Making DHS and MICS Datasets Compatible with VCQI

Draft User’s Guide

Version 1.0

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# Chapter 1: How to make datasets VCQI Compatible

There are two ways in which a user may make a survey dataset VCQI compatible: manual conversion or using the MICS/DHS VCQI Conversion program.

## 1.1 Manual Conversion

To manually convert your dataset, you will need to determine which indicators you would like to run. From there, you will need to reference the list of required variables found in Annex A. Once you confirm there is a corresponding variable in your dataset, it will need to be renamed to match up with the VCQI variable name found in the VCQI Forms and Variable List (FVL) Document. After the variables have been renamed, verify the values match up with the appropriate values for each variable. If there is a discrepancy, recode the values to align with VCQI. (e.g., in many cases VCQI expects a ‘Yes’ response to be coded as a 1 and a ‘No’ response to be coded as a 2. The values for each variable can also be found in the FVL document. If a required variable is not present in your survey dataset, generate the variable with the appropriate VCQI name and a missing value.

VCQI requires that separate datasets be created with different information. Table 1-1 lists which datasets are required for each type of indicator. Create these different datasets with the correct VCQI variables to run through the VCQI program.

**Table 1-1. List of VCQI dataset types required for RI, TT, and SIA survey analysis**

|  |  |  |
| --- | --- | --- |
| **Dataset[[1]](#footnote-1)** | **Description** | **Needed for which analyses…[[2]](#footnote-2)** |
| HH | Household listing | All |
| HM | Household member listing | All |
| CM | Cluster metadata (including weights) | All |
| RI | Routine Immunization (RI) question responses | RI |
| RIHC | RI health center records | RI if Health Center records sought |
| SIA | Vaccination campaign or supplemental immunization activity (SIA) question responses | SIA |
| TT | Tetanus question responses | TT |
| TTHC | Tetanus health center records | TT if Health Center records sought |
| Level1name | Name of nation where survey was conducted | All |
| Level2names | IDs and names of level 2 sub-national strata (if survey strata are nested within larger strata) | All |
| Level2order | Order in which level 2 strata should appear in VCQI tables | All |
| Level3names | IDs and names of survey strata | All |
| Level3order | Order in which strata should appear in VCQI tables | All |
| Level4names[[3]](#footnote-3) | IDs and names of levels of stratifier (e.g., urban, rural, male, female, etc.) | All |
| Level4order | Order in which stratified groups should be listed in VCQI tables | All |

## 1.2 VCQI Conversion Program

To help simplify this process and reduce the manual work of renaming variables, two Stata programs have been developed to convert Multiple Indicator Cluster Survey (MICS)[[4]](#footnote-4) and Demographic and Health Surveys (DHS)[[5]](#footnote-5) datasets into VCQI compatible datasets. Separate programs are available for MICS and DHS to accommodate survey differences. The programs were created using the standard survey design and variable values described on the MICS & DHS websites. Table 1-2 identifies which survey versions were reviewed in creating the programs. For all older versions the code should be reviewed to ensure it aligns with the survey data.

**Table 1-2. Survey Versions Compatible with Convert to VCQI Program**

|  |  |
| --- | --- |
| **Survey Name** | **Number or Version** |
| MICS | 3, 4 and 5 |
| DHS | 5, 6 and 7 |

The VCQI Conversion Program package contains the programs listed in Table 1-3. The programs within this package will need to be added to a new folder. Provide the path to this folder in global macro RUN\_FOLDER so the VCQI Conversion Program and Global Macro List do file knows where to find the other program files.

**Table 1-3 List of VCQI Conversion Programs**

|  |  |
| --- | --- |
| **File Name** | **Survey Name** |
| VCQI Conversion Program and Global Macro List | MICS or DHS |
| Step00 - VCQI Conversion Steps | MICS or DHS |
| Step01 - {SURVEY\_NAME} to VCQI Conversion Steps | MICS or DHS |
| Step02 - {SURVEY\_NAME} to VCQI Conversion Steps | MICS or DHS |
| Step03 - {SURVEY\_NAME} to VCQI Conversion Steps | MICS or DHS |
| Step04 - {SURVEY\_NAME} to VCQI Conversion Steps | MICS or DHS |
| {SURVEY\_NAME} to VCQI - CM dataset | MICS or DHS |
| {SURVEY\_NAME} to VCQI - HH dataset | MICS or DHS |
| {SURVEY\_NAME} to VCQI - HM dataset | MICS or DHS |
| {SURVEY\_NAME} to VCQI - RI dataset | MICS or DHS |
| {SURVEY\_NAME} to VCQI - RIHC dataset | MICS |
| {SURVEY\_NAME} to VCQI - SIA dataset | MICS or DHS |
| {SURVEY\_NAME} to VCQI - TT dataset[[6]](#footnote-6) | MICS or DHS |

Make two additional folders; one that contains the original survey datasets and a second folder that will contain the VCQI Conversion Program output: VCQI compatible datasets. These paths will need to be provided in the VCQI Conversion Program and Global Macro List file in the global macros named INPUT\_FOLDER and OUTPUT\_FOLDER.

Table 1-4 provides additional information regarding which VCQI Conversion Program calls each file.

**Table 1-4. VCQI Conversion Program File Breakdown**

|  |  |
| --- | --- |
| **File Name** | **Runs Files** |
| VCQI Conversion Program and Global Macro List | Step00 - VCQI Conversion Steps |
| Step00 - VCQI Conversion Steps | Step01 - {SURVEY\_NAME} to VCQI Conversion Steps |
| Step02 - {SURVEY\_NAME} to VCQI Conversion Steps |
| Step03 - {SURVEY\_NAME} to VCQI Conversion Steps |
| Step04 - {SURVEY\_NAME} to VCQI Conversion Steps |
| Step04 - {SURVEY\_NAME} to VCQI Conversion Steps | {SURVEY\_NAME} to VCQI - CM dataset |
| {SURVEY\_NAME} to VCQI - HH dataset |
| {SURVEY\_NAME} to VCQI - HM dataset |
| {SURVEY\_NAME} to VCQI - RI dataset |
| {SURVEY\_NAME} to VCQI - RIHC dataset |
| {SURVEY\_NAME} to VCQI - SIA dataset |
| {SURVEY\_NAME} to VCQI - TT dataset |

**Note: If your survey varied from the standard MICS or DHS format(values), you will need to review the code where values are hard coded to ensure that the variables are translated using appropriate values. More details about which specific variables are hard coded will be provided in *Step03 - {SURVEY\_NAME} to VCQI Conversion Steps*.**

### Preprocessing Steps

Prior to running datasets through the VCQI Conversion program, steps must be taken to clean up the data. The VCQI Conversion program is a Stata do file that calls several Stata ado files. It uses Stata version 14. If your data is not a Stata dataset, you will need to convert it to Stata. This can be done using StatTransfer. ([www.stattransfer.com](http://www.stattransfer.com))

Next, examine the questionnaire to see if the survey differed from the standard one for the vaccination-related questions. Pay specific attention to the variable values. As previously stated the VCQI Conversion program uses the standard survey form variable values described on the MICS & DHS websites. If your survey values differ, you will need to adjust the values prior to running the program or make the appropriate tweaks later. Before making changes, reference the VCQI FVL document as the variable values in the VCQI Conversion program have been coded to align with that document. Make sure you are not passing through values that would be interpreted incorrectly in VCQI. For example, all variables that have a yes or no response should have the value of 1 for yes and value of 2 for no. If the values are reversed, the VCQI analysis will be incorrect.

The variables found in Table 1-5 list all variables where values are hard coded in the VCQI Conversion Program. Pay extra attention to ensure the corresponding variable values in the original dataset align. If there are discrepancies, adjust the original survey data prior to running the VCQI Conversion Program to reflect the values hard coded or make the corrections in the code to accommodate the different values. The variables listed in Table 1-6 are all the variables that are automatically generated as missing or with a default of “no” in the VCQI Conversion Program.

