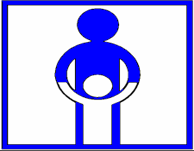


Vaccination Coverage Surveys –   
Forms & Variable Lists (FVL)   
Structured for Compatibility with VCQI

Draft Version 1.7



**Expanded   
Programme on Immunization**



Revised February 2021

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## Acknowledgements

The survey questions in this document were inspired by those in the 2005 WHO Immunization Coverage Cluster Survey Reference Manual (WHO/IVB/04.23).

They were further developed for inclusion in the 2015 (draft) and 2018 (final) WHO Vaccination Coverage Cluster Survey Reference Manual by Anthony Burton, Pierre Claquin, Felicity Cutts and Dale Rhoda (WHO/IVB/18.09).

The questions were modified further still for the Vaccination Coverage Quality Indicators (VCQI) by the staff of Biostat Global Consulting: Dale Rhoda, Mary Prier and Mary Kay Trimner.

This document was developed for the World Health Organization by Biostat Global Consulting. It was written by Dale Rhoda and Mary Kay Trimner in 2015.

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## Introduction

This document is intended to fill two purposes:

1. It lists sample questions that may be used in questionnaires for household surveys to estimate:
   1. vaccination coverage resulting from a country’s routine immunization (RI) program,
   2. coverage achieved in a vaccination campaign, or
   3. the proportion of children who are protected at birth from neonatal tetanus.
2. It lists variable names, variable types and question response coding schemes that define what it means for datasets to be compatible with the freely available WHO software called the Vaccination Coverage Quality Indicators (VCQI)[[1]](#footnote-2). To be analyzed with VCQI, survey datasets should use precisely the same variable names as those found here and precisely the same variable types (numeric vs. text string) and precisely the same response coding for categorical variables.

**Sample Questions and Response Options**

The eight forms in this document are modified versions of those in Annex H from the 2018 World Health Organization Vaccination Coverage Cluster Survey Reference Manual[[2]](#footnote-3).

1. Form HH – Sample Questions for a Household Listing Form
2. Form HM – Sample Questions for a Household Members Listing Form
3. Form RI – Sample Questions for a Routine Immunization Form (12-23 months)
4. Form TT – Sample Questions for a Maternal Tetanus Immunization Form
5. Form SIA – Sample Questions for a Post Campaign Survey Form
6. Form RIHC – Sample Questions for a Routine Immunization Health Centre Form
7. Form TTHC – Sample Questions for a Maternal Tetanus Health Centre Form
8. Form CM – Cluster Metadata

This document uses the word “form” loosely – it does not provide field-ready paper questionnaire forms, but rather lists questions and response options and skip patterns. The questions listed here could be reformatted into field-ready questionnaire forms in either paper or electronic formats.

Each sample form lists suggested questions and guidance on what type of responses and skip patterns might be appropriate. Each sample survey form is divided into three sections: (1) a suggested header with information for field staff to fill in before they begin the data collection, (2) the main body of the suggested questions, and (3) a footer with information for field staff to fill after the work in the household or cluster is complete.

The header should include several fields identifying the stratum and cluster from which the data are being collected. If possible, these fields should either be pre-printed on the forms, or pre-printed on weather-proof stickers to be applied to the forms, so that stratum ID and cluster ID will be correct, easy for data entry clerks to read, and recorded in a uniform fashion across the entire survey.

The main body of the form includes questions that will be repeated many times with one entry per household or per respondent. Paper forms should be laid out in a manner that provides enough room to fill in each entry clearly.

The footer includes fields to document when the work in the household or cluster is finished. On paper forms, be sure to leave large spaces for clearly written comments and be sure to ask data entry clerks to enter those comments into the digital database so they are available to downstream analysts. These comments are sometimes very helpful!

**Templates for VCQI-Compatible Datasets**

While the document suggests many survey questions, we might also consider each form to be a template for a survey dataset to be analyzed with VCQI. The answers to questions from Form HH (household listing) might be collected and provided in a dataset named HH. Its variables could be named after the question numbers HH01, HH02, HH03, etc. The answers to questions from Form HM (household member listing) might be provided in a dataset named HM and have variables named HM01, HM02, etc. And so on, for any of the eight forms that are used for your survey. You may download and examine digital examples of VCQI-compatible datasets with some VCQI training materials available at the Technet-21 VCQI User’s Group[[3]](#footnote-4), or at the VCQI resources website[[4]](#footnote-5).

If you are tasked with making a survey dataset compatible with VCQI, you should focus initially on the variables that are ticked in the columns named ‘Required to Run Indicators’. VCQI does not require all the variables listed here and conversely a VCQI-compatible dataset may include additional variables that are not listed in this document. In many cases the non-essential variables listed here can provide important context for your report, and if present, should be summarized using VCQI’s descriptive indicators or used to stratify coverage results. But they are not essential in for constructing a VCQI compatible dataset.

The set of questions in these sample questionnaires provide enough data to calculate vaccination coverage estimates, but survey designers may often want to add questions to capture additional constructs. These forms do not list many demographic questions, but it is common to ask about the education, occupation, and religion of adults in homes selected into vaccination coverage survey samples. The survey may also ask questions that will be summarized into a single variable to characterize wealth or socioeconomic status. Feel free to add questions to the forms and code the responses in a logical manner. VCQI has the capability to incorporate those additional variables as stratifiers in tables and to summarize responses to those questions using the so-called descriptive (DESC) indicators. See the *VCQI User’s Guide* for details. Additional questions may use any variable name that makes sense to the survey designer, but the variable names listed in this document should be reserved for the corresponding questions from this document.

**A Word Concerning Variables with Dates**

The VCQI software is particular about how date variables should be specified. Each date should be specified using three variables: one containing the month, the second containing the day of the month, and the third containing the 4-digit year. E.g., the date of the routine immunization interview is stored in RI09\_m, RI09\_d, and RI09\_y. You may also provide a variable that combines these three elements into a date-type variable (e.g., RI09), but for routine immunization surveys, VCQI will use the variables that furnish the elements of the date and ignore the variable that combines the elements into a full date.

VCQI is designed to work with dates from the Gregorian calendar. If survey data are collected using dates from another calendar (e.g., the Ethiopia calendar, the Solar Hijri calendar in Afghanistan & Iran, or the Vikram Samvat in Nepal), the data analyst will need to convert them to Gregorian dates before running VCQI. At Biostat Global Consulting we have experience with this and some Stata programs to help, so contact us if you need assistance with date conversions.

Please send corrections, suggestions, and questions to Dale Rhoda at Biostat Global Consulting ([Dale.Rhoda@biostatglobal.com](mailto:Dale.Rhoda@biostatglobal.com)) and Carolina Danovaro at the World Health Organization ([danovaroc@who.int](mailto:danovaroc@who.int)).

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## Getting Started Making a Survey Dataset Compatible with VCQI

Steps to prepare data from a routine immunization survey:

1. Review the original questionnaire and dataset to familiarize yourself with how the vaccination evidence is coded.
2. Review the RI form in this document, making a list of which variables are essential. It is not a long list:
   1. RI01, RI02, RI03, RI04, RI11, and RI12 uniquely identify children and the household, cluster & stratum they live in.
   2. RI09\_m, \_d, and \_y hold the interview date.
   3. dob\_date\_history\_m, \_d, and \_y hold the child’s date of birth from caregiver’s recall
   4. RI26 & RI27 record whether the child ever had a home-based vaccination record (card) and if so, whether they showed it to the interviewer.
   5. If the interviewer did see the card, then dob\_date\_card\_m, \_d, and \_y hold the child’s date of birth from the card.
   6. Vaccination evidence is held in:
      1. <dose>\_date\_card\_m, \_d, \_y
      2. <dose>\_tick\_card
      3. <dose>\_history
3. Use your data management skills to rename and recode the variables from your dataset to agree with those in this document. Save the dataset with a name like RI\_version1.
4. Use the draft RI dataset to construct a draft cluster metadata (CM) dataset:

use RI\_version1, clear

keep RI01 RI02 RI03 RI04

duplicates drop

rename RI01 HH01

rename RI02 HH02

rename RI03 HH03

rename RI04 HH04

gen province\_id = 1 // if a single stratum survey, or

\* gen province\_id = ///

<name of your variable that holds the province ID code>

gen psweight\_1year = 1 // replace later with survey weights

save CM\_version1, replace

1. Assemble a list of the survey strata and construct the five small datasets required to list their names and the order in which they should appear in tables. See the section of this document named **Datasets to Specify Stratum Names and Table Listing Order**.
2. This is all you need to prepare for an initial (self-weighted) analysis! You may now copy the control program template to a new empty folder and edit it to customize Blocks B, D, and F as described in the *VCQI User’s Guide.*
3. To refine the work, you might:
   1. Add some optional variables to the RI dataset, e.g., RI20 (Child sex).
   2. Code the variables that summarize why some children are not fully vaccinated.
   3. Update psweight\_1year in the CM dataset with the real survey weight values.
   4. Add optional cluster metadata to the CM dataset, like an indication of whether each cluster is urban or rural (urban\_cluster).
   5. If the survey selected clusters that yielded zero respondents, list them in the CM dataset.
   6. Generate HH and HM datasets to help describe the dataset.
   7. If the survey also collected data from health centers, generate an RIHC dataset.

The steps to make SIA and TT datasets compatible with VCQI are much the same: Review the questionnaire and dataset. Review which variables VCQI considers to be essential. Use data management skills to code those variables from the original data. Use the SIA or TT dataset to make an initial version of the CM dataset. Run a basic VCQI analysis. Refine as appropriate.

Essential variables for an SIA dataset:

1. SIA01, SIA02, SIA03, SIA04, SIA11, and SIA12 uniquely identify children and the household, cluster & stratum they live in.
2. SIA17 codes whether the child was living in the area at the time of the campaign  
   (not strictly required but recommended to include this variable).
3. SIA20 codes whether the child received the campaign dose.
4. SIA21 codes whether there is evidence documented on a campaign card.
5. SIA22 codes whether the interviewer saw a campaign mark on the child’s finger.
6. SIA27 codes whether the child had received the campaign dose before the campaign.
7. SIA28-33 codes the evidence of earlier doses from the child’s routine immunization card and optionally from cards from earlier vaccination campaigns.

Essential variables for a TT dataset:

1. TT01, TT02, TT03, TT04, TT11, and TT12 uniquely identify women and the household, cluster & stratum they live in[[5]](#footnote-6).
2. TT16 codes the age of the mother in years.
3. TT27 codes whether she has a home-based vaccination record.
4. TT36-TT40 record the number of tetanus doses she received over her lifetime before the child was born.
5. TT41 records how long ago she received the most recent dose.

## Form HH – Sample Questions for a Household Listing Form

This entire dataset is optional if the goal is simply to calculate coverage indicators.

