# Demographic and Health Survey

# Editing Guidelines – DHS 6

**ICF Macro**
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MEASURE DHS is a five-year project to assist institutions in collecting and analyzing data needed to plan, monitor, and evaluate population, health and nutrition programs. MEASURE DHS is funded by the U.S. Agency for International Development (USAID). The project is implemented by ICF Macro in Calverton, Maryland, in partnership with the Johns Hopkins Bloomberg School of Public Health/Center for Communication Programs, the Program for Appropriate Technology in Health (PATH), Futures Institute, Camris International, and Blue Raster.

The main objectives of the MEASURE DHS program are to: 1) provide improved information through appropriate data collection, analysis, and evaluation; 2) improve coordination and partnerships in data collection at the international and country levels; 3) increase host-country institutionalization of data collection capacity; 4) improve data collection and analysis tools and methodologies; and 5) improve the dissemination and utilization of data.

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# EDITING GUIDELINES

## A. GENERAL GUIDELINES FOR DATA EDITING

The editing guidelines presented in this chapter are concerned only with those checks that must be carried out to verify the internal consistency of responses to questions in the DHS core questionnaires. The specifications do not cover range or skip checks which are checked at the time of entry. Depending on the country's data processing situation, most of the simpler consistency checks may be handled at the data entry stage. However, the majority of the more complex consistency checks will be carried out during a secondary stage of machine editing. Some checks are repeated both in the data entry and editing stages. During data entry, these checks are used primarily to look for data entry errors.

When an error message appears during data entry, the data entry operator should first ensure that no typing mistake was made in the question(s) referenced in the error message. If the question(s) was/were keyed correctly, then the operator should check preceding questions, going back to previous pages if necessary, to ensure no entry error was made. If no keying error was made, the operator should request that the data entry supervisor resolve the problem, using this document as a guide.

The consistency edit guidelines include instructions on the steps to take to resolve inconsistencies detected during the editing process as well as the action to take if the inconsistencies cannot be resolved through an examination of the responses to other pertinent questions. While editing data, the supervisor, the data entry clerk and secondary editor must *REVIEW ALL OF THE PERTINENT QUESTIONS INVOLVED IN A SKIP ERROR OR AN INCONSISTENCY* before making a change. Changes should never be made in a hastily manner without a thorough review of all relevant responses.

During the secondary editing phase, the process should be organized in such a way as to maximize consistency in the correcting process. Care should be taken to ensure that all procedures are followed in a standard manner. Each of the editing rules should be applied in accordance with the guidelines. All of the computer outputs specifying the errors detected at this stage should be retained.

The editing staff should be sure that all changes made to the data file on the computer are noted in the questionnaire with an ORANGE pen. Use of orange pens will allow corrections made by office staff to be quickly distinguished from those made by the interviewers (blue pen) and the field editors (red pen). All corrections to the data should be noted on the original questionnaire by crossing through the original response with a single line and writing the new response next to it.

Secondary editing should begin as soon as possible after the verification of the questionnaires has been completed for a particular cluster. The editing process should then be repeated for the cluster until no further errors are detected.

Supervision at this stage should ensure that the rules outlined below for correcting inconsistencies are applied uniformly to all questionnaires and that errors, which recur across questionnaires, are corrected in a standardized manner. Again, the primary rule of data editing whether in the field or office must be observed: *UNDER NO CIRCUMSTANCES SHOULD AN ANSWER BE MADE UP*. Changes can be made only if there is evidence supporting a modification to the response. If an inconsistent value cannot be corrected and a modification is required, the value should be replaced with a code signifying inconsistency (7, 97, 997, etc.). Care should be taken not to confuse the 7 codes (used to replace an inconsistent response that cannot be corrected) with the 8 codes (98, 998, etc. used by the interviewer to indicate that the respondent answered a question with the statement, "I don't know") or with the 9 codes (99, 999, etc., used in cases of skip errors where the respondent was not asked a question or refused to answer a question to which she should have responded).

Finally, the editing phase for the DHS data necessitates close involvement of the host country DHS Survey Coordinator as well as other senior project staff. Resolving inconsistencies in the responses, particularly those involving date and interval information, requires a detailed understanding of the nature and overall objectives of the survey questionnaire as well as the interrelationships among specific

questions. The data processing staff itself ordinarily will not include personnel with this background or expertise. Consequently, the data editing at this phase should be organized so as to encourage close interaction between the survey's technical staff and the data processing personnel.

**B. ROLE OF THE EVENT TABLE**

One of the most crucial tasks in the machine editing of the DHS data is to check the internal consistency of information collected in the survey relating to dates and/or intervals of time. For example, it is necessary to check that the interval between two births reported in a woman's birth history is not too short or that a respondent was not too young to have had a child at the time she reported that her first birth occurred. Information on the durations of breastfeeding, amenorrhea and abstinence between two births also must be checked to see that it is consistent with the reported birth dates.

The crucial events for a woman for which consistency checks will be carried out include:

- Date of respondent's birth (Q102)
- Date of first union (Q610)
- Date of birth of each child (Q215)
- Date of sterilization (Q308)
- Date of conception of current pregnancy (date of interview minus months of current pregnancy (Q227))
- Date of interview

Other items the consistency of which will be checked with the above information at the data editing stage include:

- Age of the respondent (Q103)
- Age of child at last birthday (if child alive) (Q217)
- Age of child at death (if child died) (Q220)
- Time since last period (Q238)
- Duration of use of current method (calendar Col1/Q308)
- Duration of amenorrhea (live births in last five years) (Q449)
- Duration of abstinence (live births in last five years) (Q452)
- Time since last sexual intercourse (if ever had sex) (Q615)
- Age at first sexual intercourse (if ever had sex) (Q613)

As part of the editing program, the DHS software will compile an event table. The event table facilitates the consistency checking of the date and interval responses in the questionnaire. It allows up to 30 entries, beginning with the woman's date of birth, followed by the date of her first marriage/union, the birth dates of each of her children from the birth history, the date of sterilization (if appropriate), the date of conception of a current pregnancy (if appropriate) and completed date of interview.

Entries in the event table will be made in terms of century month codes (CMCs). The CMC for any event is based on the date of the event (e.g., the respondent's birth) and is calculated by multiplying the year (minus 1900) in which the event occurred by 12 and adding the code for the month in which the event occurred. An example of the CMCs that would be calculated based on information for the dates of births in a typical DHS interview follows:

| Q212 | Q215M | Q215Y | Q217 | CMC |
|---|---|---|---|---|
| 01 | 98 | 1992 | 09 | — |
| 02 | 01 | 1995 | 07 | 1141 |
| 03 | 98 | 1997 | 98 | — |
| 04 | 01 | 2000 | 02 | 1201 |
| 05 | 03 | 2001 | 01 | 1215 |

For children 02, 04, and 05, the century month codes are considered fully specified since the complete date (i.e., both the month and year) of the birth is known. For children 01 and 03, for whom only

the year of birth is known, it is not possible to specify the CMC exactly. However, using information on the age of the child at the time of the interview (question Q217) and the date of the interview (August 2002 was used for this example), the lower and upper bounds for the CMC for children 01 and 03 can be determined. The lower bound CMC (LCMC) is calculated based on the earliest month of birth that is possible given the year of birth, age, and date of interview while the upper bound CMC (UCMC) is calculated based on the latest month of birth possible given the same information.

There are a variety of factors other than the year of birth, age and date of interview which may have to be taken into account when calculating the upper and lower bounds for the CMC of an event that is not fully specified, including the dates of surrounding births. The LCMC (1113) and UCMC (1116) shown in the following example are determined solely by the date of birth and the age of the child. Thus, for child 01, born in 1992 and 9 years old at the time of the DHS interview in August 2002, the lower bound for their birth date (i.e., the earliest possible birth date consistent with the age, year of birth, and date of interview) is September 1992 while the upper bound for the birth date is December 1992.

| Q212 | Q215M | Q215Y | Q217 | LCMC | UCMC |
|---|---|---|---|---|---|
| 01 | 98 | 1992 | 09 | 1113 | 1116 |
| 02 | 01 | 1995 | 07 | 1141 | 1141 |
| 03 | 98 | 1997 | 98 | 1165 | 1176 |
| 04 | 01 | 2000 | 02 | 1201 | 1201 |
| 05 | 03 | 2001 | 01 | 1215 | 1215 |

Note that for events for which a date is fully specified (e.g., the birth date for child 04), the LCMC and the UCMC will be equal.

Section 12 of this manual describes error messages dealing with intervals and provides more details on the date editing and imputation process and identifies items which act as constraints on the dates defined as crucial in the DHS editing process. For example, information on the age of a living child acts as a constraint upon the date of birth of the child; i.e., the consistency between the reported age and birth date will be checked and an error message printed if the age is found to be inconsistent with the interval between the birth date and the date of interview. The error must be corrected by the office editing staff, following procedures outlined in the detailed editing guidelines presented in the following sections.

In cases of women or children whose month of birth is the same as the month of interview, the age recorded in response to question Q103 may not be equal to the age calculated from the interview date and the birth date recorded in question Q102. For example, given an interview date of August 17, 2002, the calculated age for a woman born in August 1982 would be 20 years since, for the purposes of editing and imputation, all birthdays and other events are assumed to occur on the first day of the month. If the woman's actual day of birth is after the day of interview, e.g., August 25, she may have reported her age as 19 years since she had not yet celebrated her birthday. Generally, the DHS editing and imputation policy calls for the woman's stated age to be set equal to calculated age in the final stages of the preparation of a clean data file. Thus, in the above example, the age computed in the imputation process would be changed from 19 to 20 years.

The only exception to this procedure will occur in the few cases in which a respondent's stated age is 49 but her calculated age is 50. In such cases, setting the stated age to the calculated age would result in the woman being considered ineligible for the DHS. To avoid dropping the respondent from the sample, the month of birth will be adjusted to be consistent with the stated age. For example, in the case of a woman interviewed in August 2002 who reports her birth date as August 1952 and her stated age as 49, the month of birth in question Q102 would be changed from August to September 1952.

During editing, the intervals between dates of crucial events will also be checked to ensure that they are equal to or exceed a defined minimum interval (these minimum intervals are summarized below in Section G's event table). The DHS software uses CMCs when checking the consistency between two sequential events. For example, BI (the birth interval, in months) between the births of child 04 and child 05 can be calculated using CMCs as follows:

```
BI = UCMC(child 05) - LCMC(child 04)
14 = 1215 - 1201
```

The above interval is consistent with an assumed minimum birth interval of 9 months, which is required between each birth. Between twins the minimum birth interval used is zero.

Finally, for children born since January 2005, the DHS editing process will check the consistency between the birth dates of the children in question and information collected on the durations of amenorrhea, and abstinence as well as on the dates a child was immunized. In editing these data the software uses the maximum possible interval against which to test a given response. For example, in checking the consistency of the reported duration of amenorrhea following the birth of child 04, the software calculates the maximum duration of amenorrhea (MDAM) consistent with the date of birth of child 05, assuming that the minimum allowable pregnancy duration is 7 months. Note that the minimum birth interval is two months longer than the minimum pregnancy duration on the assumption that it is not possible to become pregnant for at least two months after the birth of a child. In the case of the above example:

```
MDAM = (UCMC(child 05) - 7) - LCMC(child 04)
MDAM = (1215 - 7) - 1201
   7 = 1208 - 1201
```

Therefore, if the duration of amenorrhea reported by the mother in response to question Q449 for child 04 exceeds 7 months, the software will issue an error message, indicating that the duration of amenorrhea was inconsistent with the length of the interval between the births of children 04 and 05.

A full discussion of the event table and the calculations to establish and check the dates present in the table can be found below in Chapter G, Event Table and Chapter E, section 12.

Detailed guidelines for the procedures to follow when correcting consistency errors for these items are described below. In checking each error message generated as part of this process, it is important that the editing staff always thoroughly examine all the relevant responses in the questionnaire before making changes. *A CORRECTION SHOULD NEVER BE MADE ONLY ON THE BASIS OF AN ERROR MESSAGE WITHOUT LOOKING AT THE QUESTIONNAIRE.*

## C. RESOLVING SKIP ERRORS

Before discussing the guidelines for correcting inconsistencies in the data file, the problem of resolving skip errors must be addressed. There are two types of skip errors: the first is caused by the interviewer when s/he follows the wrong skip pattern in the questionnaire; the second is caused by the keyer when s/he enters incorrect data, causing a change in the skip pattern. The first type will generally be discovered by the operator during data entry when the operator either finds responses in the questionnaire that s/he is unable to enter into the computer or when the software is waiting an entry for which there are no responses in the questionnaire. The latter type of skip error is generally not discovered until the difference report is run, or possibly when secondary editing is run, if both the initial and verifier keyers entered the same (incorrect) value (possible if the interviewer's handwriting is not clear).

To resolve these errors, the operator should review the questionnaire in hand and the data that have been entered. By reviewing the computer screens and comparing the codes entered in each field to the codes found in the questionnaire, the operator should be able to locate the problem.

If the codes on the screen do not match those in the questionnaire, the operator should go back through the computer screens to find where the computer responses first deviated from the paper questionnaires' responses. The operator should then correct all errors encountered, making no changes to the questionnaire.

However, if the codes on the computer screens match those in the questionnaire, and the program is waiting for a response for which not exists on the questionnaire, then the error was made in the field and a "not stated" code of 9 (or 99, 999, etc.) should be entered in the computer (and noted in PURPLE ink in the questionnaire) for each question that has not been answered. For alphanumeric variables (questions containing letters as codes, for example Q409, Q410, Q709, etc.), the code "?" is to be used for missing data.

In some situations it will be possible to deduce the correct response from other information recorded in the questionnaire. This is particularly true for questions that affect the flow of the questionnaire. For example, if the question "Are you pregnant now?" was left blank, but the following question, "How many months pregnant are you?" contained the response "3 months", the response to the first question is clearly "Yes". This response should be used in such a case, as using a "not stated" code for the missing data is generally assumed to be a negative response and the following question would be skipped in data entry (if a skip existed for the "no" response to that question).

If major skip errors are encountered, they should be reported to senior survey management and supervisory personnel should be advised so that field personnel can be alerted to the problems.

## D. SPECIFIC GUIDELINES FOR DATA EDITING

The next section provides specific guidelines to apply in correcting inconsistencies that will be detected at the data entry or machine editing stages of the DHS. Again, in deciding on corrections to be made, these general principles should be observed:

- When making corrections at this stage, the data editing staff must examine the questionnaires in which errors are detected, looking initially for data entry errors, then checking for the inconsistency in the questionnaire, not just by looking at the error listing.

- All pertinent questions in both the individual and household questionnaires must be examined before a decision is made as to the manner in which inconsistent responses will be corrected. The editing staff should never correct errors in a hastily manner, e.g., by routinely entering a code 97 where it is possible to determine the correct response.

- Some of the calculations done in the computer have a tolerance of one month. For example, if a child is born on July 31, 2002 and the interview occurs on August 1, 2002, the child's age would be calculated as one month when, in fact, the child is zero months old.

  This tolerance should be kept in mind when reviewing inconsistencies. If an error is reported, and the error is a matter of one month, the data can be made to fit; that is, the data are not necessarily inconsistent, and the least reliable piece of data can be corrected by 1 month. If, however, the error is greater than one month, the least reliable piece of data should be changed to 7, 97 or 997 to represent an inconsistent response.

  In the guidelines that follow, you will find the phrase: "The 'Rule of One' can be applied". This refers to correcting the data if the error is no more than 1 month. This rule should not be applied in any other case.

- The guidelines for correcting errors detected at this stage should be applied in a standardized manner. Uniform rules must be followed in making decisions to change responses that are inconsistent. Editing decisions that are not covered by the following guidelines should be documented.

- The editing staff should be careful to make changes only when there is evidence to support the new response. Again the chief rule of data editing must apply: UNDER NO CIRCUMSTANCES SHOULD AN ANSWER BE MADE UP.

- Another basic editing rule is to change the fewest possible responses. This is reasonable, for it makes sense that the more data values you need to change to "fix" the error, the less likely you are to be making the right decisions.

- All errors detected at this stage must be corrected in the questionnaire as well as on the screen. Corrections to the questionnaire should be made in ORANGE pen so that they can be distinguished from those entries or corrections made in the field. Original responses in the questionnaire should be crossed through with one line, and the new response should be written alongside the coding boxes. *NEVER WRITE A CORRECTION OVER THE ORIGINAL RESPONSE*.

The task of resolving inconsistencies is frequently quite difficult. The senior members of the survey staff should be consulted by the editing staff for assistance in resolving difficult problems. They should also be sure to regularly review the work of the editing staff to ensure that they are observing the above principles.

## E. DATA EDITING MESSAGES AND CORRECTION GUIDELINES

The messages in the next section are used in both the Data Entry and the Secondary Editing programs; some are used in both programs, while others are used exclusively in just one program. Warning and error messages take on slightly different meanings depending in which program they occur in. Generally, for warnings in data entry, if the data entered matches what is found on the questionnaire, then the keyer should proceed; whereas in secondary editing, the Secondary Editor will review the questionnaire and take corrective action if instructed. However, if an error occurs, it must be resolved before the keyer or secondary editor can proceed. Some messages which are warnings in data entry will occur as errors in secondary editing.

**Comment [S1]:**

*Within the data entry and editing programs*, the format of the error messages are as follows:

#### E/W ==> [Loc] message text

where #### refers to the four or five digit error message number, E or W refers to the severity of the problem (E=Error, W=Warning), and finally the message text itself. When an error (E) is encountered, the problem must be resolved before the operator can continue; if they encounter a warning (W), the operator should check the accuracy of their entry, but otherwise make no corrections/changes.

In addition, within the secondary editing program, there will sometimes be a reference to the location of the cause of the message (i.e., the "[Loc]" above), and should be self-explanatory. For example, **HH** means the message was generated from the household questionnaire, **BirthHist** means the message came from the birth history questions Q212-Q221 of the woman's questionnaire, **Vacc Col #** refers to the vaccination chart, column N (i.e., Q506) of the woman's questionnaire, etc.

If the message occurs during data entry, take the following action:

**E** the data must be corrected before data entry can continue
**W** check the accuracy of the data entered, correcting for typing errors, but otherwise make no other changes

If the message occurs during secondary editing, take the following action:

**E** the data and questionnaires should be checked and possibly corrected
**W** the accuracy of the data entered is checked, but otherwise no changes are made

The following abbreviations are also used in the message listings:

cmc Century month code
dob Date of birth

doi Date of Interview
dou Date of first union
age at u Age at first union
HH Household
Rel Relationship
Elig Eligibility
h Height
w Weight

***Each listing generated from a secondary editing run should be kept with the cluster when work has been finished with it***. This is very important, as the Macro data processing specialist may wish to review how messages were dealt with.

**0001 Cluster n not found in the sample design file**

A sample design data file contains a list of all the clusters used in the survey, along with additional information for tracking purposes. The cluster number entered is not a valid cluster number, as it cannot be found in the sample design data file.

Quit the data entry program, correct the cluster number and then restart the data entry program. The data entry supervisor must be informed that files with an incorrect cluster number have been attempted, as a data file will have been created on the operator's computer when s/he attempted to start entry for the incorrect cluster number.

**0002 Filename for x file incorrect (name): Quit, correct the filename and then restart**

The main data file for the cluster should be in the C:\KH10\DATA folder. Its filename should start with the letter C (for cluster), be followed by the three digit cluster number, and then the extension .DAT. The complete filename will therefore be 'C:\KH10\DATA\Cnnn.DAT' where nnn is the cluster number (with leading zeros, if necessary). For the "Other" answers data file the filename should be 'C:\KH10\Onnn.DAT'.

The data file created when the data is entered for the second time is stored in the C:\KH10\VERI folder and the filename should start with the letter V (for verification). The “Other” answers are not entered during verification and a separate data file is therefore not produced.

If the data file is not the name given for the data file, then quit the data entry program, correct the name, and then restart the data entry program. The data entry supervisor should be informed that files with an incorrect name have been created on the operator's computer when s/he attempted to start entry for the incorrect cluster number.

**0003 Date on computer incorrect (dd/mm/yyyy): Quit, correct the date and then restart**

At the start of data entry, the date and time set on the computer should be checked. It is important for the management of the data that each data file is recorded with the correct date and time.

If the date and time are incorrect, data entry may not proceed. Quit the data entry program and ask the data entry supervisor to correct the date and time on the computer before restarting data entry.

**0005 Cannot open the CONTROL file for cluster n**

The CONTROL file used to keep track of the status of each cluster or sample point cannot be opened. The application will terminate without any further processing. Check that the file has not been deleted by mistake.

**0006 Data file not ready for editing for cluster n**

The data file that has been selected for editing has not passed the structural completeness (CKID) step and the verification step prior to secondary editing. It is required that each cluster or sample point be processed step-by-step, with the structural completeness checks and the verification checks being performed prior to secondary editing. Rerun these checks to ensure that they have been recorded as performed before trying to rerun the secondary editing for this cluster or sample point.

**0007 Failed to update the CONTROL file for cluster n**

It was not possible to update the CONTROL file to indicate that a pass of the editing program had been performed on this data file. This problem usually occurs because the CONTROL file is write protected. Ensure that the correct access rights have been given to this file. In network or multitasking environments, this message can also mean that the file is already in use by another program or in another window.

**0008 Count of questionnaires for cluster N (n:n:n n:n:n n:n:n) does not match CONTROL file (n:n:n n:n:n n:n:n)**

The control file contains the counts of questionnaires by result code based on the reception clerk's tally. If this message is produced, the supervisors must check the field supervisor's control sheet, the cluster control sheet and the questionnaires to find the error. This error must be rectified before further processing can be attempted.

**0010 Cluster number in filename (x) different from cluster number entered (y)**

Before the operator can begin entry or modification of a cluster, they must enter the cluster number in the data entry menu. This number is also written to that cluster's datafile for each household entered. As the data is being saved for the household (this includes the individual questionnaires as well), this cluster written to the data file name is checked against the cluster number entered in the operator's menu.

If the cluster number entered has been mistyped during entry, then correct the cluster number and continue with data entry. If this does not correct the problem, then quit entry and return to the operator's menu to ensure the correct cluster number was entered there.

**0011 Identification for cluster, region, urban/rural, or keyer incorrect: x, expected y**

Each data entry operator will enter a complete cluster of questionnaires. Within a cluster all of the geographic identification (id) codes for that cluster must be identical. Further, each of the id codes must agree with the expected codes for that cluster number.

If any one of the pieces of information is inconsistent with the cluster number or is different from the previous questionnaire's identification information, then the erroneous information must be corrected.

**0012 Household number not in increasing order: x y**

Household questionnaires should be entered in increasing order of household number (i.e., x must be smaller than y). Questionnaires should be ordered before the data entry staff receives them.

Check the household number of the questionnaire to ensure that the number has been entered accurately and correct it if there has been a typing error. If the number is correctly entered then no further action is necessary. The questionnaires can be sorted at a later stage. Correct the order of the unentered questionnaires so that the remaining questionnaires are in ascending order of household number (i.e., 1, 3, 6, 7, 10 rather than 3, 7, 1, 10, 6).

**0014 Household questionnaire incomplete. Check result code**

If the result code for the household questionnaire is not 1 (Completed) the data entry for the household will terminate at the end of the cover page of the household questionnaire. This is only a warning to ensure that data are not lost inadvertently.

If the household schedule was not completed then continue, but if the household schedule has been completed then go back and correct the result code entered to ensure entry of the complete household schedule.

**0015 More eligible women/men than household members: x y**

The number of eligible women/men given on the cover page of the household questionnaire (x) must be less than or equal to the number of household members given (y).

Check the number of household members and the number of eligible women/men given on the cover page with the number listed in the household schedule and correct the erroneous number.

**0016 Date of interview impossible, <additional information>**

The date of interview must be a complete and valid date, occurring after the survey start date, but before the current date. To properly solve the problem check the supervisor/interviewers assignment sheets to determine the dates that the team was in that cluster. Normally they don't spend more than a week in a cluster.

