Plausibility bounds

Under this document we describe the plausible values consider for each of the variables used in the imputation model. In addition we provide the rules that we applied on the creation of additional variables required for the imputation model.

Plausibility bounds

The following table describes the plausibility bounds for the continuous variables and the time-related variables used in the imputation process. There you can see for each variable, the classification, the units and the plausibility bounds (minimum, maximum). We set all values outside the plausible bounds as NA.

Classification	Variable name	Variable type	Units	Min	Max
Pwoman	age	Continuous	(years)	13	Inf
Pwoman	weight	Continuous	(Kg)	0	Inf
Pwoman	pre_pregweight	Continuous	(Kg)	0	Inf
Pwoman	height	Continuous	(cm)	0	Inf
Exposure	zikv_pcr_ga_1	Time	(weeks)	0	Inf
Exposure	zikv_pcr_vl_1	Continuous	(copies/microL)	0	Inf
Exposure	zikv_elisa_ga_1	Time	(weeks)	0	Inf
Exposure	zikv_ga	Time	(weeks)	0	Inf
Exposure	symp_ga	Time	(weeks)	0	Inf
Exposure	arb_clindiag_ga	Time	(weeks)	0	Inf
Outcome	miscarriage_ga	Time	(weeks)	0	Inf
Outcome	loss_ga	Time	(weeks)	0	Inf
Outcome	endga	Time	(weeks)	0	Inf
Outcome	birth_ga	Time	(weeks)	0	Inf
Outcome	inf_weight	Continuous	(grams)	100	6000
Outcome	inf_length	Continuous	(cm)	18	Inf
Outcome	inf_head_circ_birth	Continuous	(cm)	0	Inf
Outcome	inf_head_circ_fu1	Continuous	(cm)	0	Inf
Outcome	inf_head_circ_age_fu1	Time	(months)	0	Inf
Outcome	inf_head_circ_fu2	Continuous	(cm)	0	Inf
Outcome	inf_head_circ_age_fu2	Time	(months)	0	Inf
Outcome	inf_head_circ_fu3	Continuous	(cm)	0	Inf
Outcome	inf_head_circ_age_fu3	Time	(months)	0	Inf

By running this code, it is automatically generated the "obs_to_check.RData" file with the observations outside the plausibility range, it can be found in the "3_Output_data" folder. Inside obs_to_check dataset, there is an additional column called "Var_to_check" that indicates the variable with implausible values for each observation.

Logic rules for exposures

Set to NA values

SAS and R manage differently the NA values, to easy the imputation process we set to NA all the values with values equal to 666,777,888,999. Except for the arb_clindiag varaible, which "777" values were reasigned to a "6" level as it is used later on to define the CZS variable.

Zika test time of measurement (zikv_ga)

In case that is not specified the zikv_ga value for an observation, for which it was specified the time of measurement for the PCR "zikv_pcr_ga_1" or the elisa test "zikv_elisa_ga_1", we set the zikv_ga value with the date of measurment of the earliest test.

if is.na (zikv_ga) then zikv_ga = min (zikv_pcr_ga_1,zikv_elisa_ga_1)

storch_patho

arb_ever

flavi_alpha_virus

arb_preg_nz