It may be helpful, though, in your work to describe the sample clearly, and it is used by the optional indicator named DESC\_01, but it is not used by other indicators and so may not be your first priority to make this dataset VCQI-compatible.

| **Item** | **Question** | **Responses** | **Required to Run Indicators** | | | | **Not Explicitly Used by VCQI Indicators** | **Same Variable Across VCQI Datasets** |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  |  |  | **RI** | **SIA** | **TT** | **DESC01** |  |  |
| *Header, to be printed at the top of the form* | | | | | | | | |
| HH01 | Stratum ID number\* | Number | X | X | X | X |  | HH01 (CM dataset) HM01 RI01 RIHC01 SIA01 TT01 TTHC01 |
| HH02 | Stratum name\* | Free text |  |  |  |  | X | HH02 (CM dataset) HM02 RI02 RIHC02 SIA02 TT02 TTHC02 |
| HH03 | Cluster ID number\* | Number | X | X | X | X |  | HH03 (CM dataset) HM03 RI03 RIHC03 SIA03 TT03 TTHC03 |
| HH04 | Cluster name\* | Free text |  |  |  |  | X | HH04 (CM dataset) HM04 RI04 RIHC04 SIA04 TT04 TTHC04 |
| HH05 | Enumerator Number | Number |  |  |  |  | X |  |
| HH06 | Enumerator Name | Free text |  |  |  |  | X |  |
| HH07 | Supervisor number | Number |  |  |  |  | X | HM07 RI07 RIHC07 SIA07 TT07 |
| HH08 | Supervisor name | Free text |  |  |  |  | X | HM08 RI08 RIHC08 SIA08 TT08 |
| HH09 | Start date of enumeration | Date |  |  |  |  | X |  |
| HH10 | Start time of enumeration | Time |  |  |  |  | X |  |
| *\* Pre-print on the form, if possible* | | | | | | | | |
|  | | |  |  |  |  |  |  |
| *Main body of the form, one entry per household* | | | | | | | | |
| HH11 | Structure ID | Number |  |  |  |  | X |  |
| HH12 | Occupied: Does this structure contain any households?  *[If No, move on to the next structure and the next row of the form.]* | 1. Yes 2. No |  |  |  | X |  |  |
| HH13 | Household (HH) Serial Number in the structure | Number |  |  |  |  | X |  |
| HH14 | Household ID | Structure Number - HH Serial Number (e.g., 44-3)  **Take note: HH14 should be a text variable…not a numeric variable!** | X | X | X | X |  | HM09 RI11 RIHC14 TT11 SIA11 TTHC14 |
| HH15 | Address or Description | Free text |  |  |  |  | X |  |
| HH16 | Latitude | ##.#### |  |  |  |  | X | HM11 RI15 RIHC10 SIA15 TT14 |
| HH17 | Longitude | ##.#### |  |  |  |  | X | HM12 RI16 RIHC11 SIA16 TT15 |
| HH18 | Is the data from a resident, or a neighbor? | 1. Resident 2. Neighbor  3. Unable to Enumerate |  |  |  | X |  |  |
| HH19 | Name of Head of Household | Free text |  |  |  |  | X | HM10 RIHC20 |
| HH20 | Phone number to coordinate visit time | Free text |  |  |  |  | X |  |
| HH21 | Second phone number | Free text |  |  |  |  | X |  |
| HH22 | Total number of HH residents | Number |  |  |  |  | X |  |
| HH23 | # of Eligible Respondents: 12-23 Months | Number |  |  |  | X |  |  |
| HH24 | # of Eligible Respondents: Gave Live Birth in Last 12 Months | Number |  |  |  | X |  |  |
| HH25 | # of Eligible Respondents: Post-Campaign Survey | Number |  |  |  | X |  |  |
| HH26 | Comment | Free text |  |  |  |  | X |  |
| HH27 | OFFICE USE ONLY: Serial # of Occupied HH in Cluster | Leave Blank |  |  |  |  | X |  |
| HH28 | OFFICE USE ONLY: Household is selected to participate in the survey | 1. Yes 2. No |  |  |  |  | X |  |
|  | | |  |  |  |  |  |  |
| *Footer, to be printed at the bottom of the form* | | | | | | | | |
| HH29\_m | End date of interview – month | Numeric value between 1-12 or Missing |  |  |  |  | X |  |
| HH29\_d | End date of interview – day | Numeric value between 1-31 or Missing |  |  |  |  |  |  |
| HH29\_y | End date of interview – year | 4-digit numeric value or Missing |  |  |  |  |  |  |
| HH30 | End time of enumeration | Time |  |  |  |  | X |  |
| HH31 | Were there households you couldn’t enumerate? | 1. Yes 2. No |  |  |  |  | X |  |
| HH32 | If yes, how many? | Free text |  |  |  |  | X |  |
| HH33 | What prevented you from doing it? | Free text |  |  |  |  | X |  |
| HH34 | Other comments | Free text |  |  |  |  | X |  |
| HH35 | Supervisor’s comments | Free text |  |  |  |  | X |  |

## Form HM – Sample Questions for a Household Members Listing Form

This entire dataset is optional if the goal is simply to calculate coverage indicators.

It may be helpful, though, in your work to describe the sample clearly, and it is used by the optional indicator named DESC\_01, but it is not used by other indicators and so may not be your first priority to make this dataset VCQI-compatible.

| **Item** | **Question** | **Responses** | **Required to Run Indicators** | | | | **Not Explicitly Used by VCQI Indicators** | **Same Variable Across VCQI Datasets** |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  |  |  | **RI** | **SIA** | **TT** | **DESC01** |  |  |
| *Header, to be printed at the top of the form* | | | | | | | | |
| HM01 | Stratum ID number\* | Number | X | X | X | X |  | HH01 (Both HH and CM datasets) RI01 RIHC01 SIA01 TT01 |
| HM02 | Stratum name\* | Free text |  |  |  |  | X | HH02 (Both HH and CM datasets) RI02 RIHC02 SIA02 TT02 |
| HM03 | Cluster ID number\* | Number | X | X | X | X |  | HH03 (Both HH and CM datasets) RI03 RIHC03 SIA03 TT03 |
| HM04 | Cluster name\* | Free text |  |  |  |  | X | HH04 (Both HH and CM datasets) RI04 RIHC04 SIA04 TT04 |
| HM05 | Interviewer number | Number |  |  |  |  | X | RI05 RIHC05 SIA05 TT05 |
| HM06 | Interviewer name | Free text |  |  |  |  | X | RI06 RIHC06 SIA06 TT06 |
| HM07 | Supervisor number | Number |  |  |  |  | X | HH07 RI07 RIHC07 SIA07 TT07 |
| HM08 | Supervisor name | Free text |  |  |  |  | X | HH08 RI08 RIHC08 SIA08 TT08 |
| HM09 | Household ID | Copy number from HH list form | X | X | X | X |  | HH14 RI11 RIHC14 SIA11 TT11 TTHC14 |
| HM10 | Name of head of household | Free text (may be copied from HH list form) |  |  |  |  | X | HH19 RIHC20 |
| HM11 | Latitude | ##.#### |  |  |  |  | X | HH16 RI15 RIHC10 SIA15 TT14 |
| HM12 | Longitude | ##.#### |  |  |  |  | X | HH17 RI16 RIHC11 SIA16 TT15 |
| HM13 | Start Date of Interview at Visit 1 | Date |  |  |  |  | X |  |
| HM14 | Start Time of Interview at Visit 1 | Time |  |  |  |  | X |  |
| HM15 | Start Date of Interview at Visit 2 | Date |  |  |  |  | X |  |
| HM16 | Start time of Interview at Visit 2 | Time |  |  |  |  | X |  |
| HM17 | Start Date of Interview at Visit 3 | Date |  |  |  |  | X |  |
| HM18 | Start time of Interview at Visit 3 | Time |  |  |  |  | X |  |
| HM19 | Disposition Code: Visit 1 | 1. Return later; no one home (fill in # of eligible respondents if you learn it from a neighbor) 2. Come back later; interview started but could not complete  3. Refused; someone is home but refused to participate 4. Complete; collected all necessary information |  |  |  | X |  |  |
| HM20 | Disposition Code: Visit 2 | 1. Return later; no one home (fill in # of eligible respondents if you learn it from a neighbor) 2. Come back later; interview started but could not complete  3. Refused; someone is home but refused to participate 4. Complete; collected all necessary information |  |  |  | X |  |  |
| HM21 | Disposition Code: Visit 3 | 1. Return later; no one home (fill in # of eligible respondents if you learn it from a neighbor) 2. Come back later; interview started but could not complete  3. Refused; someone is home but refused to participate 4. Complete; collected all necessary information |  |  |  | X |  |  |
| *\* Pre-print on the form, if possible* | | | | | | | | |
|  | | |  |  |  |  |  |  |
| *Main body of the form, one entry per household member* | | | | | | | | |
| HM22 | Individual Number | Number | X | X | X | X |  | If primary caregiver same as : RI14 SIA14  If mother same as: TT12  If child same as: RI12 RIHC15 SIA12 TT13  Could also be the same as: RI13 SIA13 |
| HM23 | Name | Free text |  |  |  |  | X |  |
| HM24 | Did the individual sleep here last night? | 1. Yes 2. No |  |  |  |  | X |  |
| HM25 | How long has the individual lived in this household? | Time (years) |  |  |  |  | X |  |
| HM26 | How long has the individual lived in this household? | Time (months) |  |  |  |  | X |  |
| HM27 | Sex | 1. M 2. F |  |  |  | X |  | RI20 RIHC19 |
| HM28\_m | Date of birth, month | Numeric value between 1-12 or Missing |  |  |  |  | X |  |
| HM28\_d | Date of birth, day | Numeric value between 1-31 or Missing |  |  |  |  | X |  |
| HM28\_y | Date of birth, year | 4-digit numeric value or Missing |  |  |  |  | X |  |
| HM29 | Age in years | Number: Can take decimal values like 1.5 |  | X |  |  |  | If child same as: RI24  If TT respondent, same as TT16 |
| HM30 | Age in months | Number: Can take decimal values like 14.5 |  |  |  |  | X | If child same as: RI25 |
| Note that either HM29 or HM30 may be coded but they are not meant to be combined. A child who is 18 months old should be recorded as HM29 = 1.5 or HM30 = 18 but NOT coded HM29 = 1 and HM30 = 6. In other words, the values of these two variables are not meant to be added together to obtain the age – they are simply two ways of recording age. | | | | | | | | |
| HM31 | Eligible for RI Coverage Survey | 1. Yes 2. No |  |  |  | X |  |  |
| HM32 | Selected for RI Coverage Survey | 1. Yes or blank |  |  |  | X |  |  |
| HM33 | Disposition code for RI Survey: Visit 1 | 2. Come back later; caregiver not available 3. Refused interview for this respondent  4. Completed interview |  |  |  | X |  |  |
| HM34 | Disposition code for RI Survey: Visit 2 | 2. Come back later; caregiver not available 3. Refused interview for this respondent  4. Completed interview |  |  |  | X |  |  |
| HM35 | Disposition code for RI Survey: Visit 3 | 2. Come back later; caregiver not available 3. Refused interview for this respondent  4. Completed interview |  |  |  | X |  |  |
| HM36 | Eligible for TT Survey | 1. Yes 2. No |  |  |  | X |  |  |
| HM37 | Selected for TT Survey | Yes or blank |  |  |  | X |  |  |
| HM38 | Disposition code for TT Survey: Visit 1 | 2. Come back later; caregiver not available 3. Refused interview for this respondent  4. Completed interview |  |  |  | X |  |  |
| HM39 | Disposition code for TT Survey: Visit 2 | 2. Come back later; caregiver not available 3. Refused interview for this respondent  4. Completed interview |  |  |  | X |  |  |
| HM40 | Disposition code for TT Survey: Visit 3 | 2. Come back later; caregiver not available 3. Refused interview for this respondent  4. Completed interview |  |  |  | X |  |  |
| HM41 | Eligible for Post-SIA Survey | 1. Yes 2. No |  |  |  | X |  |  |
| HM42 | Selected for Post-SIA Survey | Yes or blank |  |  |  | X |  |  |
| HM43 | Disposition code for Post-SIA Survey: Visit 1 | 2. Come back later; caregiver not available 3. Refused interview for this respondent  4. Completed interview |  |  |  | X |  |  |
| HM44 | Disposition code for Post-SIA Survey: Visit 2 | 2. Come back later; caregiver not available 3. Refused interview for this respondent  4. Completed interview |  |  |  | X |  |  |
| HM45 | Disposition code for Post-SIA Survey: Visit 3 | 2. Come back later; caregiver not available 3. Refused interview for this respondent  4. Completed interview |  |  |  | X |  |  |
|  | | |  |  |  |  |  |  |
| *Footer, to be printed at the bottom of the form* | | | | | | | | |
| HM46\_m | End date of interview – month | Numeric value between 1-12 or Missing |  |  |  |  | X |  |
| HM46\_d | End date of interview – day | Numeric value between 1-31 or Missing |  |  |  |  |  |  |
| HM46\_y | End date of interview – year | 4-digit numeric value or Missing |  |  |  |  |  |  |
| HM47 | End time of interview | Time |  |  |  |  | X |  |
| HM48 | Finished with household (check box) | 1. Yes 2. No |  |  |  |  | X |  |
| HM49 | Interviewer’s comments | Free text |  |  |  |  | X |  |
| HM50 | Supervisor’s comments | Free text |  |  |  |  | X |  |