If the date is invalid or outside the survey period, determine how many other questionnaires (QREs) belong to that household.

One QRE: There is a household questionnaire with no eligible respondents. Check the previous or next questionnaires in the cluster package and assign the more plausible date.

Two QREs: There is a household questionnaire (HH QRE) and one individual questionnaire (Ind QRE). If the HH QRE has the incorrect date, compare it to the Ind QRE. If that date appears correct, use that date for the HH QRE. If the Ind. QRE has the incorrect date, assign the HH questionnaire and make sure that it fits properly with other dates like last birth in the birth history (Q215), date of union (Q610) or date began using contraception (Q308). For the man's QRE, check for their date of union (QM411).

Three or more QREs: review all questionnaires' date of interview from their cover page. If the household questionnaire was the one with the incorrect date, use the earliest date found among the individual questionnaires. If an individual questionnaire is the one that is incorrect, use the instructions above for "Two QREs" to assist you in correcting it.

**0017 Line number of respondent out of range**

The line number of the respondent for the household schedule must not be zero and cannot exceed the total number of household members listed. Correct the line number entered if a keying error.

If is not possible to identify the person, enter code 99 (missing).

**0020 Identification variable x inconsistent with sample design definition, expected n**

A value has been entered for the identification variable specified which is not the expected value according to the information in the sample design file.

The value entered should be checked and corrected. If there is no error on the questionnaire, the sample design file should be checked to ensure that there is no mistake in the information recorded in that file.

## _____HOUSEHOLD SCHEDULE_____

**0029 HH⇨Only one person can be head of the household (n were found)**

Although the head of the household can appear on any line in the household schedule, there can only be one person overall designated as head. Upon review of the entire schedule, relationships between other household members, mother's and father's line numbers, etc., you should be able to identify who is the correct head and correct the other person's relationship code to the likely code (for example, the head and spouse could have both been marked as head). If you cannot ascertain the relationship code of the second head, change it to '98' (don't know).

**0030 HH⇨No more than one spouse/parent/parent-in-law of each sex is allowed in the household**

In most households there is only one head of the household, one spouse, one male parent of the head, one female parent, one male parent-in-law and one female parent-in-law. In some households, particularly polygynous households, this rule may not hold.

During data entry, verify that the relationship codes, line number of parents, sex and age have been correctly entered for each member. If no typing mistake has been made then no further action need be taken.

During editing, check the relationship codes of each member of the household and attempt to identify the correct relationships. If it is not possible to correct the problem or it is clear that the rule does not hold for this household then no further action is necessary.

**0031 Line n: Head of household should be first line, spouse should be second line**

The head of the household is normally listed as the first person in the household listing and the spouse of the household head is normally listed as the second person in the schedule. Occasionally, the head of household or the spouse are not listed as the first and second members, particularly when the household is polygynous.

During data entry, verify that the relationship codes have been correctly entered. If no typing mistake has been made then no further action need be taken.

During editing, check the relationship (QH03), sex (QH04), father's line number (QH15), and mother's line number (QH13) for each household member and ensure that no mistake has been made in entering the data or recording the information on the household schedule. If no mistake is found, then no correction is required.

**0032 For co-wives, head of household must be female**

In countries in which polygamy exists, there may be several wives in a household. In a number of these cases, the head of household may be a woman, in which case the other wives of the head of household's husband are recorded as co-wives of the head of household. The code used for co-wives may only be used in households in which the head of household is female. Correct the coding for the household member (or for the head of the household if the head is actually female).

**0050 HH⇨Line n: Member neither usual resident (QH05=n) nor slept previous night in HH (QH06=n)**

For each household member, both responses to questions QH05 and QH06 may not be "no". Members should be included in the household schedule only if they are either a usual resident of the household (QH05) or they slept the previous night in the household (QH06).

If neither of these conditions is true, then the member should be removed from the household questionnaire. When removing members from the household schedule, all references to members' line numbers that follow the removed person in the household schedule should be adjusted correspondingly (i.e., if you removed person in line #3, all household members in line 4 and higher should be checked). Additionally, you must check all individual questionnaires for possible corrections. Specifically, references to the following line numbers in the following questions must be reviewed:

In the household questionnaire:

—line number of the HH member (QH01)
—eligibility code (QH09-QH11)
—the member's mother's line number (QH13) and father's line number (QH15)
—sick persons in the household (QH67)
—line numbers in the height/weight sections (QH202, QH209, QH215, QH220)

In the woman's questionnaire:

—child's household line number shown in the birth history (Q219)
—the husband's line number (Q605)

**0060 HH⇨Line n: Sex (QH04=n) of spouse (n) must be different from sex (QH04=n) of head of household (n)**

The sex of the spouse (i.e., where QH03=02) should be different from the sex of the head of household (i.e., where QH03=01). The head of the household should be listed as the first member in the household.

During data entry, check that the sex and relationship codes on the household schedule have been entered correctly for each member. A common error is for the line number of the second member to be entered instead of the relationship code for that member. If no data entry error has occurred, then no further action is necessary.

During editing, the relationship code, sex, age and mother/father's line numbers of each member should be checked. In many cases a relationship code of 02 (spouse) has been recorded on the questionnaire instead of code 03 (child), and this can usually be clearly seen from the ages and parent's line numbers of the members. In other cases the names of the members can often be used to check the sex of the members. Correct either the sex or the relationship of one of the members.

**0061 HH⇨Line n: Son/daughter of head of household (QH03=n), but head (line=n) not father/mother of member (QH15/QH13=n)**

The household member has a relationship code of son or the daughter of the household head and is under the age of 17, however, the head of the household is not listed as the father or mother of the child.

Follow the procedures in message 0122 to attempt to correct the error.

**0062 Sex of co-wife not valid**

The sex of a household member recorded as a co-wife of the head of the household is male. Co-wives can only be female, and can only occur when the head of the household is female. Check and correct either the relationship code or the sex for this household member.

**0071 HH⇨Line n: Age (QH07=n) of head of household or spouse is under 12 years**

The head and/or the spouse of the head of the household are expected to be adults. A minimum age of 12 is usually used in checking the age of the head/spouse.

During data entry, the age (QH07) of the head and/or the spouse should be checked to ensure no typing mistake occurred. If no typing error is found, then no further action is necessary. Similarly, during editing, if there is no obvious correction then the data should be left as originally recorded.

**0072 HH⇨Check head of household's age (line n, QH07=n) with his/her parent's age (line n, QH07=n)**

It is expected that the parent's of the head of household would be at least 12 years older than the head. Check for data entry errors in the ages of the head and each of his/her parents; also, if the parent is a woman who has been interviewed, see if the woman listed this child in her birth history—if not, then make no correction to the data.

**0073 HH⇨Check spouse's age (line n, QH07=n) with his/her parent's age (line n, QH07=n)**

It is expected that the parent's of the spouse of the head of household would be at least 12 years older than the spouse. Check for data entry errors in the ages of the spouse and each of her/his parents; also, if the parent is a woman who has been interviewed, see if the parent listed the spouse (her child) in her birth history—if not, then make no correction to the data.

**0075 Check age of the woman in the household schedule (QH07=n) with QH218**

The age of the respondent in the household schedule is not consistent with the response to QH218.

If no typing mistake has been made, then verify that the women are listed in their Height and Weight section in the same order of listing as given in the household schedule.

**0090 Level and grade of education inconsistent**

Within a country's educational system, people usually spend a maximum number of years in primary school, secondary school, and higher education. This check ensures that the grade given does not exceed the country-specific maximum expected for the education level reported.

The grade and level entered should be checked to ensure there has been no typing error, and correction should be made as necessary to either level or grade.

If the response exceeds the maximum grade of schooling possible at the highest level reported, check first to see if the error may have occurred in the form in which the answer was recorded.

You should also check for the presence of an individual questionnaire for the person; if found, cross-check the educational values recorded there (woman=Q105/Q106, man=QM105/QM106) against the household responses and adjust the household as possible.

For Cambodia education grades has been set as following:

| Level | Grade | Notes |
|---|---|---|
| 1=Primary | 1-6 for grade 1-6 | 0 = Less than 1 year completed in QH17, and for pre-primary in QH19 |
| 2=Lower secondary | 7-9 for grade 7-9 | |
| 3=Upper secondary | 10-12 for grade 10-12 | |
| 4=Higher | 1-8 for year 1-8 | 98 = Don't know |
| 5=Pre-primary | 0 for any year | |
| 8=Don't know | | |

**0120 HH⇨Line n: Line number (QH13 / QH15=n) of mother/father not valid**

The line number of the mother (QH13) or the father (QH15) of the member is either greater than the total number of household members, or is referring to the member themselves.

Check the line number (QH01), sex (QH04), and relationship codes (QH03) of the household members to identify a possible mother or father of the member. If the parent is no longer listed as a member of the household, because he/she was neither a usual resident of the household nor had slept in the household the previous night, then correct QH13/QH15 to 00 (parent not member of household). If the parent can be identified, then correct QH13/QH15 to refer to this parent.

Checking the household line number (Q219) in the birth histories of the individual womens' questionnaire may assist in correcting line numbers of the mothers. Also, the husband's line number (Q605) or date of marriage (Q610) may assist in correcting the father's line number. If no correct parent line number can be found after careful checking, the line number of the parent can be changed to missing (99). See also messages 0122 and 0123.

**0121 HH Line n: Sex of mother/father (n) incorrect**

The sex of the mother of the member should be female and the sex of the father should be male. Similarly, the mother and father should be at least 12 and 15 years older, respectively, than the member. In some cases the age restriction does not hold, but as a general rule, very few cases exist which would break this restriction.

During data entry, verify that the relationship codes, parents' line number (QH13/QH15), sex, and age have been correctly entered for each member. If no typing mistake has been made, then no further action need be taken.

During editing, check the line number of the mother or father (QH13/QH15, respectively), the relationships to the head of the household, and the ages of the member and parent. Identify the mother or father of the member and correct the line number. If the mother or father is not a member of the household, change the line number to 00. If the correct mother or father is already defined and the sex and age of the parent in the data file equals those in the questionnaire then no change should be made.

**0122 HH⇨Line n: Relationship (QH03=n) between mother/father (line=n, QH03=n) and child not correct**

For each member of the household whose mother and/or father's line number is recorded the relationship of the member and the relationship of the parent to the head of the household should

be consistent. For example, a member of the household cannot be recorded as a child of the head of the household while its mother is recorded as a parent of the head of the household.

During data entry, verify that the relationship codes, line number of parents, sex and age have been correctly entered for each member. If no typing mistake has been made, then no further action need be taken.

During editing, check the mother and father's line numbers and the relationship codes for each of the members and identify the correct relationship. Modify the relationship codes of the member and the parent so that their relationship codes conform if the members are truly parent and child; otherwise, correct the information on the line number of the parent for the member.

EXAMPLES:

| Line | Relationship | Sex | Age | Mother | Father |
|---|---|---|---|---|---|
| 01 | 01 | 1 | 33 | | |
| 02 | 02 | 2 | 31 | | |
| 03 | 03 | 2 | 08 | 02 | 01 |
| 04 | 04 | 1 | 06 | 02 | 01 |

In this case, the fourth child is recorded as being a child of the head of the household according to his father's line number, but is recorded as a son-in-law according to the relationship codes. Clearly the interview has recorded the line number rather than the relationship to the head of household in the relationship code column. The relationship code for line 04 should be corrected to 03.

| Line | Relationship | Sex | Age | Mother | Father |
|---|---|---|---|---|---|
| 01 | 01 | 2 | 57 | | |
| 02 | 03 | 2 | 33 | | |
| 03 | 13 | 2 | 30 | | |
| 04 | 05 | 2 | 06 | 03 | 00 |

The household member line 04 is recorded as being the granddaughter of the head of household, but the mother, according to the mother's line number, is not related to the head of the household. Since both of the women recorded in lines 02 and 03 are eligible for the individual interview, review their individual questionnaires if present—it should be clear who is the correct mother of the child. If line 03 is the mother, then she is clearly related to the head of the household, as her child is the granddaughter of the head of the household. Line 03 may be the daughter of the head of household, but it is more likely that she is the stepdaughter. Change the relationship code for line 03 to code 10 (stepchild).

If, however, after reviewing the individual questionnaires, it is found that line 02 is the mother of the child, correct the mother's line number (QH13) for the child in row 04 to 02. The problem in this situation was probably due to the interviewer recording the relationship code of the mother, rather than the line number in the mother's line column.

**0123** **HH⇨Line n: Child has different mother/father (x vs. y) in household according to relationship codes**

In some cases it is possible to identify the mother or father of a member of the household, solely on the basis of the relationship of each of the members to the head of the household. In these cases the line number of the mother or father recorded is checked against the line number of the mother or father identified to check for errors.

During data entry, verify that the relationship codes, line number of parents (QH13/QH15), sex, and age have been correctly entered for each member. If no typing mistake has been made, then no further action need be taken.

During editing, check the relationship codes, line number of parents (QH13/QH15), sex, and age to help identify the correct relationships. In most situations, the relationship code of the member or the parent should be changed, or the parent's line number should be modified. In a few cases, it may be decided that no correction of the data will be made.

EXAMPLES:

1.

| Line | Relationship | Sex | Age | Mother | Father |
|---|---|---|---|---|---|
| 01 | 01 | 1 | 35 | | |
| 02 | 02 | 2 | 30 | | |
| 03 | 03 | 2 | 08 | 02 | 00 |
| 04 | 03 | 2 | 02 | 02 | 01 |

In this example there are four household members: the head of the household, his spouse, and their two children. The mother of both of the children is line 02, the father of the second child is line 01, but the father of the first child is reported as not living in the household, although the relationship code of the child indicates that he/she is the child of the head of the household. There are two possibilities in this situation: either the line number of the father should be 01 for the first child, or the head of the household is not the natural father of the child (perhaps the wife was previously married and had the child during that marriage).

The individual questionnaire for the spouse can be used to look for indications as to whether the head of the household is the natural father of the child. For example, if the spouse had been married more than once, it is likely that the child was the child of a previous marriage. In this case the relationship code for the child should be changed to 10 (stepchild) or 09 (other relative). If the spouse was only married once and the first marriage was prior to the birth of the child, then it is safe to assume that the child is actually the father's and the line number of the father (QH15) should be corrected to 01.

2.

| Line | Relationship | Sex | Age | Mother | Father |
|---|---|---|---|---|---|
| 01 | 01 | 1 | 35 | | |
| 02 | 02 | 2 | 19 | | |
| 03 | 03 | 2 | 08 | 00 | 01 |
| 04 | 03 | 2 | 02 | 02 | 01 |

This situation, though similar to the previous example, differs in some important ways. The mother of the first child does not live in the household, whereas the mother of the second child is line 02. The woman listed as line 02 is 19 years old and would have been 11 at the birth of the first child (line 03). Thus, it appears that the child is the child of a different woman, not listed in the household, and so no correction is needed for the mother's line number. The head of the household is clearly the father of the child, so no change is needed for the relationship code. The data, in this example, should be left unchanged.

**0124** **HH⇨Line n: Age of mother/father QH07(n)=n unlikely.**

See message 0121.

**0150 HH Line n: Eligibility of member incorrect: sex (QH04)=n, age (QH07)=n, elig (QH09/QH10/QH11)=n**

To be eligible for the individual interview, a household member must be female (or male if there is a male sample) and 15 to 49 years of age. Similarly, to be eligible for the children's anthropometry section in the household questionnaire, a child must be 0 to 5 years old. If a member is eligible then the code entered for eligibility should be the same as the line number of the member (QH01)—otherwise, the eligibility code must be 00.

The eligibility of household members is checked at data entry to ensure that all eligible members and only those that are eligible are included in the individual data. If this is a woman (sex (QH04)=2), then ensure her age (QH07) is between 15 and 49 inclusive. If this is a male (sex (QH04)=1), then ensure his age (QH07) is between 15 and 49. If this is a child, then ensure his or her age (QH07) is between zero and five years.

If all of these conditions are correct then the member is eligible and the eligibility code (QH09/QH10/QH11) must be the same as the member's line number (QH01). If this is an adult, an individual questionnaire should exist for them. If any of the conditions is not met then the eligibility code must be 00 and no individual questionnaire should exist for this person. Check for the existence of an individual questionnaire before deciding on which piece of information is incorrect.

If this error appears during editing, then not only should the household schedule be corrected, but the individual's case may need to be added or deleted from the data file, depending on the source of the error.

**0151 HH⇨Number of eligible women/men incorrect: Expected x, found y**

The number of eligible respondents in the household schedule must equal the number of eligible respondents stated on the household questionnaire cover sheet.

If these numbers are not in agreement, the household schedule should be reviewed. Each member in the household schedule should be checked regarding their sex, age, and marital status (if applicable). An individual questionnaire should exist for each eligible adult respondent. To correct the mistake, either the total number of eligible women/men field on the cover sheet should be corrected, or the entries in the household schedule should be adjusted (for example, if the interviewer considered ineligible household members eligible for interview).

**0160 HH⇨Line n: Level and grade of education QH17=x:y inconsistent with level and grade of education QH19=x:y**

If there is an inconsistency between QH17 (highest level of education attended and grade completed at that level) and QH19 (level and grade of education attending during current/recent year) a message will be given.

During data entry, the first is when the values given in QH17 (attainment) are higher than those in QH19 (current attendance). This would imply the student has been demoted to a lower level of education, which could occur but is unusual. Review the schedule and ensure the values entered in the program match what was written on the questionnaire. If an individual questionnaire was completed for the respondent, this can also be checked for the highest level of education therein. If all values are correctly written and entered, then do not make any changes.

During editing, QH17 (attainment) is checked against current year of schooling (QH19) against QH19 (the current year's schooling). Review the scenarios described above for a resolution.

**0410 Line number of child/woman in column n incorrect: Expected n**

The children/women entered in the anthropometry (height and weight) sections, respectively, must be listed in the same order in which they were listed in the household schedule. If the individuals are listed out of order, then write the correct order in which they should be entered by the keyer just above QH202/ QH215. Also ensure that only those individuals eligible for interview were listed in the height and weight roster—for not everyone in the household should be weighed, etc. If there are any ineligible persons listed, strike them out from the roster.

**0430 Child's date of birth out of range**

The date of birth of the child in question QH203 is incorrect. This message is produced when the date of birth is either after the date of interview, before the minimum date of birth for this question, or the day of birth is invalid (i.e., February 30, or the 31st if the month is April, June, September, or November). If there is no keying error, attempt to resolve the problem by looking at the date of birth in the birth history and at the vaccination dates if the child's mother was interviewed.

**0435 Response inconsistent with year of birth**

Question QH204 asks if the child was born since 2005. If the child was born in that year or later and the response to this question is 0, or if the child was born before 2005 but the response is 1, then the message will be produced. Ensure that the child's year of birth was correctly entered; if so, correct QH204 to agree with QH203.

**0436 Response inconsistent with date of birth**

Question QH208 asks if the child was born in the last six months, i.e., in the current month of interview or in the previous five months. If so, then the response to this question should be 1; otherwise, it should be 0. If there were no keying mistakes, check the month of interview on the household cover sheet—it could be that the household was revisited several times, and when the height/weight information was finally collected, it was the next month but the interviewer did not change the cover sheet's date. Adjust QH208 to agree with the date of interview if necessary, do not change the date of interview to agree with QH208.

**0440 Child/Woman Column L R Line N: Weight QH205/QH216=n outside range expected for age=n, sex=n**

The weight of the child or woman is outside of the expected range. For children, the range is dependent on the child's age in months and sex (the exact limits are given in section F). For women, the range is 20-150 kilograms.

Carefully check the data entered. If no keying error was made, then no correction is necessary.

**0450 Child/Woman Column L Line N: Height (length) QH206/QH217=n outside range expected for age=n, sex=n**

The height or length of the respondent or child is outside of the expected range. For children, the range is dependent on the age in months and sex of the child (the exact limits are given in section F). For the woman, the range is 100-200 centimeters.

Carefully check the data entered. If no keying error was made then no correction is necessary.

**0451 Height smaller than weight; they should possibly be reversed**

The height or length of the respondent or child is smaller than the recorded weight. If it is clear that the interviewer inadvertently switched the two entries then reverse them, otherwise leave as is.

**0460 Child Column L Line N: Children under 2 years are usually measured lying down, children 2+ measured standing up: Measured QH207=n, age=n**

In measuring the height or length of children, the measurers are instructed to measure children aged under 2 years lying down, and children aged 2 years and over standing up. The code entered for this question does not agree with this rule.

Check the data entered, but make no correction unless a keying error was made.

**0461 Child's height not measured (QH206=n) not consistent with QH207=n**

The height or length of the child was not measured, but QH207 is not 3 or missing.

Check the data entered, but make no correction unless a keying error was made.

**0470 Anemia consent refused (QH211=n), thus hemoglobin measurement (QH212=n) should be 99.5**

According to question QH211 the anemia consent was refused, but 99.5 was not circled for question QH212. There are 2 ways to resolve this inconsistency:

i) If a valid measurement is recorded in QH212 then QH211 should be changed to 1 (anemia consent granted).

ii) If there is no valid measurement for QH212 and the anemia consent was refused (QH211 = 2) then QH212 should be changed to 99.5.

**0471 Anemia consent refused by parent/caretaker (QH211=n) or woman (QH222=n), thus hemoglobin measurement (QH240=n) should be 99.5.**

Follow the procedure for message 0470.

**0475 Check marital status with marital status in household schedule (n)**

In the height and weight roster in the household questionnaire, adults are asked if they have never been married or lived together (QH219 for a woman). If this is yes (1) but the person in the household schedule has been in a union, or conversely, if this is no (2) but the person in the household schedule has never been in union, then this message will be issued.

Initially check for typing errors; if there are none, ensure that the column is referencing the correct person in the household schedule (compare the name in QH215 with that written in QH02). If it is the same person, then correct QH219 to agree with the result in QH08. If it is a different person, correct the order of the persons listed in the height/weight roster to agree with the order of the persons listed in the household schedule.

**1000 Line number of respondent incorrect: Please enter woman/man number n**

Each eligible woman (or man) in the household schedule must have an individual questionnaire entered. In addition, the individual questionnaires should be entered in order of the household schedule's line number (QH01).

If the line number on the questionnaire does not agree with the line number expected, ensure there was no typing error, and ensure that the individual questionnaires are sorted in ascending order of the household line number (QH01).

If there is no questionnaire present for an expected line number, check the eligibility of the member and verify that a questionnaire should exist for that person. If there is a mistake in their eligibility, correct the sex (QH04), age (QH07), residence (QH05 and QH06) for the household member.

If the individual is eligible but a questionnaire does not exist, then check the Field Supervisor's Control Sheet to ensure that an interview was conducted with the member. If no interview was conducted, but the member was eligible, a dummy questionnaire should be created for the member—fill in all identification and geographical fields according to the cluster, enter the same date, interviewer/supervisor and filed editor codes as those of the household, and give a result code of 7 (Other), writing "Questionnaire missing" in the space provided. If it is possible to return and re-interview the eligible member, then the dummy questionnaire may be replaced at a later time by a completed questionnaire. The Cluster Control Sheet, Control File and the Field Supervisor's Control Sheet should be corrected to reflect the addition of an individual questionnaire.

In a few cases, questionnaires may have been completed for ineligible respondents, in which case no data will be expected for these respondents by the computer. The eligibility of the respondent should be checked carefully to determine whether the respondent was really eligible or not. In general, it should be assumed that the respondent was eligible, unless there is sufficient information to determine that the respondent was ineligible.

If the respondent was clearly ineligible, then the cover of the individual questionnaire should be crossed through and marked "INELIGIBLE", and the Supervisor should adjust the number of individual interviews in the Control file and the Field Supervisor's Control Sheet to reflect this change.

**1002 Questionnaire result code incomplete. Please check entry.**

If the result code for the individual questionnaire is not code 1 (completed), then the data entry for the individual will terminate at the end of the cover page. This is only a warning to ensure that data is not lost inadvertently.