**Table 1-5. Hard Coded Variable Values in Step03 - {SURVEY\_NAME} to VCQI Conversion Steps**

| **Global Macro Used to Create Variable** | **VCQI Variable** | **VCQI Values** | **MICS 4 and 5 Values** | **MICS 3 Values** | **DHS Values** |
| --- | --- | --- | --- | --- | --- |
| CHILD\_DOB\_HIST\_{DAY/MONTH/YEAR} | age\_months[[7]](#footnote-7) | Missing |  |  | 99, 98, 97, 9999, 9998, 9997 |
| MOTHER\_DOB\_{DAY/MONTH/YEAR} | age\_months | Missing |  |  | 99, 98, 97, 9999, 9998, 9997 |
| DATE\_OF\_BIRTH\_{DAY/MONTH/YEAR} | age\_months | Missing |  |  | 99, 98, 97, 9999, 9998, 9997 |
| CHILD\_DOB\_CARD\_{DAY/MONTH/YEAR} | age\_months | Missing | 99, 98, 9999, 9998 | 99,98, 9999, 9998 |  |
| CHILD\_DOB\_REGISTER\_{DAY/MONTH/YEAR} | age\_months | Missing | 99,98, 9999, 9998 | 99,98, 9999, 9998 |  |
| OVERALL\_DISPOSITION | HH12 | 2 | 5,6,7 | 4 | 6, 7, 8, 9 |
| OVERALL\_DISPOSITION | HH18 | 1 | 1 | 1 | 1 |
| OVERALL\_DISPOSITION | HH18 | 3 | 2, 3, 5, 6, 7, 96, . | 2, 4, 6, . | 2, 3, 4, 6, 7, 8, 9, . |
| OVERALL\_DISPOSITION | HH18 | 4 | 4 | 3 | 5 |
| OVERALL\_DISPOSITION | HM19 | 4 | 1 | 1 | 1 |
| OVERALL\_DISPOSITION | HM19 | 1 | 2, 3, 5, 6, 7, 96, . | 2, 4, 6, . | 1, 5 |
| OVERALL\_DISPOSITION | HM19 | 3 | 4 | 3 | 5 |
| SEX | HM27 | Missing | Not 1 or 2 | Not 1 or 2 | Not 1 or 2 |
| {RI/SIA/TT} \_DISPOSITION | HM33  HM38  HM43 | 4 | 1 | 1 | 4 |
| {RI/SIA/TT} \_DISPOSITION | HM33  HM38  HM43 | 2 | 2, 4, 5, 6, 7, 96 | 2, 4, 5, 6 | 1, 4 |
| {RI/SIA/TT} \_DISPOSITION |  | 3 | 3 | 3 | 4 |
| CARD\_SEEN | RI26 | 1 | 1, 2 | 1, 2 | 1, 2, 3 |
| CARD\_SEEN | RI26 | 2 |  | 3 |  |
| CARD\_SEEN | RI26 | 99 |  | 8 |  |
| CARD\_EVER\_RECEIVED | RI26 | 99 | 8 |  |  |
| CARD\_SEEN | RI26 | 2 | Not 1, 2, or 99 after replacements | Not 1, 2, or 99 after replacements | Not 1, 2, or 99 after replacements |
| {DOSE}\_DATE\_{CARD/REGISTER}\_{MONTH/DAY/YEAR} | {dose}\_tick\_{card/register} | 1 | 44, 4444 | 44, 4444 | 44, 4444 |
| {DOSE}\_HIST/ {DOSE} for DHS | {dose}\_history | 2 | 2 | 2 | 0 |
| {DOSE}\_HIST/ {DOSE} for DHS | {dose}\_history | 99 | 8 | 8 | 8 |
| {DOSE}\_HIST/ {DOSE} for DHS | {dose}\_history | 1 | 1 | 1 | 2 |
| {DOSE}\_HIST/ {DOSE} for DHS | {dose}\_history | Missing | 9 | 9 | Not 1, 2, or 99 after replacements |
| {DOSE}\_DATE\_{CARD/REGISTER}\_{MONTH/DAY/YEAR} | {dose}\_history | 1 | 66, 6666 | 66, 6666 |  |
| SIA\_{SIA\_LIST} | SIA20 | 99 | 8 | 8 | 8 |
| SIA\_{SIA\_LIST} | SIA20 | 3 | 2 | 2 | 0 |
| SIA\_{SIA\_LIST} | SIA20 | 1 | 1 and {CARD\_SEEN} is equal to 1 | 1 and {CARD\_SEEN} is equal to 1 | 1 and {CARD\_SEEN} is equal to 1 |
| SIA\_{SIA\_LIST} | SIA20 | 2 | 1 and {CARD\_SEEN} is equal to 2 | 1 and {CARD\_SEEN} is equal to 2 | 1 and {CARD\_SEEN} is equal to 2 |
| TT\_PREGNANCY | TT36 | 99 | 8 | 8 |  |
| NUM\_TT\_PREGNANCY | TT36 | 99 |  |  | 8 |
| NUM\_TT\_PREGNANCY | TT36 | 2 |  |  | 0 |
| NUM\_TT\_PREGNANCY | TT36 | 1 |  |  | 1, 2, 3, 4, 5, 6, 7 |
| NUM\_TT\_PREGNANCY | TT36 | Missing | Not 1, 2, 99 after replacements | Not 1, 2, 99 after replacements | Not 1, 2, 99 after replacements |
| NUM\_TT\_PREGNANCY | TT37 | 99 | 8 | 8 | 8 |
| NUM\_TT\_PREGNANCY | TT37 | 3 | greater than or equal to 3 and is not equal to 99 | greater than or equal to 3 and is not equal to 99 | greater than or equal to 3 and is not equal to 99 |
| NUM\_TT\_PREGNANCY | TT37 | Missing | Not 0, 1, 2, 3, 99 after replacements | Not 0, 1, 2, 3, 99 after replacements | Not 0, 1, 2, 3, 99 after replacements |
| TT\_ANYTIME | TT40 | 99 | 8 | 8 |  |
| TT\_ANYTIME | TT40 | Missing | Not 1, 2, 99 after replacements | Not 1, 2, 99 after replacements | Not 1, 2, 99 after replacements |
| NUM\_TT\_ANYTIME | TT40 | 2 |  |  | 0 |
| NUM\_TT\_ANYTIME | TT40 | 1 |  |  | 1, 2, 3, 4, 5, 6, 7 |
| NUM\_TT\_ANYTIME | TT40 | 99 |  |  | 8 |
| NUM\_TT\_ANYTIME | TT40 | Missing |  | 99 | Not 1, 2, 99 after replacements |
| NUM\_TT\_ANYTIME | TT41 | 99 | 8 | 98 | 8 |
| NUM\_TT\_ANYTIME | TT41 | 7 | greater than or equal to 7 and is not equal to 99 | greater than or equal to 7 and is not equal to 99 | greater than or equal to 7 and is not equal to 99 |
| NUM\_TT\_ANYTIME | TT41 | Missing | Not 0, 1, 2, 3, 4, 5, 6, 7, 99 after replacements | Not 0, 1, 2, 3, 4, 5, 6, 7, 99 after replacements | Not 0, 1, 2, 3, 4, 5, 6, 7, 99 after replacements |
| YEARS\_SINCE\_LAST\_TT | TT42 | Missing | 99 | 99 | greater than 40 |

**Note: If no replacement is listed in Table 1.5, then the original value from the global macro is used to populate the VCQI variable.**

Table 1-6 lists all the variables that the VCQI Conversion Program automatically generates as missing or a default “no” value. Please review the FVL document. If you have a variable in your dataset that could be translated into a VCQI variable listed in Table 1-6, adjust the code to include the variable or pass the variable through on the specific dataset and make the proper adjustments to ensure the values align with the acceptable VCQI variable values.

**Table 1-6. VCQI Variables Automatically Generated**

| **VCQI Variable Description** | **VCQI Variable** | **Dataset** | **Notes** |
| --- | --- | --- | --- |
| Eligible for RI Coverage Survey | HM31 | HM | Only if RI survey not conducted.  Set to 2 (No) |
| Selected for RI Coverage Survey | HM32 | HM | Only if RI survey not conducted |
| Eligible for TT Coverage Survey | HM36 | HM | Only if TT survey not conducted.  Set to 2 (No) |
| Selected for TT Survey | HM37 | HM | Only if TT survey not conducted |
| Eligible for Post-SIA Survey | HM41 | HM | Only if TT survey not conducted.  Set to 2 (No) |
| Selected for Post-SIA Survey | HM42 | HM | Only if TT survey not conducted |
| Disposition Code: Visit 2 | HM20 | HM |  |
| Disposition Code: Visit 3 | HM21 | HM |  |
| Disposition code for RI Survey: Visit 2 | HM34 | HM |  |
| Disposition code for RI Survey: Visit 3 | HM35 | HM |  |
| Disposition code for TT Survey: Visit 2 | HM39 | HM |  |
| Disposition code for TT Survey: Visit 3 | HM40 | HM |  |
| Disposition code for SIA Survey: Visit 2 | HM44 | HM |  |
| Disposition code for SIA Survey: Visit 3 | HM45 | HM |  |
| BCG scar seen | bcg\_scar\_history | RI | Set to missing if BCG\_SCAR global macro not set |
| Did the child receive a vaccination card after receiving the measles/rubella vaccination during the campaign? | SIA27 | SIA | Set to 99, but no global macro used to populate it |
| Was the finger of the child marked with a pen after receiving the measles/rubella vaccine during the campaign? | SIA21 | SIA |  |
| Before the campaign, had the child already received the measles/rubella vaccine? | SIA22 | SIA |  |
| If the vaccination record (routine) is available, record the dates of vaccination: 1st Measles Vaccination | SIA28 | SIA |  |
| If the vaccination record (routine) is available, is 2nd Measles vaccination recorded with a tick mark instead of a date? | SIA29 | SIA |  |
| If the vaccination record (routine) is available, record the dates of vaccination: 2nd Measles Vaccination | SIA30 | SIA |  |
| If the vaccination record (routine) is available, is 1st Measles vaccination recorded with a tick mark instead of a date? | SIA31 | SIA |  |
| If the vaccination record (previous campaign) is available, record the dates of vaccination: 1st Measles campaign vaccination | SIA32 | SIA |  |
| If the vaccination record (previous campaign) is available, record the dates of vaccination: 2nd measles vaccination | SIA33 | SIA |  |
| TT1 Dose Date[[8]](#footnote-8) | TT30 | TT |  |
| TT2 Dose Date | TT31 | TT |  |
| TT3 Dose Date | TT32 | TT |  |
| TT4 Dose Date | TT33 | TT |  |
| TT5 Dose Date | TT34 | TT |  |
| TT6 Dose Date | TT35 | TT |  |
| During a previous pregnancy (previous to the pregnancy with (name)), did you receive any injection in the arm or shoulder to prevent the baby from getting tetanus after birth? | TT38 | TT | Lumped into variable TT40 for dose received at any time other than last pregnancy. |
| How many times did you receive this injection in the arm (tetanus vaccination) during your pregnancies previous to the pregnancy with (name)? | TT39 | TT | Lumped into variable TT41 for dose received at any time other than last pregnancy. |

### VCQI Conversion Program and Global Macro List

The VCQI Conversion Program and Global Macro List mimics the VCQI Control Program format in that the user will need to populate global macros with the appropriate values. The global macros are used to provide folder paths, variable names and other acceptable values. Precisely which global macros must be populated can be found in Annex B VCQI CONVERSION GLOBAL MACRO LIST.

The VCQI Conversion Program and Global Macro List will erase any previous files created by this program in the specified folder, to avoid creating the dataset with old information. At the end of the program it runs the steps required to create the VCQI compatible dataset. These steps are described in later sections.

**Note: The global list may differ from the variables listed in the FVL document as these are used to create those variables. However, some variables that VCQI requires have been identified as not being included in the MICS or DHS survey datasets. If that is the case, the program will automatically generate the required variables with missing values. See Table 1-6 for the specific variable names. If your dataset has a corresponding variable for the VCQI variable, you will need to either adjust the code to include it or pass it through to the appropriate dataset and align the variable values with acceptable VCQI values.**

### Step00 - VCQI Conversion Steps

This program runs at the end of the control program. It is used to call the required steps to create the VCQI compatible dataset based on which survey type, MICS or DHS, was used.