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## Form RI – Sample Questions for a Routine Immunization Form (typically for children aged 12-23 months, but may be modified for other cohorts)

This dataset is essential if the goal is to calculate routine immunization coverage indicators.

| **Item** | **Question** | **SubQuestion** | **Responses** | **Skip** | **Required by RI**  **Indicators** | **Not Explicitly Used by RI VCQI Indicators** | **Same Variable Across VCQI Datasets** |
| --- | --- | --- | --- | --- | --- | --- | --- |
| *Header, to be printed at the top of the form* | | | | | | | |
| RI01 | Stratum ID number\* |  | Number |  | X |  | HH01 HM01 RIHC01 SIA01 TT01 |
| RI02 | Stratum name\* |  | Free text |  | X |  | HH02 HM02 RIHC02 SIA02 TT02 |
| RI03 | Cluster ID number\* |  | Number |  | X |  | HH03 HM03 RIHC03 SIA03 TT03 |
| RI04 | Cluster name\* |  | Free text |  | X |  | HH04 HM04 RIHC04 SIA04 TT04 |
| RI05 | Interviewer number |  | Number |  |  | X | HM05 RIHC05 SIA05 TT05 |
| RI06 | Interviewer name |  | Free text |  |  | X | HM06 RIHC06 SIA06 TT06 |
| RI07 | Supervisor number |  | Number |  |  | X | HH07 HM07 RIHC07 SIA07 TT07 |
| RI08 | Supervisor name |  | Free text |  |  | X | HH08 HM08 RIHC08 SIA08 TT08 |
| RI09\_m | Start date of interview | Month | Numeric value between 1-12 or Missing |  | X |  |  |
| RI09\_d | Start date of interview | Day | Numeric value between 1-31 or Missing |  | X |  |  |
| RI09\_y | Start date of interview | Year | 4-digit numeric value or Missing |  | X |  |  |
| RI10 | Start time of interview |  | Time |  |  | X |  |
| *\* Pre-print on the form, if possible* | | | | | | | |
|  |  |  |  |  |  |  |  |
| *Main body of the form, one entry per child* | | | | | | | |
| RI11 | Household ID |  | Copy from Form HM  **(Again, note that this is saved as a string type variable.)** |  | X |  | HH14 HM09 RIHC14 SIA11 TT11 TTHC14 |
| RI12 | Individual number of child (from form HM) |  | Copy number from Form HM |  | X |  | RI12 RIHC15 SIA12 TT13 |
| RI13 | Individual number being surveyed – typically the child’s mother (from form HM) |  | Copy number from Form HM |  |  | X | RI13 SIA13 |
| RI14 | Individual number of primary caregiver (from form HM) |  | Copy number from Form HM |  |  | X | RI14 SIA14 |
| RI15 | Latitude |  | ##.#### |  |  | X | HH16 HM11 RIHC10 SIA15 TT14 |
| RI16 | Longitude |  | ##.#### |  |  | X | HH17 HM12 RIHC11 SIA16 TT15 |
| RI17 | Name of child  (full name) |  | Free text |  |  | X | RIHC16 |
| RI18 | Name of child's father |  | Free text |  |  | X | RIHC17 |
| RI19 | Name of child's mother |  | Free text |  |  | X | RIHC18 |
| RI20 | Sex of child |  | 1. M 2. F |  |  | X  (Not strictly required, but sex is very often used as a stratifier, so we always include it.) | RIHC19 HM27 |
| dob\_date\_history\_m | Child’s date of birth from Mother’s recall | Month | Numeric value between 1-12 or Missing | If unknown, skip to RI24 | X |  |  |
| dob\_date\_history\_d | Child’s date of birth from Mother’s recall | Day | Numeric value between 1-31 or Missing |  | X |  |  |
| dob\_date\_history\_y | Child’s date of birth from Mother’s recall | Year | 4-digit numeric value or Missing |  | X |  |  |
| RI24 | Age of child (if birthdate not known) | Years | Number  (Can take decimal values, like 1.5) |  |  | X (RI code uses it to assign age at interview if DOB is missing and RI24 is present, but does not require it) | HM29 |
| RI25 | Age of child (if birthdate not known) | Months | Number  (Can take decimal values like 14.5) |  |  | X  (RI code uses it to assign age at interview if DOB and RI24 are missing, but does not require it) | HM30 |
| Home Based Record or Vaccination Card | | | | | | | |
| RI26 | Did you ever receive or were given a vaccination card or a family folder for (name)? |  | 1. Yes 2. No 99. Do Not Know | 2 or 99 : RI70 | X |  |  |
| RI27 | May I see it please? |  | 1. Yes, Card Seen 2. No, Card Not Seen | 1 : RI30 | X |  |  |
| RI28 | Why do you no longer have the vaccination card? |  | 1. Lost card 2. Destroyed 3. Other (Specify below) | Anything but 3: RI70 |  | X |  |
| RI29 | Other, please specify |  | Free text | Skip to RI70 |  | X |  |
| RI30 | Is the card the original that you received or a replacement/copy? |  | 1. Original 2. Replacement/ Copy 99. Do Not Know | Anything but 2 : Skip next |  | X |  |
| RI31 | Did you have to pay for the replacement card? |  | 1. Yes 2. No 99. Do Not Know |  |  | X |  |
| Note that the numbers in the Item names become irregular in this table because earlier versions of this document listed a fixed set of doses rather than using angle brackets (<dose> or <antigen>) to indicate that you should substitute the names of doses from your survey. When coding data to be compatible with VCQI, use the Item names in this document, even if the system for numbering the variables is not contiguous. | | | | | | | |
| dob\_date\_card\_m | Child’s Month of birth (as recorded on card) | Month | Numeric value between 1-12 or Missing |  | X |  | dob\_date\_card\_m (from RIHC dataset) |
| dob\_date\_card\_d | Child’s Day of birth (as recorded on card) | Day | Numeric value between 1-31 or Missing |  | X |  | dob\_date\_card\_d (from RIHC dataset) |
| dob\_date\_card\_y | Child’s Year of birth (as recorded on card) | Year | 4-digit numeric value or Missing |  | X |  | dob\_date\_card\_y (from RIHC dataset) |
| *Note: The following 4 variables need to be created for each DOSE within the survey.*  *Replace <dose> with vaccine name or abbreviation of vaccine name so it stays within 5 characters. (Example: penta, opv, rota, pcv,)* | | | | | | | |
| <*dose*>\_date\_card\_m | Month DOSE received as recorded on card document | Month | Numeric value between 1-12 or Missing | Skip tick if able to fill any dose date component | X |  |  |
| *<dose>\_*date\_card\_d | Day DOSE received as recorded on card document | Day | Numeric value between 1-31 or Missing | Skip tick if able to fill any dose date component | X |  |  |
| *<dose>\_*date\_card\_y | Year DOSE received as recorded on card document | Year | 4-digit numeric value or Missing | Skip tick if able to fill any dose date component | X |  |  |
| *<dose>*\_tick\_card | DOSE - Tick mark on card | This should be populated with a 1 if there is an indication vaccine was received but the date is not legible. If the date is legible but incomplete, it is okay to fill in part of the date OR to set the tick variable, or both. | 1. Yes 2. No |  | X |  |  |
| Caretaker Recall or History | | | | | | | |
| RI69 | *Has the child received every vaccine in this survey?* |  | 1. Yes 2. No | 1 : RI103 |  | X |  |
| RI70 | Has *the child* ever received any vaccinations, drops or injectionsin the past*?* |  | 1. Yes 2. No 99. Do Not Know | 2 or 99 : RI89 |  | X |  |
| *<antigen>*\_history\_ever | Provide description of how the child would have received the vaccine to ask about antigen specific recall.  For example: Has the child ever received an injection in the right upper arm or shoulder that usually causes a scar?  – that is, BCG vaccination (against tuberculosis) |  | 1. Yes 2. No 99. Do Not Know | 2 or 99 : Skip next |  | X |  |
| If <antigen> is given more than once, then ask:  *<antigen>*\_history\_count | How many times was the <antigen> vaccine received at a health facility? |  | Number  99. Do Not Know |  |  | X |  |
| <dose>\_history | Did the child ever receive <dose>? | Either asked for each dose, or calculated using <antigen>\_history\_ever and <antigen>\_history\_count | 1. Yes 2. No or do not know |  | X |  |  |
| Note: Your program to make the dataset compatible with VCQI will examine all of these <antigen>\_history\_ever and <antigen>\_history\_count variables and use logic to construct a set of <dose>\_history variables coded 1=Yes and 2=No. E.g., if penta\_history\_ever were 1 (yes) and penta\_history\_count were 2, your program would set penta1\_history to 1, penta2\_history to 1, and penta3\_history to 2. VCQI uses the <dose>\_history variables, but ignores any <antigen>\_history\_ever or \_count variables. For multi-dose antigens, if the respondent says yes to the \_ever question and says ‘do not know’ to the \_count question, it is traditional to code dose 1 as yes (1) and later doses as no (2). To be clear, the RI dataset should include a <dose>\_history variable for every dose in the schedule, and the only allowable values are 1 (caregiver said the child received it) or 2 (caregiver did not say the child received this dose). If <antigen>\_history\_ever response is ‘do not know’ then it is tradition to code <dose>\_history as 2, in order to be conservative. | | | | | | | |
| *If BCG is part of the DOSE list, the next variable is used in VCQI indicators.  If missing from the dataset, VCQI will create it and populate it with missing values.* | | | | | | | |
| bcg\_scar\_history | If the child is present, check for evidence of a scar |  | 1. Scar Present 2. No Scar Present 3. Child not available to check |  | X |  |  |
| Questions to ask about vaccination campaign doses  Questions RI82 and RI85 are examples of one question per dose about doses that might have been administered in campaigns in the child’s lifetime. Sometimes the questions are worded to describe the dates of the campaign(s) or include some details to help the caregiver’s memory. | | | | | | | |
| RI82 | How many times was measles vaccine given during a large campaign, normally involving a large group of children? (The campaign can be up to five or up to fifteen years of age) |  | Number  99. Do Not Know |  |  | X |  |
| RI85 | How many times did the child receive yellow fever during a large campaign, usually involving a large group of children (up to five years of age), and perhaps vaccinating at your house? |  | Number  99. Do Not Know |  |  | X |  |
| Note: Some surveys do not ask about campaign doses. If questions like RI82 or RI85 are included in the questionnaire then the program to make the <dose>\_history variables should also incorporate these data. This might be accomplished with Stata code like this:  gen mcv\_history = 2 \* default to no  replace mcv\_history = 1 if mcv\_history\_ever == 1 \* mcv stands for ‘measles containing virus’  replace mcv\_history = 1 if RI82 >= 1 & RI82 < 99 \* account for campaign doses  gen yf\_history = 2 \* default to no  replace yf\_history = 1 if yf\_history\_ever == 1 \* yf stands for ‘yellow fever’  replace yf\_history = 1 if RI85 >= 1 & RI85 < 99 \* account for campaign doses | | | | | | | |
| RI88 | Do you think your child has received all the vaccines that are recommended? |  | 1. Yes 2. No 99. Do Not Know | 1: RI103 |  | X |  |
| RI89 | Why hasn't the child had all recommended vaccines?  *(Without probing, record all reasons mentioned)* | 1. Place of Immunization Too Far | 1. Mentioned  2. Not Mentioned |  |  | X |  |
| RI90 | Why hasn't the child had all recommended vaccines? | 2. Time of Immunization Inconvenient | 1. Mentioned  2. Not Mentioned |  |  | X |  |
| RI91 | Why hasn't the child had all recommended vaccines? | 3. Mother Too Busy | 1. Mentioned  2. Not Mentioned |  |  | X |  |
| RI92 | Why hasn't the child had all recommended vaccines? | 4. Family Problem, Including Illness of Mother | 1. Mentioned  2. Not Mentioned |  |  | X |  |
| RI93 | Why hasn't the child had all recommended vaccines? | 5. Child Ill- Not Brought | 1. Mentioned  2. Not Mentioned |  |  | X |  |
| RI94 | Why hasn't the child had all recommended vaccines? | 6. Child Ill- Brought but Not Given Immunization | 1. Mentioned  2. Not Mentioned |  |  | X |  |
| RI95 | Why hasn't the child had all recommended vaccines? | 7. Long Wait | 1. Mentioned  2. Not Mentioned |  |  | X |  |
| RI96 | Why hasn't the child had all recommended vaccines? | 8. Rumors | 1. Mentioned  2. Not Mentioned |  |  | X |  |
| RI97 | Why hasn't the child had all recommended vaccines? | 9. No Faith in Immunization | 1. Mentioned  2. Not Mentioned |  |  | X |  |
| RI98 | Why hasn't the child had all recommended vaccines? | 10. Fear of Side Reactions | 1. Mentioned  2. Not Mentioned |  |  | X |  |
| RI99 | Why hasn't the child had all recommended vaccines? | 11. Place and/or Time of Immunization Unknown | 1. Mentioned  2. Not Mentioned |  |  | X |  |
| RI100 | Why hasn't the child had all recommended vaccines? | 12. Other (Specify Below) | 1. Mentioned  2. Not Mentioned |  |  | X |  |
| RI101 | Why hasn't the child had all recommended vaccines? | 13. Other, please specify | Free text |  |  | X |  |
| RI102 | Which reason above is the MOST IMPORTANT reason? |  | 1-13 |  |  | X |  |
| RI103 | Where does your child usually receive vaccinations? |  | 1. Local Government Health Clinic 2. Local Private Doctor's Office 3. Local Other  4. Outside Government Health Clinic 5. Outside Private Doctor's Office 6. Outside Other |  |  | X |  |
| RI104 | Write the name of the clinic or facility. |  | Free text |  |  | X |  |
| RI105 | Does the child usually receive vaccinations at one of the facilities on your list? (where the team will go to search for records) |  | 1. Yes 2. No |  |  | X |  |
| RI106 | Where did your child receive his/her most recent vaccination? |  | 1. Local Government Health Clinic 2. Local Private Doctor's Office 3. Local Other  4. Outside Government Health Clinic 5. Outside Private Doctor's Office 6. Outside Other |  |  | X |  |
| RI107 | Have you taken a child to a health facility for vaccination and the child was not vaccinated? |  | 1. Yes 2. No 99. Do Not Remember | 2 or 99 : RI118 |  | X |  |
| RI108 | Why was the child not vaccinated? (W*ithout probing record all reasons mentioned)* | 1. No Vaccine | 1. Mentioned  2. Not Mentioned |  |  | X |  |
| RI109 | Why was the child not vaccinated? | 2. No Vaccinator (Not Closed) | 1. Mentioned  2. Not Mentioned |  |  | X |  |
| RI110 | Why was the child not vaccinated? | 3. Health Facility Closed When I Went | 1. Mentioned  2. Not Mentioned |  |  | X |  |
| RI111 | Why was the child not vaccinated? | 4. Child Was Sick | 1. Mentioned  2. Not Mentioned |  |  | X |  |
| RI112 | Why was the child not vaccinated? | 5. Not Enough Children Present To Open A Vial of Vaccine | 1. Mentioned  2. Not Mentioned |  |  | X |  |
| RI113 | Why was the child not vaccinated? | 6. The Visit Was Not On The Vaccination Day | 1. Mentioned  2. Not Mentioned |  |  | X |  |
| RI114 | Why was the child not vaccinated? | 7. Wait was too long | 1. Mentioned  2. Not Mentioned |  |  | X |  |
| RI115 | Why was the child not vaccinated? | 8. Others (Specify Below) | 1. Mentioned  2. Not Mentioned |  |  | X |  |
| RI116 | Why was the child not vaccinated? | 9. Do Not Know | 1. Mentioned  2. Not Mentioned |  |  | X |  |
| RI117 | Other, please specify |  | Free text |  |  | X |  |
| RI118 | Do you know of any child (own or neighbor, etc.) who had an abscess after a vaccination? |  | 1. Yes 2. No 99. Do Not Know | 2 or 99 : RI123 |  | X |  |
| RI119 | Who was the child? |  | 1. Own Child 2. Neighbor’s Child 3. Friend's Child 4. Family Member's Child 5. Classmate/Friend of Own Child 6. Other (Specify Below) | Anything but 6 : Skip next |  | X |  |
| RI120 | Other, please specify |  | Free text |  |  | X |  |
| RI121 | Where was the abscess located? |  | 1. Arm 2. Thigh 3. Other (Specify Below)  99. Do Not Know | Anything but 3: Skip next |  | X |  |
| RI122 | Other, please specify |  | Free text |  |  | X |  |
| RI123 | If your child was due for a vaccination and was showing symptoms of a fever, would you take them to be vaccinated? |  | 1. Yes 2. No 99. Do Not Know |  |  | X |  |
| RI124 | If they had a cough? |  | 1. Yes 2. No 99. Unsure |  |  | X |  |
| RI125 | If they had a rash? |  | 1. Yes 2. No 99. Unsure |  |  | X |  |
| RI126 | If they had diarrhea? |  | 1. Yes 2. No 99. Unsure |  |  | X |  |
| RI127 | What messages have you heard about immunizations? *(Without probing, record all reasons mentioned)* | 1. About Campaigns (E.G. Dates, Target Group) | 1. Mentioned  2. Not Mentioned |  |  | X |  |
| RI128 | What messages have you heard about immunizations? | 2. Importance of Routine Vaccination | 1. Mentioned  2. Not Mentioned |  |  | X |  |
| RI129 | What messages have you heard about immunizations? | 3. Where to Get Routine Vaccination | 1. Mentioned  2. Not Mentioned |  |  | X |  |
| RI130 | What messages have you heard about immunizations? | 4. Age to Get Routine Vaccination | 1. Mentioned  2. Not Mentioned |  |  | X |  |
| RI131 | What messages have you heard about immunizations? | 5. Return for The Next Doses Of The Routine Vaccination | 1. Mentioned  2. Not Mentioned |  |  | X |  |
| RI132 | What messages have you heard about immunizations? | 6. About New Vaccines (Pneumococcal/Rotavirus Vaccine) | 1. Mentioned  2. Not Mentioned |  |  | X |  |
| RI133 | What messages have you heard about immunizations? | 7. Other (Specify Below) | 1. Mentioned  2. Not Mentioned |  |  | X |  |
| RI134 | What messages have you heard about immunizations? | 99. Do Not Know | 1. Mentioned  2. Not Mentioned |  |  | X |  |
| RI135 | Other, please specify |  | Free text |  |  | X |  |

