



VACCINATION COVERAGE
QUALITY INDICATORS

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

Draft Version 1.6

Revised October 9, 2019



**Expanded
Programme on
Immunization**

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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 WHO Vaccination Coverage Cluster Survey Reference Manual by Anthony Burton, Pierre Claquin, Felicity Cutts and Dale Rhoda. They 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.

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Introduction

This document is a modified version of Annex H from the 2018 World Health Organization [Vaccination Coverage Cluster Survey Reference Manual](#). The document provides the eight sample sets of questions and response options that could be included on coverage survey forms:

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

Stata datasets that are organized in the manner described in this document will be compatible with the freely-available WHO software called the Vaccination Coverage Quality Indicators (VCQI) which is pronounced “Vicki”. To be VCQI-compatible, 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. There are examples of VCQI-compatible datasets available with some VCQI training materials.

This document uses the word “form” loosely – it does not provide field-ready questionnaire forms, but rather lists of suggested questions and ways to code the responses to those questions. The questions listed here could be reformatted into field-ready questionnaire forms.

It may be helpful to think of each so-called form in this document as providing the basis for a survey dataset. The answers to questions from Form HH might be collected and provided in a dataset named HH. The variables could be named after the question numbers (HH01, HH02, HH03, etc.) The answers to questions from Form HM might be provided in a dataset named HM and have variables named after those questions (HM01, HM02, etc.). This approach is what is required for compatibility with VCQI.

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 form comprising of 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 one entry per respondent. Paper forms should be laid out in a manner that provides

enough room to fill in each entry, so it may work best to use two or three rows per entry on the form, instead of one small cramped row. In some cases it may be appropriate to use a separate paper form for each respondent. In other cases forms may be designed to accommodate responses from several respondents on one sheet of paper.

The footer includes fields to document when the work in the household or cluster is finished as well as spaces for comments so field staff can note information that may be helpful later when interpreting the survey data. On paper forms, be sure to leave large spaces for clearly-written comments, and be sure to have data entry clerks enter those comments into the database so they are available to analysts later.

For compatibility with the VCQI software, each date should be split into three variables: one containing the month, one containing the day of the month, and one containing the 4-digit year. For brevity, this document simply lists the name of a parent question or variable for each date, (e.g., HH09), but before passing datasets to VCQI, each date variable should be split into three variables with `_m`, `_d`, and `_y` suffixes. See the section entitled **Breaking Dates Into Month, Day and Year Components** for additional details.

VCQI is designed to work with dates from the Gregorian calendar. If the survey data are collected using dates from another calendar, the data analyst will need to convert them to Gregorian dates before running VCQI.

These questions provide enough data to calculate vaccination coverage estimates, but survey designers will often want to add additional questions. For example, these forms do not list many demographic questions, but it is common to ask about the education, occupation and religion of the adults in homes selected into vaccination coverage surveys. By all means, 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. Additional questions can 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 question from this document. Do not re-use the variable names listed here to encode responses from question that are not listed here.

Please do not hesitate to send corrections, suggestions and questions to Dale.Rhoda@biostatglobal.com.

Form HH – Sample Questions for a Household Listing Form

Item	Question	Responses
<i>Header, to be printed at the top of the form</i>		
HH01	Stratum ID number*	Number
HH02	Stratum name*	Free text
HH03	Cluster ID number*	Number
HH04	Cluster name*	Free text
HH05	Enumerator Number	Number
HH06	Enumerator Name	Free text
HH07	Supervisor number	Number
HH08	Supervisor name	Free text
HH09	Start date of enumeration	Date
HH10	Start time of enumeration	Time
<i>* Pre-print on the form, if possible</i>		