### Step01 - {SURVEY\_NAME} to VCQI Conversion Steps

The first step of the conversion program takes all of the survey datasets required for the analysis and combines them to create one large dataset. The single dataset is created as some variables are used across the different analyses. Rather than generating variables for each VCQI dataset, the new variables are created once and passed through to each appropriate VCQI dataset.

The combined dataset is created using only the survey datasets global macros that are populated with a 1 value in the Control Program. These survey dataset global macros include RI\_SURVEY, RIHC\_SURVEY, TT\_SURVEY and SIA\_SURVEY. All specified survey datasets are combined using the variables that uniquely identify each participant. These variables are provided in global macros STRATUM\_ID, CLUSTER\_ID, HH\_ID and HM\_LINE. When converting a DHS survey the respondent’s line number, global macro TT\_LINE, is also used to help uniquely identify the child participants. The combined dataset will be saved as "{SURVEY NAME}\_${{SURVEY NAME}\_NUM}\_combined\_dataset" in the specified output folder.

Table 1-7 explains which datasets are combined to form one large dataset given the completed survey types[[9]](#footnote-9).

**Table 1-7. Combined Dataset**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Survey Types** | **Survey Data Used to Create Combined Dataset** | | | | |
| **HH** | **HM** | **RI** | **RIHC**[[10]](#footnote-10) | **TT** |
| RI | X | X | X |  |  |
| RI  RIHC | X | X | X | X |  |
| RI  TT | X | X | X |  | X |
| TT | X | X |  |  | X |
| RI  RIHC  TT | X | X | X | X | X |
| RI  SIA | X | X | X |  |  |
| RI  RIHC  SIA | X | X | X | X |  |
| RI  RIHC  SIA  TT | X | X | X | X | X |
| SIA | X | X | X |  |  |

**Note: When converting a DHS survey dataset, all children who are no longer living and all children that could not be uniquely identified are automatically dropped from the combined dataset and will not be included in the analysis. Children are unable to be uniquely identified when their line number is populated with a 0, Not living in Household. In order to keep these participants, ensure all participants contain a valid child line number prior to running the program.**

### Step02 - {SURVEY\_NAME} to VCQI Conversion Steps

This program is used to ensure that all required variables are populated, based on which surveys the user specifies in the Control Program. It also verifies that the variable exists in the newly created combined dataset. If either of these are false, an error will appear on the screen.

**Note: Errors will not stop the program from running, but will cause issues later on as the program tries to generate the VCQI variables.**

### Step03 - {SURVEY\_NAME} to VCQI Conversion Steps

Step three creates all the variables required by VCQI based on the values provided in the global macros in the VCQI Conversion Program and Global List. Most VCQI variables are generated mirroring the variable provided in the global macro. However, there are some VCQI variables which are created based on the values in the original dataset. These variables are considered to be “hard coded” based on the values of the variable. If your survey does not mirror the standard MICS or DHS survey form, you will need to review Table 4 to ensure the VCQI variables are created correctly. If your original survey data contains different values, adjust the code accordingly.

### Step04 - {SURVEY\_NAME} to VCQI Conversion Steps

Step four runs the programs that take the combined dataset with the new VCQI variables and breaks them into the separate required VCQI datasets. See the FVL document and the list of required variables found in Annex A for the specifics regarding which VCQI variables are within each dataset. Each dataset will only contain the variables listed under the corresponding section.

**Note: Both the RI and RIHC datasets will also contain the variable age\_months so that separate datasets may be created for multiple age ranges.**

#### {SURVEY\_NAME} to VCQI -CM dataset

Creates the Cluster Metadata dataset. The dataset contains one row per cluster.

#### {SURVEY\_NAME} to VCQI -HH dataset

Creates the Household listing dataset. The dataset contains one row per household.

#### {SURVEY\_NAME} to VCQI -HM dataset

Creates the Household member dataset. The dataset contains one row per household member.

#### {SURVEY\_NAME} to VCQI -RI dataset

Creates the RI dataset. The dataset contains one row per child who participated in RI survey.

**Note: If multiple age ranges were surveyed, separate RI datasets will need to be created for each age range and VCQI will need to be run in separate sessions on each age group. This can be done by using the created RI dataset and subsequently splitting it into multiple smaller datasets, each of which contains children in the specified age range using the age\_months variable.**

#### {SURVEY\_NAME} to VCQI -RIHC dataset

Creates the RIHC dataset. The dataset contains one row per child whose health records were sought in a health center.

**Note: Just like with the RI dataset, separate datasets will need to be created if there are two separate age ranges in the survey. This can be done using the same age\_months variable.**

#### {SURVEY\_NAME} to VCQI -SIA dataset

Creates the SIA dataset. The dataset contains one row per child who participated in the SIA survey. During the MICS and DHS surveys, participants are typically asked about several campaigns. VCQI currently only analyzes one campaign dose at a time. This program creates a separate SIA dataset for each campaign dose specified in global macro SIA\_LIST. VCQI will need to be ran separately for each campaign and dose.

**Note: When entering the SIA dataset name into VCQI Control Program, be sure to use the SIA dataset for the appropriate campaign.**

#### {SURVEY\_NAME} to VCQI -TT dataset

Creates the TT dataset. The dataset contains one row for each respondent who participated in the TT survey.

#### {SURVEY\_NAME} to VCQI -levelsof dataset

Creates the various levelsof datasets found in Annex A of the User’s Guide. These are created based on the values provided in global macros Level1\_NAME, PROVINCE\_ID, LEVEL\_3\_ID and LEVEL\_4\_ID. The order datasets are created based on the number of observations for the level name variable, starting with the first level name that appears in the dataset going until the last level name.

**Note: There is nothing special about this order and you should edit those datasets and re-arrange the order so the VCQI tables suit you. This program does the service of providing the draft dataset with the understanding that you will probably need to edit it and change the order.**

# Chapter 2: Examples of VCQI Conversion Program and global Macro List

Chapter 2 provides examples of the VCQI Conversion Program and Global Macro List for each Survey type; MICS and DHS. The layout of the two programs are very similar but contain different global macros to align with the survey style. Both programs serve the same purpose and function by calling other do files in the VCQI Conversion Program package.

## Conversion Program for Multiple Indicator Cluster Surveys (MICS) and Demographic and Health Surveys (DHS)

The code below is an example of the VCQI Conversion Program and Global Macro List. Where {SURVEY\_NAME} is listed, you can substitute the survey type of MICS or DHS. The textboxes will provide additional information and call out any differences between MICS and DHS.

{SURVEY\_NAME} will be replaced with the appropriate survey type; MICS or DHS

/\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

Program Name: VCQI Conversion and Global Macro List – {SURVEY\_NAME} to VCQI

Purpose: User populates the below globals and the values are used to convert the

dataset to VCQI

\*

Project:

Date Created: 2016-04-28

If the original dataset is not in saved as a Stata dataset, the VCQI Conversion Program will fail.

Author: Mary Kay Trimner

Stata version: 14.0

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*/

\* This program converts {SURVEY\_NAME} survey data to VCQI compatible datasets.

\* Before running this program, you will need to convert the {SURVEY\_NAME} survey data (SPSS Datasets)

\* to a Stata dataset using StatTransfer.

\* All date components will need to be broken into 3 separate variables; month, day and year.

These steps will help avoid errors when bringing in the original datasets

\* Set maxvar so there are no issues with the size of the dataset

clear //Need to clear out any existing data to run the next command

clear mata // Need to clear out mata to avoid errors.

set maxvar 32767 // Change maxvar to the largest possible value to avoid errors while importing data.

\* The majority of the global macros listed below are required in order to run this program.

\* However, some are not needed but if populated can help provide additional information to the dataset.

\* These will be noted as optional.

\* Populate this global with the version of {SURVEY\_NAME} survey that is being used

\* (example 3, 4,5 for MICS – 4,5,6,7 for DHS)

global {SURVEY\_NAME}\_NUM 4

This number is very important. It helps ensure the data values are translated correctly.

\* Path where {SURVEY\_NAME} to VCQI Conversion programs are saved

global RUN\_FOLDER Q:/TEST/VCQI\_CONVERSION\_PROGRAMS

These three paths help the program know where to look to find the Conversion Program files, original datasets and where it should put the newly created VCQI compatible datasets.

\* Path where STATA will grab the original {SURVEY\_NAME} datasets

global INPUT\_FOLDER Q:/TEST/CONVERT\_TO\_VCQI/INPUT

\* Path where you would like STATA to put the new datasets that can be run through VCQI

global OUTPUT\_FOLDER Q:/TEST/CONVERT\_TO\_VCQI/OUTPUT

\* Name of MICS Datasets that will be used to create the VCQI Datasets

global {SURVEY\_NAME}\_HH\_DATA hh.dta // Household dataset

Items in purple boxes with solid lines are for MICS Survey Only

global {SURVEY\_NAME}\_HM\_DATA hl.dta // Household list/member dataset

global {SURVEY\_NAME}\_WM\_DATA wm.dta // Women’s /TT dataset

global {SURVEY\_NAME}\_CH\_DATA ch.dta // Child dataset/RI & SIA

global {SURVEY\_NAME}\_HF\_DATA // Register data if separate dataset from CH data

Register Data should only be provided if collected and not part of the child dataset.

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Items in dashed blue boxes are for DHS surveys only

\* Name of DHS Datasets that will be used to create the VCQI Datasets

global DHS\_HR\_DATA HR.dta // Household dataset (HR)

global DHS\_PR\_DATA PR.dta // Household list/member dataset (PR)

Register data not collected in surveys described on the DHS website at the time of this writing, so no global available to provide this information.

global DHS\_IR\_DATA IR.dta // Women’s /TT dataset (IR)

global DHS\_KR\_DATA KR.dta // Child dataset/RI & SIA (KR)

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\* The global macros listed below need to be defined to create

\* HH, CM HM, RI, RIHC, SIA, TT DATASETs

\* Populate with corresponding variable name

For DHS these will come from the HR or PR dataset and the variable name will typically start with “hv”

\*

global STRATUM\_ID hh7

global STRATUM\_NAME hh7

global CLUSTER\_ID hh1

global CLUSTER\_NAME hh1

\* Household ID

global HH\_ID hh2

\* The globals listed below are used to populate the levels of datasets that VCQI uses.