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Mobility Questions  *The following questions may help identify families that are mobile or where caretakers travel for part of the year. If a substantial portion of families are somewhat mobile for cultural or economic reasons, it may be worthwhile to include these questions and to perform a hypothesis test to see if coverage levels differ between mobile and immobile households.* | | | | | | | |
| RI136 | In the last year, have any members of this household gone to live or work somewhere else for part of the year? (Sleeping away from home for more than one month) |  | 1. Yes 2. No 99. Do Not Know | 2 or 99 : Skip to RI142 |  | X |  |
| RI137 | If yes, how many times? |  | 1. Once 2. 2-3 Times 3. 4 or More Times 99. Do Not Know |  |  | X |  |
| RI138 | If yes, what was the duration of the longest trip? |  | 1. 1-2 Months 2. 3-6 Months 3. More Than 6 Months 99. Do Not Know |  |  | X |  |
| RI139 | Who went? |  | 1. Everyone in the Household 2. One Adult Only 3. Two or more Adults 4. Children Only 5. A Mix of Adults and Children 99. Do Not Know |  |  | X |  |
| RI140 | What was the purpose of the trip? |  | 1. To Work 2. To Visit Family 3. For Leisure Or Holiday Or Vacation 4. Other, Specify Below 99. Do Not Know | Anything but 4 : Skip next |  | X |  |
| RI141 | Other, please specify |  | Free text |  |  | X |  |
|  |  |  |  |  |  |  |  |
| *Footer, to be printed at the bottom of the form* | | | | | | | |
| RI142\_m | End date of interview – month | Month | Numeric value between 1-12 or Missing |  |  | X |  |
| RI\_142\_d | End date of interview – day | Day | Numeric value between 1-31 or Missing |  |  |  |  |
| RI\_142\_y | End date of interview – year | Year | 4-digit numeric value or Missing |  |  |  |  |
| RI143 | End time of interview |  | Time |  |  | X |  |
| RI144 | Finished with household (check box) |  | 1. Yes 2. No |  |  | X |  |
| RI145 | Interviewer’s comments |  | Free text |  |  | X |  |
| RI146 | Supervisor’s comments |  | Free text |  |  | X |  |

