

Rwanda PHC4 2012 - Edit Specifications

1. Range checks on all variables : **pop, death, housing** records
2. Consistency checks pop
3. Consistency checks death
4. Consistency checks Housing
5. Starter decks to be constructed for **hot deck** imputation :
 - Array1 : imputation of P18a using P03 and P05
 - Array2 : imputation of P19 using P03,P05 and L07
 - Array3: imputation of P32 using P03,P05 and P11
 - Array4: Imputation of P36 using P05,P29 and VP18a
 - Anceb : vector NCEB accepted per age
 - Age: vector P05 = 12:49
 - Array5 : imputation of NCEB (P33:P36) using P05,P29 and VP18a

Variable	Specification (detect error)	Message	Method of correction of error	Denominator
QUESTIONNAIRE				
	There must be at least one person in the Household	Q01. Household empty		Head of HH records
	There must be one HOUSING record	Q02. Housing record is missing		Housing records
	There must be only one Head	Q03. More the one head	See P02 addendum below	Head of HH records
		No head		
POPULATION record				
P03	P03SPEC01. Sex of spouse must be opposite to sex of head	M01-Sex of spouses incompatible	If P02=2 then if P03= P03(HH) Impute P03(Spouse) <> P03(HH)	Total population
P05	P05SPEC02. P04 and P05 must not be Blank	M02.Age Not Stated and imputed from BirthDate	If P05 =Blank and P04Y is valid then 1. Compute VP05 based on P04Y 2. If VP05<>P05 then Impute P05=VP05	
	P05SPEC03. P04 and P05 must be consistent	M03.P05 not compatible with P04,imputed from P04Y	. Compute VP05 from P04 . if VP05<>P05 then Impute P05=VP05	
	P05SPEC04. HH must be older than 12	M04. HH less than 12	See P02 addendum below	
	P05SPEC05. Son/daughter must be at least 12 years younger than female head	M05. Female Head too young for Son/daughter	. if P02=3 and P02(HH)=2 then: .Compute increment = P05(HH)-P05 . if increment<12 then Impute P05(HH) by P05(HH) + (12-	

			increment)	
	P05SPEC06. Son/daughter must be at least 15 years younger than male head	M06. Male Head too young for Son/daughter	.if P02=3 and P02(HH)=1 then: .Compute increment = P05(HH)-P05 . if increment<15 then Impute P05(HH) by P05(HH) + (15-increment)	
	P05SPEC07. Mother must be at least 12 years older than head	M07. Mother too young for HH	. if P02=5 and P02(HH)=2 then: .Compute increment = P05-P05(HH) . if increment<12 then Impute P05 by P05 + (12-increment)	
	P05SPEC08. Father must be at least 15 years older than head	M08. Father too young for HH	. if P02=5 and P02(HH)=1 then: .Compute increment = P05-P05(HH) . if increment<15 then Impute P05 by P05 + (15-increment)	
P10	P10SPEC09. Previous Residence must be different from Place of Birth when duration of Residence is not 999	M09. P10,P09 and P07 not compatible	If P10<999 then if P09=P07 then Impute P10=999	Tota resl populati on
	P10SPEC10. Duration of residence must not be greater than age	M10.duration greater than age -imputed age	If P10>P05 then .if P09=P07 then impute P10=999 Else impute P10=P05	
P14a	P14aSPEC11. P14a for HH can not be equal to 2 or 3 if HH's Mother is alive	M11.Survivorship of HH Mother is incorrect	If P02=1 then .if Mother exists then if P14a=2:3 then impute P14a=1	Total res. pop < 18
P14c	P14cSPEC12. P14c for HH can not be equal to 2 or 3 if HH's father is alive	M12.Survivorship of HH Father is incorrect	If P02=1 then .if Father exists then if P14c=2:3 then impute P14c=1	
	P14aSPEC13. P14a for Son/daughter can not be equal to 2 or 3 if P03 (HH)=2	M13.Survivorship of Son/daughter 's Mother is incorrect	If P02 =3 and P03(HH)=2 and P14a<>1 then impute P14a =1	
	P14cSPEC14. P14c for Son/daughter can not be equal to 2 or 3 if P03(HH)=1	M14.Survivorship of Son/daughter 's Father is incorrect	If P02 =3 and P03(HH)=1 and P14c<>1 then impute P14c =1	
P15	P15SPEC15. Birth must be registered for age less than 18	M15.Birth Registration and age not compatible	if P05<18 then P15=1:3 else impute P15=3	
P16	P16SPEC16. P16 must be valid	M16.P16 has wrong value	if P16 is not valid then impute P16=8 (Hot Deck?)	Total res. pop > 2
P18a	P18aSPEC17. Education and school attendance must be compatible	M17.P17 and P18a not compatible	If P17=1 then P18a=Blank Else impute P18a=Blank Impute P18b=Blank Impute P19=Blank	
P18a	P18aSPEC18. education must be compatible with age	M18.Education – P18a and age-P05 not compatible		
P18b	P18bSPEC19. Highest level and years completed must be compatible(Preschool)	M18a.Highest level P18a and years completed P18b not compatible-Preschool- P18b imputed 3	If P18a=0 then if P18b > 3 then impute P18b=3.	
	P18bSPEC20. Highest level and years completed must be compatible(Primary)	M18a.Highest level P18a and years completed	If P18a=1 then if P18b > 6 then impute P18b=6	