\* They are not required but will be used to create level1 and level4 datasets if populated.

\* Level 2 will be populated with PROVINCE\_ID provided below

\* Level 3 will be populated with STRATUM\_ID provided above

\* You can edit the {SURVEY\_NAME} to VCQI -levels of datasets program

\* if you do not want to use these values for Level2 and Level3.

\* If the global macros are not populated, you will need to edit the

\* program {SURVEY\_NAME} to VCQI - levels of datasets to create these datasets.

\* You will also need to edit the program {SURVEY\_NAME} to VCQI -levels if you want to change the order.   
\* Current order is \_n by levelid.

Typically populated with the country name

\* See user guide for specifics around each level

Be sure to refer to the VCQI User’s Guide for additional information.

\* Name of Nation to be used in LEVEL1 dataset name

global LEVEL1\_NAME {AREA\_NAME} //OPTIONAL- If you do not populate you

PROVINCE\_ID must always be provided even if creating the levelsof datasets manually. It is used to create the CM dataset

need to edit program to create the dataset

\* Provide the variable for Province ID (Level2 name)

global PROVINCE\_ID 1 //Populate with Variable Name or 1

\* Name of Level3 stratifier

If you do not manually create the levelof datasets, these global macros will need to be populated.

global LEVEL\_3\_ID hh7 //OPTIONAL- If you do not populate you

need to edit program to create the dataset

\* Names for level 4

global LEVEL\_4\_ID hh6 //OPTIONAL- If you do not populate you

need to edit program to create the dataset

\*

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\* \* The below need to be defined to create HH DATASET

\* Date of HH interview

global HH\_DATE\_MONTH hh5m

global HH\_DATE\_DAY hh5d

global HH\_DATE\_YEAR hh5y

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\* \* The below need to be defined to create HM DATASET

\* House member line number in HM dataset

global HM\_LINE hl1

\* Variable that provides the outcome of the overall survey

\* Example completed, refused, incomplete

global OVERALL\_DISPOSITION hh9

\* Populate the below with the variable names that correspond to the global names

global SEX hl4

\* Set the below global if date of birth data was collected in the HH/HM survey 1==yes 0==NO

global HH\_DOB 1

HH\_DOB must be populated with a 1 or 0. This influences what dates of birth are taken into consideration. If marked as a 0, any date variables populated in global macros DATE\_OF\_BIRTH\_{MONTH/DAY/YEAR} will be ignored.

global DATE\_OF\_BIRTH\_MONTH hl5m // OPTIONAL -can be blank if not available

global DATE\_OF\_BIRTH\_YEAR hl5y // OPTIONAL -can be blank if not available

global DATE\_OF\_BIRTH\_DAY // OPTIONAL -can be blank if not available

global AGE\_YEARS hl6 // OPTIONAL -can be blank if not available

global AGE\_MONTHS // OPTIONAL -can be blank if not available

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\* \* The below need to be defined to create CM DATASET

\* Provide the variable for the Post-stratified sampling weight for one-year cohorts (RI & TT)

global PSWEIGHT\_1YEAR hhweight

\* Provide the variable for the Post-stratified sampling weight for SIA cohort

global PSWEIGHT\_SIA hhweight

\* Provide the variable that indicates if the area is urban or cluster

global URBAN\_CLUSTER hh6

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\* \* The global macros listed here need to be defined to create RI DATASET

If a child vaccination coverage survey (RI) was completed, global macro RI\_SURVEY must be populated with a 1. If it says 0, the program will ignore all global macros related to the RI survey dataset and it will not create a VCQI compatible RI dataset.

\* Was the RI Survey completed? 1 yes, 0 no

global RI\_SURVEY 1

\* Outcome for each RI survey if survey completed

\* Example completed, refused, incomplete

global RI\_DISPOSITION uf9

\* Populate with the appropriate ages in months for the Child Survey if RI Survey completed

global RI\_MIN\_AGE 9

Make sure these values are provided in MONTHS

global RI\_MAX\_AGE 24

\* Populate with the variable names that correspond to the global name if the RI Survey was completed

Global macro CARD\_EVER\_RECEIVED is only part of the MICS VCQI Conversion Program. A corresponding variable was not found in the DHS survey and each survey type code has been adjusted to accommodate the difference.

global CARD\_EVER\_RECEIVED im2

global CARD\_SEEN im1

\* Date of RI interview

global RI\_DATE\_MONTH uf8m

global RI\_DATE\_DAY uf8d

global RI\_DATE\_YEAR uf8y

\* Child Date of Birth per history

\* NOTE either History or Card date of birth must be populated.

\* Both cannot be left blank.

global CHILD\_DOB\_HIST\_MONTH ag1m // OPTIONAL -can be blank if not available if

CHILD\_DOB\_CARD\_MONTH is provided

global CHILD\_DOB\_HIST\_DAY ag1d // OPTIONAL -can be blank if not available if

CHILD\_DOB\_CARD\_DAY is provided

global CHILD\_DOB\_HIST\_YEAR ag1y // OPTIONAL -can be blank if not available if

CHILD\_DOB\_CARD\_YEAR is provided

\* Child Age in Years

global CHILD\_AGE\_YEARS ag2 // OPTIONAL -can be blank if not available

\* House member line number in Child dataset

global RI\_LINE uf4

\* Are there variable for CARD DOB? 1== yes 0==No

If global macro CARD\_DOB is not set to 1, all dates provided in global macros CHILD\_DOB\_CARD\_{MONTH/DAY/YEAR} will be ignored.

global CARD\_DOB 1

\* Child Date of Birth per CARD

Global macros CARD\_DOB and CHILD\_DOB\_CARD\_ {MONTH/DAY/YEAR} are only available in the MICS surveys. The only date of birth provided in DHS is through History.

\* NOTE either History or Card date of birth must be populated.

\* Both cannot be left blank.

global CHILD\_DOB\_CARD\_MONTH //OPTIONAL -can be blank if not available if CHILD\_DOB\_HIST\_MONTH is provided

global CHILD\_DOB\_CARD\_DAY //OPTIONAL -can be blank if not available if CHILD\_DOB\_HIST\_DAY is provided

global CHILD\_DOB\_CARD\_YEAR //OPTIONAL -can be blank if not available if CHILD\_DOB\_HIST\_YEAR is provided

\* Populate the doses with the proper variable name per CARD DATA

\* NOTE: If the vaccine is not part of the survey, leave it bank

\* Provide a complete list of the RI doses, use the same dose names as the globals below

\* all dose numbers must be provided, so if there are three doses provide the dose1 dose2 dose3.

The global macro RI\_LIST is very important to running VCQI Conversion Program successfully. This should include all vaccination dose names, including each sequence. If all doses are not provided, the translated data will not be accurate.

global RI\_LIST bcg opv0 opv1 opv2 opv3 dpt1 dpt2 dpt3

The sections below provide examples of the global macros corresponding to dose card dates and dose history.

For card data, only one dose is provided as an example; BCG. This setup is the same for MICS and DHS surveys.

***Note: {DOSE}\_DATE\_CARD\_{MONTH/DAY/YEAR} global macros will need to be populated for each dose provided in global macro RI\_LIST.***

MICS and DHS are set up differently, so pay close attention to which global macros are used for MICS and DHS.

\* BCG

global BCG\_DATE\_CARD\_MONTH im3bm

global BCG\_DATE\_CARD\_DAY im3bd

global BCG\_DATE\_CARD\_YEAR im3by

\* Populate the doses below with the

\* proper variable name per HIST DATA

\* NOTE: If the vaccine is not part of the survey,

The global macros that contain the history data will be listed here for only BCG and OPV0, OPV1, OPV2, and OPV3 to illustrate the differences between single and multi-dose vaccinations.

***Note: {DOSE}\_DOSE\_NUM, {DOSE}\_HIST, {DOSE} (*for DHS only*) global macros will need to be populated for each dose provided in global macro RI\_LIST.***

**EXCEPTION: In MICS survey, the history variables only need to be created for the main doses. Unlike the {DOSE}\_DATE\_CARD\_{MONTH/DAY/YEAR} date global macros and RI\_LIST these should not include each dose in the sequence. For the RI\_LIST provided above, global macros would need to be created for BCG, DPT, OPV0, and OPV. A separate global macro is needed for OPV0 as it was received at birth and not included in the normal dose sequence.**

\* leave it blank

\* \*\_DOSE\_NUM is the question that indicates how many doses

\* the caretaker says the child received.

\* BCG

global BCG\_DOSE\_NUM 1

global BCG\_HIST im7

global BCG\_SCAR

\* OPV at Birth

global OPV0\_HIST im9

History global macros for MICS surveys

\* OPV

global OPV\_DOSE\_NUM im10

Global macro {DOSE}\_DOSE\_NUM indicates how many doses were received per history. If it is a single dose vaccine (BCG), enter the number 1.

global OPV\_HIST im8

\* Populate the below doses with the proper variable name per CARD DATA and HIST DATA

\* Global DOSE\_NAME should be the variable that indicates if the dose was received, but is NOT the date.

\* The dates from the card should populate the globals immediately following.

\* NOTE: If the vaccine is not part of the survey, leave it bank

\* BCG

global BCG h2

This page includes the global macros for {DOSE}\_CARD\_DATE\_{MONTH/DAY/YEAR} to show the placement of the history global macro in the DHS VCQI Conversion Program.

***Note: {DOSE} global macros are required for all doses in RI\_LIST***

global BCG\_DATE\_CARD\_MONTH h2m

global BCG\_DATE\_CARD\_DAY h2d

global BCG\_DATE\_CARD\_YEAR h2y

\* OPV at Birth

global OPV0 h0

global OPV0\_DATE\_CARD\_MONTH h0m

global OPV0\_DATE\_CARD\_DAY h0d

global OPV0\_DATE\_CARD\_YEAR h0y

History global macros for DHS surveys

\* OPV doses 1-3 (polio)

global OPV1 h4

global OPV1\_DATE\_CARD\_MONTH h4m

global OPV1\_DATE\_CARD\_DAY h4d

global OPV1\_DATE\_CARD\_YEAR h4y

global OPV2 h6

global OPV2\_DATE\_CARD\_MONTH h6m

global OPV2\_DATE\_CARD\_DAY h6d

global OPV2\_DATE\_CARD\_YEAR h6y

global OPV3 h8

global OPV3\_DATE\_CARD\_MONTH h8m

global OPV3\_DATE\_CARD\_DAY h8d

global OPV3\_DATE\_CARD\_YEAR h8y

\* The globals listed here need to be defined to create RIHC DATASET

\* Was the RIHC/Health Center Data collected? 1 yes, 0 No

global RIHC\_SURVEY 0

If register/health center data was collected, global macro RIHC\_SURVEY must be set to 1. If set to 0, all data provided in RIHC global macros will be ignored.