## Form TT – Sample Questions for a Maternal Tetanus Immunization Form (Women who gave birth to a live baby in the last 12 months)

This dataset is essential if the goal is to calculate the tetanus protection at birth coverage indicator.

| **Item** | **Question** | **Responses** | **Skip** | **Required by TT**  **Indicators** | **Not Explicitly Used by TT VCQI Indicators** | **Same Variable Across VCQI Datasets** |
| --- | --- | --- | --- | --- | --- | --- |
| *Header, to be printed at the top of the form* | | | |  |  |  |
| TT01 | Stratum ID number\* | Number |  | X |  | HH01 HM01 RI01 RIHC01 SIA01 |
| TT02 | Stratum name\* | Free text |  | X |  | HH02 HM02 RI02 RIHC02 SIA02 |
| TT03 | Cluster ID number\* | Number |  | X |  | HH03 HM03 RI03 RIHC03 SIA03 |
| TT04 | Cluster name\* | Free text |  | X |  | HH04 HM04 RI04 RIHC04 SIA04 |
| TT05 | Interviewer number | Number |  |  | X |  |
| TT06 | Interviewer name | Free text |  |  | X |  |
| TT07 | Supervisor number | Number |  |  | X |  |
| TT08 | Supervisor name | Free text |  |  | X |  |
| TT09 | Start date of interview | Date |  | X |  |  |
| TT10 | Start time of interview | Time |  |  | X |  |
| *\* Pre-print on the form, if possible* | | | |  |  |  |
|  |  |  |  |  |  |  |
| *Main body of the form; one entry per respondent* | | | |  |  |  |
| TT11 | Household ID | Number |  | X |  | HH14 HM09 RI11 RIHC14 SIA11 |
| TT12 | Individual number of mother being interviewed (from form HM) | Copy number from Form HM |  | X |  | If primary caregiver same as: RI14 SIA14 |
| TT13 | Individual number of child (from form HM) | Copy number from Form HM |  |  |  | RI12 RIHC15 SIA12 |
| TT14 | Latitude | ##.#### |  |  | X | HH16 HM11 RI15 RIHC10 SIA15 |
| TT15 | Longitude | ##.#### |  |  | X | HH17 HM12 RI16 RIHC11 SIA16 |
| TT16 | Age of the mother (years) | Number (Can take decimal values) |  | X |  | HM29 |
| TT17 | Date of birth of the child aged 0-11 months | Date |  |  | X |  |
| TT18 | Did you see anyone for pregnancy care during your pregnancy with (name) to check your pregnancy? | 1: Yes 2: No 99: Do Not Remember | 2 or 99 : TT22 |  | X |  |
| TT19 | Whom did you see? | 1. Doctor 2. Health Officer 3. Nurse/Midwife 4. Health Extension Worker 5. Traditional Birth Attendant 6. Community Health Worker 7. Other (Specify Below) 8. Do Not Know | Anything but 7 : Skip next |  | X |  |
| TT20 | Other, please specify | Free text |  |  | X |  |
| TT21 | How many visits did you have? | Number |  |  | X |  |
| TT22 | Where did you deliver the baby? | 1. Home  2. Relative/Neighbor’s Home 3. Health Post 4. Health Center/Hospital  5. Private Or NGO Facility  6. Other (Specify Below) | Anything but 6 : Skip next |  | X |  |
| TT23 | Other, please specify | Free text |  |  | X |  |
| TT24 | Who attended the delivery of the child? | 1. Doctor  2. Health Officer  3. Nurse  4. Midwife  5. Health Extension Worker  6. Traditional Birth Attendant  7. Community Health Worker  8. Relative/Friend  9. Other Person (Specify Below) 10. Do Not Know | Anything but 9 : Skip next |  | X |  |
| TT25 | Other, please specify | Free text |  |  | X |  |
| TT26 | Did you ever receive a vaccination card for your own immunizations? | 1. Yes 2. No 99. Do Not Know | 2 or 99 : TT36 |  | X |  |
| TT27 | Do you have a card or other documents with your own immunizations listed? May I see it? | 1. Yes, Card Seen 2. Yes, Card Not Seen 3. No Card | 3 : TT36 | X |  |  |
| TT28 | Is the card the original that you received or a replacement/copy? | 1. Original 2. Replacement/ Copy 3. Do Not Know | 1 or 3 : Skip next |  | X |  |
| TT29 | Did you have to pay for a replacement? | 1. Yes 2. No |  |  | X |  |
| If card is available, copy dates for TT1-TT6 | | | | | | |
| TT30 | TT1 | Date (may record using TT30\_m and TT30\_d and TT30\_y or may store the complete date in TT30. If the date on the card is incomplete or illegible, set the value of TT30 to 1. |  | X |  |  |
| TT31 | TT2 | Date (may record using TT31\_m and TT31\_d and TT31\_y or may store the complete date in TT31. If the date on the card is incomplete or illegible, set the value of TT31 to 1. |  | X |  |  |
| TT32 | TT3 | Date (may record using TT32\_m and TT32\_d and TT32\_y or may store the complete date in TT32. If the date on the card is incomplete or illegible, set the value of TT32 to 1. |  | X |  |  |
| TT33 | TT4 | Date (may record using TT33\_m and TT33\_d and TT33\_y or may store the complete date in TT33. If the date on the card is incomplete or illegible, set the value of TT33 to 1. |  | X |  |  |
| TT34 | TT5 | Date (may record using TT34\_m and TT34\_d and TT34\_y or may store the complete date in TT34. If the date on the card is incomplete or illegible, set the value of TT34 to 1. |  | X |  |  |
| TT35 | TT6 | Date (may record using TT35\_m and TT35\_d and TT35\_y or may store the complete date in TT35. If the date on the card is incomplete or illegible, set the value of TT35 to 1. |  | X |  |  |
| If no card is available, or if the card does not have a date recorded for  at least five doses, ask the following history questions. | | | | | | |
| TT36 | When you were pregnant with (*name*), did you receive any injection in the arm or shoulder to prevent the baby from getting tetanus after birth? | 1. Yes 2. No  99. Do Not Remember | 2 or 99 : Skip next | X |  |  |
| TT37 | How many times did you receive this injection in the arm (tetanus vaccine) during your pregnancy with (*name of baby born live in last 12 months*)?  [Please list the total number, even if some of them are also listed on your card.] | Number of times 3. If ≥3 99. Do Not Know |  | X |  |  |
| TT38 | 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? | 1. Yes 2. No  99. Do Not Remember | 2 or 99 : Skip next | X |  |  |
| TT39 | How many times did you receive this injection in the arm (tetanus vaccination) during your pregnancies previous to the pregnancy with (*name*)? [Please list the total number, even if some of them are also listed on your card.] | Number 99. Do Not Know |  | X |  |  |
| TT40 | Did you receive any tetanus vaccination (an injection in the arm) at any time when you were not pregnant, other than injections given for contraception (Depo-Provera)? | 1. Yes 2. No  99. Do Not Know | 2 or 99 skip next | X |  |  |
| TT41 | How many times did you receive a tetanus vaccination when you were not pregnant during routine or outreach immunizations or during large campaign many women attended? [Please list the total number, even if some of them are also listed on your card.] | Number of times  7. If ≥7  99. Do Not Know |  | X |  |  |
| TT42 | When did you receive your last tetanus vaccination (How many years ago)? | 0. If <1 year enter 0 Years ago \_\_\_\_\_\_\_\_\_\_ 98. Never Had One  99. Do Not Know |  | X |  |  |
| TT43 | If the mother has received 0 or 1 lifetime vaccine doses against tetanus, why?  (Ask the question first, after the person has answered, go through the list of answers to find the main reason) | A. The Mother Did Not Perceive The Importance Of The Second Dose At Least Two Weeks Before Delivery B. The Mother Ignores Need For Immunization C. The Mother Ignores The Place And Time Of The Session D. She Is Afraid Of Side Reactions E. She Made No Antenatal Visits F. She Deferred To A Later Date G. Does Not Trust Vaccination H. Rumors I. Location Of Setting Too Far Away J. Hours Unsuitable K. Missing Vaccinator L. Vaccine Not Available M. Mother Too Busy N. Family Problem (Disease)  O. Mother Not Brought Because She Was Sick P. Sick Mother Brought But Was Not Vaccinated Q. Price Vaccination Card R. Syringes Too Expensive S. Wait Too Long T. Other (Specify Below) | Anything but T : Skip next |  | X |  |
| TT44 | Other, please specify | Free text |  |  | X |  |
|  | | | |  |  |  |
| *Footer, to be printed at the bottom of the form* | | | | | | |
| TT45\_m | End date of interview – month | Numeric value between 1-12 or Missing |  |  | X |  |
| TT45\_d | End date of interview – day | Numeric value between 1-31 or Missing |  |  |  |  |
| TT45\_y | End date of interview – year | 4-digit numeric value or Missing |  |  |  |  |
| TT46 | End time of interview | Time |  |  | X |  |
| TT47 | Interviewer’s comments | Free text |  |  | X |  |
| TT48 | Supervisor’s comments | Free text |  |  | X |  |

## Form SIA – Sample Questions for a Post Campaign Survey Form

This dataset is essential if the goal is to calculate campaign coverage indicators.

Note that the dataset only holds information for a single campaign dose, so if your campaign included two or more doses, you will need to make two or more datasets. If the campaign administered measles and polio vaccine, you might construct a dataset named sia\_mcv and another named sia\_opv.