<i>Main body of the form, one entry per household</i>		
HH11	Structure ID	Number
HH12	Occupied: Does this structure contain any households? <i>[If No, move on to the next structure and the next row of the form.]</i>	1. Yes 2. No
HH13	Household (HH) Serial Number in the structure	Number
HH14	Household ID	Structure Number - HH Serial Number (e.g., 44-3)
HH15	Address or Description	Free text
HH16	Latitude	##.####
HH17	Longitude	##.####
HH18	Is the data from a resident, or a neighbor?	1. Resident 2. Neighbor 3. Unable to Enumerate
HH19	Name of Head of Household	Free text
HH20	Phone number to coordinate visit time	Free text
HH21	Second phone number	Free text
HH22	Total number of HH residents	Number
HH23	# of Eligible Respondents: 12-23 Months	Number
HH24	# of Eligible Respondents: Gave Live Birth in Last 12 Months	Number
HH25	# of Eligible Respondents: Post-Campaign Survey	Number
HH26	Comment	Free text
HH27	OFFICE USE ONLY: Serial # of Occupied HH in Cluster	Leave Blank
HH28	OFFICE USE ONLY: Household is selected to participate in the survey	1. Yes 2. No

Item	Question	Responses
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<i>Footer, to be printed at the bottom of the form</i>		
HH29	End date of enumeration	Date
HH30	End time of enumeration	Time
HH31	Were there households you couldn't enumerate?	1. Yes 2. No
HH32	If yes, how many?	Free text
HH33	What prevented you from doing it?	Free text
HH34	Other comments	Free text
HH35	Supervisor's comments	Free text

Form HM – Sample Questions for a Household Members Listing Form

Item	Question	Responses
<i>Header, to be printed at the top of the form</i>		
HM01	Stratum ID number*	Number
HM02	Stratum name*	Free text
HM03	Cluster ID number*	Number
HM04	Cluster name*	Free text
HM05	Interviewer number	Number
HM06	Interviewer name	Free text
HM07	Supervisor number	Number
HM08	Supervisor name	Free text
HM09	Household ID	Copy number from HH list form
HM10	Name of head of household	Free text (may be copied from HH list form)
HM11	Latitude	##.####
HM12	Longitude	##.####
HM13	Start Date of Interview at Visit 1	Date
HM14	Start Time of Interview at Visit 1	Time
HM15	Start Date of Interview at Visit 2	Date
HM16	Start time of Interview at Visit 2	Time
HM17	Start Date of Interview at Visit 3	Date
HM18	Start time of Interview at Visit 3	Time
HM19	Disposition Code: Visit 1	<ol style="list-style-type: none"> 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
HM20	Disposition Code: Visit 2	<ol style="list-style-type: none"> 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

Item	Question	Responses
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
<i>* Pre-print on the form, if possible</i>		

<i>Main body of the form, one entry per household member</i>		
HM22	Individual Number	Number
HM23	Name	Free text
HM24	Did the individual sleep here last night?	1. Yes 2. No
HM25	How long has the individual lived in this household?	Time (years)
HM26	How long has the individual lived in this household?	Time (months)
HM27	Sex	1. M 2. F
HM28	Date of birth (DOB)	Birthday (DD/MM/YYYY)
HM29	Age (completed years)	Number: Age (years)
HM30	Age (completed months)	Number: Age (months)
HM31	Eligible for RI Coverage Survey	1. Yes 2. No
HM32	Selected for RI Coverage Survey	1. Yes or blank
HM33	Disposition code for RI Survey: Visit 1	2. Come back later; caregiver not available 3. Refused interview for this respondent 4. Completed interview
HM34	Disposition code for RI Survey: Visit 2	2. Come back later; caregiver not available 3. Refused interview for this respondent 4. Completed interview
HM35	Disposition code for RI Survey: Visit 3	2. Come back later; caregiver not available 3. Refused interview for this respondent 4. Completed interview
HM36	Eligible for TT Survey	1. Yes 2. No
HM37	Selected for TT Survey	Yes or blank
HM38	Disposition code for TT Survey: Visit 1	2. Come back later; caregiver not available 3. Refused interview for this respondent 4. Completed interview

Item	Question	Responses
HM39	Disposition code for TT Survey: Visit 2	2. Come back later; caregiver not available 3. Refused interview for this respondent 4. Completed interview
HM40	Disposition code for TT Survey: Visit 3	2. Come back later; caregiver not available 3. Refused interview for this respondent 4. Completed interview
HM41	Eligible for Post-SIA Survey	1. Yes 2. No
HM42	Selected for Post-SIA Survey	Yes or blank
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
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
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

