

Appendix A15. Logical checks and decision rules for coding

Following logical checks have to be done before transferring data to the coordinating center. The term 'Main' in table refers to the variable that determines the possible combinations between variables in question. Variable names are the same as in appendix A14.

For categorical variables exact values are introduced in tables, for continuous variables (including dates) only terms 'miss/non-miss' indicating missing and non-missing values are used. See Appendix A14 for coding of variables.

This appendix A15 serves also as decision rules for coding to be used together with the appendix A14 ('Coding of data'). Thinking goes from the main question to the sub question. For example, notification 'miss -> 2' means that in the phase of logical checking the variable may be missing, but in the coding phase the variable has to be coded as 2.

Baseline 1 questionnaire

Question 4

	Main	
Question	4	4.1
Variable	B1Q4	B1Q4P1
Value	1	1 or 2
Value	0	miss -> 3

	Main	
Question	4	4.1.1
Variable	B1Q4	B1Q4P1A
Value	1	0 or 1
Value	0	miss -> 2

	Main	
Question	4	4.2
Variable	B1Q4	B1Q4P2
Value	1	miss -> 5
Value	0	1 or 2 or 3 or 4

Note: If question 4 is missing and questions 4.1 or 4.2 have been answered so that it is possible to code question 4 as non-missing, it is allowed to do it.

Question 8

	Main				
Question	8	8.1	8.2	8.2	8.2
Variable	B1Q8	B1Q8P1	B1Q8P2DD	B1Q8P2MM	B1Q8P2YY
Value	1	non-miss	non-miss/miss*	non-miss/miss*	non-miss
Value	0	miss -> 0	miss	miss	miss

* It is possible that the subject cannot remember exact day/month, therefore also missing value is allowed.

Note: If question 8 is missing and questions 8.1 or 8.2 has been answered so that it is possible to code question 8 as non-missing, it is allowed to do it.

Question 9

	Main			
Question	9	9.1	9.1	9.1
Variable	B1Q9	B1Q9P1DD	B1Q9P1MM	B1Q912YY
Value	1	non-miss/miss*	non-miss/miss*	non-miss
Value	0	miss	miss	miss

	Main			
Question	9	9.2	9.2	9.2
Variable	B1Q9	B1Q9P2DD	B1Q9P2MM	B1Q9P2YY
Value	1	non-miss/miss*	non-miss/miss*	non-miss
Value	0	miss	miss	miss

* It is possible that the subject cannot remember exact day/month, therefore also missing value is allowed.

Note: If question 9 is missing and question 9.1 or 9.2 has been answered so that it is possible to code question 9 as non-missing, it is allowed to do it.

Question 10

	Main				
Question	10	10.1	10.2	10.2	10.2
Variable	B1Q10	B1Q10P1	B1Q10P2D	B1Q10P2M	B1Q10P2Y
Value	1	non-miss	non-miss/miss*	non-miss/miss*	non-miss
Value	0	miss -> 0	miss	miss	miss

* It is possible that the subject cannot remember exact day/month, therefore also missing value is allowed.

Note: If question 10 is missing and question 10.1 or 10.2 has been answered so that it is possible to code question 10 as non-missing, it is allowed to do it.

Question 11

	Main	
Question	11	11.1
Variable	B1Q11	B1Q11P1
Value	1	0 or 1
Value	0	miss -> 2

Baseline 2 questionnaire

Question 4

	Main		
Question	4	4.1	4.2
Variable	B2Q4	B2Q4P1	B2Q4P2
Value	1	0 or 1	0 or 1
Value	0	miss -> 2	miss -> 2

Question 7

	Main	
Question	7	7.1
Variable	B2Q7	B2Q7P1
Value	1	0 or 1
Value	0	miss -> 2

Question 8

	Main	
Question	8	8.1
Variable	B2Q8	B2Q8P1
Value	1	0 or 1
Value	0	miss -> 2

Question 15

	Main	
Question	15	15.1
Variable	B2Q15	B2Q15P1
Value	1	1 or 2 or 3
Value	0	miss -> 4

Question 21

	Main				
Question	21	21.1	21.1	21.1	21.1
Variable	B2Q21	B2Q21P1A	B2Q21P1B	B2Q21P1C	B2Q21P1D
Value	1	miss	miss	miss	miss
Value	0	0 or 1	0 or 1	0 or 1	0 or 1

Question 26

	Main			
Question	26	26.1	26.2	26.2
Variable	B2Q26	B2Q26P1	B2Q26P2A	B2Q26P2B
Value	1	non-miss	non-miss	non-miss
Value	0	miss -> 0	miss -> 0	miss -> 0

If B2Q26=1 and if B2Q26P2A (number of cigarettes) is non-missing and B2Q26P2B (number of cigars/pipes) is missing then B2Q26P2B=0.

If B2Q26=1 and if B2Q26P2B (number of cigars/pipes) is non-missing and B2Q26P2A (number of cigarettes) is missing then B2Q26P2A=0.

Question 27

If a subject has answered both 'No' and 'Don't work' then B2Q27=2 (i.e. 'Don't work' will be chosen).

Question 28

	Main		
Question	28	28.1	28.2
Variable	B2Q28	B2Q28P1	B2Q28P2
Value	1	non-miss	non-miss
Value	0	miss	miss

	Main				
Question	28	28.3	28.3	28.3	28.3
Variable	B2Q28	B2Q28P3A	B2Q28P3B	B2Q28P3C	B2Q28P3D
Value	1	>=0	>=0	>=0	>=0
Value	0	miss -> 0	miss -> 0	miss -> 0	miss -> 0

If a subject has smoked before (i.e., question 28=1) and a subject has answered to the question 28.3 so that he has filled in the number of cigarettes per day (B2Q28P3A), but the number of cigarillos per day (B2Q28P3B), the number of cigars (B2Q28P3C) and pipe of tobacco in grams per week (B2Q28P3D) have not been answered then B2Q28P3B=0, B2Q28P3C=0 and B2Q28P3D=0. Other possible combinations will be coded respectively.