\* Populate the below with the variable names that correspond to the global

\* name per Health Center Records if RIHC survey completed

\* Child line number

global RIHC\_LINE hf4

\* Date of RIHC/Health Center Visit

global RIHC\_DATE\_MONTH hf8m

global RIHC\_DATE\_DAY hf8d

global RIHC\_DATE\_YEAR hf8y

Register/RIHC data is only available for the MICS survey. DHS currently does not collect register data, therefore this section will not appear in the DHS VCQI Conversion Program and Global Macro List do file.

\* Child Date of Birth per Health Center Records/Register

global CHILD\_DOB\_REG\_MONTH hf12m

global CHILD\_DOB\_REG\_DAY hf12d

global CHILD\_DOB\_REG\_YEAR hf12y

\* Populate the below doses with the proper variable name per HEALTH CENTER/REGISTER DATA

\* NOTE: If the vaccine is not part of the survey, leave it bank

For register data, only one dose is provided as an example; BCG.

***Note: {DOSE}\_DATE\_REG\_{MONTH/DAY/YEAR} global macros will need to be populated for each dose provided in global macro RI\_LIST.***

\* BCG

global BCG\_DATE\_REG\_MONTH

global BCG\_DATE\_REG\_DAY

global BCG\_DATE\_REG\_YEAR

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\* \* The below need to be defined to create SIA DATASET

If an SIA survey was completed, global macro SIA\_SURVEY must be populated with a 1. If it says 0, the program will ignore all global macros related to the SIA survey dataset and it will not create a VCQI compatible SIA dataset.

\* Was the SIA Survey completed? 1 yes, 0 no

global SIA\_SURVEY 1

\* Outcome for SIA survey if survey completed

\* Example completed, refused, incomplete

global SIA\_DISPOSITION uf9

\* Populate the below global with the list of vaccines received in SIA campaign if the SIA Survey was completed

\* These should be consistent with the SIA\_MIN/MAX\_AGE\_\* global macros, and include either the Campaign letter or the dose name.

Global macro SIA\_LIST must include all vaccinations that were included in the supplemental campaigns.

global SIA\_LIST A

\* For all global macros specific to a campaign:

\* Make sure the global name is consistent with the Doses provided in global SIA\_LIST.

\* If SIA\_LIST is populated with the Campaign letter (A, B, or C) the global macros must have the letter in their name.

\* If SIA\_LIST is populated with the dose name, the global macros must have the Dose name and not Campaign letter.

\* NOTE Additional global macros may need to be created if there are more than 3 campaigns.

\* Create them with the same format and the appropriate campaign name (dose name or letter)

\* Populate the below with the appropriate ages in months for the Campaign Survey if SIA Survey completed

\* Fill in the appropriate global for which dose the campaign was for

Global macros SIA\_MIN\_AGE\_{SIA\_LIST} and SIA\_MAX\_AGE\_{SIA\_LIST} must be provided in MONTHs

global SIA\_MIN\_AGE\_A 12

global SIA\_MAX\_AGE\_A `=15\*12'

\* Populate the below with the variable names that correspond to the global name

Separate global macros SIA\_MIN\_AGE\_{SIA\_LIST}, SIA\_MAX\_AGE\_{SIA\_LIST}, and SIA\_{SIA\_LIST} must be created for all values (doses or letters) provided in global macro SIA\_LIST.

\* Variable that indicates if child was vaccinated in SIA campaign.

\* NOTE These only need to be populated for the campaigns that were completed.

global SIA\_A im19a

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\* \* The below need to be defined to create TT DATASET

If a TT survey was completed, global macro TT\_SURVEY must be populated with a 1. If it says 0, the program will ignore all global macros related to the TT survey dataset and it will not create a VCQI compatible TT dataset.

\* Was the TT/Women’s survey completed? 1 yes, 0 no

global TT\_SURVEY 1

\* Outcome for TT survey if survey completed

\* Example completed, refused, incomplete

global TT\_DISPOSITION wm7

\* Populate the below with the appropriate ages in months for the Women’s TT Survey if TT Survey completed

global TT\_MIN\_AGE `=15\*12'

global TT\_MAX\_AGE `=50\*12'

Global macros TT\_MIN\_AGE and TT\_MAX\_AGE must be provided in MONTHs

\* Populate the below with the variable names that correspond to

\* the global name if the TT Survey was completed

\* House member line number in Women’s dataset

global TT\_LINE wm4

Global macros TT\_DATE\_{MONTH/DAY/YEAR} are only included in the MICS survey.

In DHS surveys it is the same date as the Household interview so these global macros are not part of the VCQI Conversion Program and Global Macro List.

\* Date of TT/Women’s interview

global TT\_DATE\_MONTH wm6m

global TT\_DATE\_DAY wm6d

global TT\_DATE\_YEAR wm6y

\* Populate the below if Mother DOB was collected 1==yes, 0==no

Global macro MOTHER\_DOB must be set to 1 if the date of birth for Mother is provided. If set to 0, all date information provided in global macros MOTHER\_DOB\_{MONTH/DAY/YEAR} will be ignored.

global MOTHER\_DOB 1

\* Women’s Date of birth

global MOTHER\_DOB\_MONTH wb1m

global MOTHER\_DOB\_YEAR wb1y

global MOTHER\_DOB\_DAY // OPTIONAL -can be blank if not available

\* Age of Mother in years

global MOTHER\_AGE\_YEARS wb2 // OPTIONAL -can be blank if not available

Global macros MOTHER\_CARD\_SEEN, TT\_CHILD\_{MONTH/DAY/YEAR}, TT\_PREGNANCY, and TT\_ANYTIME are only included in the MICS VCQI Conversion Program and Global List do file.

These will not be included on the DHS VCQI Conversion Program and Global list as DHS surveys do not have variables that correlate to these variables and the code is adjusted to accommodate for this difference.

\* Was the Mothers card or document with their own immunizations seen?

global MOTHER\_CARD\_SEEN mn5

\* What was the date of the last birth?

global TT\_CHILD\_DOB\_MONTH cm12m // OPTIONAL -can be blank if not available

global TT\_CHILD\_DOB\_DAY // OPTIONAL -can be blank if not available

global TT\_CHILD\_DOB\_YEAR cm12y // OPTIONAL -can be blank if not available

\* TT received during last pregnancy?

global TT\_PREGNANCY mn6

\* Number of TT doses received during last pregnancy

global NUM\_TT\_PREGNANCY mn7

\* TT received at any time prior to last pregnancy? When not pregnant or previous pregnancy

global TT\_ANYTIME mn9

\* Number of TT doses received prior to last pregnancy

global NUM\_TT\_ANYTIME mn10

\* Month and Year of TT dose

global LAST\_TT\_MONTH tt7m // OPTIONAL -can be blank if not available

global LAST\_TT\_YEAR tt7y // OPTIONAL -can be blank if not available

\* How many years since last TT

global YEARS\_SINCE\_LAST\_TT mn11

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\* Delete any existing combined dataset files

Before running any VCQI Conversion Steps all old datasets must be erased to ensure the program is using the current dataset.

capture confirm file "${OUTPUT\_FOLDER}/{SURVEY\_NAME}\_${{SURVEY\_NAME}\_NUM}\_combined\_dataset.dta"

if !\_rc {

erase "${OUTPUT\_FOLDER}/{SURVEY\_NAME}\_${{SURVEY\_NAME}\_NUM}\_combined\_dataset.dta"

}

See Table 1.4 for the specifics around which programs are run by this code.

set more off

\* Run the program to create the datasets

do "${RUN\_FOLDER}/Step00- VCQI Conversion Steps.do" // Runs all the necessary steps to

make dataset VCQI compatible

# Annex A. Required Variables

The tables in this annex list the variables required to run a dataset through the VCQI program. The required variables are contingent on which indicators will be calculated. Tables A-1 through A-4 break down which variables are required for each survey type. If these variables are not present in the MICS or DHS survey dataset they will either need to be generated based on other variables. There are some variables where it is acceptable to generate the variable as missing for all participants. These are listed as optional. VCQI will not run if they are not present in the dataset. Please reference the FVL document for acceptable values.

Table A-1 lists the required variables to create the household listing (HH), household member listing, and cluster metadata datasets. These three datasets are used in all VCQI analyses. If these variables are not present, VCQI will quit.