<i>Footer, to be printed at the bottom of the form</i>		
HM46	End date of interview	Date
HM47	End time of interview	Time
HM48	Finished with household (check box)	1. Yes 2. No
HM49	Interviewer's comments	Free text
HM50	Supervisor's comments	Free text

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Form RI – Sample Questions for a Routine Immunization Form (12-23 months)

Item	Question	SubQuestion	Responses	Skip
<i>Header, to be printed at the top of the form</i>				
RI01	Stratum ID number*		Number	
RI02	Stratum name*		Free text	
RI03	Cluster ID number*		Number	
RI04	Cluster name*		Free text	
RI05	Interviewer number		Number	
RI06	Interviewer name		Free text	
RI07	Supervisor number		Number	
RI08	Supervisor name		Free text	
RI09	Start date of interview		Date	
RI10	Start time of interview		Time	
<i>* Pre-print on the form, if possible</i>				

<i>Main body of the form, one entry per child</i>				
RI11	Household ID		Copy number from Form HM	
RI12	Individual number of child (from form HM)		Copy number from Form HM	
RI13	Individual number being surveyed (from form HM)		Copy number from Form HM	
RI14	Individual number of primary caregiver (from form HM)		Copy number from Form HM	
RI15	Latitude		##.####	
RI16	Longitude		##.####	
RI17	Name of child (full name)		Free text	
RI18	Name of child's father		Free text	
RI19	Name of child's mother		Free text	
RI20	Sex of child		1. M 2. F	
RI21	Birth date of child	Day	Number 99. Don't know	99 : RI24
RI22	Birth date of child	Month	Number 99. Don't know	
RI23	Birth date of child	Year	Number 99. Don't know	
RI24	Age of child (if birthdate not known)	Years	Number	

Item	Question	SubQuestion	Responses	Skip
RI25	Age of child (if birthdate not known)	Months	Number	
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
RI27	May I see it please?		1. Yes, Card Seen 2. No, Card Not Seen	1 : RI30
RI28	Why do you no longer have the vaccination card?		1. Lost card 2. Destroyed 3. Other (Specify below)	Anything but 3: RI70
RI29	Other, please specify		Free text	Skip to RI70
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
RI31	Did you have to pay for the replacement card?		1. Yes 2. No 99. Do Not Know	
RI32	Date of birth (as recorded on card)		Date	
<i>Note: The following vaccines and doses are listed as an example. You will update this list to reflect the information (and order) on the vaccination cards in the country where you are doing the survey.</i>				
RI33	BCG		Date	If date recorded on card: Skip next
RI34	BCG - Tick mark on card		1. Yes 2. No	
RI35	Hepatitis B (birth dose)		Date	If date recorded on card: Skip next
RI36	Hepatitis B (birth dose) - Tick mark on card		1. Yes 2. No	

Item	Question	SubQuestion	Responses	Skip
RI37	Polio at birth (OPV0)		Date	If date recorded on card: Skip next
RI38	Polio at birth (OPV0) - Tick mark on card		1. Yes 2. No	
RI39	Penta/DPT-Hib-Hep 1		Date	If date recorded on card: Skip next
RI40	Penta/DPT-Hib-Hep 1- Tick mark on card		1. Yes 2. No	
RI41	Pneumococcal 1 (PCV-1)		Date	If date recorded on card: Skip next
RI42	Pneumococcal 1 (PCV-1)- Tick mark on card		1. Yes 2. No	
RI43	Polio 1 (OPV1)		Date	If date recorded on card: Skip next
RI44	Polio 1 (OPV1) - Tick mark on card		1. Yes 2. No	
RI45	Rotavirus 1		Date	If date recorded on card: Skip next
RI46	Rotavirus 1 - Tick mark on card		1. Yes 2. No	
RI47	Penta/DPT-Hib-Hep 2		Date	If date recorded on card: Skip next
RI48	Penta/DPT-Hib-Hep 2 - Tick mark on card		1. Yes 2. No	
RI49	Pneumococcal 2 (PCV-2)		Date	If date recorded on card: Skip next
RI50	Pneumococcal 2 (PCV-2)- Tick mark on card		1. Yes 2. No	
RI51	Polio 2 (OPV2)		Date	If date recorded on card: Skip next