		P18b not compatible – Primary- P18b imputed 6		
	P18bSPEC21. Highest level and years completed must be compatible(Post-Primary)	M18a.Highest level P18a and years completed P18b not compatible – Post Primary- P18b imputed 3	If P18a=2 then if P18b > 3 impute P18b=3	
	P18bSPEC22. Highest level and years completed must be compatible(Secondary)	M18a.Highest level P18a and years completed P18b not compatible – Secondary- P18b imputed 7	If P18a=3 then if P18b > 7 impute P18b=7	
	P18bSPEC23. Highest level and years completed must be compatible(University)	M18a.Highest level P18a and years completed P18b not compatible – University- P18b imputed 7	If P18a=4 then if P18b > 7 impute P18b=7	
P19	P19SPEC19. Degree P19 must be compatible with level of education P18a and years completed P18b	M19. P19 not compatible with P18b and P18a – imputed hot deck (P05, L07, 03)	Impute P19 by P05,P03 and L07 . Recode P18a to VP18a 0,0 1,4 2,11 3,15 4,23 . VP18a=VP18a + P18b; if (P19=0 and VP18a>0) or (P19=1 and VP18a>14) or (P19=2 and VP18a>18) or (P19=3 and VP18a>19) or (P19=4 and VP18a>21) or (P19=5 and VP18a>25) or (P19=6 and VP18a>27) or (P19=7 and VP18a>28) or (P19=8 and VP18a>30) then impute (P19, AP18P19(P05, P03, area) Hotdeck(P05,P03,L07")) Else AP18P19(P05, P03, area)= P19;	
	P19SPEC21. P19 must be compatible with P16	M20. P19 not compatible with P16. P16 imputed.	If P19 >0 and P16=0 Then Impute P16=8.	
P20	P20SPEC22. P20 must be compatible with P21 thru P24	M21. P20 not compatible with P21 thru P24	If P21 <> Blank and P22 <> Blank and P23 <> Blank and P24 <> Blank then If P20 <> 2 then impute P20=2	Total res. pop > 4
P21	P21SPEC22. P20 must be compatible with P21	M22. P21 not compatible with P20 – P21 thru P24 imputed Blank	If P20=1 then P21=Blank else Impute P21=Blank Impute P22=Blank Impute P23=Blank Impute P24=Blank	
	P21SPEC23. P21 must be compatible with P05	M23. P21 not compatible with	If P21=4 then if P05 < 65 then Impute P21=7.	