Diary

Symptoms

Coding of missing values:

Missing values have to be left missing, unless there is a note made by the field worker to code the missing value to 0.

Medication

First of all, because the subject has been told to report only medication for respiratory and cardiac conditions (the term 'cardiorespiratory' used later on), cardiorespiratory and other medication are coded differently. The brand, the dose and the number of inhalations or capsules of cardiorespiratory medicine are coded as follows: The first cardiorespiratory medicine in the diary is coded into variables BRAND1, DOSE1 and AMOUNT1, the second one into BRAND2, DOSE2 and AMOUNT2 and the third one into BRAND3, DOSE3 and AMOUNT3, and so on, if needed. BRANDn variables have to be coded according to the medication code list.

Because the interest is in the cardiorespiratory medication all other medication than cardiorespiratory is combined into MEDIC999 variable. MEDIC999=1 if the subject has used

other medication on that day and MEDIC999=0 if not used. Doses and numbers of inhalations or capsules of other medication are not coded.

Coding of missing values:

Case 1: All medication boxes (brand, dose and number of inhalations or capsules) for a specific week are empty

- if the subject has filled in the symptoms section for that day then we can assume that the subject has not used as needed medication on that day and NOMEDIC=1, otherwise NOMEDIC=missing
- NOMEDIC variable is used only to code those weeks when no as needed medication has been taken

Case 2: Some boxes of number of inhalations/capsules are empty

- this means the subject has used as needed medication on that week, but he has not filled in the number of inhalations/capsules every day
- if the subject has filled in the symptoms section for that day then we can assume that the subject has not used as needed medication on that day
- in case of cardiorespiratory medicine the AMOUNTn=0 and in case of other medication MEDIC999=0.

Clinical visit questionnaire

Question 6

	Main	
Question	6	6.1
Variable	CQ6	CQ6P1
Value	1	0 or 1
Value	0	miss

Because of the error in the questionnaire ('No' option is missing for question 6.1) coding of question 6.1 may be problematic. However, if question 6=1 and question 6.1=missing then the diary for that day (cough, common cold or flue) has to be checked. If the subject has reported having cough, common cold or flue then question 6.1=1, otherwise 6.1=missing. If the center has added 'No' option in question 6, then there should not be problems in coding.

Question7

Because of the error in the questionnaire ('No' option is missing for question 7) coding of question 7 may be problematic. However, if question 7=missing and the subject has been able to perform the exercise (i.e., question 8=1) then question 7=0. If the center has added 'No' option in question 7, then there should not be problems in coding.

Question 8

	Main	
Question	8	8.1
Variable	CQ8	CQ8A
Value	1	miss
Value	0	1 or 2 or 3

Question 9

	Main					
Question	9	9	9	9	9	9
Variable	CQ9	CQ9A	CQ9B	CQ9C	CQ9D	CQ9E
Value	1	0 or 1	0 or 1	0 or 1	0 or 1	0 or 1
Value	0	miss	miss	miss	miss	miss

If question 9=1 and at least one of the options (angina pectoris, other cardiac, respiratory condition, urinary tract infection or other) has been selected and the rest of the options are missing then the rest of the options will be coded as 'No'. For example, if the subject has reported having angina pectoris and the rest of the options are missing then CQ9A=1, CQ9B=0, CQ9C=0, CQ9D=0 and CQ9E=0.

Question 13

	Main			
Question	13	13	13	13
Variable	CQ13	CQ13A	CQ13B	CQ13C
Value	1	0 or 1	0 or 1	0 or 1
Value	0	miss	miss	miss

If question 13=1 and at least one of the options (beta-agonist, corticosteroids or anti-cholinergic) has been selected and the rest of the options are missing then the rest of the options will be coded as 'No'. For example, if the subject has reported using beta-agonist and the rest of the options are missing then CQ13A=1, CQ13B=0 and CQ13C=0.

Question 14

	Main		
Question	14	14.1	14.2
Variable	CQ14	CQ14P1	CQ14P2
Value	1	1 or 2 or 3 or 4	0 or 1
Value	0	miss -> 0	miss -> 2

Question 15

	Main	
Question	15	15.1
Variable	CQ15	CQ15P1
Value	1	>=0
Value	0	miss -> 0

Question 17

	Main	
Question	17	17.1
Variable	CQ17A	CQ17P1
Value	>0	0 or 1
Value	0	0

	Main	
Question	17	17.2
Variable	CQ17B	CQ17P2
Value	>0	0 or 1
Value	0	0

Clinical visit log book

Question 6

	Main	
Question	6	6
Variable	EXEOK	EXESTOP
Value	1	miss
Value	0	1 or 2 or 3

Question 9

	Main	
Question	9	9
Variable	SPIROOK	SPISTOP
Value	1	miss
Value	0	1 or 2 or 3 or 4

Medication sheet

The brand of medicine has to be coded using the medication code list.

Spirometry

FVC

- calculate individual mean during study
- calculate visit-specific differences from individual mean
- check the form if visit-specific difference from individual mean is more than 20%, but do not delete the observation if the value is real

FEV1

- calculate individual mean during study
- calculate visit-specific differences from individual mean
- check the form if visit-specific difference from individual mean is more than 20%, but do not delete the observation if the value is real

PEF

- calculate individual mean during study
- calculate visit-specific differences from individual mean
- check the form if visit-specific difference from individual mean is more than 20%, but do not delete the observation if the value is real