| **Item** | **Question** | **Responses** | **Skip** | **Required by SIA**  **Indicators** | **Not Explicitly Used by SIA VCQI Indicators** | **Same Variable Across VCQI Datasets** |
| --- | --- | --- | --- | --- | --- | --- |
| *Header, to be printed at the top of the form* | | | | | | |
| SIA01 | Stratum ID number\* | Number |  | X |  | HH01 HM01 RI01 RIHC01 TT01 TTHC01 |
| SIA02 | Stratum name\* | Free text |  | X |  | HH02 HM02 RI02 RIHC02 TT02 TTHC02 |
| SIA03 | Cluster ID number\* | Number |  | X |  | HH03 HM03 RI03 RIHC03 TT03 TTHC03 |
| SIA04 | Cluster name\* | Free text |  | X |  | HH04 HM04 RI04 RIHC04 TT04 TTHC04 |
| SIA05 | Interviewer number | Number |  |  | X |  |
| SIA06 | Interviewer name | Free text |  |  | X |  |
| SIA07 | Supervisor number | Number |  |  | X |  |
| SIA08 | Supervisor name | Free text |  |  | X |  |
| SIA09 | Start date of interview | Date |  |  | X |  |
| SIA10 | Start time of interview | Time |  |  | X |  |
| *\*Preprinted on the forms, if possible* | | | | | | |
| *Main body of form; one entry per respondent* | | | | | | |
| SIA11 | Household ID | Number |  | X |  | HH14 HM09 RI11 RIHC14 TT11 TTHC14 |
| SIA12 | Individual number of child (from form HM) | Copy number from Form HM |  | X |  | RI12 RIHC15 SIA12 TT13 TTHC16 |
| SIA13 | Individual number being surveyed (from form HM) | Copy number from Form HM |  |  | X | RI13 |
| SIA14 | Individual number (from form HM) of primary caregiver of child identified in question SIA12 | Copy number from Form HM |  |  | X | RI14 |
| SIA15 | Latitude | ##.#### |  |  | X | HH16 HM11 RI15 RIHC10 TT14 TTHC10 |
| SIA16 | Longitude | ##.#### |  |  | X | HH17 HM12 RI16 RIHC11 TT15 TTHC11 |
| SIA17 | Was the child living here during the campaign?  (mention the campaign dates) | 1. Yes 2. No  99. Do Not Know |  |  | X |  |
| Although VCQI doesn’t use SIA17 explicitly, if a notable portion of respondents say ‘No’ then it is important to consider using it in a high-level summary of the sample. *NN children were interviewed and PP% were living in the household at the time of the campaign.* It may also be prudent to report coverage among those who were living in the surveyed households at the time of the campaign and among those who were not. This can be a notable issue if the post-campaign coverage survey is delayed by weeks or months in a country with a mobile population. We recommend including SIA17 in the analysis dataset and doing some sensitivity analysis to decide what to say about it, if anything. | | | | | | |
| SIA18 | What was the primary source of information about the occurrence of the campaign?   (Ask the question first, after the person has answered, go through the list of answers to select the primary source.)  [If you would rather have the respondents tell you ALL the sources by which they heard of the campaign, break this into several questions where each is coded  1) Mentioned or 2) Not Mentioned.] | A. Not Informed B. Radio C. Television D. Internet E. Criers / Mobilisers F. Community Health Workers G. School H. Family I. Neighbor/ Friend J. Village Chief K. Religious Leader L. Other (Specify Below) | Anything but L: Skip next |  | X |  |
| SIA19 | Other, please specify | Free text |  |  | X |  |
| SIA20 | Did the child receive the <campaign> (e.g., measles/rubella) vaccine during the recent campaign (name campaign dates here as a reminder)? | 1. Yes, Card Seen 2. Yes, Card Not Seen 3. No  99. Do Not Know **Note SIA20 may NOT be set to a missing value.** | 3 or 99 : SIA25 | X |  |  |
| SIA21 | Did the child receive a vaccination card after receiving the vaccination during the campaign? | 1. Yes, Card Seen 2. Yes, Card Not Seen 3. No Card  99. Do Not Know |  | X |  |  |
| SIA22 | Was the finger of the child marked with a pen after receiving the vaccine during the campaign? | 1. Yes, Saw Mark on Child 2. Yes, Child Not Available to Check 3. No 99. Do Not Know |  | X |  |  |
| SIA23 | Did the child develop a reaction in the months following the vaccination? | 1. Yes 2. No  99. Do Not Know |  |  | X |  |
| SIA24 | If so what is/was the problem? | Free text |  |  | X |  |
| SIA25 | If the child did not receive the vaccine during the campaign, why?   (Ask the question first, after the person has answered, go through the list of answers to find the main reason for non-vaccination.)  [If you prefer to summarize all of the reasons, switch this to a ‘select all that apply’ with a separate variable for each response coded 1) Mentioned or 2) Not mentioned. The variables might be named something like SIA25a – SIA25v.] | A. Didn’t Know About the Campaign B. Confused With Other Vaccines (Believed That The Child Had Already Been Vaccinated. C. Subject Or Parent / Guardian Were Missing D. Injections Fear E. Lack Of Confidence In The Vaccine F. Fear Of Side Effects G. Site Of Vaccination Was Not Known H. Hours Vaccination Unsuitable I. Waited Too Long At The Vaccination Site J. Site Of Vaccination Too Far K. Vaccine Not Available At The Vaccination Site L. Missing Vaccinator At The Site M. Not Authorized By Head Of The Household N. Religious Beliefs O. Speaker At The Time Of Vaccination P. Sick At Time Of Vaccination Q. Absent or Travelling During The Period Of The Campaign R. Too Busy To Take Child S. Child Ill T. Mother Ill U. Child Already Received Measles Vaccine  V. Other (Specify Below) | Anything but V : Skip next |  | X |  |
| SIA26 | Other, please specify | Free text |  |  | X |  |
| SIA27 | Before the campaign, had the child already received the <campaign> (e.g., measles/rubella) vaccine? | 1. Yes, Date(s) On Card 2. Yes, Recall/History 3. No 99. Do Not Know |  | X |  |  |
| SIA28\_m | Month of first (e.g., measles/rubella) vaccination on routine immunization card. | Numeric value between 1-12 or Missing | If date: skip next | X |  |  |
| SIA28\_d | Day of first (e.g., measles/rubella) vaccination on routine immunization card. | Numeric value between 1-31 or Missing |  | X |  |  |
| SIA28\_y | Year of first (e.g., measles/rubella) vaccination on routine immunization card. | 4-digit numeric value or Missing |  | X |  |  |
| SIA29 | If the vaccination record (routine) is available, is 1st (e.g., measles/rubella) vaccination recorded with a tick mark or incomplete date or illegible date? | 1=Yes, by tick mark or by incomplete or illegible date; 2 otherwise |  | X |  |  |
| SIA30\_m | Month of second (e.g., measles/rubella) vaccination on routine immunization card. | Numeric value between 1-12 or Missing | If date: skip next | X |  |  |
| SIA30\_d | Day of second (e.g., measles/rubella) vaccination on routine immunization card. | Numeric value between 1-31 or Missing |  | X |  |  |
| SIA30\_y | Year of second (e.g., measles/rubella) vaccination on routine immunization card. | 4-digit numeric value or Missing |  | X |  |  |
| SIA31 | If the vaccination record (routine) is available, is 2nd (e.g., measles/rubella) vaccination recorded with a tick mark or incomplete date or illegible date? | 1=Yes, by tick mark or by incomplete or illegible date; 2 otherwise |  | X |  |  |
| SIA32 | If the vaccination record from a previous campaign is available, does it show that the child received at least one <campaign> vaccination? | 1=Yes, by date or tick mark or incomplete or illegible date (1 means there was any indication on the card they received the dose)  ; 2 otherwise |  | X |  |  |
| SIA33 | If a second vaccination record is available from a previous campaign, does it show that the child received a second <campaign> vaccination? | 1=Yes, by date or tick mark or incomplete or illegible date (1 means there was any indication on the card that they received the dose) ; 2 otherwise |  | X |  |  |
| Note that SIA32 and 33 are coded with 1 and 2 regardless of whether the evidence lists a date or not. If vaccination cards for earlier campaigns may list the vaccination dates, and if you wish to collect & analyze those dates, you could include additional date variables with names like SIA\_PRIOR\_DOSE1\_m, \_d, \_y and SIA\_PRIOR\_DOSE2\_m, \_d, and \_y. But the SIA coverage indicators expect to find the values 1 or 2 or missing in SIA32 and SIA33. If your survey did not ask to see cards from previous vaccination campaigns, simply code SIA32=2 and SIA33 = 2 for every respondent in the SIA dataset. | | | | | | |
|  | | | |  |  |  |
| *Footer, to be printed at the bottom of the form* | | | | | | |
| SIA34\_m | End date of interview – month | Numeric value between 1-12 or Missing |  |  | X |  |
| SIA34\_d | End date of interview – day | Numeric value between 1-31 or Missing |  |  |  |  |
| SIA34\_y | End date of interview – year | 4-digit numeric value or Missing |  |  |  |  |
| SIA35 | End time of interview | Time |  |  | X |  |
| SIA36 | Interviewer’s comments | Free text |  |  | X |  |
| SIA37 | Supervisor’s comments | Free text |  |  | X |  |

## Form RIHC – Sample Questions for a Routine Immunization Health Centre Form

| **Item** | **Question** | **Responses** | **Skip** | **Required by RI**  **Indicators** | **Not Explicitly Used by RI VCQI Indicators** | **Same Variable Across VCQI Datasets** |
| --- | --- | --- | --- | --- | --- | --- |
| *Header, to be printed at the top of the form* | | | | | | |
| RIHC01 | Stratum ID number\* | Number |  | X |  | HH01 HM01 RI01 SIA01 TT01 |
| RIHC02 | Stratum name\* | Free text |  | X |  | HH02 HM02 RI02 SIA02 TT02 |
| RIHC03 | Cluster ID number\* | Number |  | X |  | HH03 HM03 RI03 SIA03 TT03 |
| RIHC04 | Cluster name\* | Free text |  | X |  | HH04 HM04 RI04 SIA04 TT04 |
| RIHC05 | Interviewer number | Number |  |  | X |  |
| RIHC06 | Interviewer name | Free text |  |  | X |  |
| RIHC07 | Supervisor number | Number |  |  | X |  |
| RIHC08 | Supervisor name | Free text |  |  | X |  |
| RIHC09 | Name of health facility | Free text |  |  | X |  |
| RIHC10 | Latitude | ##.#### |  |  | X |  |
| RIHC11 | Longitude | ##.#### |  |  | X |  |
| RIHC12 | Arrival date at health facility | Date |  |  | X |  |
| RIHC13 | Start time of records review | Time |  |  | X |  |
| *\* Pre-printed on the form, if possible* | | | | | | |
|  | | | |  |  |  |
| *Main body of form; one entry per respondent* | | | | | | |
| RIHC14 | Household ID | Number |  | X |  | HH14 HM09 RI11 SIA11 TT11 TTHC14 |
| RIHC15 | Individual number of child (from form HM) | Number |  | X |  | RI12 SIA12 TT13 |
| RIHC16 | Name of child (full name) | Free text |  |  | X | RI17 |
| RIHC17 | Name of child's father | Free text |  |  | X | RI18 |
| RIHC18 | Name of child's mother | Free text |  |  | X | RI19 |
| RIHC19 | Sex of child | 1. M 2. F |  |  | X | RI20 HM27 |
| RIHC20 | Name of head of household | Free text |  |  | X | HH19 HM10 |
| dob\_date\_card\_m | Child’s Month of birth (according to card seen in home (preferred) or caregiver recall on HH listing) | Numeric value between 1-12 or Missing |  |  | X | dob\_date\_card\_m (From RI dataset)  Included in this dataset for purpose of matching the child |
| dob\_date\_card\_d | Child’s Day of birth (according to card seen in home (preferred) or caregiver recall on HH listing) | Numeric value between 1-31 or Missing |  |  | X | dob\_date\_card\_d (From RI dataset)  Included in this dataset for purpose of matching the child |
| dob\_date\_card\_y | Child’s Year of birth (according to card seen in home (preferred) or caregiver recall on HH listing) | 4-digit numeric value or Missing |  |  | X | dob\_date\_card\_y (From RI dataset)  Included in this dataset for purpose of matching the child |
| dob\_date\_register\_m | Child’s Month of birth (according to register) | Numeric value between 1-12 or Missing |  | X |  |  |
| dob\_date\_register\_d | Child’s Day of birth (according to register) | Numeric value between 1-31 or Missing |  | X |  |  |
| dob\_date\_register\_y | Child’s Year of birth (according to register) | 4-digit numeric value or Missing |  | X |  |  |
| *Note: The following 4 variables need to be created for each DOSE within the survey.*  *Replace <dose> with vaccine name or abbreviation of vaccine name so it stays within 5 characters. (Example: penta, opv, rota, pcv,)* | | | | | | |
| *<dose>*\_date\_register\_m | Month DOSE received as recorded on register document | Numeric value between 1-12 or Missing | Skip tick if able to fill any dose date component | X |  |  |
| *<dose>*\_date\_register\_d | Day DOSE received as recorded on register document | Numeric value between 1-31 or Missing | Skip tick if able to fill any dose date component | *X* |  |  |
| *<dose>*\_date\_register\_y | Year DOSE received as recorded on register document | 4-digit numeric value or Missing | Skip tick if able to fill any dose date component | *X* |  |  |
| *<dose>\_*tick\_register | Tick mark recorded on register document or date DOSE received illegible. | 1. Yes 2. No | This should be populated with a 1 if there is any indication the dose was received but there is no date or the date is not legible | X |  |  |
| RIHC59 | Photo file name(s) of digital photo(s) or scan(s) of the EPI register | Free text |  |  | X |  |
|  | | | |  |  |  |
| *Footer, to be printed at the bottom of the form* | | | | | | |
| RIHC60\_m | End date of interview – month | Numeric value between 1-12 or Missing |  |  | X |  |
| RIHC60\_d | End date of interview – day | Numeric value between 1-31 or Missing |  |  |  |  |
| RIHC60\_y | End date of interview – year | 4-digit numeric value or Missing |  |  |  |  |
| RIHC61 | End time of interview | Time |  |  | X |  |
| RIHC62 | Interviewer’s comments | Free text |  |  | X |  |
| RIHC63 | Supervisor’s comments | Free text |  |  | X |  |