**Table A-1. VCQI Required Variables for All Analyses**

| **Variable Description** | **HH Variable Name** | **HM Variable**  **Name** | **CM Variable Name** | **Notes** |
| --- | --- | --- | --- | --- |
| Stratum ID number | HH01 | HM01 | HH01 | This will be used as level 3 stratifier |
| Stratum name | HH02 | HM02 | HH02 | If no separate variable, can use the value label from Stratum ID number |
| Cluster number | HH03 | HM03 | HH03 |  |
| Cluster name | HH04 | HM04 | HH04 | If no separate variable, can use the value label from Stratum ID number |
| Household ID | HH14 | HM09 |  |  |
| Individual Number (Line Number) |  | HM22 |  | Used to uniquely identify participants. Be careful to use the appropriate individual number for each survey. |
| Post-stratified sampling weight for one-year cohorts (RI & TT) |  |  | psweight\_1year |  |
| Post-stratified sampling weight for SIA cohort |  |  | psweight\_sia |  |
| Number of HH survey team expects to visit in cluster (or cluster segment) |  |  | expected\_hh\_to\_visit | If not captured in a variable, can be created using the count from each Stratum and Cluster |
| Is the cluster urban? |  |  | urban\_cluster | This may also be used as a level 4 stratifier |
| Province ID Number |  |  | province\_id | This will be used as the level 2 stratifier |
| Occupied: Does this structure contain any households? | HH12 |  |  | If not captured in a variable, this can be created using the variable that contains the result of the survey (HM19 - Overall Disposition) |
| Is the data from a resident, or a neighbor? | HH18 |  |  | If not captured in a variable, this can be created using the variable that contains the result of the survey (HM19 - Overall Disposition). All participants that completed the survey should be coded as from resident (1). All non-completed surveys should be set to 3 - unable to enumerate. |
| # of Eligible Respondents: 12-23 Months | HH23 |  |  | If RI survey was not completed, generate this variable with all missing values.  If RI survey was completed and this number not captured in a variable, it can be created using the child’s age in months from variable HM30. |
| # of Eligible Respondents: Gave Live Birth in Last 12 Months | HH24 |  |  | If TT survey was not completed, generate this variable with all missing values.  If TT survey was completed and this number not captured in a variable, it can be created using the child’s age in months from variable HM30. |
| # of Eligible Respondents: Post-Campaign Survey | HH25 |  |  | If SIA survey was not completed, generate this variable with all missing values.  If SIA survey was completed and this number not captured in a variable, it can be created using the child’s age in months from variable HM30. |
| Disposition Code: Visit 1 |  | HM19 |  | Result of the Household Listing Survey for first visit  If unable to track the result of each visit this should be populated with the result from the final visit. |
| Disposition Code: Visit 2 |  | HM20 |  | Result of Household Listing Survey for the second visit  This is often not provided and can be generated as missing.  The conversion program for MICS and DHS will automatically generate this variable as missing. |
| Disposition Code: Visit 3 |  | HM21 |  | Result of Household Listing Survey for the third visit  This is often not provided and can be generated as missing.  The conversion program for MICS and DHS will automatically generate this variable as missing. |
| Sex |  | HM27 |  | Sex of household member |
| Age (Years) |  | HM29 |  | If this is not captured in a variable it can be calculated using the participants date of birth and survey date. |
| Age (Months) |  | HM30 |  | If this is not captured in a variable it can be calculated using the participants date of birth and survey date. |
| Eligible for RI Coverage Survey |  | HM31 |  | If this is not captured in a variable it can be calculated using HM30 and setting to one if participant falls within the specified age range. |
| Selected for RI Coverage Survey |  | HM32 |  | If this is not captured in a variable, can be set to 1 if the participant is in the RI dataset |
| Disposition code for RI Survey: Visit 1 |  | HM33 |  | Result of RI survey for first visit.  If unable to track the result of each visit this should be populated with the result from the final visit. |
| Disposition code for RI Survey: Visit 2 |  | HM34 |  | Result of RI Survey for the second visit  This is often not provided and can be generated as missing.  The conversion program for MICS and DHS will automatically generate this variable as missing. |
| Disposition code for RI Survey: Visit 3 |  | HM35 |  | Result of RI Survey for the third visit  This is often not provided and can be generated as missing.  The conversion program for MICS and DHS will automatically generate this variable as missing. |
| Eligible for TT Survey |  | HM36 |  | If this is not captured in a variable it can be calculated using HM30 and setting to one if participant falls within the specified age range for TT survey and had a birth in last year. |
| Selected for TT Survey |  | HM37 |  | If this is not captured in a variable, can be set to 1 if the participant is in the TT dataset |
| Disposition code for TT Survey: Visit 1 |  | HM38 |  | Result of TT survey for first visit.  If unable to track the result of each visit this should be populated with the result from the final visit. |
| Disposition code for TT Survey: Visit 2 |  | HM39 |  | Result of TT Survey for the second visit  This is often not provided and can be generated as missing.  The conversion program for MICS and DHS will automatically generate this variable as missing. |
| Disposition code for TT Survey: Visit 3 |  | HM40 |  | Result of TT Survey for the third visit  This is often not provided and can be generated as missing.  The conversion program for MICS and DHS will automatically generate this variable as missing. |
| Eligible for Post-SIA Survey |  | HM41 |  | If this is not captured in a variable it can be calculated using HM30 and setting to one if participant falls within the specified age range for SIA survey. |
| Selected for Post-SIA Survey |  | HM42 |  | If this is not captured in a variable, can be set to 1 if the participant is in the RI dataset and is not missing a response to the question regarding the SIA campaign. |
| Disposition code for Post-SIA Survey: Visit 1 |  | HM43 |  | Result of SIA survey for first visit.  If unable to track the result of each visit this should be populated with the result from the final visit. |
| Disposition code for Post-SIA Survey: Visit 2 |  | HM44 |  | Result of SIA Survey for the second visit  This is often not provided and can be generated as missing.  The conversion program for MICS and DHS will automatically generate this variable as missing. |
| Disposition code for Post-SIA Survey: Visit 3 |  | HM45 |  | Result of SIA Survey for the third visit  This is often not provided and can be generated as missing.  The conversion program for MICS and DHS will automatically generate this variable as missing. |

Table A-2 lists the required variables to create the RI dataset. These VCQI variables are required when running any RI analysis.

**Table A-2. VCQI Required Variables for RI Analyses**

| **Variable Description** | **RI Variable Name** | **Notes** |
| --- | --- | --- |
| Stratum Id | RI01 | Same as in the Household Member Listing |
| Cluster Number | RI03 | Same as in the Household Member Listing |
| Household Number | RI11 | Same as in the Household Member Listing |
| Child’s Line Number | RI12 | Same as in the Household Member Listing |
| Did the child ever receive a vaccination card? | RI26 | If not captured in a variable, may be able to code based on the variable used for RI27. |
| Does the child have a vaccination card, and was it seen? | RI27 | If not captured in a variable, may be able to code based on the variable used for RI26. |
| Month of birth from Card | dob\_date\_card\_m |  |
| Day of birth from Card | dob\_date\_card\_d |  |
| Year of birth from Card | dob\_date\_card\_y |  |
| Month of birth from History | dob\_date\_history\_m |  |
| Day of birth from History | dob\_date\_history\_d |  |
| Year of birth from History | dob\_date\_history\_y |  |
| Month dose was received per card | {dose}\_date\_card\_m | Required for all doses provided in RI\_LIST |
| Day dose was received per card | {dose}\_date\_card\_d | Required for all doses provided in RI\_LIST |
| Year dose was received per card | {dose}\_date\_card\_y | Required for all doses provided in RI\_LIST |
| Was does received per history? | {dose}\_history | Required for all doses provided in RI\_LIST |
| Was a BCG scar seen? | bcg\_scar\_history | Only required if BCG is part of RI\_LIST |
| Was there a tick mark on the card indicating they received the dose, but no date provided? | {dose}\_tick\_card | Required for all doses provided in RI\_LIST |

Table A-3 lists the variables required to create a RIHC dataset if the RI survey was conducted and the health center records were obtained. These VCQI variables are required when running any RI analysis that includes RIHC data.

**Table A-3. VCQI Required Variables for RI Analyses if RIHC survey conducted**

| **Variable Description** | **RIHC Variable Name** | **Notes** |
| --- | --- | --- |
| Stratum Id | RIHC01 | Same as in the Household Member Listing |
| Cluster Number | RIHC03 | Same as in the Household Member Listing |
| Household Number | RIHC14 | Same as in the Household Member Listing |
| Child’s Line Number | RIHC15 | Same as in the Household Member Listing |
| Date of birth (according to card seen in home) | RIHC21 |  |
| Date of birth (according to register) | RIHC22 |  |
| Month of birth from Register | dob\_date\_register\_m |  |
| Day of birth from Register | dob\_date\_register\_d |  |
| Year of birth from Register | dob\_date\_register\_y |  |
| Month dose was received per register | {dose}\_date\_register\_m | Required for all doses provided in RI\_LIST |
| Day dose was received per register | {dose}\_date\_register\_d | Required for all doses provided in RI\_LIST |
| Year dose was received per register | {dose}\_date\_register\_y | Required for all doses provided in RI\_LIST |
| Was there a tick mark on the register indicating they received the dose, but no date provided? | {dose}\_tick\_register | Required for all doses provided in RI\_LIST |

Table A-4 lists the required variables to create the TT dataset. VCQI will fail if the variables are not present.

**Table A-4. VCQI Required Variables for TT Analyses**

| **Variable Description** | **TT Variable Name** | **Notes** |
| --- | --- | --- |
| Stratum Id | TT01 | Same as in the Household Member Listing |
| Cluster Number | TT03 | Same as in the Household Member Listing |
| Date of Interview | TT09 | Will need to be provided as three date components and the program will create a single date |
| Household Number | TT11 | Same as in the Household Member Listing |
| Woman’s Line Number | TT12 | Same as in the Household Member Listing |
| Participants age in years | TT16 |  |
| Does the participant have a card with their own vaccination records? | TT27 |  |
| Date of TT1 dose | TT30 |  |
| Date of TT2 dose | TT31 |  |
| Date of TT3 dose | TT32 |  |
| Date of TT4 dose | TT33 |  |
| Date of TT5 dose | TT34 |  |
| Date of TT6 dose | TT35 |  |
| Did the participant receive any TT injections during last pregnancy? | TT36 |  |
| Number of TT doses received during last pregnancy | TT37 |  |
| Did the participant receive any TT injections in previous pregnancies (prior to last pregnancy) | TT38 |  |
| Number of TT doses received in previous pregnancies? (prior to last pregnancy) | TT39 |  |
| Did the participant receive a TT injection at any time while not pregnant? | TT40 |  |
| Number of TT doses received outside of all pregnancies? | TT41 |  |
| Number of years since last TT dose | TT42 |  |

Table A-5 lists the required variables to create the SIA dataset. VCQI will fail if the variables are not present.