		P05. P21 imputed.	If P21=6 Then If P05 > 30 then Impute P21=7	
P22	P22SPEC23. P22 must be compatible with P21	M24. P22 not compatible with P21. P22 imputed.	If P21=3 then P22=Blank Else impute P22 thru P24 = Blank If P21=4:6 then P22=Blank Else impute P22 = Blank	
P25	P25SPEC26. P25 must be valid	M28. Occupation code invalid. Imputed 9999	If P25 not valid impute P25=9999.	
P27	P27SPEC27. P25 must be valid	M29. Activity code invalid. Imputed 9999	If P27 not valid impute P27=9999.	
P30	P30SPEC28. P30 must be compatible with sex P03 and Marital Status P29	M30. P30 not compatible with P03 and P29. P29 imputed 2	If P03 =1and P05 >12 then if P30>0 then if P29 <> 2 Then impute P29=2	Total res. pop > 11
P31	P31SPEC29. P31 must be compatible with sex P03 and Marital Status P29	M31. P31 not compatible with P03 and P29. P29 imputed 2	If P03 =2 and P05 >12 then if P31>0 then if P29 <> 2 Then impute P29=2	
P32	P32SPEC30. P32 must be compatible with sex P03 and Marital Status P29	M32. P32 not compatible with P03 and P29. P29 imputed by hot deck (P05, P03,P11)	If P03 =2 and P05 >12 then if P32 <> Blank then if P29 =1 Then Hot deck P29 (P03, P05,P11).	
	P32SPEC31. P32 must be compatible with sex P05	M33. P32 greater than P05	If P32 > P05 then impute P32=P05	
P36	P36SPEC32. Fertility data must be compatible	M34.Fertility data P33 thru P36 not compatible imputed by Hot Deck(P05, P29,VP18a)	Universe P03=2 and P05>11. NCEB=P33M+P33F NCEA=P34M+P34F NCB12=P35M+P35F NCA12=P36M+P36F If P33M<P34M then CTRF=CTRF+1 If P33F<P34F then CTRF=CTRF+1 If P35M<P36M then CTRF=CTRF+1 If P35F<P36F then CTRF=CTRF+1 If NCEB<NCEA or NCEB<NCB12 or NCEB<NCA12 then CTRF=CTRF+1 If NCEA<NCB12 or NCEA<NCA12 then CTRF=CTRF+1 If NCB12<NCA12 then CTRF=CTRF+1 If P36M > 4 then CTRF=CTRF+1 If P36F > 4 then CTRF=CTRF+1 If NCB12 > 4 then CTRF=CTRF+1 AAGE(38) ANCEB(38) Do varying If P05 = AAGE(i) then If NCEB > ANCEB(i) then CTRF=CTRF+1 If CTRF > 0 then Message.....	Res female pop > 11

			Impute fert by HOT DECK (P05, P29,VP18a)	
			FORMAT OF RECORD	

HOUSING record				
H04	H04SPEC81. Roof H04 must be compatible with type of building H02	M81. H04 not compatible with H02. Imputed 8.	If H02 = 3 then H04 <>6:7 else Impute H04 =8	
H05	H05SPEC83.Wall H05 must be compatible with type of building H02	M83. H05 not compatible with H02. Imputed 9	If H02 = 3 then H05 <>1:4 else Impute H05 =9	
	H05SPEC84. Wall H05 must be compatible with Roof H04	M84. H05 not compatible with H04. Imputed 9.	If H04=5 then H05 <> 1:4 else Impute H05=9 If H04=5 then H05 <> 7 else Impute H05=9	
H08	H08SPEC84. Number of bed rooms H08 must be compatible with number of rooms H07	M85. H08 greater than H07. Imputed H07	If H08 > H07 then impute H08=H07	
H11	H11SPEC85. Toilet facility H11 must be compatible with Walls H05	M86. H11 not compatible with H05. Imputed 5	If H11 = 1 then H05=5:8 else impute H11=5	
	H11SPEC86. Toilet facility H11 must be compatible with Water source	M87. H11 not compatible with H10. Imputed 5	If H11 = 1 then H10=1:2 else impute H11=5	
H13	H13SPEC87. Energy for cooking must be compatible H13 with Main source of energy H12	M88. H13 not compatible with H12. Imputed 8	If H13=1 then H12<>1 else impute H13=8	
DEATH RECORD				
D2	D2SPEC101. Sex of deceased D2 must be compatible with maternal mortality variable D5	M101. D2 not compatible with D5. Imputed 2	Universe D3=12:49 If D5 >0 then D2 =2 else impute D2=2	
	D2SPEC102. Sex of deceased D2 must be compatible with maternal mortality variable D6	M102. D2 not compatible with D6. Imputed 2	Universe D3=12:49 If D6 >0 then D2 =2 else impute D2=2	
	D2SPEC103. Sex of deceased D2 must be compatible with maternal mortality variable D7	M103. D2 not compatible with D7. Imputed 2	Universe D3=12:49 If D7 >0 then D2 =2 else impute D2=2	
D4	D4SPEC104. Cause of death D4 must be compatible with maternal mortality variable D5	M101. D4 not compatible with D5. Imputed 6	Universe D3=12:49 If D5 >0 then D4 =6 else impute D4=6 Impute D6=Blank Impute D7=Blank	
	D4SPEC105. Cause of death D4 must be compatible with maternal mortality variable D6	M102. D4 not compatible with D6. Imputed 6	Universe D3=12:49 If D6 >0 then D4 =6 else impute D4=6 Impute D5=Blank Impute D7=Blank	
	D4SPEC106. Cause of death D4 must be compatible with maternal mortality variable D7	M103. D4 not compatible with D7. Imputed 6	Universe D3=12:49 If D7 >0 then D4 =6 else impute D4=6 Impute D5=Blank Impute D6=Blank	