Item	Question	SubQuestion	Responses	Skip
RI52	Polio 2 (OPV2) - Tick mark on card		1. Yes 2. No	
RI53	Rotavirus 2		Date	If date recorded on card: Skip next
RI54	Rotavirus 2- Tick mark on card		1. Yes 2. No	
RI55	Penta/DPT-Hib-Hep 3		Date	If date recorded on card: Skip next
RI56	Penta/DPT-Hib-Hep 3 - Tick mark on card		1. Yes 2. No	
RI57	Pneumococcal 3 (PCV-3)		Date	If date recorded on card: Skip next
RI58	Pneumococcal 3 (PCV-3)- Tick mark on card		1. Yes 2. No	
RI59	Polio 3 (OPV3)		Date	If date recorded on card: Skip next
RI60	Polio 3 (OPV3) - Tick mark on card		1. Yes 2. No	
RI61	Rotavirus 3		Date	If date recorded on card: Skip next
RI62	Rotavirus 3 - Tick mark on card		1. Yes 2. No	
RI63	Polio (IPV)		Date	If date recorded on card: Skip next
RI64	Polio (IPV) - Tick mark on card		1. Yes 2. No	
RI65	Measles (1 st)		Date	If date recorded on card: Skip next
RI66	Measles (1 st) - Tick mark on card		1. Yes 2. No	

Item	Question	SubQuestion	Responses	Skip
RI67	Yellow Fever		Date	If date recorded on card: Skip next
RI68	Yellow Fever - Tick mark on card		1. Yes 2. No	
Caretaker Recall or History				
<i>Again, the vaccines and doses listed here are an example that will likely need to be updated when you design your questionnaire so the list corresponds to the vaccines delivered in your country.</i>				
RI69	<i>Has the child received every vaccine in this survey?</i>		1. Yes 2. No	1 : RI103
RI70	Has <i>the child</i> ever received any vaccinations, drops or injections in the past?		1. Yes 2. No 99. Do Not Know	2 or 99 : RI89
RI71	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
RI72	If the child is present, check for evidence of a scar and record		1. Scar Present 2. No Scar Present 3. Child not available to check	
RI73	Has the child ever received any “vaccination drops in the mouth” – that is, polio?		1. Yes 2. No 99. Do Not Know	2 or 99 : RI76
RI74	How many times was the polio vaccine received at a health facility?		Number 99. Do Not Know	
RI75	How many times was Polio vaccine received 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	

Item	Question	SubQuestion	Responses	Skip
RI76	Has the child ever received an injection on the upper outer thigh? – that is a penta (dpt -hep b- hib) vaccination to prevent him/her from getting tetanus, whooping cough, or diphtheria, influenza & hepatitis		1. Yes 2. No 99. Do Not Know	2 or 99 : RI78
RI77	How many times?		Number 99. Do Not Know	
RI78	Has the child ever received Pneumococcal (PCV) vaccine?		1. Yes 2. No 99. Do Not Know	2 or 99 : RI80
RI79	How many times?		Number 99. Do Not Know	
RI80	Has the child ever received an injection on the left upper arm? -that is measles injection at the age of 9 months or older - to prevent him/her from getting measles		1. Yes 2. No 99. Do Not Know	2 or 99 : RI83
RI81	How many times was measles vaccine given at a health facility?		Number 99. Do Not Know	
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	
RI83	Has the child ever received Yellow Fever vaccine?		1. Yes 2. No 99. Do Not Know	2 or 99 : RI86
RI84	How many times did the child receive it at a health facility?		Number 99. Do Not Know	
RI85	How many times did the child receive it 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	

