

Develop Automatic Checks for your Standards

...using SAS™ and XLS as technical solutions

...to ensure compliance with standards like CDISC®

...to free up time on higher knowledgeable issues



Bayer HealthCare

Enter data only once

Read checked data as many times as needed

Input table is different from output table

Identify rules: plausible values, consistency, etc.

Run checks for every single table first and then across tables

Store checks definition in a table

One check = One name (unique, stable, meaningful)

Report queries in a XLS file (convenient for end user)

Resolve queries whenever possible or flag them

TO RESOLVE

EXCEPTION

AUTORESOLVE

PENDING

Store decisions permanently to be available at next run

Build new checks based on gained experience

Metadata

Codelists

International Standards

Company Standards

VAR NAME	VAR LABEL	VAR TYPE	VAR NOTE
VAR_A	VAR_A_LABEL	Char	VAR_1NOTE

Read Source Data

VAR NAME	VAR LABEL	VAR OUTPUT FORM	VAR TYPE	CODELIST	VAR NOTE
VAR_A	VAR_A_LABEL	2.	Char	CODELIST_1a	VAR_1NOTE
VAR_B	VAR_B_LABEL	3.	Char	CODELIST_1a	
VAR_C	VAR_C_LABEL	30.	Num	CODELIST_3	

chk_outform_across

chk_type_codmeta
chk_type_metacod

CODE	CODELIST ID	CODELIST EXTENSIBLE	SUBMISSION VALUE
CODELIST_1a ID		Y	CODELIST_1a
CODE ID 11 ID	CODELIST_1a ID		VALUE_1a1
CODE ID 12 ID	CODELIST_1a ID		VALUE_1a2
CODELIST_1b ID		Y	CODELIST_1b
CODE ID 11 ID	CODELIST_1b ID		VALUE_1b1
CODE ID 12 ID	CODELIST_1b ID		VALUE_1b2
CODELIST_2 ID		N	CODELIST_2
CODE ID	CODELIST_2 ID		VALUE_21

chk_codlist_dup

CODELIST	TYPE	CODE	DECODE
CODELIST_1	Char	VALUE_1a1	VALUE_1b1
		VALUE_1a1	VALUE_1b2
		VALUE_1a88	VALUE_1b88
CODELIST_2	Num	...	VALUE_21
			VALUE_99
CodeList_3	Char	...	VALUE_31

chk_extensible_ny

Queries Reports

Decision	Decision Date	Decision User	Decision Note	Check Name	Status	Data Set	Variable	Actual Value	Expected Value	Rule Details
1										
2				chk_outform_across	STATUS=A	DM	PPROT	NY Codelist Decode OUTFORM=3	Common outform (w.d)	Variables using the same codelist should have the same output form.
3				chk_outform_across	STATUS=A	DM	ITT	NY Codelist Decode OUTFORM=2	Common outform (w.d)	Variables using the same codelist should have the same output form.
4				chk_type_metacod	STATUS=A	LB	LBTESTCD	LBTESTCD codelist is character	Same type for both codelist and variable	The type of a variable must match the type of the associated format.

Decision	Decision Date	Decision User	Decision Note	Check Name	Status	Form Name	Start	Actual Value	Expected Value	Rule Details
1										
2				chk_codlist_dup	STATUS=A	LBTESTCD	ATAGLP	START=AMMONA LABEL=Ammonia	No Duplicate	More than one code per codelist is not allowed in SAS.
3				chk_codlist_dup	STATUS=A	LBTESTCD	ATAGLP	START=AMMONA LABEL=Ammonia	No Duplicate	More than one code per codelist is not allowed in SAS.
4				chk_type_codmeta	STATUS=A	LBTESTCD	ATAGLP	Variable LBTESTCD is numeric.	Same type for both codelist and variable	The type of a variable must match the type of the associated format.
5				chk_type_codmeta	STATUS=A	LBTESTCD	ATAGLP	Variable LBTESTCD is numeric.	Same type for both codelist and variable	The type of a variable must match the type of the associated format.
6				chk_extensible_ny	STATUS=X	NY	997	LABEL=NOT ASSESSABLE	Entry exist in SDTM CT	According to SDTM Controlled Terminology, the codelist is not extensible. Only submission values specified in SDTM CT are allowed.