Check the individual questionnaire to see if a complete interview was conducted. If the result code shows a partly completed interview, but more than half of the questionnaire was answered, then the interview should be considered complete, the result code changed to 1, and the remaining unanswered questions should be set to missing (9s for numeric fields, "?" for alphabetic responses).

However, if the individual interview was clearly not completed (none or very little of the questionnaire was completed), then continue with data entry for the next questionnaire.

## SECTION 1. RESPONDENT'S BACKGROUND

### 1060 Neither date of birth (Q102=mm/yyyy) nor age (Q103=n) specified

The age of the respondent is one of the most important pieces of information in the individual data file. It is crucial that the age of the respondent be known for all women in the individual data file. For this reason, either the age or the year of birth are required for all respondents.

If no information has been recorded for either of these questions, then check other related pieces of information to see if the age of the respondent can be deduced. The information to check includes the following:

- respondent's age in the household schedule (QH07)
- age at first union (Q611) and date of first union (Q610)
- first child's date of birth (Q215)
- age at first sexual intercourse (Q613)

If none of the related information gives any clear idea as to the correct date of birth or age of the respondent, use the respondent's age as reported in the household schedule (QH07) in Q103.

### 1061 Respondent's age in individual questionnaire (Q103=n) differs from age in household (QH07=n)

The respondent's age in the individual questionnaire (Q103) and the age given for her in the household schedule (QH07) should be the same, but discrepancies can arise as the household schedule is often reported by a different member of the household.

If the age of the respondent has been recorded differently in the household schedule and the individual questionnaire, but both have been correctly entered, then the information should be left as recorded, unless it affects her eligibility for interview.

Cases in which the age of the respondent is significantly different from the age recorded in the household schedule should be carefully reviewed. However, unless there has been a keying error, or the age of the woman in the household schedule makes her ineligible for interview, then the ages should not be changed.

If there are two or more eligible women in the household, each of the individual questionnaires should be checked to ensure that the correct questionnaire is being entered. Occasionally the wrong line numbers are written on the cover pages of the questionnaires. If this is the case, the line numbers should be corrected, the questionnaires reordered, and the entered according to the correct order.

### 1062 Date of birth (Q102=mm/yyyy, cmc=cmc-cmc) and age (Q103=n) inconsistent with date of interview (mm/yyyy, cmc=cmc)

The age calculated based on the month and year of birth of the respondent (question Q102) must be equal to the respondent's age in completed years (question Q103).

In resolving inconsistencies in the calculated and reported ages, it may be necessary to consider other information in the DHS household and individual questionnaires including:

- The age recorded for the respondent in the household listing (QH07)
- The number of live births in the woman's birth history (Q212-Q221)
- The date of birth of the respondent's first child (the first entry in row 1 for Q215)

- The age at first union (Q611) and date of first union (Q610)

If, after reviewing all other relevant items of information, the inconsistency cannot be resolved, there are two ways of correcting the data. If the inconsistency is 1 year, correct the year of birth if the month is given; otherwise correct the age. If the inconsistency is greater than 1 year, choose the age or date of birth, whichever appears more correct (i.e., is most consistent with other pieces of information). If the age is chosen, change the year of birth to 9997 and the month to 97. If the date of birth is chosen, change the age to 97.

Note that in many cases, the difference between the calculated and reported ages will not be large. Often the error occurs because the respondent reported her age at her next birthday (especially if the date is close to the interview date), rather than at her last birthday.

EXAMPLES:

1. Her birth date recorded in Q102 was May 1971, indicating that the respondent was 31 years old at the time of the DHS interview in August 2002. However, her age as recorded in the individual questionnaire and in the household schedule was 32 years. Both the birth date and the age are consistent with the date of first union (July 1992) and date of birth of her first child (August 1994). To resolve the inconsistency between the birth date and the age response, change the age reported in her individual questionnaire (Q103) to 31. Do not change the age as recorded in the household schedule.

2. Her birth date recorded in Q102 was March 1970, indicating that the respondent was 32 years old at the time of the DHS interview in September 2002. However, her age as recorded in the individual questionnaire and in the household schedule was 42 years. The respondent also reported that she was 17 years old when she first married, that she has had five children, and that her first child was born in June 1979. The latter responses are more consistent with current age of 42 years than 32 years (e.g., if the respondent was 32 years at the time of the interview, she would have only been 9 years old at the birth of her first child). The year of birth (Q102) should therefore be changed to 9997 and the month to 97.

**1063 Date of birth (Q102=mm/yyyy) is out of range with respect to the interview date (mm/yyyy), range=mm/yyyy-mm/yyyy**

A respondent must be between 15 and 49 completed years to be eligible for interview. Depending on the date of interview, this translates into a minimum and maximum possible date of birth for the respondent. Occasionally a date of birth recorded is outside of this range.

Check that all information relating to the date of birth of the respondent are correct as in message 1062.

If the date of birth is one month before the minimum date of birth, and the age of the respondent is recorded as 49, then change the month of birth of the respondent to the month following. This will ensure consistency of information, without dropping the respondent from the sample.

If the respondent was clearly born outside of the expected range, then the respondent should be dropped from the sample due to ineligibility. Cross through the front cover of the individual questionnaire and mark it ineligible. Correct the age and eligibility in the household schedule to reflect the correct age of the respondent. The supervisor should adjust the number of individual interviews in the Control file and Change the Field Supervisors Control Sheet to reflect the correction.

**1064 Month of birth (Q102M=n) inconsistent with other information: cmc=cmc-cmc [mm/yyyy-mm/yyyy]**

If the year of birth was not recorded, but the month of birth was given, the editing and imputation program will attempt to correctly calculate the year of birth from other information provided in the

questionnaire. In some cases, after constraining the date of birth using all other available information, the month of birth proves to be inconsistent with the constrained date. This message is often accompanied by message 9921.

If the month of birth is truly inconsistent with the other available data, no correction is necessary, as the month of birth will be ignored in the imputation of the respondent's date of birth. However, if the month of birth is believed to be correct, then the information used to constrain the date of birth will need to be modified to avoid the inconsistency. In general, it is better to assume that the month of birth is not correct, and allow a new month of birth to be imputed.

**1080 Level of education n different from level in household n (QH17A=n)**

The data recorded in the household listing for education should be checked for consistency with the information recorded in the individual questionnaire.

Only keying errors should be corrected. The household data should not be changed to be consistent with the respondent's data since it is not possible to correct the data reported for the never-married women at the household level. If there are two or more eligible women in the household, check each of the individual questionnaires to ensure that the correct individual questionnaire is being entered as in message 1061.

**1090 Grade of education n different from grade in household (QH17B=n)**

See message 1080.

**1091 Level and grade of respondent's education inconsistent**

The level of school as reported in Q105 (primary, secondary, higher) does not agree with the number of years stated in Q106. Generally, there are a maximum of number of years that can be taken in a given level, and the number of years cannot be beyond that number (for example, 10 years spent in primary school is well beyond the maximum number of years anticipated of 6 or 7).

If there are no keying errors, then review the procedure for message 0090 (education in the household schedule).

## SECTION 2. REPRODUCTION (children ever born)

**2030 Number of boys and girls must be greater than zero**

The number of boys and girls specified in questions Q203, Q205, or Q207 must be greater than zero or the responses to Q202, Q204, and Q206 should be "No" (code 2).

Check the number of boys and girls living at home, living elsewhere, and who have died in the birth history, against the numbers given in questions Q201 to Q208. If there are no boys and no girls in a particular category, then the response to the preceding question should be "No". For example, if there are no boys living elsewhere and no girls living elsewhere then the response to question Q204 should be corrected to "No" (code 2).

**2080 Number of children ever born incorrect**

The total number of live births must be equal to the sum of the total number of children reported in questions Q203 (number of sons and daughters at home), Q205 (number of sons and daughters elsewhere) and Q207 (number of boys and girls dead).

If the total reported in question Q208 does not agree with the sum of the number recorded in

questions Q203, Q205 and Q207, review each of the entries given in Q203, Q205, and Q207 to get them to total correctly, then ensure that Q208 correctly sums to these numbers.

## SECTION 2. REPRODUCTION (birth history)

A detailed description of the birth history and the internal consistency of the information recorded within the birth history is given in section H.

### 2120 Multiple birth code incorrect

There are three possible causes of this error:

[1] The current birth is marked as a single birth, BUT the preceding birth is marked as the first of a multiple birth.

[2] The current birth is the first of a multiple birth, but there are no further births.

[3] The current birth and the preceding birth are recorded as part of the same multiple birth, but the date of birth is different.

Check that the multiple birth status is coded correctly. The definition of a multiple birth is a pregnancy that results in the birth of two or more living children. Stillbirths are not included as a live birth.

Ensure that the children listed in the birth history are entered in order of their line numbers, which should reflect the chronological order of the births. For example a dead child may have been missed from the birth history at first, but then added at the end of the birth history during the interview. The line number of each child in the birth history should have been changed to reflect the correct ordering of the children and the children should have been entered according to this order. If this is not done, twins may be separated in the entered data, causing this error.

If the children are correctly ordered and the multiple birth status is correctly coded, check that the date of birth recorded for each of the children resulting from the multiple birth is exactly the same. If the children were born on different dates, the multiple birth status of each child should be changed to reflect the fact that they were single births, but if they were born at the same time, the date of birth should be exactly the same.

In a few cases there may be triplets or one pair of twins born after another pair of twins. It is important to check the data carefully to ensure that each of the twins is correctly coded and that the twins are recorded as being born on the same date.

### 2141 BirthHist: Child n's sex in birth history (Q213)=n, but sex in household (QH04)=n

The sex of the child given in the women's questionnaire (Q213) is different from the sex of the child in the household questionnaire (QH04).

Check that the line number given in Q219 refers to the correct child in the household schedule by checking the name and age of the referenced child. If Q219 points to the wrong child, correct Q219. If Q219 refers to the correct child, check questions Q201-Q205 to check if there was a mistake with the sex in question Q213. Also review the child's name to see if that can be used to determine the sex of the child. If there is no way to determine the sex of the child, assume that the sex given in the women's questionnaire is correct and change the sex given in the household questionnaire (QH04) for the line referenced by Q219.

### 2150 Child's date of birth after date of interview

The child's date of birth (Q215) must be prior to or the same day as the date of interview.

If the date of birth is later than the date of interview, the error may be in either the response to question Q215 or with the interview date. In resolving the problem, check to see that the child's age (Q217) is consistent with the response in Q215, i.e., that the child was 00 years old at the time of the interview. If the child's age is greater than 00, change the child's year of birth (Q215) to be consistent with the child's age. Other information that may help in determining the child's correct age and/or birth date include the child's age in the household listing and the dates recorded for immunizations (Q506). The interview date should be checked with the dates recorded on the questionnaire cover page for each interview visit. Also ensure that it is consistent with the dates recorded for other interviews in the cluster.

If both the interview date and question Q215 appear to be correct, change the child's month of birth in Q215 to 97.

### 2151 Child's date of birth and his/her twin are different

If a child is recorded as the second (or third or fourth) of a multiple birth, then the child's date of birth must be exactly the same as the preceding child's date of birth.

If the dates of birth are different, check that the age of the child is the same for each living twin and ensure that they are twins. If twins are recorded with slightly different dates of birth, then the dates should be made to be exactly the same. For example, a child who has died may be recorded as being born in 1988, but the month of birth was unknown (98), while the living twin is recorded as being born in February 1988. In this case the dead twin's month of birth should be changed to February (02).

Other errors can occur due to poorly written entries on the questionnaire. For example, one of the twins is recorded as being born in March 2000, while the other is listed as being born in March 2001. The age of the twins, the dates of birth of other children born before or after the twins, immunization dates, etc. can be used to deduce which year is correct.

### 2152 Childrens' date of births not in order

Each child must be entered in chronological order of birth date. The line numbers of each child must reflect this ordering. The oldest child should be listed first, followed by later births. If a younger child is found listed before an older child this message will occur.

Check the current child's date of birth and previous child's date of birth to see if they were entered correctly and that they were recorded accurately on the questionnaire. Check that each child's date of birth is consistent with their age (if the child is alive). If the child's date of birth is correct, then the ordering of the children in the birth history should be changed; however, before reordering, the birth history must be checked to ensure that this change will not produce any other inconsistencies.

For example, the interval between the births of children must be sufficiently wide. Nine months is the minimum birth interval allowed, and about two and a half years is the expected interval. Also ensure that the age of the woman was not too young or too old at the time of the birth, and that the birth was not too far away from other births. These are all signs of a possible error in the date of birth.

If, after carefully checking that the date is correct and reordering will not create other problems, then correct the order of the births and the line numbers of each of the children affected. If the reordering affects any children born in the last five years, then the line numbers and the ordering of columns in Sections 4 and 5 of the questionnaire should be corrected. Reordering is done in each section by writing the correct column number at the top of each column and marking with '*'

(i.e., a star) the columns to be reordered. It is important that the data entry operators enter the data from the entire column into the correct column in the data file. It is not enough to simply change the line number in Q403 and Q502. The entire section must be correctly entered. Further, particular attention must be given to Section 4, as many questions are not asked except for the most recent birth. Therefore if you are swapping columns 1 and 2, the new column 1 will have a lot of missing responses, and the new column 2 will be losing a lot of data, as many questions that were asked in column 1 are now skipped over for column 2.

**2153 Child should be coded as multiple birth if born on same date as previous child**

Each child that was born on the same date as another child should be recorded as a multiple birth. First check that the date from the correct line of the birth history has been entered for the current entry and the previous entry. Check the multiple birth status of the previous child to see if that child was marked as a multiple birth. Verify that the age of each child is the same.

If all information indicates that the dates of birth and ages are correct and the children are twins, then correct the multiple birth status of the child, and the previous child if necessary. If the children do not appear to be twins, then the date of birth of one of the children must be changed.

**2170 Age of child and his/her twin different**

If two children are recorded as twins and their dates of birth are the same, then the ages of the children must be the same. Modify the ages of the children to be the same and to be consistent with the date of birth.

**2171 BirthHist: Child n's age (Q217=n) and DOB (Q215=mm/yyyy) inconsistent with date of interview=mm/yyyy**

For all surviving children in the birth history table (i.e., when Q216=1), the age calculated on the basis of the date of birth (Q215, month and year) must be equal to the child's age reported in Q217.

In resolving inconsistencies in the calculated and reported ages for children, first check the consistency between the two items of information (date/age) and similar information for the preceding and/or subsequent births. Using all of this information, the following rules should be applied in resolving inconsistencies between the child's date of birth and age:

i) If both the date and age are consistent with information for the surrounding births, then either the date of birth or the age should be corrected. If the month and year of birth are both reported, change the age to be consistent with the month and year of birth, otherwise change the month or year of birth to be consistent with the age.

ii) If one response is inconsistent with information relating to a preceding or subsequent birth while the other response is consistent, change the inconsistent response.

iii) If both items are inconsistent, follow the procedures outlined in message 9905 for correcting errors relating to the interval between two births.

**2172 BirthHist: Child n's month of birth (Q215M=n) inconsistent with other information: cmc=cmc-cmc [mm/yyyy-mm/yyyy]**

See message 1064.

**2173 BirthHist: Child n is (Q217) x years old in birth history but (QH07) y years in household**

The age of the child given in the women's questionnaire (Q217) is different from the age of the child in the household questionnaire (QH07).

Check that the line number given in question Q219 refers to the correct child in the household schedule by checking the name and sex of the child referred to. If Q219 refers to the wrong child, correct Q219.

Check the age of the child in Q217 and the age given in the household schedule. Look for corrections marked on the women's questionnaire to deduce the correct age of the child. If neither is obviously wrong, make no changes to the child's age in either questionnaire.

**2181 Household line number of child invalid**

The line number of the child given in question Q219 is greater than the total number of household members listed in the household schedule.

Review the household schedule and identify the child using the name (Q212), sex (Q213), and age of the child (Q217), and correct Q219 to reference the correct child's line number from the household schedule. If no child in the household schedule matches the child, change Q219 to 00 (not in household).

**2182 BirthHist: Child n has different mother in household (QH13=n, mother's line=n)**

According to the child's line number in the household schedule given in Q219, and referring to the mother's line number in question QH13 of the household schedule for that line, the mother's line number differs from the line number of the respondent (who is reporting the child as one of her children).

Check that the line number given in Q219 refers to the correct child in the household schedule by checking the name (Q212), age (Q217), and sex (Q213) of the child cited. If Q219 refers to a different child, correct Q219 accordingly.

Using the line number of the mother cited in QH13 in the household schedule, check that woman's birth history in her individual questionnaire. If she does not list that child as hers in her birth history, then she cannot be the mother of the child.

Finally, check that the child is not listed as the child of another respondent in the household. If the child is listed in another respondent's questionnaire, try to determine which woman is the natural mother of the child. Also determine whether the child is truly the same in both questionnaires, or if they are different children who just happen to have the same name (or birthday).

**2183 BirthHist: Child n's residence status in BH (Q218=n) different in household (QH05=n); mother's residence status (QH05)=n**

Either the residency status given for the child in Q218 is not the same as that given for the child in the household listing OR the child's residency status is not the same as the mother's residency status given in the household listing.

First ensure that the child's household number given in Q219 is in fact referring to the correct child in the household listing. It could be that an incorrect line number was given in the birth history and so the incorrect child is being referenced from the household schedule. If the child is under 18 years of age, check QH13 to see that the current woman was referenced as the child's mother.

If the child in question was not declared as a usual resident (QH05 different of 1) this is an indication that the mother may not be a usual resident either. However, before changing the mother's living status in the household make sure that she slept the night before in the household otherwise she would not be considered as a household member. If there is no clear solution, leave the data unchanged.

**2184 BirthHist: Child n with HH#/Q219=n has already been referenced by this woman**

There cannot be two separate entries in the woman's birth history that refer to the same child from the household listing. Each child listed in a woman's birth history gives the child's line number as listed in the household schedule for column Q219. If the child does not live with the mother, then Q219 should be zero (0). However, if the child does live with the mother, then the line number given for Q219 can only be used once.

Check that the line number given in question Q219 refers to the correct child in the household schedule by checking the name, age and sex of the child referred to. Correct Q219 for the child that was incorrectly coded.

**2185 BirthHist: Child with HH #n not found in woman's birth history**

In the household schedule, a child was listed stating the respondent as his or her mother, but that child is not listed in the birth history of the respondent.

Check each entry in the birth history, reviewing the name (Q212), age (Q217), sex (Q213), and residency status (Q218) of each child to see if they are listed in the household schedule. For each child listed in the household schedule, ensure that question Q219 is referencing the correct child. Conversely, check all women's questionnaires to see if any of the women in the household claims this "orphaned" child as her own. It could be that the mother is the stepmother to the child, and therefore not given in her birth history. Any living children in a woman's birth history who is not found in the household schedule should have Q219 set to 00.

**2186 Child n has no line number in household (Q219=n), but mother is de jure member (QH05=n) and child lives with mother (Q218=n)**

A child listed in the birth history is reported to live with the respondent according to Q218, and the respondent is a usual (*de jure*) member of the household according to QH05 in the household questionnaire, however, the child is not listed in the household schedule according to Q219.

Check the household schedule to see if the child is listed in the household—if so, change Q219 to the line number from the household schedule. If not, check the residency status of both the respondent and the child in the household schedule and check questions Q201-Q205 and question Q218 in the women's questionnaire. If there is no obvious error, then make no change to the data.

**2190 Age at death invalid for units=9**

For Q220 when a unit code of 9 is found, only the special responses of missing (99), don't know (98), and inconsistent (97) are permitted.

If an age at death is recorded in Q220, but the units for age at death have not been circled, then the code adjacent to the completed boxes in Q220 should be entered, if it does not result in an inconsistency. For example, if the value 03 was written in the box adjacent to "Days", but the unit code was not circled, then circle code 1 and enter it. However, if a value of 03 was written in the "Years" box but the child was born only one year ago, then the child could not have died three years ago and therefore this answer is impossible—in this scenario, a unit of 9 should be used with 97 as the accompanying number.

If Q220 was left blank entirely, then the missing code (99) should be used, and a unit code of '9' should be written just below the "Years" row. A response of don't know (98) can only be recorded by the interviewer—if the field is missing at the time of entry, use missing (99).

**2191 BirthHist: Child n: Age at death Q220N= n out of range x-y for the units Q220U=n**

The age at death should usually be in the ranges (x to y) 0-30 for days, 1-23 for months, and 2 or higher for years.

During data entry and editing, the age at death entered should be checked to ensure that it is the same as that recorded on the questionnaire. If no data entry error was made, then no further action should be taken. Under no circumstances should the data be modified.

**2192 BirthHist: Child n: Age at death (Q220=u/n) and DOB (Q215=mm/yyyy) inconsistent with date of interview=mm/yyyy**

The child's age at death (Q220) should be less than or equal to the interval between the birth of the child (Q215) and the date of the interview. Check for data entry errors, but otherwise make no corrections.

**2200 BirthHist: Child n with HH #/Q219=n is also referenced in woman #n's questionnaire**

The child's line number given in Q219 was also recorded as the child of another woman.

Check the line numbers given in Q219 for the two individual questionnaires where the same child was recorded. Check also the household schedule by checking the name, age and sex of the child referred to. Correct Q219 for the child that was incorrectly coded.

Review the procedures for message 2182 for additional help in resolving the error.

**2212 BirthHist: Child n with HH#/Q219=n: child's DOB (Q215=mm/yyyy) and DOB in height/weight section (QH203=dd/mm/yyyy) differ**

The child's date of birth in the women's questionnaire and the date of birth in the height and weight section of the household questionnaire must be the same.

Compare the age (Q217) and date of birth (Q215) with the date of birth given in QH203 of the household questionnaire. If there are no obvious errors and the age and date of birth in Q217 and Q215 are consistent with each other, change the date of birth in QH203 in the household questionnaire to be consistent with Q215.

This is one of the few instances where data recorded in the household questionnaire is changed based on information recorded in the individual questionnaire. It is done because the height and weight ranges are validated against one another based on the child's age and sex, and therefore the information needs to be as accurate as possible. It is NOT necessary to change the age of the child in the household listing (QH07). However, if the child's age as recorded in the woman's birth history makes the child ineligible for the height/weight roster, then their age should be corrected in the household listing, and their entry should be struck from the height/weight roster.

**2240 Sons living at home/Daughters living at home/Sons living away from home/Daughters living away from home/Sons who died/Daughters who died inconsistent: Q203, Q205 or Q207=n, count=n**

There are a number of edits which must be carried out to check the consistency between responses to questions Q201 through Q208 and responses to questions Q213, Q216, and Q218. They include:

- Total number of live births (Q208) must be equal to the total number of births recorded in the birth history.

- Number of sons and daughters at home (Q203) must be equal to the total number of boys and girls reported as still alive and living with the mother in Q213 (sex of child), Q216 (whether child still alive), and Q218 (whether child living with mother).

- Number of sons and daughters elsewhere (Q205) must be equal to the number of boys and girls reported as still alive but not living with the mother in Q213, Q216, and Q218.

- Number of boys and girls dead (Q207) must be equal to the number of boys and girls reported as having died in questions Q213 and Q216.

Three basic types of inconsistencies may occur in the above responses:

i) Inconsistencies in the sex distribution of surviving and/or dead children.

To resolve differences in the sex distribution of surviving and/or dead children, first check the names recorded in Q212 to determine if the names are consistent with the sex recorded in Q213. (For surviving children who are living with their mothers, a check may also be made with the names recorded in the household listing.) If the names are not consistent with the reported sex (e.g., Mary is recorded as a boy in Q213), change Q213. Then check to see if the sex distributions of children reported in questions Q203, Q205 and Q207 are consistent with those in the corrected birth history.

If the names are consistent with the sexes reported in question Q213 or the inconsistencies cannot be resolved, change the sex distribution of the totals reported in questions Q203, Q205 and/or Q207 to be consistent with the birth history.