Addendum (for CSPro editing programme)

P02. RELATIONSHIP Edit checks:

Each household must have 1 and only 1 head of household (HH).

- If no head of household is declared, and the spouse is declared, then make the spouse head else make eldest person the head
- If more than one head of household is declared, leave the first head as head and impute the remaining heads as other relative.

EditCheck: minimum age of head of household not specified.

- It has been decided the least age for head is 12 years. If there older member in the household then make him Head.
However, it remains the decision of subject matter specialist to decide on any other age.
- For other members of the household, if relationship is invalid, impute to other relative.

P04. SEX Edit checks:

1. If the head has no sex and there is a spouse, then the sex of the head is different from the spouse. If neither the head nor the spouse have sex declared, impute from the previous correct response and relationship.

Q2. Sex of Head/Spouse				
Sex of Head				
Valid			Invalid	
Sex Spouse			Sex Spouse	
Valid		Invalid	Valid	Invalid
Sex Head <> Sex Spouse		Impute Sex of Spouse opposite sex of head	Impute Sex of Head to Opposite Sex of Spouse	Impute from the previous response using relationship
TRUE	FALSE			
OK	Make Sex Spouse opposite of head			

2. If the head has no sex and there are no spouses, impute sex from the previous valid response.
3. If the head has no sex and there are spouses with valid sex, then the sex of the head is made opposite the sex of the spouse; but if the head has invalid sex and spouse has invalid sex, then impute sex from previous response using relationship.
4. For the rest of the household members, if the sex is invalid, impute (hot deck) from previous using relationship.

If the sex of head is invalid and there are more than one spouse, make sex of head a mal

P06. AGE Edit checks:

1. The Head of the Household has invalid age declared.
Impute (hot deck) the age from the previous response using sex (relationship).
2. If the age of the head is less than 12, impute (hot deck) the age of head from previous response using sex (relationship).

3. If the age of the rest of members is invalid, impute the age from the previous response using relationship and sex.
 4. There must be valid age difference between child and head.
 If head is a male age difference must have a minimum difference of 15 years.
 If head is female, the age difference must be minimum 12.
 If head is male and age difference is less than 15, add the difference to the father's age. Eg if difference is 12, add 3 to the age of father.
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P11. RELIGION Edit checks

RELIGION Edit checks				
Edit #	Head	Spouse	Others in HH	Action
0501	Valid	Valid	Valid	None
0502	Valid	Valid	Invalid	Impute Religion from the previous valid response
0503	Valid	Invalid	Valid	Impute Religion from the previous valid response
0504	Valid	Invalid	Invalid	Impute Religion from the previous valid response
0505	Invalid	Valid	Valid	Impute Religion from the previous valid response
0506	Invalid	Valid	Invalid	Impute Religion from the previous valid response
0507	Invalid	Invalid	Valid	Impute Religion from the previous valid response
7008	Invalid	Invalid	Invalid	Impute Religion from the previous valid response