**Table A-5. VCQI Required Variables for SIA Analyses**

| **Variable Description** | **SIA Variable Name** | **Notes** |
| --- | --- | --- |
| Stratum Id | SIA01 | Same as in the Household Member Listing |
| Cluster Number | SIA03 | Same as in the Household Member Listing |
| Household Number | SIA11 | Same as in the Household Member Listing |
| Child’s Line Number | SIA12 | Same as in the Household Member Listing |
| Did the child receive the {dose} during recent campaign? | SIA20 | Required for all doses in campaign |
| Did the child receive a vaccination card after receiving the {dose} during campaign | SIA21 | Required for all doses in campaign |
| Was the finger of the child marked with a pen after receiving the measles/rubella vaccine during the campaign? | SIA22 |  |
| Before the campaign, had the child already received the measles/rubella vaccine? | SIA27 |  |
| If the vaccination record (routine) is available, record the dates of vaccination: 1st Measles Vaccination | SIA28 |  |
| If the vaccination record (routine) is available, is 2nd Measles vaccination recorded with a tick mark instead of a date? | SIA29 |  |
| If the vaccination record (routine) is available, record the dates of vaccination: 2nd Measles Vaccination | SIA30 |  |
| If the vaccination record (routine) is available, is 1st Measles vaccination recorded with a tick mark instead of a date? | SIA31 |  |
| If the vaccination record (previous campaign) is available, record the dates of vaccination: 1st Measles campaign vaccination | SIA32 |  |
| If the vaccination record (previous campaign) is available, record the dates of vaccination: 2nd measles vaccination | SIA33 |  |

# Annex B. VCQI Conversion Global Macro List

Table B-1 can be used as a guide for interpreting Table B-2 which contains all of the global macros used to convert a MICS or DHS survey to a VCQI compatible format.

**Table B-1. Description of VCQI Conversion Global Macro List**

|  |  |
| --- | --- |
| **Column Name** | **Description** |
| Dataset | Name of VCQI Datasets that use the global macro.  Example: If running results for RI/children’s survey, all global macros listed as RI/RIHC and All would apply. |
| Global Name | Global macro name in the Control Program |
| MICS | If populated with an X the global macro is used to convert MICS surveys |
| DHS | If populated with an X the global macro is used to convert DHS surveys |
| Acceptable Values | These are the only values that can be used to populate the global macro |
| Description | Information around how the global macro will be used; this will help the user populate it with the appropriate value or variable name. |
| Required | Indicates if the global macro must be populated to run the program. |