Item	Question	SubQuestion	Responses	Skip
RI86	Has the child ever received Rotavirus vaccine?		1. Yes 2. No 99. Do Not Know	2 or 99 : Skip next
RI87	How many times?		Number 99. Do Not Know	
RI88	Do you think your child has received all the vaccines that are recommended?		1. Yes 2. No 99. Do Not Know	1: RI103
RI89	Why hasn't the child had all recommended vaccines? <i>(Without probing, record all reasons mentioned)</i>	1. Place Of Immunization Too Far	1. Mentioned 2. Not Mentioned	
RI90	Why hasn't the child had all recommended vaccines?	2. Time Of Immunization Inconvenient	1. Mentioned 2. Not Mentioned	
RI91	Why hasn't the child had all recommended vaccines?	3. Mother Too Busy	1. Mentioned 2. Not Mentioned	
RI92	Why hasn't the child had all recommended vaccines?	4. Family Problem, Including Illness Of Mother	1. Mentioned 2. Not Mentioned	
RI93	Why hasn't the child had all recommended vaccines?	5. Child Ill- Not Brought	1. Mentioned 2. Not Mentioned	
RI94	Why hasn't the child had all recommended vaccines?	6. Child Ill- Brought But Not Given Immunization	1. Mentioned 2. Not Mentioned	
RI95	Why hasn't the child had all recommended vaccines?	7. Long Wait	1. Mentioned 2. Not Mentioned	
RI96	Why hasn't the child had all recommended vaccines?	8. Rumors	1. Mentioned 2. Not Mentioned	
RI97	Why hasn't the child had all recommended vaccines?	9. No Faith In Immunization	1. Mentioned 2. Not Mentioned	
RI98	Why hasn't the child had all recommended vaccines?	10. Fear Of Side Reactions	1. Mentioned 2. Not Mentioned	
RI99	Why hasn't the child had all recommended vaccines?	11. Place And/Or Time Of Immunization Unknown	1. Mentioned 2. Not Mentioned	
RI100	Why hasn't the child had all recommended vaccines?	12. Other (Specify Below)	1. Mentioned 2. Not Mentioned	
RI101	Why hasn't the child had all recommended vaccines?	Other, please specify	Free text	
RI102	Which reason above is the MOST IMPORTANT reason?		1-12	

Item	Question	SubQuestion	Responses	Skip
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	
RI104	Write the name of the clinic or facility.		Free text	
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	
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	
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
RI108	Why was the child not vaccinated? <i>(Without probing record all reasons mentioned)</i>	1. No Vaccine	1. Mentioned 2. Not Mentioned	
RI109	Why was the child not vaccinated?	2. No Vaccinator (Not Closed)	1. Mentioned 2. Not Mentioned	
RI110	Why was the child not vaccinated?	3. Health Facility Closed When I Went	1. Mentioned 2. Not Mentioned	
RI111	Why was the child not vaccinated?	4. Child Was Sick	1. Mentioned 2. Not Mentioned	

Item	Question	SubQuestion	Responses	Skip
RI112	Why was the child not vaccinated?	5. Not Enough Children Present To Open A Vial of Vaccine	1. Mentioned 2. Not Mentioned	
RI113	Why was the child not vaccinated?	6. The Visit Was Not On The Vaccination Day	1. Mentioned 2. Not Mentioned	
RI114	Why was the child not vaccinated?	7. Wait was too long	1. Mentioned 2. Not Mentioned	
RI115	Why was the child not vaccinated?	8. Others (Specify Below)	1. Mentioned 2. Not Mentioned	
RI116	Why was the child not vaccinated?	9. Do Not Know	1. Mentioned 2. Not Mentioned	
RI117	Other, please specify		Free text	
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
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
RI120	Other, please specify		Free text	
RI121	Where was the abscess located?		1. Arm 2. Thigh 3. Other (Specify Below) 99. Do Not Know	Anything but 3: Skip next
RI122	Other, please specify		Free text	
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	
RI124	If they had a cough?		1. Yes 2. No 99. Unsure	
RI125	If they had a rash?		1. Yes 2. No 99. Unsure	
RI126	If they had diarrhea?		1. Yes 2. No 99. Unsure	