## Form TTHC – Sample Questions for a Maternal Tetanus Health Centre Form

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Item** | **Question** | **Responses** | **Required by TT**  **Indicators** | **Not Explicitly Used by TT VCQI Indicators** | **Same Variable Across VCQI Datasets** |
| *Header, to be printed at the top of the form* | | | | | |
| TTHC01 | Stratum ID number\* | Number | X |  | HH01 HM01 RI01 RIHC01 SIA01 TT01 |
| TTHC02 | Stratum name\* | Free text | X |  | HH02 HM02 RI02 RIHC02 SIA02 TT02 |
| TTHC03 | Cluster ID number\* | Number | X |  | HH03 HM03 RI03 RIHC03 SIA03 TT03 |
| TTHC04 | Cluster name\* | Free text | X |  | HH04 HM04 RI04 RIHC04 SIA04 TT04 |
| TTHC05 | Interviewer number | Number |  | X |  |
| TTHC06 | Interviewer name | Free text |  | X |  |
| TTHC07 | Supervisor number | Number |  | X |  |
| TTHC08 | Supervisor name | Free text |  | X |  |
| TTHC09 | Name of health facility | Free text |  | X |  |
| TTHC10 | Latitude | ##.#### |  | X | HH16 HM11 RI15 RIHC10 SIA15 TT14 |
| TTHC11 | Longitude | ##.#### |  | X | HH17 HM12 RI16 RIHC11 SIA16 TT15 |
| TTHC12 | Start date of record check | Date |  | X |  |
| TTHC13 | Start time of record check | Time |  | X |  |
| *\*Pre-printed on the forms, if possible* | | | | | |
|  | | |  |  |  |
| *Main body of the form, one entry per respondent* | | | | | |
| TTHC14 | Household ID | Number | X |  | HH14 HM09 RI11 RIHC14 SIA11 TT11 |
| TTHC15 | Individual number of mother (from form HM) | Number | X |  | HM22 TT12  If primary caregiver same as: RI14  If individual being surveyed same as: RI13 SIA13 |
| TTHC16 | Individual number of child (from form HM) | Number |  | X | RI12 RIHC15 SIA12 TT13 |
| TTHC17 | Name of mother (full name) | Free text |  | X | RI19 RIHC18 |
| TTHC18 | Name of head of household | Free text |  | X | HH19 HM10 RIHC20 |
| TTHC19 | Mother's date of birth (according to HH listing) | Date |  | X | HM28 |
| TTHC20 | Mother’s date of birth (according to register) | Date |  | X |  |
| TTHC21 | TT1 (according to register) | Date (may record using TTHC21\_m and TTHC21\_d and TTHC21\_y or may store the complete date in TTHC21. If the date on the card is incomplete or illegible, set the value of TTHC21 to 1. | X |  |  |
| TTHC22 | TT2 (according to register) | Date (may record using TTHC22\_m and TTHC22\_d and TTHC22\_y or may store the complete date in TTHC22. If the date on the card is incomplete or illegible, set the value of TTHC22 to 1. | X |  |  |
| TTHC23 | TT3 (according to register) | Date (may record using TTHC23\_m and TTHC23\_d and TTHC23\_y or may store the complete date in TTHC23. If the date on the card is incomplete or illegible, set the value of TTHC23 to 1. | X |  |  |
| TTHC24 | TT4 (according to register) | Date (may record using TTHC24\_m and TTHC24\_d and TTHC24\_y or may store the complete date in TTHC24. If the date on the card is incomplete or illegible, set the value of TTHC24 to 1. | X |  |  |
| TTHC25 | TT5 (according to register) | Date (may record using TTHC25\_m and TTHC25\_d and TTHC25\_y or may store the complete date in TTHC25. If the date on the card is incomplete or illegible, set the value of TTHC25 to 1. | X |  |  |
| TTHC26 | TT6 (according to register) | Date (may record using TTHC26\_m and TTHC26\_d and TTHC26\_y or may store the complete date in TTHC26. If the date on the card is incomplete or illegible, set the value of TTHC26 to 1. | X |  |  |
| TTHC27 | Photo file name(s) of digital photos or scans of the register record | Free text |  | X |  |
|  | | |  |  |  |
| *Footer, to be printed at the bottom of the form* | | | | | |
| TTHC28\_m | End date of interview – month | Numeric value between 1-12 or Missing |  | X |  |
| TTHC28\_d | End date of interview – day | Numeric value between 1-31 or Missing |  |  |  |
| TTHC28\_y | End date of interview – year | 4-digit numeric value or Missing |  |  |  |
| TTHC29 | End time of interview | Time |  | X |  |
| TTHC30 | Interviewer’s comments | Free text |  | X |  |
| TTHC31 | Supervisor’s comments | Free text |  | X |  |

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## Form CM – Cluster-level Metadata

VCQI requires a “Cluster-level Metadata” or “CM” dataset with the following variables to describe the individual clusters. For some projects it might include additional variables.

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Variable** | **Label** | **Responses** | **Required to Run Indicators** | | | | **Not Explicitly Used by VCQI Indicators** | **Same Variable Across VCQI Datasets** |
|  |  |  | **RI** | **SIA** | **TT** | **DESC01** |  |  |
| HH01 | Stratum ID number | Number | X | X | X | X |  | HH01 (HH Dataset) HM01 RI01 RIHC01 SIA01 TT01 |
| HH02 | Stratum name | Free text | X | X | X | X |  | HH02 (HH Dataset) HM02 RI02 RIHC02 SIA02 TT02 |
| HH03 | Cluster ID number | Number | X | X | X | X |  | HH03 (HH Dataset) HM03 RI03 RIHC03 SIA03 TT03 |
| HH04 | Cluster name | Free text | X | X | X | X |  | HH04 (HH Dataset) HM04 RI04 RIHC04 SIA04 TT04 |
| province\_id\* | Province ID number  (VCQI will later rename this level2id) | Number |  |  |  |  | X | level2id |
| expected\_hh\_to\_visit | Number of HH survey team expects to visit in this cluster (or cluster segment) | Number |  |  |  | X |  |  |
| urban\_cluster | Is the cluster urban? | 1=yes; 0 = no  Or we might say:  1=Urban  0=Rural |  |  |  |  | X |  |
| psweight\_1year\*\* | Post-stratified sampling weight for one-year cohorts (RI & TT) | Number | X |  | X |  |  |  |
| psweight\_sia\*\* | Post-stratified sampling weight for SIA cohort | Number |  | X |  |  |  |  |

\* The CM dataset has the important job of defining which Level 3 strata (values of HH01) are nested within which Level 2 strata (values of province\_id). Every rows in CM with the same value of HH01 should also have the same value of province\_id.

\*\* Note that VCQI assumes that every respondent in the same cluster will have the same post-stratified weight. This is commonly but not universally true. If the survey weights can vary within a cluster for your survey, code the variables psweight\_1year and psweight\_sia with missing values in the CM dataset. The weights can be saved directly with the SIA, TT or RI datasets but must use a name other than psweight. The user will need to insert extra lines into the VCQI control program to rename the weight variable to psweight after the analysis dataset is assembled, but before the analyses in Block F. Alternatively, you can store the weights in a small dataset and merge it with the analysis dataset before Block F executes. Contact Dale Rhoda ([Dale.Rhoda@biostatglobal.com](mailto:Dale.Rhoda@biostatglobal.com)) for details on how to use VCQI with weights that vary within a cluster.

## Datasets to Specify Stratum Names and Table Listing Order

To run VCQI, the user must construct several small datasets that hold metadata naming the survey strata and specifying what order they should appear in VCQI output tables. Sometimes the preferred order is alphabetical; sometimes it is not. The user specifies their wishes unambiguously with the files that are described below. Some surveys will have meaningful strata at levels 1 and 2 and 3; others will only have level3 or level 2 & 3 strata. Regardless of which levels are meaningful for your survey, you must specify datasets to hold: level1name, level2names, level2order, level3names, and level3order. The text below holds guidance for what to specify for levels that are not relevant for your survey. See the *VCQI User’s Guide* Annex A & B for more details and several examples. Note that regardless of the number of levels of strata in your survey, you are required

|  |  |  |  |
| --- | --- | --- | --- |
| **Level** | **What it Represents** | **Is the Name Dataset Required?** | **Is the Order Dataset Required?** |
| 1 | All of the survey strata aggregated together;  sometimes this represents the entire country | Yes | No, because there is always only one level 1 stratum. |
| 2 | Sub-national aggregates of sampling strata;  sometimes this representsprovinces | Yes, even if there is only one level 2 stratum | Yes |
| 3 | The main sampling strata in the survey; in VCQI examples, level 3 strata are sometimes health districts or states | Yes, even if there is only one level 3 stratum | Yes |
| 4 | Subgroups – usually demographic such as male/female or urban/rural, etc. | Level 4 strata are optional.  Level 4 names and order are specified in a single LAYOUT dataset.  See Annex B of the *VCQI User’s Guide* | |

**Level1name Dataset**

Just one row with two columns. The level1name variable indicates the name will be listed in tables if the user asks for level 1 output. If level 1 is not relevant to your work, simply call it “Level 1”.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Variable** | **Label** | **Responses** | **Required to Run Indicators** | | | |
|  |  |  | **RI** | **SIA** | **TT** | **DESC01** |
| level1id | Stratum ID of level1 population. Should be 1. | Numeric value | X | X | X | X |
| level1name | Name of level1 population. Usually “National” or the name of the country where the survey was conducted. | String | X | X | X | X |

**Level2names Dataset**

One row per level 2 stratum. The names specified in this dataset will be used in tables if the user asks for level 2 output. If level 2 is not relevant to your work, identify a single level2 stratum with level2id = 1 and level2name = “Level 2”.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Variable** | **Label** | **Responses** | **Required to Run Indicators** | | | |
|  |  |  | **RI** | **SIA** | **TT** | **DESC01** |
| level2id | Stratum ID of level2 population | Numeric | X | X | X | X |
| leve2name | Name of level2 population | String | X | X | X | X |