EXAMPLE: According to question Q203, a respondent has two sons and one daughter at home. However, in the birth history, the respondent is reported to have one son and two daughters living with her. An examination of Q212 shows that the names of each child listed as living with the respondent are consistent with their sex recorded in Q213. Therefore, question Q203 should be changed to be consistent with the information in the birth history: i.e., change Q203 to 01 son and 02 daughters at home.

ii) Inconsistencies in the residency status of surviving children.

If the mother is a usual resident of the household, check the information on residence in the household listing to see if the responses are consistent with the responses to Q218. If they are not consistent (e.g., a child is reported to be living with the mother in Q218 but is not listed in the household questionnaire as a household member), change the response to Q218 to be consistent with the information in the household listing. Then check to see if the distribution of children by residence status in questions Q203, Q205, and Q207 is consistent with the corrected birth history.

If the residence status in the household listing for the child/children in question is consistent with Q218, or the inconsistencies cannot be resolved, change the residency status of the totals reported in questions Q203 and Q205 to be consistent with the woman's birth history.

EXAMPLE: According to Q203 and Q205, a respondent has five children living at home (three sons and two daughters) and two children living away (one son and one daughter). These totals are inconsistent with the responses to Q218 in the birth history which indicate that six children are living with the mother (three sons and three daughters) and only one child (a son) is living away. An examination of the household questionnaire indicates that one of the daughters reported as living at home is not listed as a household member. Because the household listing is consistent with the response in Q205, the answer to Q218 for that daughter should be changed to "No" (code 2), and no change should be made in the answers to questions Q203 and Q205.

iii) Inconsistencies in the survival status of births.

To resolve inconsistencies in the survival status of births, it will be necessary to check responses to other questions in the birth history, in section 4 and section 5 (for children under 5 years of age) and information in the household listing.

In general, the responses to questions Q203, Q205 and Q207 should be changed to be consistent with the survival status of children as reported in question Q216 of the birth history. However, if there is clear evidence that a "No" (code 2) response in question Q216 is incorrect (e.g., there is no answer to age at death (question Q220) but there are answers for the current age of the child (question Q217) and whether the child is living with the mother (question Q218), consistent with the child being alive), the response to question Q216 may be changed to "Yes" (code 1).

EXAMPLE: According to the responses to questions Q203, Q205, and Q207, a respondent has five surviving children, three children at home and two children (a son and a daughter) living elsewhere. In the birth history, the respondent is, however, reported as having four surviving children (three at home and one living elsewhere) and one dead child. For the latter child (a daughter), the responses to other questions in the birth history are consistent with the reported survival status. The responses to questions Q205, Q206, and Q207 should be changed to be consistent with the birth history, i.e., only one child (a son) should be reported as living elsewhere in Q205, Q206 should be changed from "No" (code 2) to "Yes" (code 1), and one child (a girl) should be reported as dead in Q207.

### 2241 Interval between birth x (mm/yyyy) and birth y (mm/yyyy) too small

The interval between births (i.e., the number of months between one child's date of birth and the next child) must be greater than or equal to nine months for all births in the birth history.

Check the dates of birth of each of the children to ensure that they have been correctly entered. If no data entry error has been made then leave the data as it is. A similar message will be produced during editing/imputation and corrective action can be taken at that time. This is described under message 9905 (Interval between two births).

### 2250 Number of births (Q224=n) since 2005 different from births in birth history (x-y)

The number of births since January 2005 found in the birth history should equal the number in question Q224. In cases where there is some incomplete reporting of dates of birth, it is not always possible to calculate how many children were born since January 2005, and a range of possible values is displayed.

The number recorded in Q224 is used to control the entry of information in Section 4 of the questionnaire, i.e., data will be required for the number of children specified in question Q224. The date of birth of each child in the birth history, the response to question Q224, and the number of children included in the health section should be reviewed carefully.

If a child has been included in the health section, but the date of birth of the child is recorded as being before January 2005, then the date of birth of the child has probably been incorrectly recorded and should be changed. The immunization information can often be used to estimate the correct date of birth.

If a child was not included in the health section, but its birth was recorded as after January 2005, there are two possibilities. Either the date of birth of the child was incorrect and should be before the cutoff date, or the interviewer failed to include the child when asking the questions in the health section. The latter is the more usual case but, before assuming this is the source of error, the interval between the birth and any succeeding birth should be checked to ensure that it is not too narrow.

If the interviewer has failed to ask the questions in Sections 4 and 5 for the child, then these sections should be completed with missing data for this child and the number recorded in

question Q224 should be adjusted accordingly. The questionnaire may be sent back to the field after data entry for the information to be collected and later updated in the data file. A record of any questionnaires sent back to the field must be kept in the HH Problem log.

## SECTION 2. REPRODUCTION (other pregnancies)

**2270 Current pregnancy information (Q226=n) inconsistent with calendar ( x ).**

The respondent is recorded as being pregnant, either in the month of interview in Col1 of the calendar, or in question Q226, but not in both places.

This error is usually because of a mistake in the calendar, such as the current pregnancy information being ignored when completing Col1 of the calendar or a pregnancy resulted in a birth in the month of interview, and the “B” was not recorded clearly in the calendar. In general, corrections should be made to the calendar; only in situations where it is clear that the mistake is in the main part of the questionnaire should question Q226 be corrected.

**2280 Duration of pregnancy in calendar (n) different from Q227 (n)**

The current pregnancy is recorded in the calendar after asking question Q227, and the duration of the pregnancy must be the same as the response to question Q227. The problem is usually caused by data entry error while entering the calendar or by the interviewer failing to enter the correct number of "P"s in Col1 of the calendar.

If the problem is not a data entry error, then the calendar should be changed to reflect the correct duration of pregnancy, while taking care to maintain the information recorded in the calendar for the months immediately preceding the start of the pregnancy.

**2300 Pregnancy termination in calendar (row n), but never terminated a pregnancy**

A pregnancy termination, other than a live birth, is recorded in the calendar, but the response to question Q230 was "No" (code 2). Check to see if there is a date recorded in Q231, in which case the response to Q230 should have been "Yes" (code 1).

If the termination (“T”) in the calendar is preceded by one or more months of pregnancy ("P"), but no pregnancy termination information is recorded in questions Q230-Q237, and it appears that the information in the calendar is correct, questions Q230-Q237 should be modified to reflect this. In other words, change Q230 to code 1, change Q231 to the date of termination recorded in the calendar, change Q233 to the duration of the terminated pregnancy (i.e., the number of "P"s in the calendar plus one month), and change Q234 to missing ("9"s). If there is another pregnancy termination recorded in the calendar, Q234 should be set to code 1.

If the pregnancy termination (“T”) in Col1 of the calendar is not preceded by any months of pregnancy ("P"), then the information in the calendar should be modified. The “T” may have been misread and might, perhaps, be a code 1 or a code 7. Check the surrounding months in the calendar and the information on current use (Q303-Q304) and ever use of contraceptive methods (Q301) to resolve the problem.

**2310 Last pregnancy termination date (Q231=mm/yyyy, cmc=cmc-cmc) different from termination date given in calendar (cmc=cmc [mm/yyyy] row n)**

The termination date of the last pregnancy that did not result in a live birth (recorded in Q231) does not match the termination date as recorded in the calendar.

In general the calendar should be corrected, but only after ensuring that the date recorded in

Q231 is not inconsistent with other information. The information to review includes the dates of surrounding births and the durations of amenorrhea and abstinence after a preceding birth.

**2330 Duration of last terminated pregnancy (Q233=n) different from duration in calendar (n)**

The duration of the last terminated pregnancy (Q233) does not equal the duration of the pregnancy recorded in the calendar.

The information recorded in the calendar should be corrected in most circumstances, after verifying that the response in Q233 appears correct and is not inconsistent with other information.

**2340 Earlier terminated pregnancy in calendar (row n), but no other terminated pregnancy mentioned (Q234=n)**

A second pregnancy termination was recorded in the calendar, but question Q234 shows no record of a prior pregnancy that did not result in a live birth.

A similar procedure should be applied as for messages 2280 and 2300. If the termination (“T”) is preceded by some months of pregnancy ("P") then the error is probably in Q234 and it should be changed to code 1, but if the “T” stands alone in the calendar then it has probably been misread and should be corrected; if there is other codes just before and/or after the “T”, it's possible that is the code that should have been written. Other times a code of 7 (condom) is misread for a termination code (“T”).

**2360 Last period before last birth (Q238=n) but never gave birth (CEB Q208=n)**

The response recorded in Q238 indicates the respondent's last period was prior to her last birth, but the respondent has never given birth according to Q208 (CEB, i.e., children ever born). There are two possible explanations:

i) The response relates to the respondent's last pregnancy, not her last birth.

ii) The response was incorrectly recorded.

During data entry, the question should be checked for a typing error. If no typing error is found, then data entry should continue without correction.

During editing, review Q238 and related questions to see if the wrong code was circled. For example, the respondent may be in menopause, or may have never menstruated. If it is clear that the wrong code was circled, then the code should be corrected. If not, the data should be left as it is.

**2362 Amenorrhea (Q447(1)=n) inconsistent with time since period returned (Q238=u-n)**

Either the respondent has claimed that her period has returned since her last birth ((Q447=1), yet also reports that her last period was before her last birth (Q238=995), or her last period was after her last birth (Q238U=1,2,3 or 4), but she also reports that her period has not returned since her last birth (Q447=2).

Check for typing errors but make no changes to the data.

**2364 Time since last period exceeds interval: child n cmc(n)=cmc-cmc [mm/yyyy-mm/yyyy], interview=cmc [mm/yyyy], last period Q238=u/n**

The time since the last period from question Q238 exceeds the interval between the birth of the child and the date of interview. It is possible that the respondent's last period may have been before her last birth, but she replied to Q238 with the actual time since the last period.

Check for typing errors but make no changes to the data.

**2365 Time since last period given (Q238=u/n), but period not returned (Q447(1)=2) since last birth**

The respondent reported the time since last period in question Q238, which was calculated to be after the last birth, but according to question Q447 her period had not returned after the last birth.

Check for typing errors but make no changes to the data.

**2366 Duration of amenorrhea + time since last period exceeds interval: child n cmc(n)=cmc-cmc [mm/yyyy-mm/yyyy], interview=cmc [mm/yyyy], amenorrhea=n, last period Q238=u/n**

The duration of amenorrhea after the last birth, as reported in question Q449, plus the time since the last period exceeds the interval between the date of the last birth and the date of interview.

Check for typing errors but make no changes to the data.

**2367 Never menstruated (Q238N=n), but time period returned given for a birth in the last 5 years**

The respondent reported never having had a period according to question Q238, but has reported her period returning after a birth in the last five years in question Q447.

Review the question and related questions to see if the wrong code was circled. For example, the respondent may be in her menopause, or may have last menstruated before her last birth. Only if it is clear that the wrong code was circled may the code be corrected. In most cases the data should not be corrected.

**2368 Not menstruated since last birth (Q238N=n), but stated period returned (Q447(1)=n) after last birth**

The respondent reported in question Q238 that her last period was before her last birth, but in question Q447 she stated that her period had returned since her last birth.

Check for typing errors but make no changes to the data.

**2369 Never menstruated (Q238N=n), but had children (Q208=n)**

The respondent has never menstruated according to question Q238, but has had children (question Q208). This is possible in a few cases, but is very unlikely.

Check for typing errors but make no changes to the data.

**2370 Last period (Q238=u/n) occurred during current pregnancy (Q227=n)**

The last period as reported in question Q238 would have occurred during the current pregnancy.

Check for typing errors but make no changes to the data.

**3051 Ever use of a method inconsistent with calendar**

The value entered in Q313 is not consistent with the data entered in the calendar.

Check the value entered and the calendar for typing errors. If Q313 was incorrectly recorded according to information in the calendar, correct Q313. If there is no indication that a method has been used, change Q313 to code 2.

**3130 Current use of contraception (Q303=n, Q304=x) inconsistent with calendar (last use in row n)**

The response to question Q303 concerning current use of contraception is not consistent with the use of contraception as recorded in the month of interview in Col1 of the calendar.

There are two ways in which this information may be inconsistent:

- The calendar records a contraceptive method as being used in the month of interview, but the respondent is not currently using a method according to questions Q303 and Q304.
- Current use of contraception is recorded in questions Q303 and Q304, but no method is recorded as having been used in the month of interview in Col1 of the calendar.

During data entry, the operator should check that no typing errors have been made in entering the calendar or recording the responses to questions Q303-Q304. Carefully check the original questionnaire to ensure that the data in the calendar has been properly transcribed onto the data entry screen. Many errors relating to the calendar may be due to poorly recorded responses on the calendar. Any data entry errors should be corrected, but if the error was made in the field, then no changes should be made and this error will be corrected during the editing phase.

During the editing phase, the two ways the error may occur need to be treated differently:

*In the first scenario*, it is possible that the respondent used the contraceptive method in the month of interview, but stopped using the method just prior to the day of interview. This situation will be unusual, but if it occurred then, if Col3 in the calendar is used, there should be a code in the month of interview in Col3 of the calendar recording the reason for the discontinuation of the method. If the method has been discontinued then no further action is required.

If this message is not the result of discontinuation of the method, then the error should be resolved and corrected. First check for transcription errors, then ensure that the contraceptive method was recorded as ever used in the contraceptive table. Also check the responses recorded in section 3 of the questionnaire to see whether the respondent was actually using a contraceptive method, but was incorrectly recorded as not using one in Q303.

If the contraceptive method recorded in the calendar was only used in the month of interview and not in the preceding months, the response has probably been incorrectly recorded in the calendar and should be corrected to code 0 (Not using).

EXAMPLE: The respondent reports six months of sterilization (code 1) in the last six months of the calendar, but is not currently using a contraceptive method according to Q304. After reviewing section 3 of the questionnaire and Col1 of the calendar, change the code 1 in the calendar to a code 0 (Not using) for each of the last six months.

EXAMPLE: Col1 of the calendar shows pill use in the last three months, but the respondent is

not currently using a method according to Q304. Inspection of section 3 of the questionnaire shows no indication that the respondent was currently using a method. Assume that the respondent had stopped using the pill in the month of interview (if column 3 is used in the calendar code a "?" in Col3 of the calendar, indicating that the method was discontinued for an unknown reason).

*In the second scenario*, the respondent is recorded as currently using a method in Q304, but not in the calendar. This is possible if the respondent had just had a birth or pregnancy termination in the month of interview and had immediately started using contraception after the pregnancy. In this case there should be a code “B” or code “T” in the month of interview in Col1, and no further action is necessary.

In all other cases a correction to the data is necessary. If, after inspecting section 3 of the questionnaire, it is clear that the respondent was not currently using a contraceptive method, then Q303 should be changed to "No" (code 2). In most cases, though, it should be assumed that the respondent is currently using contraception, and record that method in Col1 of the calendar in the month of interview.

EXAMPLE: If the respondent is recorded as currently using an IUD, but no contraceptive use was recorded in the last three months of the calendar, change the last month in the calendar to code 4.

**3131 Methods used (Q304=x) inconsistent with current method in calendar (x)**

See message 3140.

**3140 Current method different (Q304=x) from method in calendar (x)**

The respondent is recorded as currently using a contraceptive method in Q304 and in the calendar, but the methods recorded in Q304 and the calendar are not the same.

Check the questionnaire and the calendar for typing errors and then look for responses to Q307-Q308 for sterilized women or partners, Q308A for date of initiation of current use, Q317-Q319 about side effects of methods, and Q323 for source of method. Each of these may provide a clue as to which method was currently being used. Also look at which methods had been used earlier in the calendar to decide which method is most likely to be correct. If there is no clear correction, then assume that the method recorded in question Q304 is correct and change the method in each month of use in Col1 of the calendar.

**3142 Current method (A304=x) not known according to contraceptive table**

If a method is recorded as being currently used then the method must also have been recorded as known in the contraceptive table (Q301). If the response in question Q301 is "No" (code 2) for any of the current methods, then change the response to "Yes" (code 1).

**3143 Current pregnancy information (Q226=n) inconsistent with current use information (Q304=x)**

A respondent cannot be recorded as currently using a contraceptive method while being pregnant. If the respondent is currently pregnant, then the respondent should be recorded as not currently using a method. In fact, this situation is normally impossible due to the flow of the questionnaire. If the respondent is currently pregnant the data entry program will skip the question on current use and this situation will never occur.

**3145 Current method in Q304N=n is different from current method expected=n**

Q304N is an internal variable calculated in the data entry program from question Q304 to establish the most effective method as the one being currently used. If only one method is currently being used then that is the current method but if a combination of methods are used the most effective (the highest in the list) is selected as the one currently being used. To correct this message, simply drop into the case in modify mode, advance to the end of the case, and save it—the variable should be automatically corrected.

**3211 Current method start date (Q308=mm/yyyy = cmc cmc-cmc) does not agree with calendar (cmc=cmc-cmc [mm/yyyy-mm/yyyy] row n)**

The date of start of use of current method in Q308 does not agree with the date of start of use as recorded in Col1 of the calendar. For both pieces of data, the date of start of use may not be exact. If Q308 does not contain an exact date then the programs allow a range of dates for the start of use of the current method. Similarly, if the start date for usage as recorded in the calendar is immediately after a birth or pregnancy termination, then it is assumed that the start date for usage may have taken place during the pregnancy, and so a range of dates is allowed based on the calendar. This message appears if the range of dates from each of the sources does not overlap.

During data entry, check for typing errors in Q308 and in Col1 of the calendar. If no data entry error was made then leave the error for correction during the editing stage.

During editing, again ensure that no data entry error was made. Otherwise change the usage start date recorded in Q308 to agree with the calendar, unless there is compelling reason to believe that the calendar is incorrect.

**3212 Female sterilization use in calendar in row n (cmc=cmc [mm/yyyy] ) but not continuously used after that date**

The respondent has used female sterilization, but there has been a break in the period of use.

If the break in the use was caused by a birth or pregnancy termination, and the date of sterilization as recorded in Q308 is prior to the date of birth or pregnancy termination, then it is assumed that the female sterilization method failed. In this case no further action is necessary.

If the sterilization use was interrupted by a period of nonuse or by the use of a different method, then this period of interruption of sterilization should be changed to the code for sterilization (code 1).

**3215 Sterilization start date (cmc=cmc-cmc [mm/yyyy-mm/yyyy]) before date of first union (cmc=cmc-cmc [mm/yyyy-mm/yyyy])**

The start date for use of current method is reported as being before the date of union. If the method that is currently being used is sterilization, it is very unusual, but is not impossible. If, after carefully checking the data on the date of union and the date of sterilization there is no error in the data entered, then the data should be left unchanged.

**3216 Current method start date (cmc=cmc-cmc [mm/yyyy-mm/yyyy]) and minimum age at first contraceptive use (n) inconsistent: DOB=cmc-cmc [mm/yyyy-mm/yyyy]**

The respondent's age at start of use of the current contraceptive method is younger than a prescribed minimum age (20 for sterilization and 12 for all other methods). As in message 3215, this will be unusual, but not impossible. Again the data should be carefully checked for typing errors, but no correction is necessary unless a data entry error was made.

**3217** **Month began using current method (Q308M=n) inconsistent with other information: cmc=cmc-cmc [mm/yyyy-mm/yyyy]**

Follow the same procedure as for message 1064.

**3270** **Current method in Q304 (x) must be the same as in this question (Q314, Q316, or Q322)**

The code entered for the current method in questions Q314/Q316/Q322 is not the same as the code entered for Q304. For a combination of methods in Q304 it is possible that the interviewer marked a method that it isn't the highest in the list of methods.

Check the data entered and correct the relevant question to agree with the highest method in Q304.

**3280** **Source (Q323=n) of current method (Q304=x) inconsistent with method**

The source for the current method of contraception in Q323 should be consistent with the method given in Q304.

In cases where the source appears to be inconsistent with the method used (e.g., "Friends/relatives" as a source for female sterilization), the survey team may elect to change the response in question Q323. The exact rules for which sources are acceptable for each method should be established on a country specific basis.

## _____SECTION 4. PREGNANCY AND POSTNATAL CARE_____

**4030** **Line number of child in column x incorrect, expected y**

The children entered in Section 4 must be in reverse order from their birth; i.e., the youngest should be listed first, moving towards the oldest child born within the last five years.

If the children are listed out of order in this section, then strike out with a single line the number currently written in Q403 and write their correct birth order above it, using the birth history as a guide.

**4050** **Column n: Stopped to get pregnant in row n with child n, but did not want child then (Q405=n)**

According to the calendar, the respondent stopped using a method to get pregnant, but then reported that she did not want to become pregnant at that time in question Q405.

This message is used to check for data entry errors. If no error is found, the data may be left unchanged.

**4139** **Columns x & y: Twins should have the same responses. Q433(x)=n but Q433(x+1)=y. Please check.**

See explanation for message 4140 below.

**4140** **Columns x & y: Twins should have the same responses. Q405-Q407, Q433-Q452. Please check.**

Questions Q405, Q406, Q407, Q433 through Q435, Q447 through Q449 and Q452 relate to the woman's prenatal care and the birth conditions of the children, but not to the individual children themselves. Therefore, for twins the responses should be identical for each child. However, in

rare cases the responses to questions Q433-Q452 may be different. For example, a woman may give birth to one child at home, experience complications, and then go to hospital to give birth to the other child.

Check the data entered for these questions to ensure there are no typing errors. Look for possible changes in responses marked on the questionnaire to try and deduce the correct answer. For questions Q405-Q407, the responses should be identical. In general, check for missing data in one of the variables in one column, with data given in the other column. If missing data is found, replace it with the response found in the other column. If there are two different responses and it is not possible to determine which response is correct, change the data in the second of the two columns cited to agree with the data in the first of the two columns.

**4141 Columns x & y: Twins should have the same responses. Q451(x)=n but Q451(y)=n, Q452(x)=n but Q452(y)=n. Please check.**

See message 4140 above for a discussion of this problem. Additionally, check Q615 in the event it can help determine the error.

**4211 Months with no period (Q449=n) inconsistent with interval: interview=mm/yyyy DOB=mm/yyyy**

The duration of amenorrhea after the last child's date of birth exceeds the duration since this date and the date of interview.

During data entry, check for data entry errors; however, if no keying errors are found, leave the data as is.

During editing, message 9914 will trigger, but only if 100 percent verification is not being done.

**4212 Duration of amenorrhea between pregnancies n inconsistent dob=mm/yyyy dob=mm/yyyy**

The duration of amenorrhea after the birth of a child exceeds the interval between the birth and the start of the following pregnancy.

During data entry, check for data entry errors; however, if no keying errors are found, leave the data as is.

During editing, message 9914 will trigger, but only if 100 percent verification is not being done.

**4220 Years since injection greater than age (Q103=n)**

Question Q420 asks for the number of years since the woman's last tetanus injection, which cannot exceed the woman's age.

If there was no entry error, review Q420 for any marks the interviewer may have made, i.e., cross outs of other responses or notes in the margin. If nothing can assist you to determine the correct number of years, then leave the data as it is.

**4241 Duration of abstinence n inconsistent with interval: interview=mm/yyyy dob=mm/yyyy**

The duration of abstinence after the birth of the last child exceeds the interval between the last birth and the date of interview.

During data entry, check for data entry errors; however, if no keying errors are found, leave the data as is.

During editing, message 9915 will trigger, but only if 100 percent verification is not being done.

**4242 Duration of abstinence between pregnancies n inconsistent dob=mm/yyyy dob=mm/yyyy**

The duration of abstinence after the birth of a child exceeds the interval between the birth and the start of the following pregnancy.

During data entry, check for data entry errors; however, if no keying errors are found, leave the data as is.

During editing, message 9915 will trigger, but only if 100 percent verification is not being done.

**4260 Column n: Time first breastfed (Q455=u/n) child (n) after age at death of child (Q220=u/n)**

If a child is no longer living, a check is made to ensure that the time at which the child was first breastfed after their birth (Q455) took place before the child's age at death (Q220).

This occurs during editing only. Check for data entry errors, but otherwise do not make any corrections to the data.