**Table B-2. VCQI Conversion Global Macro List**

| **Dataset** | **Global Name** | **MICS** | **DHS** | **Values** | **Description** | **Required** | **Notes** |
| --- | --- | --- | --- | --- | --- | --- | --- |
| All | DHS\_NUM |  | X | Numeric | Indicates the DHS Phase number (Example: 7,6,5 etc.) | Yes |  |
| All | MICS\_NUM | X |  | Numeric | Indicates the MICS survey number (Example: 4,5 etc.) | Yes |  |
| All | RUN\_FOLDER | X | X | Text | Path where the VCQI Conversion Programs mentioned in Table 1-3 are located | Yes |  |
| All | INPUT\_FOLDER | X | X | Text | Folder path where the program will go to grab the original datasets to convert them to VCQI compatible | Yes |  |
| All | OUTPUT\_FOLDER | X | X | Text | Folder path where the program will put the new datasets that can be run through VCQI | Yes |  |
| All | DHS\_HR\_DATA |  | X | Text | Name of Household record dataset for DHS survey located in the INPUT\_FOLDER | Yes |  |
| All | DHS\_PR\_DATA |  | X | Text | Name of Household Member dataset for DHS survey located in the INPUT\_FOLDER | Yes |  |
| TT | DHS\_IR\_DATA |  | X | Text | Name of Women (TT) dataset for DHS survey located in the INPUT\_FOLDER | Yes | Only required for TT |
| RI & SIA | DHS\_KR\_DATA |  | X | Text | Name of Children dataset for DHS survey located in the INPUT\_FOLDER | Yes | Only required for RI or SIA |
| All | MICS\_HH\_DATA | X |  | Text | Name of Household record dataset for MICS survey located in the INPUT\_FOLDER | Yes |  |
| All | MICS\_HM\_DATA | X |  | Text | Name of Household Member dataset for MICS survey located in the INPUT\_FOLDER | Yes |  |
| TT | MICS\_WM\_DATA | X |  | Text | Name of Women (TT) dataset for MICS survey located in the INPUT\_FOLDER | Yes | Only required for TT |
| RI & SIA | MICS\_CH\_DATA | X |  | Text | Name of Children dataset for MICS survey located in the INPUT\_FOLDER | Yes | Only required for RI or SIA |
| RIHC | MICS\_HF\_DATA | X |  | Text | Name of Children Health Center records for MICS survey located in INPUT\_FOLDER | Yes | This should only be populated in MICS survey if the children health center records are not included in the children’s survey data (RI) |
| All | STRATUM\_ID | X | X | Variable Name | Stratum id | Yes |  |
| All | STRATUM\_NAME | X | X | Variable Name | Stratum name | Yes | if this variable does not exist, put Stratum id and program will use the label associated with variable |
| All | CLUSTER\_ID | X | X | Variable Name | Cluster id | Yes |  |
| All | CLUSTER\_NAME | X | X | Variable Name | Cluster name | Yes | if this variable does not exist, put Cluster id and program will use the label associated with variable |
| All | HH\_ID | X | X | Variable Name | Household id | Yes |  |
| All | LEVEL1\_NAME | X | X | Text | National Name (Not a variable) | Optional | if not populated, need to create the levelsof datasets as specified in the User's Guide |
| All | PROVINCE\_ID | X | X | Variable Name  Or 1 | Province ID (Level2 name) |  | this can be a variable name if the variable for a level 2 stratifier exists, if not it should be populated with the numeric value of 1 |
| All | LEVEL\_3\_ID | X | X | Variable Name | Level3 stratifier | Optional | if not populated, need to create the levelsof datasets as specified in the User's Guide |
| All | LEVEL\_4\_ID | X | X | Variable Name | Level4 Stratifier | Optional | Only needed if wish to use a level 4 stratifier. If not populated, need to create the levelsof datasets as specified in the User's Guide |
| All | HH\_DATE\_MONTH | X | X | Variable Name | Month of Household Interview | Yes | In DHS survey also TT survey Month |
| All | HH\_DATE\_DAY | X | X | Variable Name | Day of Household interview | Yes | In DHS survey also TT survey Day |
| All | HH\_DATE\_YEAR | X | X | Variable Name | Year of Household Interview | Yes | In DHS survey also TT survey Year |
| All | HM\_LINE | X | X | Variable Name | Line Number is Household Member dataset | Yes |  |
| All | OVERALL\_DISPOSITION | X | X | Variable Name | Result of Overall(Household) Survey | Yes |  |
| All | SEX | X | X | Variable Name | Sex listed in household dataset | Yes |  |
| All | HH\_DOB | X | X | 1 or 0 | 1 indicates if the Household Member Dataset had a date of birth | Yes | If there was no date of birth on the Household Member Dataset populate with 0 |
| All | DATE\_OF\_BIRTH\_MONTH | X | X | Variable Name | Month of birth from Household Member Dataset | Optional |  |
| All | DATE\_OF\_BIRTH\_YEAR | X | X | Variable Name | Day of birth from Household Member Dataset | Optional |  |
| All | DATE\_OF\_BIRTH\_DAY | X | X | Variable Name | Year of birth from Household Member Dataset | Optional |  |
| All | AGE\_YEARS | X | X | Variable Name | Age in Years from Household Member Dataset | Optional |  |
| All | AGE\_MONTHS | X | X | Variable Name | Age in Months from Household Member Dataset | Optional |  |
| RI & TT | PSWEIGHT\_1YEAR | X | X | Variable Name | Post-stratified sampling weight for one-year cohorts (RI & TT) | Yes |  |
| SIA | PSWEIGHT\_SIA | X | X | Variable Name | Post-stratified sampling weight for SIA cohort | Yes |  |
| All | URBAN\_CLUSTER | X | X | Variable Name | Area is urban or cluster | Yes |  |
| All | RI\_SURVEY | X | X | 1 or 0 | 1 indicates if the RI (children’s) survey was completed. | Yes | If it was not, please mark with 0 |
| RI | RI\_DISPOSITION | X | X | Variable Name | Result of RI (child) survey | Yes |  |
| RI | RI\_MIN\_AGE | X | X | Numeric Value | Minimum eligible age in MONTHS for RI respondents | Yes |  |
| RI | RI\_MAX\_AGE | X | X | Numeric Value | Maximum eligible age in MONTHS for RI respondents | Yes |  |
| RI | CARD\_EVER\_RECEIVED | X |  | Variable Name | Child ever received a vaccination card in MICS survey | Yes | This will not be available for DHS and MICS 3 surveys. In these surveys it may be left blank |
| RI | CARD\_SEEN | X | X | Variable Name | If the child received a vaccination card, was it seen during the survey | Yes |  |
| RI | RI\_DATE\_MONTH | X | X | Variable Name | Month RI survey was conducted | Yes |  |
| RI | RI\_DATE\_DAY | X | X | Variable Name | Day RI survey was conducted | Yes |  |
| RI | RI\_DATE\_YEAR | X | X | Variable Name | Year RI survey was conducted | Yes |  |
| RI | CHILD\_DOB\_HIST\_MONTH | X | X | Variable Name | Month of child date of birth per history | Optional | This cannot be blank if CHILD\_DOB\_CARD\_MONTH is blank |
| RI | CHILD\_DOB\_HIST\_DAY | X | X | Variable Name | Day of child date of birth per history | Optional | This cannot be blank if CHILD\_DOB\_CARD\_DAY is blank |
| RI | CHILD\_DOB\_HIST\_YEAR | X | X | Variable Name | Year of child date of birth per history | Optional | This cannot be blank if CHILD\_DOB\_CARD\_YEAR is blank |
| RI | CHILD\_AGE\_YEARS | X | X | Variable Name | Child age in Years | Optional |  |
| RI | RI\_LINE | X | X | Variable Name | Child line number in RI survey | Yes |  |
| RI | RESPONDENT\_LINE |  | X | Variable Name | Line number for Respondent (Caretaker of child) to help uniquely identify child | Yes |  |
| RI | CARD\_DOB | X |  | 1 or 0 | 1 Indicates if the dataset contains a date of birth from the card in MICS survey | Yes | If it was not, please mark with 0 |
| RI | CHILD\_DOB\_CARD\_MONTH | X |  | Variable Name | Month of child date of birth per card in MICS survey | Optional | This cannot be blank if CHILD\_DOB\_HIST\_MONTH is blank |
| RI | CHILD\_DOB\_CARD\_DAY | X |  | Variable Name | Day of child date of birth per card in MICS survey | Optional | This cannot be blank if CHILD\_DOB\_HIST\_DAY is blank |
| RI | CHILD\_DOB\_CARD\_YEAR | X |  | Variable Name | Year of child date of birth per card in MICS survey | Optional | This cannot be blank if CHILD\_DOB\_HIST\_YEAR is blank |
| RI | RI\_LIST | X | X | Text (dose names) | Provide a complete list of the RI doses, use the same dose names as the global macros that provide history/date/tick. | Yes | All dose numbers must be provided, so if there are three doses provide the dose1 dose2 dose3. |
| RI | {DOSE\_NAME}\_DATE\_CARD\_MONTH | X | X | Variable Name | Month dose was received per card | Yes | A global must populated for all doses provided in RI\_LIST |
| RI | {DOSE\_NAME}\_DATE\_CARD\_DAY | X | X | Variable Name | Day dose was received per card | Yes | A global must be populated for all doses provided in RI\_LIST |
| RI | {DOSE\_NAME}\_DATE\_CARD\_YEAR | X | X | Variable Name | Year dose was received per card | Yes | A global must be populated for all doses provided in RI\_LIST |
| RI | {DOSE\_NAME}\_DOSE\_NUM | X |  | Variable Name or 1 if a Single dose vaccine | The number of doses received per history in MICS survey | Yes | If single dose, this should be populated with a 1  A global must be populated for all doses provided in RI\_LIST |
| RI | {DOSE\_NAME}\_HIST | X |  | Variable Name | Dose received per history in MICS survey | Yes | This must be populated for all doses provided in RI\_LIST |
| RI | BCG\_SCAR | X |  | Variable Name | BCG scar seen in MICS survey | Optional |  |
| RI | {DOSE\_NAME} |  | X | Variable Name | Dose received per history in DHS survey | Yes | This must be populated for all doses provided in RI\_LIST |
| All | RIHC\_SURVEY | X | X | 1 or 0 | 1 Indicates RIHC (health center records) were sought for children who participated in the RI survey. | Yes | If it was not, please mark with 0 |
| RI & RIHC | RIHC\_LINE | X |  | Variable Name | Child line number in RIHC survey in MICS survey | Yes | Only if RIHC records sought |
| RI & RIHC | RIHC\_DATE\_MONTH | X |  | Variable Name | Month health records sought in MICS survey | Yes | Only if RIHC records sought |
| RI & RIHC | RIHC\_DATE\_DAY | X |  | Variable Name | Day health records sought in MICS survey | Yes | Only if RIHC records sought |
| RI & RIHC | RIHC\_DATE\_YEAR | X |  | Variable Name | Year health records sought in MICS survey | Yes | Only if RIHC records sought |
| RI & RIHC | CHILD\_DOB\_REG\_MONTH | X |  | Variable Name | Month of Child date of birth per health center records in MICS survey | Yes | Only if RIHC records sought |
| RI & RIHC | CHILD\_DOB\_REG\_DAY | X |  | Variable Name | Day of Child date of birth per health center records in MICS survey | Yes | Only if RIHC records sought |
| RI & RIHC | CHILD\_DOB\_REG\_YEAR | X |  | Variable Name | Year of Child date of birth per health center records in MICS survey | Yes | Only if RIHC records sought |
| RI & RIHC | {DOSE\_NAME}\_DATE\_REG\_MONTH | X |  | Variable Name | Month dose was received per health center records in MICS survey | Yes | This must be populated for all doses provided in RI\_LIST |
| RI & RIHC | {DOSE\_NAME}\_DATE\_REG\_DAY | X |  | Variable Name | Day dose was received per health center records in MICS survey | Yes | This must be populated for all doses provided in RI\_LIST |
| RI & RIHC | {DOSE\_NAME}\_DATE\_REG\_YEAR | X |  | Variable Name | Year dose was received per health center records in MICS survey | Yes | This must be populated for all doses provided in RI\_LIST |
| All | SIA\_SURVEY | X | X | 1 or 0 | 1 Indicates if an SIA survey was conducted | Yes | If it was not, please mark with 0 |
| SIA | SIA\_DISPOSITION | X | X | Variable Name | Result of SIA survey | Yes |  |
| SIA | SIA\_MIN\_AGE\_{SIA\_LIST} | X | X | Variable Name | Minimum age for participants in SIA survey | Yes | A global must be populated for each campaign listed in SIA\_LIST. Must be consistent with format. If SIA\_LIST contains letters, these global macros must be named with letters. |
| SIA | SIA\_MAX\_AGE\_{SIA\_LIST} | X | X | Variable Name | Maximum age for participants in SIA survey | Yes | A global must be populated for each campaign listed in SIA\_LIST. Must be consistent with format. If SIA\_LIST contains letters, these global macros must be named with letters. |
| SIA | SIA\_LIST | X | X | Variable Name | SIA campaign list (example MCV, DPT, or A, B, C) | Yes | This can be dose names or letters for each campaign. Must be consistent with all SIA global macros. |
| SIA | SIA\_{SIA\_LIST} | X | X | Variable Name | Child received the dose during the corresponding campaign | Yes | A global must be populated for each campaign listed in SIA\_LIST. Must be consistent with format. If SIA\_LIST contains letters, these global macros must be named with letters. |
| All | TT\_SURVEY | X | X | 1 or 0 | 1 Indicates if TT survey conducted | Yes | If it was not, please mark with 0 |
| TT | TT\_DISPOSITION | X | X | Variable Name | Result of TT survey | Yes |  |
| TT | TT\_MIN\_AGE | X | X | Numeric Value | Minimum eligible age in MONTHS for TT respondents | Yes |  |
| TT | TT\_MAX\_AGE | X | X | Numeric Value | Maximum eligible age in MONTHS for TT respondents | Yes |  |
| TT | TT\_LINE | X | X | Variable Name | Women's line number in TT survey | Yes |  |
| TT | TT\_DATE\_MONTH | X |  | Variable Name | Month TT survey conducted in MICS survey | Yes |  |
| TT | TT\_DATE\_DAY | X |  | Variable Name | Day TT survey conducted in MICS survey | Yes |  |
| TT | TT\_DATE\_YEAR | X |  | Variable Name | Year TT survey conducted in MICS survey | Yes |  |
| TT | MOTHER\_DOB | X | X | 1 or 0 | 1 Indicates if there is a variable with the Mother's date of birth | Yes | If it was not, please mark with 0 |
| TT | MOTHER\_DOB\_MONTH | X | X | Variable Name | Month of Mothers date of birth per history | Optional |  |
| TT | MOTHER\_DOB\_YEAR | X | X | Variable Name | Day of Mothers date of birth per history | Optional |  |
| TT | MOTHER\_DOB\_DAY | X | X | Variable Name | Year of Mothers date of birth per history | Optional |  |
| TT | MOTHER\_AGE\_YEARS | X | X | Variable Name | Mothers age in Years | Optional |  |
| TT | MOTHER\_CARD\_SEEN | X |  | Variable Name | Does the mother have a card with vaccination records and was it seen in MICS survey | Yes |  |
| TT | TT\_LAST\_BIRTH\_MONTHS |  | X | Variable Name | Months since last birth in DHS survey | Optional |  |
| TT | TT\_CHILD\_DOB\_MONTH | X |  | Variable Name | Month of last born child's date of birth in MICS survey | Optional |  |
| TT | TT\_CHILD\_DOB\_DAY | X |  | Variable Name | Day of last born child's date of birth in MICS survey | Optional |  |
| TT | TT\_CHILD\_DOB\_YEAR | X |  | Variable Name | Year of last born child's date of birth in MICS survey | Optional |  |
| TT | TT\_PREGNANCY | X |  | Variable Name | TT dose received during last pregnancy in MICS survey | Yes |  |
| TT | NUM\_TT\_PREGNANCY | X | X | Variable Name | How many TT doses were received during last pregnancy? | Yes |  |
| TT | TT\_ANYTIME | X |  | Variable Name | TT dose received during last anytime outside of last pregnancy in MICS survey | Yes |  |
| TT | NUM\_TT\_ANYTIME | X | X | Variable Name | Number of TT doses received outside of last pregnancy | Yes |  |
| TT | LAST\_TT\_MONTH | X | X | Variable Name | Month last TT dose was received | Optional |  |
| TT | LAST\_TT\_YEAR | X | X | Variable Name | Year last TT dose was received | Optional |  |
| TT | YEARS\_SINCE\_LAST\_TT | X | X | Variable Name | Years since last TT dose was received | Yes |  |

1. You may name the dataset files using any name that is clear to you. You will later put the dataset names in the VCQI control program. So for instance you might call the RI dataset RI\_LaoPDR\_2015\_12-23m.dta. [↑](#footnote-ref-1)
2. See Annex A in the User’s Guide for specifics regarding the datasets starting with “Level”. [↑](#footnote-ref-2)
3. Level4names and Level4order only need to be populated if a level4 stratifier is specified in the VCQI Control Program for the analysis. [↑](#footnote-ref-3)
4. Multiple Indicator Cluster Survey is referred to as MICS through the rest of the document. [↑](#footnote-ref-4)
5. Demographic and Health Survey is referred to as DHS through the rest of the document. [↑](#footnote-ref-5)
6. These programs do not currently generate a TTHC dataset because we do not know of MICS or DHS surveys that have sought tetanus records at health centers. It would be straightforward to add a module for this purpose if such surveys exist. [↑](#footnote-ref-6)
7. The variable age\_months is not a VCQI variable but is used to calculate several of the required VCQI variables. [↑](#footnote-ref-7)
8. If the six TT dose dates are available, they will need to be broken into three date components and renamed per the FVL document. [↑](#footnote-ref-8)
9. The survey types completed are determine by which of the following global macros that are set to one; RI\_SURVEY, RIHC\_SURVEY, TT\_SURVEY and SIA\_SURVEY. [↑](#footnote-ref-9)
10. RIHC data is used if the health records data is not included in the RI dataset. If the health records data is provided in the RI dataset, then the global macro that contains the dataset name for RIHC records should be left blank. [↑](#footnote-ref-10)