	>=105 mmHg and >=15 mmHg increase
ADVS-CRIT1-CL-AB	ADVS CRIT1 Codelist AB	text	>=120 bpm and >=15 bpm increase
ADVS-CRIT1-CL-AC	ADVS CRIT1 Codelist AC	text	>=7% increase

Creating character codelists:

Concatenate all datasets together that you want to create codelists with

Assign numbers 1, 2, etc. to each possible value within each variable/paramcd

Transpose with ID being this numeric assignment and var is the variable.

Repeat process with PARAMCD to create one line per codelist. CATX can handle concatenating all non-missing columns.

DOMAIN	var_name	paramcd	val
ADVS	CRIT1FL	PSDIABP	<80 mmhg
ADVS	CRIT1FL	PSDIABP	>120 mmhg
ADVS	CRIT1FL	SDDIABP	<80 mmhg
ADVS	CRIT1FL	SDDIABP	>120 mmhg
ADVS	CRIT1FL	STDIABP	<80 mmhg
ADVS	CRIT1FL	STDIABP	>120 mmhg

Creating character codelists, cont:

- ▶ data codelist;
- ▶ set codelist;
- ▶ by dataset var_name paramcd val;
- ▶ retain valnum;
- ▶ if first.paramcd then valnum = 1;
- ▶ else valnum = valnum+1;
- ▶ run;
- ▶
- ▶ proc transpose data = codelists out = codeltrn prefix = val;
- ▶ by dataset var_name paramcd;
- ▶ var val;
- ▶ id valnum;
- ▶ run;
- ▶
- ▶ proc sort;
- ▶ by dataset var_name val: paramcd; *using a colon after val ensures that you sort by every column val1, val2, etc. before paramcd;
- ▶ run;

DOMAIN	var_name	paramcd	_NAME_	val1	val2
ADVS	CRIT1FL	PSDIABP	val	<80 mmhg	>120 mmhg
ADVS	CRIT1FL	SDDIABP	val	<80 mmhg	>120 mmhg
ADVS	CRIT1FL	STDIABP	val	<80 mmhg	>120 mmhg

Naming character codelists:

Suggestion: order alphabetically by lowest PARAMCD value within each variable. Assign alphabetically: AA, AB, AC, etc. From previous example:

PSDIABP, SDDIABP, STDIABP	ADVS-CRIT1-CL-AA
SDPULSE, SPPULSE, STPULSE, PSPULSE	ADVS-CRIT1-CL-AB
WEIGHT, WEIGHTS	ADVS-CRIT1-CL-AC

An easy technique for achieving these names involves creating a character variable and populating it with the alphabet

It also makes use of the SAS mod(int, int) function

Naming character codelists:

- ▶ data codelist;
- ▶ set codelist;
- ▶ retain ord;
- ▶ by dset varnam paramlst;
- ▶
- ▶ alphabet = 'ABCDEFGHIJKLMNOPQRSTUVWXYZ';
- ▶
- ▶ if first.paramlst then ord = 0;
- ▶ else ord = ord+1;
- ▶
- ▶ letters = substr(alphabet,floor(ord/26)+1, 1) || substr(alphabet, mod(ord, 26)+1, 1);
- ▶
- ▶ run;