## SECTION 5. CHILD IMMUNIZATION AND HEALTH and CHILD AND WOMAN'S NUTRITION

While vaccinations can *generally* be given at any time, there are recommended guidelines for the vaccinations, and knowing these will assist you in your decisions when attempting to correct out-of-sequence or other problematic vaccination dates. Please note that the following are *recommended* timelines for vaccinations—if you find a date that falls outside the suggested periods, you should *not* correct a date to force it to fall in this range.

| | |
|---|---|
| BCG | within the first two weeks of birth |
| HB 0 | within the first two weeks of birth |
| Polio 1 | at six weeks after birth (it can be given earlier or later than this, but must occur after HB 0 and before P2) |
| Polio 2 | at ten weeks after birth (it can be given earlier or later than this, but must occur after P1 and before P3) |
| Polio 3 | at fourteen weeks after birth (it can be given earlier or later than this, but must occur after P2) |
| Tetra/P. 1 | at six weeks after birth (it can be given earlier or later than this, but must occur before Tetra/P. 2) |
| Tetra/P. 2 | at ten weeks after birth (it can be given earlier or later than this, but must occur after Tetra/P. 1 and before Tetra/P. 3) |
| Tetra/P. 3 | at fourteen weeks after birth (it can be given earlier or later than this, but must occur after Tetra/P. 2) |
| Measles | between 9 months and 2 years of age |
| Vitamin A | beginning at 6 months of age and continuing every 6 six up to 5 years of age |

In addition to the above BCG and HB 0 are usually given at the same time and Polio 1, 2, and 3 are usually given at the same time as Tetra/P. 1, 2, and 3, respectively.

**4430 Line number of child in column n incorrect, expected n**

Follow the same procedure as for message 4030.

**4470 Date of vaccination out of range**

The date of vaccination given is outside the acceptable range of values. The date must be between 01/01/2005 and the date of interview, or should be all zeros (vaccination not given), 44/44/4444 (vaccination recorded without date), or 66/66/6666 (vaccination received according to mother). In addition, 97/9997 (inconsistent) and 99/9999 (missing) are acceptable for the day, month and year of a date. Missing values are not common on vaccination dates since when a vaccination date is left blank it means that the vaccination was not given. Missing should only be assigned when the child has a vaccination card (Q504 = 1) and not a single vaccine was registered in question Q506.

During entry, an invalid date must be resolved before entry can continue. If the error is not due to a keying entry (either the wrong values or values from a different column (and hence, a different child) were entered), then first ensure that the date is actually a legitimate date. For example, June has only 30 days, so if the interviewer has written June 31 then day should be changed to 30.

If this is not the culprit, then review the other dates to see if it was a recording error on the part of the interviewer. For example, since Tetra/Pentavalent (Tetra/P.) 1 should be given at the same time as Polio 1 is administered, if the day and month of both vaccinations are the same, but the year for Tetra/P. 1 is being flagged as incorrect, then it is very likely that the Tetra/P. 1's year should have been the same as that for Polio 1; and therefore in this case Tetra/P. 1's year should be set to that used for Polio 1. If it is not easy to determine the source of error, then change the offending piece of data (either, day, month, or year) to inconsistent (which is 97 for day or month, 9997 in the case of year).

**4471 Vacc col n: Date of x (dd/mm/yyyy) is after date of interview (dd/mm/yyyy)**

The date of the BCG, Polio 1, 2, or 3, Tetra/P. 1, 2, or 3, Measles, or Vitamin A vaccinations recorded is after the date of interview.

Check that the vaccination date was correctly recorded. Look for recording errors on the questionnaire, such as two vaccinations being recorded on the same day and month, but with a different year. For example, Polio 2 being recorded as January 12, 2006 and Tetra/P. 2 as January 12, 2007 (assuming an August 2006 date of interview). If there is an obvious error of this type, then correct the vaccination date.

Also check to see that the day and month of immunization have not been reversed. For example, an immunization given on April 9, 2005 should be coded in the *ddmmyyyy* form as 09-04-2005; however, the day and month may have been reversed and the date recorded as 04-09-2005. If reversing the month and day codes will allow the date to be consistent with the birth date (and will not cause an inconsistency between dates of immunization given in a series), reverse the two codes.

In some countries, a date for a return visit for a vaccination may have been recorded on the vaccination card rather than the date of vaccination itself. If this is believed to be the case then the date of vaccination should be changed to code 0 (vaccination not received).

While attempting to resolve inconsistencies in the child's immunization dates, attention should be paid to immunization dates recorded for other children in the table, since children of different ages may have been immunized on the same date.

If there is no clear correction for the data, then use code 97 for the day or month if the year is the same as the year of interview. If the year is after the year of interview, use code 9997 for the year of vaccination.

**4472 Vacc col n: Date of x (dd/mm/yyyy) is before minimum date of birth of child, calculated as dd/mm/yyyy**

Vaccination dates in Q506 cannot occur before the child's date of birth.

Follow the procedure for message 4471.

**4473 Vacc col n: Date of x (dd/mm/yyyy) is earlier than y (dd/mm/yyyy)**

Dates for immunizations of a particular type (Tetra/P. or Polio) that are given in series must be consistent in their order, i.e., the date for the second and third immunizations in a series cannot be earlier than or on the same date as the first immunization, and so forth.

If the immunization dates are inconsistent, look for recording errors on the questionnaire as for message 4471. If these rules will not resolve the inconsistency, then look for anomalies in the series. For example, upon reviewing the following dates for a child (HB 0, measles, and vitamin A are not shown in the examples below):

| BCG | Polio 1 | Polio 2 | Polio 3 | Tetra/P. 1 | Tetra/P. 2 | Tetra/P. 3 |
|---|---|---|---|---|---|---|
| 24-12-2005 | 28-01-2006 | 27-03-2006 | 01-05-2005 | 27-03-2006 | 24-04-2006 | 04-06-2006 |

it is clear that the Polio 3 vaccination date should have been in 2006 (01-05-2006), rather than in 2005 as was recorded. Another common mistake is the following:

| BCG | Polio 1 | Polio 2 | Polio 3 | Tetra/P. 1 | Tetra/P. 2 | Tetra/P. 3 |
|---|---|---|---|---|---|---|
| 28-09-2006 | 28-09-2006 | 27-11-2006 | 16-01-2007 | 28-09-2006 | 27-11-2006 | 16-01-2006 |

Notice the error? The year of Tetra/P. 3 didn't "roll over" as Polio 3's did. The interviewer had September and November dates for Tetra/P. 1 and 2, and then had a January vaccination for Tetra/P. 3. However, it was of course given in the following, not same, year as the other two Tetra/P. injections. Finally, another common error is the following:

| BCG | Polio 1 | Polio 2 | Polio 3 | Tetra/P. 1 | Tetra/P. 2 | Tetra/P. 3 |
|---|---|---|---|---|---|---|
| 02-04-2005 | 25-04-2005 | 21-04-2005 | 18-06-2005 | 25-04-2005 | 21-04-2005 | 18-06-2005 |

Here the error is that both Polio 2 and Tetra/P. 2 were given before Polio 1 and Tetra/P. 1 dates (respectively). In this case since both dates were wrong, both dates must be changed to "fit in" the series. And since we can't use one of the "2" series dates to help us with the other, a code of 97 (inconsistent) should be assigned to both—but to which piece of information? If we assign 97 to day, then when the program imputes a new date, it must occur in April after the 25th (the date of the Polio/Tetra/P. 1 vaccinations). However, that would yield a date of April 30th at the latest, which is not even one week later, and certainly not the preferred four weeks delay between these vaccinations. What about the month? Since Polio/Tetra/P. 3 was administered in June, if 97 were assigned to Polio/Tetra/P. 2's month, the only month that could be imputed would be May; therefore, in this situation, "05" can be assigned.

The last example above illustrates the point of when to use the inconsistent code (97 or 9997) vs. "making an educated guess" for a date—if it is possible to change only one piece of the date (day, month, or year) and there is only one choice for that number, then go ahead and use that value. If, however, it is not possible to determine what the date probably was (for example, if there had been a 4 month lapse between Polio 1 and 3 above), then change the most inconsistent piece of information (day, month, or year) to 97 (for day or month) or 9997 (for year). *Do not change both the day and month to inconsistent unless it is absolutely necessary—and the year should only rarely need to be changed to 9997.*

**4474 Vacc col n: Dates are different (b=dd/mm/yyyy vs. hb 0=dd/mm/yyyy p1=dd/mm/yyyy vs. tetra/p. 1=dd/mm/yyyy p2=dd/mm/yyyy vs. tetra/p. 2=dd/mm/yyyy p3=dd/mm/yyyy vs. treat/p. 3=dd/mm/yyyy)**

In most countries, the Polio and Tetra/P. vaccination series are given together and the dates of the vaccinations are the same. In other words, Polio 1 would have the same date as Tetra/P. 1, Polio 2 would have the same date as Tetra/P. 2, and Polio 3 would have the same date as Tetra/P. 3. This message is used to check for typing errors in the data and recording errors on the questionnaire. *Dates should never be changed simply to make them agree with their "mate" date.* Corrections should only be made when there is convincing evidence that a mistake has been made.

Follow the procedures outlined in messages 4473 above.

**4475 Vacc col n: Date of x (dd/mm/yyyy) is after date of death (dd/mm/yyyy)**

The vaccination date is recorded after the latest possible date at which the child could have died, calculated from the age at death given in the birth history.

Check the child's age at death (Q220) against the vaccination dates and compare the vaccination dates to each other and against the vaccination dates of the other children listed. Use the procedures in message 4473 to try to determine whether the error exists in the vaccination date or in the age at death. If the error is in the vaccination date it should be corrected or set to the inconsistent code (97 in the day or month, 9997 in the year of vaccination). However, if the error appears to be in the age at death, no change should be made, as the imputation program will create a variable with a flag informing of the problem.

**4476 Vacc col n: Q504=n, but no vaccinations recorded in vaccination chart (Q506)**

The vaccination card is reported as having been seen by the interviewer in (Q504=1), however no dates are recorded for any vaccination in question Q506. As mentioned in the introduction to this section this situation is a valid candidate to have all vaccinations with missing values. The rationale is that if a vaccination card exists at least one vaccine should have been given to the child. If all vaccination dates are left blank it suggests that perhaps the interviewer forgot to record them.

Check that there is no data entry error, but otherwise no correction is necessary.

**4480 Column n: Receipt of other vaccinations (Q508=n) inconsistent with vaccinations recorded (B=dd/mm/yyyy; P=dd/mm/yyyy, dd/mm/yyyy, dd/mm/yyyy, dd/mm/yyyy; Tetra/P.=dd/mm/yyyy, dd/mm/yyyy dd/mm/yyyy; M=dd/mm/yyyy)**

According to Q508, the child received a vaccination that was not recorded on the card, but there is no record of that vaccination in Q506 (i.e., no code of 66 in the day for any vaccination).

In some cases the respondent may state that the child has received another vaccination that is not listed on the questionnaire (for example, yellow fever) and may be referring to that in answering Q508. However, this question is only concerned with the vaccines BCG, Polio, Tetra/P. and Measles (excluding Vitamin A) listed on the questionnaire and all other vaccinations should be ignored. If this is believed to be the case, the response to Q508 should be changed to code 2 ("No").

**4485 Code for question Q521=x must exist in question Q519=y**

The place where the respondent first sought advice for treatment in Q521 was not one of the places mentioned in Q519.

Initially check for keying errors, as always. The inconsistency needs to be resolved even if it requires the attention of the data processing supervisor or any of the survey's senior staff.

## _____SECTION 6. MARRIAGE AND SEXUAL ACTIVITY_____

### 5060 Line number (Q605=n) of husband/partner exceeds number of household members (QHMEMBER=n)

The line number of the respondent's husband given in Q605 is greater than the total number of household members.

Review the household schedule and identify the husband using his name, sex, and age; then correct Q605 to the line number of the correct husband from the household schedule. If the husband is not in the household schedule, change Q605 to 00.

### 5061 Sex (QH04=n) of husband/partner (Q605 line=n) not male

The sex of the respondent's husband whose line number is given in question Q605 is not male according to QH04 in the household schedule.

Check that the line number given in Q605 refers to the correct person in the household schedule by checking the name given in Q605 with the name (QH02), age (QH07), and relationship (QH03) codes of that partner given in the household schedule. If Q605 points to the wrong person, try to determine the correct person in the household schedule and change Q605 to that line number (QH01). If the person does not exist in the household schedule, set Q605 to 00.

### 5062 Age (QH07=n) of the husband/partner (Q605 line=n) is under n

The age of the respondent's husband whose line number is given in Q605 is less than 15 years according to QH07 in the household schedule.

Follow the procedure for message 5061 above. Ensure the age of the husband is correctly recorded in the household schedule by reviewing the man's individual questionnaire, if present. If there is no obvious mistake in the age, then make no changes to the data.

### 5063 Possible husband (n, rel=n) found in household but not listed as husband of woman (n, rel=n)

According to the respondent's relationship to the head of the household (QH03), there is a possibility that the man to whom the message relates is the respondent's husband. However the respondent didn't declare that this man is her husband in Q605. Review the household schedule to see if in fact they are husband and wife (if they are the parents of any children, for example); if so, change Q605 accordingly. Otherwise make no changes.

### 5064 Relationship between woman (QH03=n) and husband (QH03=n, Q605 line=n) seems incorrect

The respondent's relationship to the head of household and her husband are inconsistent.

Check the relationship codes in the household schedule and ensure that the woman and husband are correctly related. Check the line numbers to ensure the correct line number has been entered in Q605**.** If everything has been entered correctly, then make no changes.

**5100 Rank (Q608=n) of wife exceeds number of husband's wives given in Q607 (n)**

The rank number of the wife as recorded in question Q608 is greater than the total number of wives reported for the partner (which includes the respondent herself).

First check for typing errors in question Q607 and Q608, but if there is no typing error leave the data unchanged.

**5120 First union after date of interview: DOU (Q610)=mm/yyyy, age at u (Q611)=n, interview=mm/yyyy DOB (Q102)=mm/yyyy, age (Q103)=n**

The date of the woman's first union as entered is after the date of interview.

During data entry, check for the correct entry of the questions cited. If everything entered is the same as that written on the questionnaire, then make no changes.

During editing, try to correct Q610 (first union) or Q611 (age at first union) based on the date of interview and the respondent's date of birth (Q102) and age (Q103). For example, suppose the respondent is born in July 1978 and is 32 years old in August 2010 at the time of interview. However, she is recorded as having married in September 2010, which is after the date of interview. Review the questionnaire for other information that would indicate the date of first union or her age at first union. For example, the interviewer may have done a calculation in the margin of the questionnaire that shows the respondent's age at first union as 28. In this case, the respondent's date of first union should have been September 2006.

If the date of first union is after the date of interview and it is impossible to deduce the correct date of first union or age at first union from other information, change the year in Q610 to inconsistent, 9997 (if the date was given), or change the age in Q611 to inconsistent, 97 (if the age was originally given). For example, the respondent is 27 years old when interviewed in August 2010, though her date of birth was not given, implying it must be between September 1983 and August 1984. Her date of first union was October 2010. Assuming she was married before she had sex, if her age at first sex is given as 19, then the age of marriage is actually approximately 8 years earlier. Further, if her first birth is given as 2003, then assuming all data (other than the date of first union) are correct, the union probably took place in 2001, 2002, or 2003. However, rather than guess the correct year, 9997 should be used instead for the year of first union in Q610.

**5121 First union before age n: DOB (Q102)=mm/yyyy, age (Q103)=n, DOU (Q610)=mm/yyyy, age at u (Q611)=n**

The first union took place before the respondent reached a specified minimum age (usually 12). Check for keying errors in the data and recording errors on the questionnaire, but if the data appear correct, then leave the data unchanged.

**5126 Month of first union (Q610M=n) inconsistent with other information: cmc=cmc-cmc [mm/yyyy-mm/yyyy]**

Follow the same procedure as for message 1064.

**5130 Age at first union (Q611=n) exceeds current age (Q103=n); interview date=mm/yyyy, DOB (Q102)=mm/yyyy, DOU (Q610)=mm/yyyy**

The age at first union in Q611 must be less than or equal to the age of the respondent reported in Q103.

During data entry, only check for typing errors; if there are none, make no other changes.

During editing, if a valid date of first union is reported in Q610, check the age at first union

(Q611) against this date and attempt to correct Q611 based on this date and the respondent's date of birth. For example, the respondent was born in October 1984 and is 26 years old in August 2010. She was married at age 28 in September 2002. Clearly the respondent must have been 18 in September 2002, and question Q611 should be corrected to 18.

If the age at first union is greater than the respondent's current age and it is not possible to deduce the correct age at first union from the date of first union, then change Q611 to 97 (inconsistent).

**5132 Age at first union (Q611=n) and date of first union (Q610=mm/yyyy) inconsistent with date of interview (mm/yyyy), age (Q103=n), and/or DOB (Q102=mm/yyyy)**

The age at first union and date of first union are not consistent with the respondent's date of birth. This error is one of the most common messages to be produced during editing. There are several possible reasons for the error:

- The age at first union is incorrect.
- The date of first union is incorrect.
- The date of birth and age of the respondent are incorrect.

Although the first and second cases are the more common, the third situation should not be overlooked, particularly if either the date of birth or the current age of the respondent has already been changed in the field by the field editor or during earlier machine editing.

During data entry, check for typing errors, but make no other changes to the data.

During editing, there are several pieces of data to be taken into account in checking the age and date of first union, including:

- Age of the respondent (Q103)
- Date of birth of the respondent (Q102)
- Date of birth of the first child (Q215, row 1)
- Date of sterilization (Q308)
- Age at first sexual intercourse (Q613)
- Date of interview

Using these data it should be possible to deduce which piece of data is incorrect and to make the required correction. However, if there is any uncertainty as to what the correction should be, then either the age at first union or the date of first union should be set to the inconsistent code 97/9997. Here there may also be some uncertainty as to which piece of data is to be changed to the inconsistent code. As a general guideline, a complete date of an event, with both the year and month reported, is assumed to be more accurate than the age at the event, while the age at the event is assumed to be more accurately reported than a date when the complete date of the event has not been given (i.e., the month or year is missing or unknown). It should be remembered that the program will use the data available in imputing the complete date of an event, and so the least reliable piece should be changed to 97 or 9997.

EXAMPLES:

| | Int. Date | Q103 | Q102 | Q611 | Q610 | Q215(1) | Q308 | Q613 |
|---|---|---|---|---|---|---|---|---|
| 1. | 08/2010 | 25 | 12/1984 | 21 | 06/2008 | 04/2007 | - | 95 |

As the first sexual intercourse was at marriage and the first child was born in 2007, the year of first union (Q610Y) should be set to 2006. If the age at first union is correct, the only year consistent with that is 2006.

| | Int. Date | Q103 | Q102 | Q611 | Q610 | Q215(1) | Q308 | Q613 |
|---|---|---|---|---|---|---|---|---|
| 2. | 08/2010 | 42 | 04/1968 | 18 | 98/1992 | 98/1983 | - | 14 |

There is no data here to indicate whether the date of first union or the age at first union is more accurate. Taking either of the two, the first birth would have been before the union; therefore the recommendation would be to set the year of first union to 9997. The year of first union was chosen for correction on the basis that incomplete dates are assumed to be less accurate than the age at the event.

| | Int. Date | Q103 | Q102 | Q611 | Q610 | Q215(1) | Q308 | Q613 |
|---|---|---|---|---|---|---|---|---|
| 3. | 08/2010 | 38 | 98/1971 | 29 | 98/1992 | 03/1995 | 98/1999 | 19 |

Change the age at first union to 97 as an age of 29 would imply that the union was after the first birth. Additionally, if the age at first union was correct it would imply that the sterilization was before the union.

| | Int. Date | Q103 | Q102 | Q611 | Q610 | Q215(1) | Q308 | Q613 |
|---|---|---|---|---|---|---|---|---|
| 4. | 08/2010 | ~~48~~ 46 | 98/1964 | 17 | 98/1979 | 98/1981 | - | 96 |

In the last case the age of the respondent has earlier been corrected in the field from 48 to 46 to be consistent with the respondent's date of birth. However, the age at first union and date of first union are now inconsistent. The current age originally recorded was probably correct and should be reinstated to 48, and the year of birth of the respondent should be changed to 9997. With this change, the age at first union and date of first union will be consistent.

**5133 Age at first union (Q611=n) and date of first union (Q610=mm/yyyy ) inconsistent after imputing DOB (Q102=mm/yyyy): interview=mm/yyyy, age (Q103)=n**

In rare cases, the date of first union and age at union may be inconsistent after the imputation of the respondent's date of birth. This will only occur when the logical range for the respondent's date of birth was adjusted by some further piece of data after constraining the logical range for the date of first union. In practice this implies that there is an inconsistency between this other piece of data and the age at first union information. Either this other data item may be adjusted, or a new age at first union will be imputed if no change is made.

**5134 Age at first union (Q611=n) and date of first union (Q610=mm/yyyy ) inconsistent with interview=mm/yyyy, age (Q103)=n, and/or DOB (Q102)=mm/yyyy**

The age at first union and date of first union are not consistent with the date of birth of the respondent after all other date editing constraints have been met. Follow the procedure for message 5132 to resolve the inconsistency.

**5135 No information given for date of first union: age at u (Q611)=n, DOU (Q610)=mm/yyyy**

No information is recorded for the data of first union or age at first union. With no information available, the imputation program will attempt to impute a plausible date of first union, but it is better if some information were available. Check the questionnaire to see if there was a typing mistake, or if something might have been written in the margin by the field staff, or if both pieces of information were unnecessarily set to the inconsistent code 97 during entry.

**5150 Never had sexual intercourse (Q613=0), but has children (Q208=n) or is currently pregnant (Q226=n)**

The respondent is recorded as never having had sexual intercourse in Q613, but she has children listed in the birth history or she is currently pregnant according to question Q226.

If the respondent is unsure if she is pregnant (Q226=8), also states that she never had sexual

intercourse (Q613=00), and has further never given birth (Q208=0), change the response in Q226 to code 2 (not pregnant).

In all other cases, change the response to Q613 to code 97 (inconsistent) and set the responses to questions Q615-Q627 to code 9 or 99 (missing).

**5151 Never had sexual intercourse (Q613=n), but has been in union (Q601=n) or lived with a man (Q602=n)**

The respondent reported that she has been in a union, or lived with a man, but has never had sexual intercourse. Check for keying errors, but if none are found, make no correction to the data.

**5152 Last sex before last birth (Q615=u/n), but currently pregnant (Q226=n)**

The respondent reported that her last sexual intercourse was before her last birth (Q615), but the respondent is currently pregnant (Q226=1). Data entry errors should be corrected, but otherwise no changes should be made.

**5153 Time since last sex (Q615=u/n) exceeds interval: child n cmc(n)=cmc-cmc [mm/yyyy-mm/yyyy], interview=cmc [mm/yyyy], last sex (Q615)=u/n**

The time since last sexual intercourse (Q615) is longer than the total period of time since the date of the last birth to the date of interview.

During editing, correct any typing errors, but otherwise make no changes as the imputation program will create a variable with a flag informing of the problem.

**5154 Time since last sex given (Q615=u/n), but sexual relations not resumed (Q451(1)=2) since last birth**

The respondent reported last having sexual relations a certain time prior to the interview in Q615, but according to Q451 she has not resumed sexual relations since the birth of her last child. Data entry errors should be corrected, but otherwise the data should be left as is, as the imputation program will create a variable with a flag informing of the problem.

**5155 Duration of abstinence (n) + time since last sex (Q615=n) exceeds interval: child n cmc(n)=cmc-cmc [mm/yyyy-mm/yyyy] interview=cmc [mm/yyyy]**

The duration of abstinence (Q452) plus the time since last sexual intercourse (Q615) is longer than the total length of the interval from the date of the last birth to the date of interview. Only typing errors made during data entry should be corrected as the imputation program will create a variable with a flag informing of the problem.