**Level2order Dataset**

One row per level 2 stratum. This indicates the relative order that the user wants the tables to use when listing level 2 strata.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Variable** | **Label** | **Responses** | **Required to Run Indicators** | | | |
|  |  |  | **RI** | **SIA** | **TT** | **DESC01** |
| level2id | Stratum ID of level2 population | Numeric | X | X | X | X |
| level2order | Order for level2 id to appear in VCQI results. | Numeric value 1-number of rows in dataset. Does not need to be the same as the ID number | X | X | X | X |

**Level3names Dataset**

One row per level 3 stratum. These names will be used in tables if the user asks for level 3 results. Every survey has at least one meaningful level 3 stratum. List the ID and the name for each stratum in this dataset.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Variable** | **Label** | **Responses** | **Required to Run Indicators** | | | |
|  |  |  | **RI** | **SIA** | **TT** | **DESC01** |
| level3id | Stratum ID of level3 population | Numeric | X | X | X | X |
| level3name | Name of level3 population | String | X | X | X | X |

**Level3order Dataset**

One row per level 3 stratum. The level3order stipulates the order in which strata should appear in tables.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Variable** | **Label** | **Responses** | **Required to Run Indicators** | | | |
|  |  |  | **RI** | **SIA** | **TT** | **DESC01** |
| level3id | Stratum ID of level3 population | Numeric value 1- number of rows in dataset | X | X | X | X |
| level3order | Order for level3 ID to appear in VCQI results | Numeric value 1-number of rows in dataset. Does not need to be the same as the ID number | X | X | X | X |

**Level4 Layout Dataset**

This dataset is only required if LEVEL4 output is requested and you want to specify the layout through the VCQI\_LEVEL4\_SET\_LAYOUT. This dataset can also be created automatically by VCQI by providing a list of the names of stratification variable(s) in the global VCQI\_LEVEL4\_SET\_VARLIST and leaving the global VCQI\_LEVEL4\_SET\_LAYOUT blank. See Annex B in the *VCQI User’s Guide* for more instructions and examples.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Variable** | **Label** | **Responses** | **Required to Run Indicators** | | | |
|  |  |  | **RI** | **SIA** | **TT** | **DESC01** |
| order | Row order for level 4 results | Unique numeric value ranging from 1 up to the number of rows in dataset | X | X | X | X |
| label | Row label | String | X | X | X | X |
| condition | Criteria for including in this row of output | String – a valid conditional clause for a Stata *if* statement | X | X | X | X |
| rowtype | Indicates if the row is a label for the output or data value or a blank row to make the table look nice | String that takes one of three values:   * LABEL\_ONLY * DATA\_ROW * BLANK\_ROW | X | X | X | X |

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## Names of RI Dose-related Variables

Vaccination evidence for each RI dose will be stored using several variables. For example, evidence concerning whether the child received measles-containing vaccine might be stored in the following variables:

1. In the RI dataset:
   1. mcv\_history
   2. mcv\_date\_card\_m
   3. mcv\_date\_card\_d
   4. mcv\_date\_card\_y
   5. mcv\_tick\_card
2. In the RIHC dataset:
   1. mcv\_date\_register\_m
   2. mcv\_date\_register\_d
   3. mcv\_date\_register\_y
   4. mcv\_tick\_register

VCQI is somewhat flexible concerning dose names that form the prefixes of these variables. The examples above start with a dose name prefix of *mcv* which stands for “measles containing vaccine”. They could just as easily use a prefix *mr* to stand for “measles-rubella” or *sar* for the Spanish “*sarampión”* or *rouge* for the French “*rougeole”*. Any short text string is okay in the prefix.

Please note that VCQI is not at all flexible about the remainder of the variable name! You must name the variables using the lower-case phrases listed in the examples above: \_history, \_date\_card\_m, etc.

Here are some guidelines for dose naming conventions in VCQI.

1. For single-dose antigens, the name should be no more than six characters and the variable names should use lower-case letters. Some common choices for surveys conducted in English include: bcg, hepb0, mcv, mr, ipv, and yf.
2. For multi-dose antigens, VCQI currently knows how to handle two- and three-dose antigens. Those dose names must use a root string or word that is five characters or less, because VCQI will append a number that indicates the dose number. Examples include: penta1, penta2, penta3, mcv1, mcv2, hepb1, hepb2, hepb3. Note that *pneumo* is one character too long to be a prefix for a multi-dose antigen.
3. Two-dose antigens use the suffixes 1 and 2. Three-dose antigens use 1, 2 and 3.
4. The variables that encode vaccination evidence from card, from history and from register must all use the same prefix. And the doses in a series must all use the same prefix.
5. Birth doses are considered to be single-dose antigens. Common choices in English include bcg, opv0, and hepb0.
6. Single dose antigens may have a number in their name. It is okay to use hepb0 or mcv1 as single-dose prefixes.
7. The only hard-coded dose name in VCQI is bcg. If the RI survey asks whether the interviewer observed the child’s BCG scar, then that response should be coded into a variable named bcg\_scar\_history and the dose prefix should be bcg. When VCQI calculates crude coverage, it considers evidence from card or recall (history) or register or from the BCG scar.
8. The dose abbreviations will appear in column names of VCQI output, so select something that will be meaningful in the country where the survey is conducted.
9. The prefix that is used in the dose evidence variable names must be the same as the prefix used in Blocks D and F of the VCQI control program to specify the vaccination schedule and to specify which doses should be analyzed by VCQI. See the *VCQI User’s Guide* for more information on the control program.

## Breaking Dates Into Month, Day and Year Components

VCQI requires that dates be provided in three component variables ending with \_m, \_d, and \_y.

For doses recorded by caregiver recall, or “history”, VCQI expects to find a yes/no variable named <dose>\_history where 1 = yes and 2 = no.

For doses recorded from the home-based record, or “card”, VCQI expects to find four variables per dose:

* If the dose was recorded with a date, then <dose>\_date\_card\_m, <dose>\_date\_card\_d and <dose>\_date\_card\_y
* If the dose was recorded with a tick, then <dose>\_tick\_card (coded 1=yes and 2 or missing = no)

For doses recorded at the health center or health facility, from the EPI register, VCQI expects to find four variables per dose:

* If the dose was recorded with a date, then <dose>\_date\_register\_m, <dose>\_date\_register\_d and <dose>\_date\_register\_y
* If the dose was recorded with a tick, then <dose>\_tick\_register (coded 1=yes and 2 or missing = no)

For date of birth, VCQI expects to find the following:

* If a household interview was completed, VCQI expects to see: dob\_date\_history\_m, dob\_date\_history\_d, and dob\_date\_history\_y
* If a card was seen, VCQI expects to see: dob\_date\_card\_m, dob\_date\_card\_d, and dob\_date\_card\_y
* If a register was seen then VCQI expects to see: dob\_date\_register\_m, dob\_date\_register\_d, and dob\_date\_register\_y

If you are trying to make a dataset compatible with VCQI and the date of birth, of vaccination, or of the interview are stored in a variable that holds the entire date, you will need to conduct a preprocessing step to generate variables with the \_m, \_d, and \_y suffixes. That might be accomplished with code like this:

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

\* Code the \_m \_d \_y of child’s DOB as reported by caregiver

\* The date of birth reported by the caregiver is

\* held in a variable named child\_dob\_from\_caregiver.

gen dob\_date\_history\_m = month(child\_dob\_from\_caregiver)

gen dob\_date\_history\_d = day(child\_dob\_from\_caregiver)

gen dob\_date\_history\_y = year(child\_dob\_from\_caregiver)

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

## Coding Caregiver Recall from Survey Data

If the caregiver recall data for a multi-dose antigen is stored in variables that code whether the child had any of that dose, and if so, how many, then you will need to code a preprocessing step to generate a single recall variable (<dose>\_history) for each dose where 1=yes and 2=no or do not know. That might be accomplished using code like this:

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

\* Code penta1\_history and penta2\_history and penta3\_history

\*

\* In the variables from the survey,

\* Received \*ANY\* Penta is stored in any\_penta (1=yes, 2=no, 99=do not know)

\* and

\* HOW MANY Penta received is stored in how\_many\_penta

\*(missing if any\_penta = 2 or 99; otherwise = positive integer;

\* 99 = do not know if any\_penta = 1)

gen penta1\_history = 2 // default to no

replace penta1\_history = 1 if any\_penta == 1 & ///

how\_many\_penta >= 1 & how\_many\_penta < 99 & !missing(how\_many\_penta)

gen penta2\_history = 2

replace penta2\_history = 1 if any\_penta == 1 & ///

how\_many\_penta >= 2 & how\_many\_penta < 99 & !missing(how\_many\_penta)

gen penta3\_history = 2

replace penta3\_history = 1 if any\_penta == 1 & ///

how\_many\_penta >= 3 & how\_many\_penta < 99 & !missing(how\_many\_penta)

\* Give credit for a single dose if the caregiver says

\* the child received some penta but they do not know how many

replace penta1\_history = 1 if any\_penta == 1 & how\_many\_penta == 99

label define yesno12 1 “Yes” 2 “No”, replace

label values penta1\_history penta2\_history penta3\_history yesno12

\* If the caregiver says they do not know whether the child received

\* any penta (any\_penta == 99), then the conservative choice is to

\* leave \_history = 2 (no) for all three doses.

\* The code above does just that.

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

## Accompanying Excel Spreadsheet

There is an Excel spreadsheet named “VCQI FVL - Required Variables Spreadsheet v1.0.xlsx” that accompanies this document. It holds one worksheet or tab for each VCQI indicator and lists the survey variables that are required to calculate that indicator. You may find it helpful to examine the sheets for indicators that interest you to be sure you have incorporated all required variables into your datasets.

## Other Challenges Making Data Compatible with VCQI

The VCQI software developers at Biostat Global Consulting have converted dozens of datasets to be compatible with VCQI. If you have a question about how to accomplish this task, email [Dale.Rhoda@biostatglobal.com](mailto:Dale.Rhoda@biostatglobal.com).

1. Pronounced *Vicki.* [↑](#footnote-ref-2)
2. <https://www.who.int/immunization/documents/who_ivb_18.09/en/> [↑](#footnote-ref-3)
3. [www.technet-21.org/en/network/groups/293-vcqi](http://www.technet-21.org/en/network/groups/293-vcqi) [↑](#footnote-ref-4)
4. <http://www.biostatglobal.com/VCQI_RESOURCES.HTML> [↑](#footnote-ref-5)
5. Most TT datasets will have one row per woman who gave birth in the last year, but of course a woman might have given birth to more than one child. If she gave birth more than once (e.g., 11 months ago and 11 days ago) then the survey protocol usually focuses on the most recent pregnancy. But if the most recent pregnancy yielded live twins or triplets then the TT dataset should include one row per child. Her 2-3 rows will have identical values of TT01-04 & TT11-12 but will hold unique values of TT13 which is the id number of the child. VCQI does not use TT13, so strictly speaking you may include it or exclude it, but if there are twins or triplets in your dataset, you may wish to include it for clarity. [↑](#footnote-ref-6)