**5156 No sex since last birth (Q615N=u/n), but stated sexual relations resumed (Q451(1)=n) after last birth**

Question Q615 states that the respondent last had sexual intercourse prior to her last birth, but according to Q451 she has resumed sexual relations since the last birth. Correct data entry errors, but otherwise do not change the data.

**5157 Last sex (Q615=u/n) longer ago than start of current pregnancy (Q227=n)**

The respondent is reported as being currently pregnant (Q226=1), but her last sexual intercourse is longer ago than the duration of the current pregnancy (Q227). Check for data entry errors in these questions, but otherwise leave the responses unchanged.

**5158 Last sex before last birth (Q615=u/n), but never given birth (Q208=n)**

According to Q615 the respondent last had sexual intercourse before her last birth, however according to Q208 she has never given birth (Q208=0). Correct typing errors, but otherwise leave the data as is.

**5190 Age at first sex (Q613=n) exceeds current age (Q103=n ); interview=mm/yyyy, DOB (Q102)=mm/yyyy**

The age of the respondent when she first had sexual intercourse (Q613) exceeds her current age (Q102). Correct typing errors, but otherwise leave the data as is.

**5191 Age at first sex (Q613=n) after age at first conception: child's DOB (Q215)=mm/yyyy, woman's DOB (Q102)=mm/yyyy**

Based on the respondent 's date of birth (Q102), her age when she first had sexual intercourse (Q613), and her first child's date of birth (Q215), the respondent reported first having sex at a later date than the date of conception of her first birth. This is one of the more common error messages. Keying mistakes should be corrected, but otherwise the data should be left as is.

**5192 First sex (Q613=n) when in first union, but never in union (Q602=n)**

The respondent reported that she first had sex when she was first married/started living with first partner (Q613), but the respondent has never married/in union (Q602=3). Keying mistakes should be corrected, but otherwise the data should be left as is.

**5193 Age at first sex (Q613=n) after date of marriage (Q610=mm/yyyy); age at u (Q611)=n, DOB (Q102)=mm/yyyy**

The respondent's age at first sex (Q613) is later than the respondent's age at first union. This is possible, but very unusual. Keying mistakes should be corrected, but otherwise the data should be left as is.

**5194 Age at first sex (Q613=n) was at time of marriage (Q610=mm/yyyy), but this is after age at first conception: first child born mm/yyyy (Q215), age at u (Q611)=n**

The respondent reported first having sex when she was first married (Q613), but the date of her first union (Q610) was after the conception of her first child (Q215 row 1). Keying mistakes should be corrected, but otherwise the data should be left as is.

**5200 No sex in last 12 months (Q615=u/n), but is or may be pregnant (Q226=Yes or DK: n)**

According to question Q615, the respondent's last sex was more than one year, however the respondent is or maybe pregnant according to question Q226.

Review the current pregnancy status of the respondent in Q226 and the time since last sex in question Q615 and look for corrections to the data. If there are no obvious corrections to the data, make no changes to the data.

**5240 Answer husband/live-in partner, but never in union (Q601=n, Q602=n)**

The respondent reported in Q619 that she was the spouse or cohabiting partner of her last, second-to-last, or third-to-last sex partner, however, according to questions Q601 and Q602 she has never been in a union or lived with a man.

Check the questionnaires for typing errors, but otherwise make no changes to the data.

**5245 Number of lifetime partners must be greater than or equal to the number of partners in the last year (n)**

The woman's questionnaire asks for information about the last three sexual partners she had within the last 12 months. If she had three or more partners in that 12 month period, she is further asked how many sexual partners in total she had over that period (Q626). It is then compared with Q627, which asks the total number of sexual partners she has had in her lifetime; and this number must be greater than or equal to Q626.

During data entry, check for typing mistakes. If there are none and questions Q616-Q624 clearly reference different men, then change Q627 to the value in Q626.

## SECTION 7. FERTILITY PREFERENCES

**6031 Time to next birth seems incorrect (Q705=n)**

The time period specified to wait for a future birth in Q705 is less than 9 months. If the woman is not pregnant, then it is unlikely she could give birth to a child in 9 months or less. If the woman is pregnant, then 9 months or less become impossible, for after the woman delivers a child it is impossible to become immediately pregnant and also deliver within a 9 month time frame.

Q705 should be checked for a data entry or recording error; perhaps the response is supposed to be in years rather than months, or perhaps the time was recorded poorly. However, if there is no obvious correction, then leave the data unchanged.

**6032 Answered after marriage (Q705=u/n) but respondent is currently married (Q601=1)**

In question Q705, the respondent stated that she would like to have the next child after she is married, but according to question Q601 the respondent is currently married.

Check for keying errors, but otherwise make no corrections and leave the data as it is.

**6100 Respondent married (Q601=1), but responded "Not married" as reason for not using/will never use a method (Q709=n)**

In questions Q709, the respondent stated that the main reason she is not using/would never use a method is because she is not married; however, according to Q601 the respondent is currently married.

Check for keying errors, but otherwise make no corrections and leave the data as it is.

**6101 Response "Knows no method" (Q709=n), but n method(s) known in contraceptive table**

In questions Q709 the respondent stated that the main reason she is not using/would never use a method, is because she does not know any method, yet according to Q301 the respondent has heard of at least one method.

Check for keying errors, but otherwise make no corrections and leave the data as it is.

**6104 Declared menopausal/hysterectomy (Q709=n) inconsistent with response to time since last period (Q238=u/n)**

In questions Q709 the respondent stated that the main reason she is not using/would never use a method is because she is menopausal or had a hysterectomy, but according to question Q238 the respondent is not in menopause.

Check for keying errors, but otherwise make no corrections and leave the data as it is.

**6105 Declared subfecund/infecund (Q709=n) inconsistent with response to desire for future birth (Q703=n, Q705=u/n)**

In questions Q709 the respondent stated that the main reason she is not using/would never use a method is because she is subfecund or infecund, but according to questions Q703 and Q705 the respondent does not say she cannot get pregnant.

Check for keying errors, but otherwise make no corrections and leave the data as it is.

**6111 Declared knows no source (Q709=n), however knew of a source of family planning (Q324=n)**

In questions Q709 the respondent stated that the main reason she is not using/would never use a method is because she does not know any source, but according to question Q324 the respondent reported that she knows a source of family planning.

Check for keying errors, but otherwise make no corrections and leave the data as it is.

**6131 Boys (Q713A=x), girls (Q713B=y), and either (Q713C=z) should add up to total ideal number of children (Q712=n)**

The total number of boys desired, girls desired, and either sex desired should add up to the total ideal number of children.

If there are no keying errors and the sum of boys and girls in Q713A and Q713B equals Q712, change the response for 'either sex' (Q713C) to "00". Otherwise, make no changes to the data.

## SECTION 8. HUSBAND'S BACKGROUND AND WOMAN'S WORK

**7051 Level and grade of partner's education inconsistent**

Within each level of school attended (primary, secondary, and higher as given in Q804), there is a maximum number of grades (Q805) expected within that level. The highest grade completed cannot exceed the expected maximum number of grades. For example, within the primary level, there are generally 5 or 6 grades of education, so it would be an error to record 11 for Q805.

Initially check the entry for keying errors. If there are none, then look to see if an individual questionnaire was completed for the woman's husband. If so, check his responses to questions QM105 and QM106; if his responses seem correct, adjust Q804 and/or Q805 as necessary.

If the man was not interviewed, then if the response exceeds the maximum grade of schooling possible at the highest level reported, check to see if the error may have occurred in the form in which the answer was recorded.

For Cambodia education grades has been set as following:

| Level | Grade | Notes |
|---|---|---|
| 1=Primary | 1-6 for grade 1-6 | 0 = Less than 1 year completed in QH17, and for pre-primary in QH19 |
| 2=Lower secondary | 7-9 for grade 7-9 | |
| 3=Upper secondary | 10-12 for grade 10-12 | |
| 4=Higher | 1-8 for year 1-8 | 98 = Don't know |
| 5=Pre-primary | 0 for any year | |
| 8=Don't know | | |

**7250** **Husband/partner makes decisions or is present/listening, yet respondent not in union (Q601=n)**

According to question Q817, Q820 through Q822, or Q825B, the respondent's husband or partner participates in some household activities alone or jointly with the respondent, but the respondent has stated that she is not currently married or living with a man (Q601), i.e. she has no husband or partner.

This message is used just to identify data entry errors. If no typing mistake is found then leave the data unchanged.

## SECTION 9. HIV/AIDS

No section-specific messages.

## SECTION 10. OTHER HEALTH ISSUES

**8110** **Time at start of interview (Q101=hh:mm) after time at end of interview (Q1114=hh:mm), but only one visit**

If only one visit is made to interview the respondent, the time recorded at the start of the interview (question Q101) must be earlier than the time recorded at the end of the interview (question Q1114).

If the time recorded at the start of the interview is equal to or later than the time recorded at the end of the interview, check the time recorded for the start and end of other interviews conducted by the interviewer in question on the same date to see if the inconsistency can be resolved. If the inconsistency cannot be corrected, change the values recorded for hours and minutes at the end of the interview (question Q1114) to 97.

**9006** **Injections administered by health personnel (x) can't be more than injections in last 12 months (Q1001=y)**

Question Q1001 states how many injections, administered by any type of person, the respondent received in the last 12 months. Q1002 asks how many of those were administered by a health professional. Therefore Q1002 must be a subset of (or equal to) the total number of injections stated in Q1001.

Review Q1001 and Q1002 for keying errors. If none are found, review the questionnaire for any marks or corrections made in the vicinity that could assist you in determining the correct response. If it is impossible to determine which response is correct, leave the response as is.

## SECTION 11. MATERNAL MORTALITY

**9000** **Siblings listed out of order: sibling n Year since birth=n Sibling n Year since birth n**

For each sibling, the number of years since birth is calculated as either the sibling's current age (if living) or the sibling's age at death plus the number of years since their death (if deceased). In

the maternal mortality module of the questionnaire, each sibling of the respondent should be listed in order of their birth starting with the first sibling born. The number of years since birth (Q1107) or the age at death (Q1109) and number of years since their death (Q1108) is used to check this order and should be in order. The oldest sibling should be listed first in column 1 progressing to the youngest sibling.

If the siblings are simply given out of order, reorder the siblings so that they are presented in the right order. Otherwise, check for mistakes in the ages, age at death and years since death for each sibling. Look for large gaps in year between the siblings. Typically, siblings are born 2-3 years apart. Gaps of more than 6 years are unusual and may indicate an error in one of the variables. However, if no obvious error can be found, then leave the entries as given in the questionnaire.

**9001 More than 30 years between oldest (n) and youngest (n) sibling**

If there are more than 30 years between the birth of the oldest and youngest sibling, this would indicate that the respondent's mother had children over a span of more than 30 years (for example, from age 15 to 45). This is very unusual and usually indicates an error in the ages, ages at death, or years since death for at least one of the siblings.

Follow instructions given in message 9000.

## _____SECTION 12. CALENDAR EDITING_____

**9800 No entries allowed in row i column j**

Entries in the calendar may not be made for months after the month of interview. These months should be left blank.

Ensure that the entries in the calendar finish in the month of interview and do not go into one of the later months. If there are later entries, check the sections of the questionnaire they reference to ensure the interviewer did not get "off" in their recording. For example, Col1 information comes from the woman's birth history (Q212-Q221), current pregnancy (Q226-Q227), pregnancy termination (Q231), and current use (Q304) questions.

Therefore, only births in the last 5 years should be recorded in the calendar, and if a woman is currently pregnant, the calendar should not have an entry past the current month (for example, an estimated date of delivery). Adjust the calendar by blanking out entries in months after the interview date as necessary.

**9801 Calendar: Invalid code x in column i row j**

Each column of the calendar corresponds to specific question in the questionnaire. Check the pertinent sections. For example, Col1 information comes from the woman's birth history (Q212-Q221), current pregnancy (Q226-Q227), pregnancy termination (Q231), and current use (Q304) questions. Check discontinuation reasons in Col3. If it’s not possible to identify the correct code, use the “missing” code (“?”).

**9802 Calendar: Birth in row n (cmc=cmc [mm/yyyy]) out of range from birth history (event n type=n cmc=cmc-cmc [mm/yyyy-mm/yyyy])**

According to the birth history, the respondent gave birth to a child somewhere between two dates (the dates are given in terms of century month codes and are calculated based on the child's date of birth and age), however in the calendar the birth is reported in a month that is outside of this range.

Check the birth history and the calendar to ensure that there is no typing error in either place. If there is not, then there are many supporting pieces of data to assist you in determining a correct date of birth. Specifically, review the birth history (Q212-Q221) for the child's age and the spacing between births; the health section record (Q506) for dates of vaccination; the child's date of birth as recorded in the household height and weight roster for children (QH203); the woman's date of first union; and her age at first sex.

After reviewing all these data, the accuracy of one of the birth dates (either in the birth history or calendar) should be apparent. If Q215 appears most consistent with the other data, then adjust the calendar to agree with Q215. If the calendar appears more consistent, then adjust Q215 to match the calendar. However, if neither date appears more correct, but both dates will work with the other pieces of information, then adjust the calendar to agree with Q215.

**9803 Calendar: Birth in row i of calendar has gestation length of n months**

A birth in the birth history is reported as having a gestation length other than 9 months, that is, the code “B” is not preceded by 8 code "P"s. It is not unusual for a birth to have a gestation length of 8 or 10 months.

Carefully check the data entered. If no keying error was made then no correction is necessary.

**9804 Birth n (cmc-cmc [mm/yyyy-mm/yyyy]) in birth history does not have an entry in calendar**

According to the birth history, the respondent gave birth to a child in the last 5 years, however the calendar has no record of the birth (the dates are given in terms of century month codes and are calculated based on the date of birth and age of the child).

This message is handled in a similar manner to message 9802. If the birth definitely took place since January 2005, correct the calendar to reflect the birth of the child. However, if the birth possibly occurred before January 2005, then set the year of birth in the birth history to the inconsistent code 9997.

**9805 Calendar: Discontinuation of use but no code given in Col2 row n: col.1=x col.1(n)=x**

The respondent is recorded in Col1 of the calendar as having discontinued the use of a contraceptive method, but the reason for discontinuation is not recorded in the corresponding row of Col2. A discontinuation is defined as either a change in the type of method of contraception, the start of a pregnancy immediately after contraceptive use, or merely the termination of use of a contraceptive method. The reason for discontinuation should be recorded against the last month of use of the contraceptive method.

First check that the reason for discontinuation has not been coded in the wrong month and that there was a break in the use of the method. If there is no recording error in the calendar and there is nothing recorded in the questionnaire or alongside the calendar for the reason for discontinuation in this month, use the "?" (missing) code to indicate missing data in Col2 for the last month of use of the method.

**9806 Calendar: Discontinuation ( x ) in consecutive months n. Please check!**

According to the calendar, there are reasons for discontinuation recorded in the calendar for two consecutive months, implying that the respondent discontinued contraceptive methods in consecutive months.

Check that there are two discontinuations of methods recorded in the two months in Col1 of the calendar. If there are no errors then leave the data unchanged.

**9807 Calendar: No discontinuation of use, but code for discontinuation given in Col2 row n=x**

A reason for discontinuation is recorded in Col2 of the calendar, but there is no discontinuation of a contraceptive method recorded in Col1 of the calendar. A discontinuation is defined as either a change in the type of method of contraception, the start of a pregnancy immediately after contraceptive use, or merely the stopping of use of a contraceptive. The reason for discontinuation should be recorded against the last month of use of the contraceptive method.

First check for a data entry error in Col1 of the calendar. There may be a change of contraceptive method, which was not noticed during data entry. Also check to see if the reason for discontinuation should be recorded against a different month of contraceptive use. However, if there is no data entry error, remove the reason for discontinuation and replace it with a blank.

**9812 Calendar: Became pregnant while using (Col2=x), but use in row n not followed by a pregnancy**

The respondent stated that she stopped using the contraceptive method, because she became pregnant while using it, but there is no pregnancy recorded in the month after the discontinuation.

If the discontinuation is followed by a single month of non-use of contraception and then the start of the pregnancy, move forward the last month of use of the contraceptive and the reason for discontinuation to replace the month of non-use.

In all other cases, the reason for the discontinuation should be replaced by the missing code (a "?").

**9813 Calendar: Stopped to become pregnant (Col2=x), but no month of non-use or pregnancy after discontinuation in row n**

The respondent stated that she stopped using the contraceptive method to try and become pregnant, but the discontinuation of the method is not followed by either the start of a pregnancy or at least one month without using a contraceptive method.

Change the code for the reason for discontinuation of the contraceptive method to the code "?".

**9814 Column n: Abstaining (Q452=n) but using a method (col. Col1 row n=x) in same month**

The respondent was abstaining after the birth of a child, but Col1 indicates that the respondent was using a contraceptive method in the same month.

If no recording or keying errors in the calendar, then no further action should be taken.

**9815 Column n: Abstaining/amenorrhea (Q452/Q449=n) during pregnancy (col. 1 row n=x)**

A period of amenorrhea or abstinence after the previous birth has extended into the following birth. If no data entry error was made, then no further action should be taken as the imputation program will create a variable with a flag informing of the problem.

**9817 Method (n) used in row n of calendar, but never known in contraceptive table (Q301=n)**

The method recorded as being used in a certain month in Col1 of the calendar has never been known according to the contraceptive table in section 3 of the questionnaire.

Check the calendar and the contraceptive table for typing errors or for misread entries in the calendar. Check to see if the respondent had ever known a contraceptive method. If the method was not recorded as being known in Q301, then the response should be changed to "Yes" (code 1).

Codes in the calendar are often misread. For example a code 1 may really be a “T” for a pregnancy termination or a line "|" used to record several months of the calendar containing the same code. If it appears that the method use recorded in Col1 of the calendar is incorrect, the codes in the calendar should be changed.

**9818 Calendar: Pregnancy code in row i, column 1 not followed by a termination code**

A “P” was found in Col1 of the calendar that is not followed by a termination code (“B” or “T”). Check the calendar for typing errors, if no keying errors check the calendar against the birth history to see if the respondent had a child on the date marked in the calendar. If this is the case, correct the problem adding a code “B” in Col1 row n. If this is not the case, check question Q228-Q237 to see if the respondent has had a termination and correct the problem with the code “T”.

If after checking the birth history and questions Q228-Q237 the problem cannot be solved, verify if there is any method discontinuation code in Col2 of the calendar. If this is the case check the contraceptive table and section 3 to determine the method and change the “P” codes for the corresponding method. If there is no discontinuation code, enter “?” for missing data.

**9819 Calendar: Terminated pregnancy in row (n) has a gestation of n months**

A pregnancy that ended in a termination with more than or 9 months of gestation was found in the calendar. This is very unusual as miscarriages, stillbirths or abortions normally have pregnancy duration of less than 9 months.

This is a warning message for keying errors. If no keying errors, make no changes to the data.

## SECTION 13. INTERVAL EDITING BETWEEN EVENTS

**9901 Interval between birth and first union inconsistent: cmc(n)=cmc-cmc [mm/yyyy-mm/yyyy], cmc(n)=cmc-cmc [mm/yyyy-mm/yyyy], interval=n**

The respondent's age at first union should not be less than a certain minimum, usually 10 years. In some countries, this minimum may need to be changed to a lower value, perhaps 8 years, while others may have laws restricting marriage to older ages, and a higher limit may be used. The term marriage is used here to mean married or living together in union with a partner. A few women in each country will truly have married earlier than the minimum age, but most cases are incorrect and should be corrected.

Errors in the woman's age at her first union may arise from two sources:

- The respondent's birth date and/or age (Q102 and Q103) are incorrect.
- The date of first union and/or age at first union (Q610 and Q611) are incorrect.

To resolve inconsistencies in the age of the respondent at her first union, all of the information relating to each of the above items must be examined carefully, including her birth history and age at first sexual intercourse, in addition to the date of birth, age of the respondent, her date of first union, age at first union, and date of interview. Study the questionnaire for recording errors, and in particular look at the responses that have been crossed out when attempting to correct the data. If the woman's husband has been interviewed, and both the man and woman have only been married once, then review his information concerning date of marriage to see if it helps resolve the error.

If the date of union seems to be incorrect, and the date of birth, age at first sexual intercourse,

and date of birth of the first child all appear consistent, then change the year of first union and/or the age at first union to code 9997/97 as necessary.

However, if the date of first union appears consistent with the date of birth of the first child and the date of birth of the respondent is in conflict with the date of first union and the date of birth of the first child, then the date of birth of the respondent needs to be corrected.

If it is not possible to find the correct date of birth and age, change the date of birth (and age) of the respondent to be consistent with the sum of the age of her first child (or the number of years since her first birth if the child is dead) and her age at the time she first had sex, plus one year. If her age at the time she first had sex is missing or she first had sex when she was first married, the age of 16 should be substituted (as long as the new age doesn't force the women to be ineligible). In addition, the age of the respondent at first union should be set to code 97.

In the examples below, **DoI**=date of interview, **DoB**=date of birth, **AgeU**=age at union, **DoU**=date of union, **FCDoB**=first child's date of birth, **AgeFS**=age at first sex.

**EXAMPLES:**

**1.**

| DoI | Age | DoB | AgeU | DoU | FCDoB | DoS | AgeFS |
|---|---|---|---|---|---|---|---|
| 08/2010 | 27 | 98/98 | 07 | 98/1989 | 04/2000 | - | 15 |

In the example above, the date of union and age at union although consistent are very unlikely. On the other hand, the respondent did not have sex until the age of 15, which would be approximately in 1998, which in turn is consistent with her first child's date of birth in 2000. Therefore, the age at first union (and year of first union) should be set to code 97/9997 and a plausible date of union will be imputed at a later stage.

**2.**

| DoI | Age | DoB | AgeU | DoU | FCDoB | DoS | AgeFS |
|---|---|---|---|---|---|---|---|
| 08/2010 | 27 | 98/98 | 07 | 98/1989 | 04/1997 | - | 15 |

In the example above, the date of first union and date of birth of the first child are consistent, but occurred at too young age. If we assume that her age at first sex is correct and since the date of union and date of first birth are consistent, we can conclude that her current age and age at first union are incorrect. If we place her first sex at the time when she got married (1981), then at the time of interview the respondent would be approximately 36 (number of years since first birth 20 (2002-1982) + age at first sex (15) + 1 for conception). Therefore, we should change her current age at 36 and set her age at union to 97 (inconsistent), all other information should be left unchanged.

**9902 Interval between birth and first birth inconsistent: cmc(n)=cmc-cmc [mm/yyyy-mm/yyyy], cmc(n)=cmc-cmc [mm/yyyy-mm/yyyy], interval=n**

A respondent's age at the birth of her first child as calculated from the date of her birth (Q102), her current age (Q103), the date of birth of her first child (Q215), and the first child's current age if alive (Q217), cannot be less than a certain minimum age, usually 12 years. Typically there are one or two cases in each country where the age at first birth is less than this minimum, but these are very unusual, and most occurrences of this message should be corrected.

Errors in the woman's age at her first birth may arise from three sources:

- The child is not the woman's own (biological) child.
- The respondent's birth date and/or age (Q102 and Q103) are incorrect.
- The birth date and/or age of the first child (Q215 and Q217) are incorrect.

To resolve inconsistencies in the age of the respondent at her first birth, all of the information relating to each of the above items must be examined carefully. Items which can help indicate whether the child is the woman's own child include the name of the child and their residence and

adoption/fostering status as reported in the household questionnaire, and the responses to questions Q203, Q205, and Q207.

If it is clear that the child is not the respondent's own biological child, then its entry should be removed from the woman's birth history, and adjustments should be made to questions Q201 through Q208 accordingly.

If the child is one of the respondent's biological children, then either the first child's date of birth or the respondent's date of birth should be adjusted. First check to see if the first child's date of birth was before the date of first union. This may indicate that the child's date of birth is incorrect, particularly if the respondent stated that her first sexual intercourse was at marriage (Q613=95).

The birth history should be reviewed, especially the interval between the first and second birth (if a second birth exists). If the interval between these births is large enough to allow the first birth to be moved forward, and it appears that the first child's date of birth is incorrect, then either the month or year (or both) of birth (Q215) should be changed to inconsistent (code 97 or 9997). If the child's age is present that may also be changed to 97 as it may constrain the limits in which the birth may have occurred.

**EXAMPLE**

| | **Q215** | **Q216** |
|---|---|---|
| Child 1 | 03-2002 | 1 |
| Child 2 | 05-2004 | 1 |

In this example, changing the month of birth of the first child to 97 will allow the program to impute a later month (April through December) depending on the child's current age. If the year is changed to 9997 it will essentially impute a date of 03-2003 again considering that the child's current age permits it. By changing both the month and year to 97/9997 it will give more room for a valid imputation to take place. Again, the child's current age (if known) may need to be changed as it provides another constrain at imputation time.

**EXAMPLE**

| | **Q215** | **Q216** |
|---|---|---|
| Child 1 | 10-2003 | 1 |
| Child 2 | 08-2004 | 1 |

In the above example, the second birth does not permit moving the first child's date of birth forward, as there is only the barest minimum of gap between them. In this scenario, it would seem likely that the respondent's date of birth (and age) has been incorrectly reported, and so the woman's date of birth should be corrected. Checking the woman's age in the household schedule, her date (age) of first union, and her age at first sex, may serve to confirm the inconsistency between the first child's date of birth and the respondent's date of birth. Look for recording errors in the date of birth and age of the respondent, particularly responses that were crossed through, to assess the correct date of birth.

If it is not possible to find the correct date of birth and age, change the date of birth (and age) of the respondent to be consistent with the sum of the age of her first child (or the number of years since her first birth if the child is dead) and the higher of her age at the time she first had sex and her age at first union, plus one year. If there is no information for her age at the time she first had sex or her age at first union, the age of 16 should be substituted.

**EXAMPLES:**

| 1. | DoI | Age | DoB | AgeU | DoU | DoBC | AgeC | DoS | AgeFS |
|---|---|---|---|---|---|---|---|---|---|
| | 08/2010 | 27 | 98/98 | 16 | 98/98 | 98/1990 | 20 | – | 15 |
| | | | | | | 98/2002 | 08 | | |

Clearly the date of birth and age of the first child are incorrect. Look for original responses recorded on the questionnaire, but crossed through, and reinstate the original response if it would be consistent. If the date of birth and/or age of the child are incorrect, change them to the inconsistent code 97/9997.

| 2. | DoI | Age | DoB | AgeU | DoU | DoBC | AgeC | DoS | AgeFS |
|---|---|---|---|---|---|---|---|---|---|
| | 08/2010 | 27 | 98/98 | 16 | 98/98 | 98/1990 | 20 | – | 15 |
| | | | | | | 98/1992 | 18 | | |

In this case, the respondent's date of birth is obviously wrong. Question Q102, if reported, would be changed to code 97/9997. The current age of the respondent (Q103) should be changed to 37 (years since first birth (20) + age at first union (16) + one year).

**9903 Interval between first union and first birth inconsistent: cmc(n)=cmc-cmc [mm/yyyy-mm/yyyy], cmc(n)=cmc-cmc [mm/yyyy-mm/yyyy], interval=n**

In most societies, children are usually conceived within marital unions. This message is generated whenever a child appears to have been conceived prior to the date of the first union. Although it is clearly not a requirement that children be conceived within marriage, this message is used to try to reduce the number of cases that may be incorrectly categorized as pre-marital conceptions. It should be noted that, in most countries, it will not be necessary to correct data from this message when there is convincing evidence that the conception of the child took place before the date of first union.

Typically, inconsistencies may arise because of problems in any of the following information:

- The respondent's date of union and/or age at union (Q610 and Q611) are incorrect.
- The first child's birth date (Q215) and/or age (Q217) are incorrect.
- The respondent's own date of birth (Q102) and/or age (Q103) are incorrect.
- The first child is not the woman's own (biological) child.

To resolve inconsistencies between the date of first union and the date of the first birth all of the information relating to each of the above items must be carefully examined.

Follow the procedures outlined in messages 9902 and 9905 to attempt to resolve the inconsistency. In general, attempts should be made to reduce the incidence of pre-marital births, if not pre-marital conceptions, as it is fairly uncommon for a woman to deliver a child when she is not married, even if the child was conceived outside of a marital union.

However, if it is common/acceptable in the country for a woman to conceive prior to the first union or out-of-wedlock, then leave the responses as they are.

**9904 Interval between birth or union and later event inconsistent: cmc(n)=cmc-cmc [mm/yyyy-mm/yyyy], cmc(n)=cmc-cmc [mm/yyyy-mm/yyyy], interval=n**

The interval between the birth of the respondent or the date of her first union and the date of start of current use or date of conception of the current pregnancy is too short.

If the message relates to the interval between the birth of the respondent and the date of start of current use, follow similar procedures as for message 9901. If the message relates to the interval between the birth of the respondent and the date of conception of the current pregnancy, use similar procedures as for message 9902. If the message relates to the interval between the date of first union and the date of start of current use, refer to message 3215. If it relates to the interval between the first union and the date of conception of the current pregnancy, follow similar procedures as for message 9903.

**9905 Interval between births inconsistent: child n1: cmc(n)=cmc-cmc [mm/yyyy-mm/yyyy], child n2: cmc(n)=cmc-cmc [mm/yyyy-mm/yyyy], interval=n**

The interval between births (i.e., the number of months between the date of birth of one child and the date of birth of the next child) must be greater than or equal to 9 months for all births in the birth history.

If the interval between two births is less than 9 months, examine the information on the dates of birth (and ages) for other births occurring before and after the births in question. The ages recorded in the household listing for all the children in question (QH07) should also be examined, as should information on the dates of immunization (if any) reported for the children in Q506 and the date of birth declared on the children's anthropometry section QH203.

The following is an example of a birth history in which there is an interval of less than nine months between a pair of births (child 02 and child 03). The example assumes an interview date of August 2002.

| Q212 | Q215M | Q215Y | Q217 |
|---|---|---|---|
| 01 | 09 | 1997 | 04 |
| 02 | 03 | 2000 | 02 |
| 03 | 09 | 2000 | 01 |
| 04 | 06 | 2002 | 00 |

To resolve the inconsistency between the reported dates of birth for child 02 and child 03 check:

i) The ages of the children in the household listing. If the age in the household listing for one child (or both children) is different from the age reported in question Q217, change the age and year of birth for that child to be consistent with the age in the household listing, providing the corrected age and birth year will yield a more consistent birth interval.

EXAMPLE: For instance, assuming in the above example, that the household listing shows that child 02 was 3 years old, the age in question Q217 should be changed to 03 and the year of birth to 1999.

ii) The immunization record (for children under 5 years) in question Q506. If the immunization record for the children in question indicates that the year of birth for one of the children may have been different from that reported in the birth history, change the year of birth to be consistent with the immunization record.

EXAMPLE: The immunization record (question Q506) shows that child 02 had a BCG shot in April 2000, child 03 had a BCG shot in October 2002 and child 04 had a BCG shot in July 2002. Since the pattern of immunizations for both child 02 and child 04 suggests that the respondent in question takes her children to receive the BCG immunization when the children are one month

old, it is likely that child 03 was born in 2001, the year in which the BCG immunization was given. Thus, for child 03, the year of birth in question Q215 should be changed to 2001 and the age in question Q217 to 00.

In general, it will not be possible to easily resolve birth interval inconsistencies. If neither of the birth dates can be corrected, then the month for the later of the two births should be changed to 97, unless the later child's month of birth is late in the year and setting it to 97 will not yield enough of a time difference, or the interval between that birth and a subsequent one is less than 12 months. In the latter case, the month of birth for the first child in the pair of births for which the interval is too short should be changed to 97.

**9906 Interval between last birth and later event inconsistent: cmc(n)=cmc-cmc [mm/yyyy-mm/yyyy], cmc(n)=cmc-cmc [mm/yyyy-mm/yyyy], interval=n**

Interval between the last birth and sterilization/current pregnancy
A respondent's age at the time of adoption of the current method of contraception as determined by Q308 (start date for current method) and the date of birth/age of the respondent (Q102 and Q103) should be greater than or equal to a certain minimum, usually 20 years for sterilization and 12 years for any other method.

The survey team may elect to make no changes to Q308, but questions Q102, Q103 and Q308 should be checked for keying errors. If the age at start of use of the method is less than 20 (for sterilization) or 12 (for other methods), you may elect to change Q308's year to code 9997.

**9907 Interval between events inconsistent: cmc(n)=cmc-cmc [mm/yyyy-mm/yyyy], cmc(n)=cmc-cmc [mm/yyyy-mm/yyyy], interval=n**

This message usually relates to inconsistencies between the date of conception of the current pregnancy and the date of interview. A few messages are produced relating to the date of start of current use and the date of interview.

Use the procedures outlined in messages 9904-9906 to correct the problem.

**9914 Duration of amenorrhea between events inconsistent: child n cmc(n)=cmc-cmc [mm/yyyy-mm/yyyy], cmc(n)=cmc-cmc [mm/yyyy-mm/yyyy], amenorrhea=n, interval=n**

The duration of amenorrhea recorded in Q449 is longer than the interval between two events (see section B - Role of the Event Table). The events are usually the births of two children, but may be between the birth of a child and the date of interview.

Check for keying errors in questions Q449 and date of birth for the child reporting the error (Q215) as well as the date of birth for the next child if any or the date of interview if it is the last child. Leave the data unchanged if there are no typing errors.

**9915 Duration of abstinence between events inconsistent: child n cmc(n)=cmc-cmc [mm/yyyy-mm/yyyy], cmc(n)=cmc-cmc [mm/yyyy-mm/yyyy], abstinence=n, interval=n**

The duration of abstinence recorded in Q452 is longer than the interval between two events (see section B - Role of the Event Table). The events are usually the births of two children, but may be between the birth of a child and the date of interview.

Check for keying errors in questions Q452 and date of birth for the child reporting the error (Q215) as well as the date of birth for the next child if any or the date of interview if it is the last child. Leave the data unchanged if there are no typing errors.

**9917** **Duration of contraceptive use between events inconsistent: child n cmc(n)=cmc-cmc [mm/yyyy-mm/yyyy], cmc(n)=cmc-cmc [mm/yyyy-mm/yyyy], contraceptive use=n, interval=n**

The duration of contraceptive use reported in Q308 exceeds the interval between the birth of the last child and the date of interview.

Check for keying errors in questions Q308, date of birth for the last child (Q215) and the date of interview. Leave the data unchanged if there are no typing errors.

**9918** **Cannot create gap between events: cmc(n)=cmc-cmc [mm/yyyy-mm/yyyy], cmc(n)=cmc-cmc [mm/yyyy-mm/yyyy], interval=n**

The minimum interval between two events cannot be maintained in preparation for the imputation of the final dates for these events. This message is usually accompanied by some other message indicating an earlier error. The correction of this earlier error will remove this inconsistency and allow the imputation of the final dates. This message must not appear in the listing for the final imputation run.

As an example, if the dates of birth of two children are reported as 3/1999 and 5/1999 and the minimum interval between the births is 9 months, an earlier message will be generated, but will be accompanied by this error message, indicating that the events are too close together.

**9919** **Minimum and maximum date of event n cross over: cmc=cmc-cmc [mm/yyyy-mm/yyyy]**

After all preparation for imputation the minimum and maximum date of an event have crossed over such that the minimum date of the event is now greater than the maximum date of the event. This message will often be accompanied by message 9918 and an earlier message. The problem is very similar to that in message 9918 and must always be corrected before the final imputation run.

**9920** **Minimum and maximum date of birth of twins n cross over: cmc=cmc-cmc [mm/yyyy-mm/yyyy]**

In the preparation for the final imputation, it is found that the constraints that applied to the date of birth of one twin were in conflict with the constraints that applied to the date of birth of a different twin. For example, the duration of breastfeeding may apply a constraint on the date of birth of the second twin, while the date of birth of an earlier child places a constraint on the date of birth of the first twin. These constraints are in different directions and may lead to inconsistencies in the date of birth of the twins. These inconsistencies must be resolved prior to the final imputation.

**9921** **Event n: Month of event (n) inconsistent with final range for event: cmc=cmc-cmc [mm/yyyy-mm/yyyy], imputed=cmc [mm/yyyy]**

See message 1064.

**9992** **Date must be before date of interview**

Dates given in questions Q231, Q237 and Q308 must happen before the date of interview.

If there is no keying error, ensure that there was no transposition of dates (for example, month and day switched). Also ensure that the woman's date of interview is correct. If it is impossible to determine where the error lies, change the month to 97 or year to 9997, whichever will resolve the error.

**9993 Please check the value entered**

This is a warning during data entry to confirm an entered value. The message is given for QH104, which is usually reported in rounded units that end in 0 or 5, and for Q432N, which is normally reported in rounded units that end in 00 or 50.

Ensure that the data has been correctly entered, but otherwise make no changes.

**9994 Special answers inconsistent**

This message must be resolved during data entry and it checks values for a two-part question made up of units and numbers.

For example, in Q238 (start of last menstrual period) if the units code is a 9, then the response code must be one of the special response categories 94 (menopausal), 95 (before last birth), or 96 (never menstruated). Similarly, if the units code is not 9, then a response code of 94, 95, or 96 is not allowed.

In addition, there is a restricted range for some numeric values in questions that collect both unit and number responses. The data entry operator will be reminded that the number recorded for the unit is not acceptable.

**9995 Response no one/no drug at home inconsistent with other responses**

Several questions allow multiple choice responses; however, when one of the choices is "no one", "no drugs at home", etc., then this choice cannot be used in combination with another selection.

If this message occurs then one of two scenarios occurred: [1] the response "no one" etc. was circled along with some other responses, in which case, this response should be ignored in favor of the other responses, or [2] no responses were circled when an answer was expected; in this case the code "?" should be entered to indicate missing data.

**9995 Response don't know inconsistent with other responses**

Several questions allow multiple choice responses; however, when one of the choices is "don't know" then this choice cannot be used in combination with another selection.

If this message occurs then one of two scenarios occurred: [1] the response "don't know" was circled along with some other responses, in which case, this response should be ignored in favor of the other responses, or [2] no responses were circled when an answer was expected; in this case the code "?" should be entered to indicate missing data.

**9997 The response code “?” is not used for this question**

Because many questions depend to Q304, "?" is not an allowed response. This question needs to have a valid code. If no code is circled, check the skip pattern following Q304 to see if it indicates a specific method. If not, check the contraceptive table for methods used; perhaps this will indicate the method currently being used. If it is not possible to identify a method, or no further “current use” questions have responses, change Q303 to “no” (2), not currently using.

**9998 Codes given for alpha variable not acceptable**

For multiple response questions (alphabetical response questions), the codes should be entered in alphabetical order with no spaces between letters nor duplication of the codes. For example, if the codes "A", "C" and "F" are circled for a question, then they should be entered as "ACF" into the data entry program. Any other combination ("CAF", "A CF", " ACF", "ACCF") is not

acceptable. If no codes have been circled for the question, then the special code of "?" should be used, which indicates the response is missing.

## MAN'S QUESTIONNAIRE

## SECTION 1. RESPONDENT'S BACKGROUND

### 21060 Neither date of birth (QM102=mm/yyyy) nor age (QM103=n) specified

The age of the respondent is one of the most important pieces of information in the individual data file. It is crucial that the age of the respondent should be known for all men in the individual data file. For this reason either the age or the year of birth are required for all respondents.

If no information has been recorded for either of these questions, then check other related pieces of information to see if the age of the respondent can be deduced. The information to check includes the following:

- Age of the respondent in the household schedule (QH07).
- Age at first union and date of first union (QM411, QM412).
- Age at first sexual intercourse (QM414).

If none of the related information gives any clear idea as to the correct date of birth or age for the respondent, use the respondent's age as reported in the household schedule (QH07) in question QM103.

### 21061 Respondent's age in individual questionnaire (QM103=n) differs from age in household (QH07=n)

The respondent's age in the individual questionnaire (QM103) and the respondent's age in the household schedule (QH07) should be the same, but discrepancies can arise as a different member of the household often reports in the household schedule.

If the age of the respondent has been recorded differently in the household schedule and the individual questionnaire, but both have been correctly entered then the information should be left as recorded, unless it affects the man's eligibility for individual interview.

Cases where the age of the respondent is significantly different from the age recorded in the household schedule should be carefully reviewed. However, unless there has been a keying error, the ages should not be changed.

If there are two or more eligible men in the household, each of the individual questionnaires should be checked to ensure that the correct questionnaire is being entered. Occasionally the wrong line numbers are written on the cover pages of the questionnaires. If this is the case, the line numbers should be corrected, the questionnaires reordered and the entered according to the correct order.

### 21062 DOB (QM102=mm/yyyy, cmc=lower-upper) and age (QM103=n) inconsistent with date of interview=mm/yyyy, cmc=cmc

The age calculated based on the respondent's month and year of birth (QM102) must be equal to the respondent's age in completed years (QM103).

In resolving inconsistencies in the calculated and reported ages, it may be necessary to consider other information in the DHS household and individual questionnaires including:

- The respondent's age as reported in the household listing (QH07)
- The number of live births (QM208)
- The respondent's age at birth of first child (QM212)
- The date (QM411) or age (QM412) at first union

If, after reviewing all other relevant items of information, the inconsistency cannot be resolved, there are two ways of correcting the data. If the difference is 1 year, correct the year of birth if the month is given; otherwise correct the age. If the difference is greater than 1 year, choose the age or date of birth, whichever is assumed to be more correct. If the age is chosen, change the year of birth to 9997 and the month to 97. If the date of birth is chosen, change the age to 97.

Note that, in many cases, the difference between the calculated and reported ages will not be large. In those instances, the error is most likely to have occurred because the respondent reported her age at her next birthday rather than at her last birthday.

EXAMPLE:

The birth date was recorded as May 1971, indicating that the respondent was 31 years old at the time of the DHS interview in August 2002. However, his age, as recorded in the individual questionnaire and in the household schedule, was 32 years. Both his birth date and age are consistent with the date of first union (July 1992). To resolve the inconsistency between the birth date and the age response, change the age reported (QM103) to 31. Do not change the age as recorded in the household schedule.

**21063 Respondent's DOB (QM102=mm/yyyy) out of range: cmc=cmc-cmc, interview=cmc, range=cmc-cmc [mm/yyyy-mm/yyyy]**

Normally, the respondent must be aged between 15 and 49 complete years of age to be eligible for interview. Occasionally a country will increase the age range to 54 or 59 years, but this should be clearly shown in the household schedule in QH10. Depending on the date of interview, this translates into a minimum and maximum possible date of birth for the respondent.

Check that all information relating to the date of birth of the respondent are correct as in message 21062.

If the date of birth is one month before the minimum date of birth, and the age of the respondent is recorded as 59, then change the month of birth of the respondent to the month following. This will ensure consistency of information, without dropping the respondent from the sample.

If the respondent was clearly born outside of the expected range, then the respondent should be dropped from the sample due to ineligibility. Cross through the front cover of the individual questionnaire and mark it ineligible. Correct the age and eligibility in the household schedule to reflect the correct age of the respondent. Change the Field Supervisors Control Sheet and adjust the number of individual interviews in the Control file to reflect the correction.

**21064 Respondent's month of birth (QM102M=n) inconsistent with other information: cmc=cmc-cmc [mm/yyyy-mm/yyyy]**

If the year of birth was not recorded, but the month of birth was given, the editing and imputation program will attempt to correctly calculate the year of birth from other information provided in the questionnaire. In some cases, after constraining the date of birth using all other available information, the month of birth proves to be inconsistent with the constrained date. This message is often accompanied by message 9921.

If the month of birth is truly inconsistent with the other available data, no correction is necessary, as the month of birth will be ignored in the imputation of the respondent's date of birth. However,

if the month of birth is believed to be correct, then the information used to constrain the date of birth will need to be modified to avoid the inconsistency. In general, it is better to assume that the month of birth is not correct, and allow a new month of birth to be imputed.

**21080 Level of education n different from level in household (QH17A=n)**

The data recorded in the household listing for education should be checked for consistency with the information recorded in the individual questionnaire.

Only keying errors should be corrected. The household data should not be changed to be consistent with the respondent's data since it is not possible to correct the data reported for all men at the household level. If there are two or more eligible men in the household, check each of the individual questionnaires to ensure that the correct individual questionnaire is being entered as in message 1061.

**21090 Grade of education n different from grade in household (QH17B=n)**

See message 21080.

**21091 Level and grade of respondent's education inconsistent**

The level of school as reported in QM105 (primary, secondary, higher) does not agree with the number of years stated in QM106. Generally, there are a maximum of number of years that can be taken in a given level, and the number of years cannot be beyond that number (for example, 10 years spent in primary school is well beyond the maximum number of years anticipated of 6 or 7).

If there are no keying errors, then review the procedure for message 0090 (education in the household schedule).

## SECTION 2. REPRODUCTION

**22030 Number of boys and girls must be greater than zero**

The number of boys and girls specified in questions QM203, QM205, or QM207 must be greater than zero, else the response to questions QM202, QM204 or QM206 (respectively) should be "No" (code 2).

Check the number of boys and girls living at home (QM203), living elsewhere (QM205), and who have died (QM207) against the responses given in the respective preceding questions QM202, QM204, and AM206. If there are no boys and no girls in a particular category, then the response to the preceding question should be "No". For example, if there are no boys living elsewhere and no girls living elsewhere (QM205) then the response to question QM204 should be corrected to "No" (code 2).

**22080 Number of children ever born incorrect**

The total number of live births must be equal to the sum of the total number of children reported in questions QM203 (number of sons and daughters at home), QM205 (number of sons and daughters elsewhere) and QM207 (number of boys and girls dead).

If the total reported in question QM208 does not agree with the sum of the number recorded in questions QM203, QM205 and QM207, then adjust QM208 to agree with this tally.

**22110 Number of women with whom fathered children (QM211=n) exceeds number of children ever born (QM208=n)**

The number of women with that the respondent has fathered children with (question QM211) is greater than the total number of children the respondent has ever fathered (QM208).

If the number given in QM211 exceeds the number in question QM208, reduce the number given in QM211 to be the same as the number in QM208.

**22130 Age at first birth (n) exceeds current age (QM103=n)**

The man's age at the birth of his first child (QM212) must be less than or equal to his current age as reported in QM103.

Check for typing errors and review any other comments on the questionnaire that might give an indication of the correct age at first birth.

If the age at first birth is greater than the respondent's current age and it is not possible to deduce the correct age at first birth, change question QM212 to code 97.

**22140 Age of youngest child (QM214=n) not plausible with father's age (QM103=n) minimum age at birth=n**

Question QM214 reports the current age of the man's youngest living child. This is added to the minimum age at which a man is expected to father a child (generally 12 to 15 years of age) and this cannot exceed the man's current age.

If there are no keying errors, then leave the response as is.

## SECTION 4. MARRIAGE AND SEXUAL ACTIVITY

**25120 First union after date of interview: DOU (QM411)=mm/yyyy, age at u (QM412)=n, interview=mm/yyyy, DOB (QM102)=mm/yyyy, age (QM103)=n**

The date of first union as entered is after the date of interview. During data entry this message should be used just for the correction of typing errors, with corrections to the questionnaire data being left until the editing stage.

Check the date of first union against the age at first union reported in question QM412 and try to correct QM411 based on this information and the date of birth of the respondent. For example, the respondent is born in July 1959 and is 32 years old in August 2001. He was married at age 28 in September 2001. The year of first union is after the date of interview. The respondent's date of first union should have been September 1997.

If the date of first union is after the date of interview and it is impossible to deduce the correct date of first union from the age at first union, change the year in question QM411Y to the inconsistent code 9997. For example, the respondent is 27 years old when interviewed in August 2009, but his date of birth has not been given. The age at first union is given as 19, but the date places the union in 2010, with the month unknown. Assuming all other data are correct, the union may have taken place in 1999, 2000 or 2001 and rather than guess which is correct the code 9997 should be used.

**25121 First union before age n: DOB (QM102)=mm/yyyy, age (QM103)=n, DOU (QM411)=mm/yyyy, age at u (QM412)=n**

The first union took place before the respondent reached a specified minimum age (usually 15). Check for keying errors in the data and recording errors on the questionnaire, but if the data appear correct then leave the data unchanged.

**25126 Month of first union (QM411M) inconsistent with other information: cmc=cmc-cmc [mm/yyyy-mm/yyyy]**

Follow the same procedure as for message 21064.

**25130 Age at first union (QM412=n) exceeds current age (QM103=n); interview date=mm/yyyy, DOB (QM102)=mm/yyyy, DOU (QM411)=mm/yyyy**

The age at first union in QM412 must be less than or equal to the age of the respondent reported in QM103. During data entry this message should be used just for the correction of typing errors, with corrections to the questionnaire data being left until the editing stage.

Check the age at first union against the date of first union reported in QM411 and try to correct QM412 based on this information and the date of birth of the respondent. For example, the respondent was born in October 1974 and is 26 years old in August 2001. He was married at age 28 in September 1993. Clearly the respondent must have been 18 in September 1993. Question QM412 should be corrected to 18.

If the age at first union is greater than the respondent's current age and it is not possible to deduce the correct age at first union from the date of first union, change QM412 to code 97.

**25131 Age at first union (QM412=n ) and date of first union (QM411=mm/yyyy) inconsistent with DOB (QM102=mm/yyyy); interview=mm/yyyy, age (QM103)=n**

This message will appear only if both the date of first union and the age at first union are asked.

The age at first union and date of first union are inconsistent with the respondent's date of birth. This message is produced during editing of the respondent's date of birth based on the date of first union and age at first union. Follow the procedures for message 25132 to correct this problem.

**25132 Age at first union (QM412=n) and date of first union (QM411=mm/yyyy) inconsistent: interview=mm/yyyy, age (QM103)=n, DOB (QM102)=mm/yyyy**

This message will appear only if both the date of first union and the age at first union were asked.

The age at first union and date of first union are not consistent with the respondent's date of birth. This error is one of the most common messages to be produced during editing. There are several possible reasons for the error:

- The age at first union is incorrect.
- The date of first union is incorrect.
- The respondent's date of birth and/or age are incorrect.

Although the first and second cases are more common, the third situation should not be overlooked, particularly if either the date of birth or the current age of the respondent has already been changed during earlier machine editing or during field editing.

During data entry, check for typing errors, but make no other changes to the data. Consistency editing when there is no data entry error should be done during the editing stage.

During editing, there are several pieces of data to be taken into account when checking the age and date of first union, including:

- Respondent's age (QM103)
- Respondent's date of birth (QM102)
- Date of interview

Using these data it should be possible to deduce which piece of data is incorrect and to make the required correction. However, if there is any uncertainty as to what the correction should be, then either the age at first union or the date of first union should be set to the inconsistent code 97. As a general guideline when deciding which piece to set to inconsistent, a complete date of an event, with both the year and month reported, is assumed to be more accurate than the age at the event, whereas the age at the event is assumed to be more accurately reported than a date where the month or year of the event is unknown. It should be remembered that the imputation program will use the data available in imputing the complete date of an event and so the least reliable piece should be changed to 97.

EXAMPLES:

| **1.** | **DoI** | **Age** | **DoB** | **AgeU** | **DoU** | **DoBFC** | **DoS** | **AgeFS** |
|---|---|---|---|---|---|---|---|---|
| | 08/2001 | 25 | 12/1975 | 21 | 06/9998 | 04/1998 | - | 95 |

As the first sexual intercourse was at marriage and the first child was born in 1998, set the year of first union to 1997. If the age at first union is correct the only year consistent with that is 1997.

| **2.** | **DoI** | **Age** | **DoB** | **AgeU** | **DoU** | **DoBFC** | **DoS** | **AgeFS** |
|---|---|---|---|---|---|---|---|---|
| | 08/2001 | 42 | 04/1959 | 18 | 98/1983 | 98/1974 | - | 14 |

Set the year of first union to 9997. There is no data here to indicate whether the date of first union or the age at first union is more accurate. Taking either of the two, the first birth would have been before the union. The year of first union was chosen for correction on the basis that incomplete dates are assumed to be less accurate than the age at the event.

| **3.** | **DoI** | **Age** | **DoB** | **AgeU** | **DoU** | **DoBFC** | **DoS** | **AgeFS** |
|---|---|---|---|---|---|---|---|---|
| | 08/2001 | 38 | 98/1962 | 29 | 98/1983 | 03/1986 | 98/1990 | 19 |

Change the age at first union to 97, as an age of 29 would mean that the union was after the first birth. Additionally, if the age at first union were correct, it would imply that the sterilization was before the union.

| **4.** | **DoI** | **Age** | **DoB** | **AgeU** | **DoU** | **DoBFC** | **DoS** | **AgeFS** |
|---|---|---|---|---|---|---|---|---|
| | 08/2001 | ~~48~~ 46 | 98/1955 | 17 | 98/1970 | 98/1972 | - | 95 |

In the last case, the age of the respondent has previously been corrected in the field from 48 to 46 to be consistent with the respondent's date of birth. However, the age at first union and date of first union are now inconsistent. The current age originally recorded was probably correct and should be reinstated as 48, whereas the respondent's year of birth should be changed to 1953. With this change, the age at first union and date of first union would be consistent.

**25133 Age at first union (QM412=n ) and date of first union (QM411=mm/yyyy) inconsistent after imputing DOB (QM102=mm/yyyy): interview=mm/yyyy, age (QM103)=n**

In rare cases, the date of first union and age at union information may be inconsistent after imputing the respondent's date of birth. This will only occur when the logical range for the date of birth was adjusted by some further piece of data after constraining the logical range for the date of first union. In practice this implies that there is an inconsistency between this other piece of data and the age at first union information. See message 25132 for resolution.

**25134 Age at first union (QM412=n ) and date of first union (QM411=mm/yyyy) inconsistent with interview=mm/yyyy, age (QM103)=n, and/or DOB (QM102)=mm/yyyy**

The age at first union and date of first union are not consistent with the respondent's date of birth after all other date editing constraints have been met. Follow the procedure for message 25132 to resolve the inconsistency.

**25135 No information given for date of first union: age at u (QM412)=n, DOU (QM411)=mm/yyyy**

No information was reported or recorded for the data of first union or age at first union. With no information available, the imputation program will attempt to impute a plausible date of first union, but it is better if some information were available. Check the questionnaire to see if there was a typing mistake or if both pieces of information were unnecessarily set to the inconsistent code 97 (9997).

**25150 Never had sexual intercourse (QM414=n), but has children (QM208=n) or a partner is or maybe pregnant (QM503=n)**

The respondent is recorded as having never had sexual intercourse in QM414, but he has children (QM208 > 0), or has stated that a partner is or may be pregnant (QM503 = 1 or 8).

In all cases, change the response in QM414 to code 97 (Had sexual relations) and set the responses to questions previously skipped to missing. This will occur mainly in section 4 (marriage and sexual activity) but also may have effects in sections 5 (fertility preferences) and section 7 (HIV/AIDS).

**25151 Never had sexual intercourse (QM414=n), but has a sex partner, or is/was in a union, or live/lived with a woman (QM401=n, QM402=n)**

The respondent reported that he has been in a union, but has never had sexual intercourse. Check for keying errors, but if none are found, make no correction to the data.

**25153 Time since last sex exceeds interval: child n cmc(n)=cmc-cmc [mm/yyyy-mm/yyyy] interview=cmc [mm/yyyy], last sex QM416=n**

The time since last sexual intercourse (QM416) is longer than the total length of the interval from the date of the last birth to the date of interview. Correct the typing errors made during data entry but otherwise leave the data as is.

**25158 Last sex before last birth (QM416=u/n), but never had a child (QM208=n)**

According to QM402 the respondent last had sexual intercourse before his last child was born, but he has never had a child (QM208). Correct typing errors only, otherwise leave the data as is.

**25180 Age at first birth (QM212=n) inconsistent with other information about timing of first birth (cmc=cmc-cmc [mm/yyyy-mm/yyyy]). Date of birth of resp.=cmc-cmc [mm/yyyy-mm/yyyy] interview=cmc [mm/yyyy]**

The respondent's age at the time of his first child's birth is inconsistent with other information about his age. Check that there are no obvious errors in the data, but otherwise make no changes to the data.

**25190 Age at first sex (QM414=n) exceeds current age (QM103=n); interview=mm/yyyy, DOB (QM102)=mm/yyyy**

The age of the respondent when he first had sexual intercourse (QM414) exceeds his current age (QM102). Check that there are no obvious errors in the data, but otherwise make no changes to the data.

**25191 Age at first sex (QM414=n) after age at first birth (QM212=n); respondent DOB (QM102)=mm/yyyy**

Based on the respondent's date of birth, his age when he first had sexual intercourse, and his age at the birth of his first child, the respondent reported first having sex at a later date than the date of conception of his first birth. Keying mistakes should be corrected, but otherwise make no changes to the data.

**25192 First sex (QM414=n) when first married, but never married (QM402=n)**

The respondent reported that he first had sex when he was first married according to QM414, but the respondent has never married (QM402 is code 3).

During data entry, just check for data entry errors.

During editing, check for data entry errors, but otherwise leave the data unchanged.

**25193 Age at first sex (QM414=n) after date of marriage (QM411=mm/yyyy); age at u (QM412)=n, DOB (QM102)=mm/yyyy**

The age at first sex in QM414 is older than the respondent's age at first union. This is possible, but very unusual. Check for data entry errors, but otherwise leave the data unchanged.

**25194 Age at first sex at marriage (QM414=n) after age at partner's conception of first birth (QM212=n): date of union (QM411)=mm/yyyy, age at u (QM412=n)**

The respondent reported first having sex when he was first married in QM414, but the date of his first union was after the conception of his first child. Check for data entry errors, but otherwise leave the data unchanged.

**25200 Has not had sex in last 12 months (QM416=u/n), but at least one partner is or may be pregnant (QM503=n)**

The respondent has not had sexual relations in the last year (QM416), yet one or more of his wives or partners is or may be pregnant (QM503).

Check for typing errors, but otherwise make no changes.

**25240 Answer wife/live-in partner but never in union (QM401=n, QM402=n)**

The respondent reported in QM420 that he had sex with his spouse or cohabiting partner in his last, second-to-last, or third-to-last sexual encounters, however, according to questions QM401 and QM402, he has never been in a union.

Check the questionnaires for typing errors, but otherwise make no changes to the data.

**25245 Number of lifetime partners must be greater than or equal to the number of partners in the last year (n)**

The man's questionnaire asks for information about the last three sexual partners he had within the last 12 months. If he had three or more partners in that 12 month period, he is further asked how many sexual partners in total he had over that period (QM427). It is then compared with QM434A, which asks the total number of sexual partners he has had in his lifetime; and this number must be greater than or equal to QM427.

During data entry, check for typing mistakes. If there are none and questions QM417-QM425 clearly reference different women, then change QM434A to the value in QM427.

## _____SECTION 5. FERTILITY PREFERENCES_____

**26131 Boys (QM510A=x), girls (QM510B=y), and either (QM510C=z) should add up to total ideal number of children (QM509=n)**

The total number of boys desired, girls desired, and either sex desired, should add up to the total ideal number of children given in QM509.

If there are no keying errors and the sum of boys and girls in QM509A and QM510B equals QM509, change the response for 'either' (QM510C) to "00". Otherwise, make no changes to the data.

## _____SECTION 8. OTHER HEALTH ISSUES_____

**28110 Time at start of interview (QM101=hh:mm) after time at end of interview (QM814=hh:mm), but only one visit**

If only one visit is made to interview the respondent, the time recorded at the start of the interview (QM101) must be earlier than the time recorded at the end of the interview (QM814).

If the time recorded at the start of the interview is equal to or later than the time recorded at the end of the interview, check the time recorded for the start and end of other interviews conducted by the interviewer in question on the same date to see if the inconsistency can be resolved. If the inconsistency cannot be corrected, set the values recorded for hours and minutes at the end of the interview (QM814) to 97.

**29006 Injections administered by health personnel (QM806=x) can't be more than injections in the last 12 months (QM805=y)**

Question QM805 asks how many injections the respondent has received in the last 12 months. His reply cannot be less that that given in QM806, which asks how many injections in the last 12 months have been administered by health personnel.

If there are no typing errors and no markings on the questionnaire that would indicate another response, set QM805 to the response given in QM806.

**29901 Interval between birth and first union inconsistent: cmc(n1)=yyyy-yyyy [mm1/yyyy1-mm2/yyyy2] cmc(n2)=yyyy-yyyy [mm3/yyyy3-mm4/yyyy4] interval=n**

See message 9901 in the woman's block. However, the following variables should be referenced in lieu of the woman's variables cited:

- The respondent's birth date (QM102)
- The respondent's age (QM103)
- The date of first union (QM411)
- The age at first union (QM412)

**29902 Interval between birth and first birth inconsistent: cmc(n1)=yyyy-yyyy [mm1/yyyy1-mm2/yyyy2] cmc(n2)=yyyy-yyyy [mm3/yyyy3-mm4/yyyy4] interval=n**

See message 9902 in the woman's block. However, the following variables should be referenced in lieu of the woman's variables cited:

- The respondent's birth date (QM102)
- The respondent's age (QM103)
- The respondent's age at the time of his first child's birth (QM212)

**29903** **Interval between first union and first birth inconsistent: cmc(n1)=yyyy-yyyy [mm1/yyyy1-mm2/yyyy2] cmc(n2)=yyyy-yyyy [mm3/yyyy3-mm4/yyyy4] interval=n**

See message 9903 in the woman's block. However, the following variables should be referenced in lieu of the woman's variables cited:

- The respondent's birth date (QM102)
- The respondent's age (QM103)
- The respondent's age at the time of his first child's birth (QM212)

**29904** **Interval between birth or union and later event inconsistent: cmc(n1)=yyyy-yyyy [mm1/yyyy1-mm2/yyyy2] cmc(n2)=yyyy-yyyy [mm3/yyyy3-mm4/yyyy4] interval=n**

See message 9904 in the woman's block.

**29905** **Interval between births inconsistent: child c1: cmc(n1)=yyyy-yyyy [mm1/yyyy1-mm2/yyyy2] child c2: cmc(n2)=yyyy-yyyy [mm3/yyyy3-mm4/yyyy4] interval=n**

See message 9905 in the woman's block.

**29906** **Interval between last birth and later event inconsistent: cmc(n1)=yyyy-yyyy [mm1/yyyy1-mm2/yyyy2] cmc(n2)=yyyy-yyyy [mm3/yyyy3-mm4/yyyy4] interval=n**

See message 9906 in the woman's block.

**29907** **Interval between events inconsistent: cmc(n1)=yyyy-yyyy [mm1/yyyy1-mm2/yyyy2] cmc(n2)=yyyy-yyyy [mm3/yyyy3-mm4/yyyy4] interval=n**

See message 9907 in the woman's block.

**29918** **Cannot create gap between events: cmc(n1)=yyyy-yyyy [mm1/yyyy1-mm2/yyyy2] cmc(n2)=yyyy-yyyy [mm3/yyyy3-mm4/yyyy4] interval=n**

See message 9918 in the woman's block.

**29919** **Minimum and maximum date of event %02d cross over: cmc=yyyy-yyyy [mm1/yyyy1-mm2/yyyy2]**

See message 9919 in the woman's block.

**29921** **Event %02d: Month of event (%02d) inconsistent with final range for event: cmc= imputed=yyyy [mm/yyyy]**

See message 9921 in the woman's block.

**99990 Respondent R said that husband/wife # is (N) but that person is not currently in a union (U)**

A number of checks are performed between men and women's questionnaires to ensure that the responses related to husbands and wives are consistent. This check ensures that if a respondent declared that they are married to another person for whom there is an individual questionnaire, then that person also states that they are married.

Review the household schedule, checking each of the household members to identify each couple in the household. Check the individual questionnaires, looking at question Q605 in the women's questionnaire. Check that the line numbers refer to the correct person(s). Also ensure that the marital status of each person is correctly recorded (in questions Q601 to Q604 for women and questions QM401 to QM404 for men).

Occasionally, a woman will say she is single when she is living with a man, but not married to him. In this case, question Q601 in the women's questionnaire should be changed to code 2 (Yes, living with a man), question Q604 should be changed to code 1 (living with her), and question Q605 should be changed to the man's line number. Other related questions may also require modification.

On occasion, a couple that has divorced may still be living together. One may answer that they are married together, while the other may say they are divorced. If it is believed that they are really divorced, even though they still living together, then their marital status questions should be changed to reflect this.

**99995 Respondent R said that husband/wife # is (N) but that person declared that his/her partner is (n)**

A number of checks are performed between men and women's questionnaires to ensure that the responses related to husbands and wives are consistent. This check ensures that if a respondent declared that they are married to another person for whom there is an individual questionnaire, then that person also states that they are married to the respondent and not another person.

Follow the procedures outlined above for 99990 to determine correct alliances.

**99997 Respondents X and Y are both married to person # n**

This check looks to see if two or more men state that they are married to the same woman. This is usually caused by the wrong line number being recorded in one of the men's questionnaires.

Follow the procedures outlined above for 99990 to determine correct alliances.

## F. LIMITS FOR LENGTH AND WEIGHT OF CHILDREN

In editing the length and weight of children to ensure that no data entry errors are made, the following values are used as the minimum and maximum expected values. The ranges are dependent on the sex and age of the child and are given in centimeters for the length (height) of the child and kilograms for the weight of the child.

| Age in Months | LENGTH (cm.) | | | | WEIGHT (kg.) | | | |
|---|---|---|---|---|---|---|---|---|
| | Males | | Females | | Males | | Females | |
| | Minimum | Maximum | Minimum | Maximum | Minimum | Maximum | Minimum | Maximum |
| 0 - 2 | 36.0 | 74.0 | 36.0 | 72.0 | 0.5 | 10.0 | 0.5 | 9.0 |
| 3 - 5 | 45.0 | 83.0 | 44.0 | 80.0 | 1.0 | 13.0 | 1.0 | 12.0 |
| 6 - 8 | 51.0 | 87.0 | 50.0 | 86.0 | 2.0 | 15.0 | 2.0 | 14.0 |
| 9 - 11 | 56.0 | 91.0 | 54.0 | 90.0 | 3.0 | 16.5 | 2.5 | 15.5 |
| 12 - 14 | 59.0 | 96.0 | 57.0 | 95.0 | 4.0 | 17.5 | 3.0 | 16.5 |
| 15 - 17 | 62.0 | 100.0 | 60.0 | 99.0 | 4.0 | 18.5 | 3.5 | 17.5 |
| 18 - 20 | 64.0 | 104.0 | 62.0 | 102.0 | 4.0 | 19.5 | 3.5 | 18.5 |
| 21 - 23 | 65.0 | 107.0 | 64.0 | 106.0 | 4.5 | 20.5 | 4.0 | 19.5 |
| 24 - 26 | 67.0 | 108.0 | 66.0 | 107.0 | 4.5 | 23.0 | 4.5 | 21.5 |
| 27 - 29 | 68.0 | 112.0 | 68.0 | 111.0 | 5.0 | 24.0 | 5.0 | 23.0 |
| 30 - 32 | 70.0 | 115.0 | 69.0 | 114.0 | 5.0 | 24.5 | 5.0 | 24.5 |
| 33 - 35 | 71.0 | 118.0 | 71.0 | 117.0 | 5.0 | 25.5 | 5.0 | 25.5 |
| 36 - 38 | 73.0 | 121.0 | 72.0 | 120.0 | 5.0 | 26.0 | 5.0 | 27.0 |
| 39 - 41 | 74.0 | 124.0 | 74.0 | 122.0 | 5.0 | 27.0 | 5.0 | 28.0 |
| 42 - 44 | 75.0 | 127.0 | 75.0 | 124.0 | 5.0 | 28.0 | 5.5 | 29.0 |
| 45 - 47 | 77.0 | 129.9 | 77.0 | 126.0 | 5.0 | 29.0 | 5.5 | 30.0 |
| 48 - 50 | 78.0 | 132.0 | 78.0 | 129.0 | 5.0 | 30.0 | 5.5 | 31.0 |
| 51 - 53 | 79.0 | 134.0 | 79.0 | 131.0 | 5.0 | 31.0 | 5.5 | 32.0 |
| 54 - 56 | 80.0 | 136.0 | 81.0 | 133.0 | 5.5 | 32.0 | 6.0 | 33.0 |
| 57 - 60 | 82.0 | 139.0 | 81.0 | 136.0 | 5.5 | 33.0 | 6.0 | 34.5 |
| 61 - 72 | 82.0 | 140.0 | 81.0 | 137.0 | 5.5 | 34.0 | 6.0 | 36.0 |

## G. EVENT TABLE

The event table contains a history of the key events in the life of the respondent, including the dates of each event. The event table is to be used to help resolve problems in the data. The event table contains the following information:

| | | | | |
|---|---|---|---|---|
| IX | Index to events | | | |
| T | Type of event | | Female | Male |
| | 1 | Date of birth of respondent | Q102/Q103 | QM102/QM103 |
| | 2 | Date of marriage | Q610/Q611 | QM411/QM412 |
| | 3 | Date of birth of children | Q215/Q217 | QM212 |
| | 4 | Date of conception of current pregnancy | Q227 | |
| | 5 | Date of sterilization/start of contraceptive use | Q308 | |
| | 6 | Date of interview | QINTM/QINTY | QINTM/QINTY |
| Ord | Birth order of children in birth history | | Q212 | |
| M | Whether birth was a multiple birth | | Q214 | |
| | 0 | Single birth | | |
| | >0 | Order in multiple births | | |
| S | Survival status of child (type=3) or | | Q216 | |
| | Sterilization or other method code (type=5) | | Q304 | |
| F | Flag for date calculations | | | |
| | 1 | Month and year reported | | |
| | 2 | Month and age reported - year imputed | | |
| | 3 | Year and age reported - month imputed | | |
| | 4 | Year and age reported - year ignored, month imputed | | |
| | 5 | Year only reported - month and age imputed | | |
| | 6 | Age only reported - month and year imputed | | |
| | 7 | Month only reported - age and year imputed | | |
| | 8 | Nothing reported - age, month and year imputed | | |
| E | Error. An "*****" appears where there is an inconsistency between date events. | | | |
| Date | Date given in the mmyyyy format, e.g. 062010 is June, 2010. | | | |
| CMC | Century month code. The event table gives the minimum and maximum century month codes for the data of each event. These will be the same if the date given is complete (i.e. month and year given - code 1 for column F), or there will be a range if either the month or year of the event is not known. | | | |
| Int | Minimum interval between events in months. For example between event type 1 (date of birth of respondent) and type 2 (date of marriage) the minimum interval is assumed to be 120 months (10 years). | | | |
| Concep | Minimum waiting time between a birth and conception of the next pregnancy, which is assumed to be 2 months. | | | |
| Amen | Dur | duration of postpartum amenorrhea | Q449 | |
| | F | flag for duration of amenorrhea | | |
| Abst | Dur | duration of postpartum abstinence | Q452 | |
| | F | flag for duration of abstinence | | |
| Meth | Dur | duration of current method use | Q308 | |
| | F | flag for duration of current method use | | |
| Age | Death | Age at death for children born alive, who later died | Q220 | |
| | | The first digit is the unit from | Q220U | |
| | | The last two digits are the number in the units from | Q220N | |
| | F | Flag for age at death | | |
| Last Period | | First digit gives the units, last two digits give the number | Q238 | |
| Last Sex | | First digit gives the units, last two digits give the number | Q615 | QM416 |
| Age at first sex | | | Q613 | QM414 |
| Flag | | Flag variable for last period, last sex, and age at first sex. | | |