Item	Question	SubQuestion	Responses	Skip
RI127	What messages have you heard about immunizations?	1. About Campaigns (E.G. Dates, Target Group)	1. Mentioned 2. Not Mentioned	
RI128	What messages have you heard about immunizations?	2. Importance Of Routine Vaccination	1. Mentioned 2. Not Mentioned	
RI129	What messages have you heard about immunizations?	3. Where To Get Routine Vaccination	1. Mentioned 2. Not Mentioned	
RI130	What messages have you heard about immunizations?	4. Age To Get Routine Vaccination	1. Mentioned 2. Not Mentioned	
RI131	What messages have you heard about immunizations?	5. Return For The Next Doses Of The Routine Vaccination	1. Mentioned 2. Not Mentioned	
RI132	What messages have you heard about immunizations?	6. About New Vaccines (Pneumococcal/Rotavirus Vaccine)	1. Mentioned 2. Not Mentioned	
RI133	What messages have you heard about immunizations?	7. Other (Specify Below)	1. Mentioned 2. Not Mentioned	
RI134	What messages have you heard about immunizations?	99. Do Not Know	1. Mentioned 2. Not Mentioned	
RI135	Other, please specify		Free text	
Mobility Questions <i>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.</i>				
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
RI137	If yes, how many times?		1. Once 2. 2-3 Times 3. 4 or More Times 99. Do Not Know	
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	

Item	Question	SubQuestion	Responses	Skip
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	
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
RI141	Other, please specify		Free text	

<i>Footer, to be printed at the bottom of the form</i>				
RI142	End date of interview		Date	
RI143	End time of interview		Time	
RI144	Finished with household (check box)		1. Yes 2. No	
RI145	Interviewer's comments		Free text	
RI146	Supervisor's comments		Free text	

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

Item	Question	Responses	Skip
<i>Header, to be printed at the top of the form</i>			
TT01	Stratum ID number*	Number	
TT02	Stratum name*	Free text	
TT03	Cluster ID number*	Number	
TT04	Cluster name*	Free text	
TT05	Interviewer number	Number	
TT06	Interviewer name	Free text	
TT07	Supervisor number	Number	
TT08	Supervisor name	Free text	
TT09	Start date of interview	Date	
TT10	Start time of interview	Time	
<i>* Pre-print on the form, if possible</i>			

<i>Main body of the form; one entry per respondent</i>			
TT11	Household ID	Number	
TT12	Individual number of mother being surveyed (from form HM)	Copy number from Form HM	
TT13	Individual number of child (from form HM)	Copy number from Form HM	
TT14	Latitude	##.####	
TT15	Longitude	##.####	
TT16	Age of the mother (years)	Number	
TT17	Date of birth of the child aged 0-11 months	Date	
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
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
TT20	Other, please specify	Free text	
TT21	How many visits did you have?	Number	

Item	Question	Responses	Skip
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
TT23	Other, please specify	Free text	
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
TT25	Other, please specify	Free text	
TT26	Did you ever receive a vaccination card for your own immunizations?	1. Yes 2. No 99. Do Not Know	2 or 99 : TT36
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
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
TT29	Did you have to pay for a replacement?	1. Yes 2. No	
If card is available, copy dates for TT1-TT6			
TT30	TT1	Date	
TT31	TT2	Date	
TT32	TT3	Date	
TT33	TT4	Date	
TT34	TT5	Date	
TT35	TT6	Date	
If no card is available, <u>or</u> if the card does not have a date recorded for <u>at least five doses</u> , ask the following history questions.			
TT36	When you were pregnant with (<i>name</i>), 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
TT37	How many times did you receive this injection in the arm (tetanus vaccine) during your pregnancy with (<i>name of baby born live in last 12 months</i>)? [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	

Item	Question	Responses	Skip
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
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	
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
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	
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	
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	Anything but T : Skip next

Item	Question	Responses	Skip
		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)	
TT44	Other, please specify	Free text	

<i>Footer, to be printed at the bottom of the form</i>			
TT45	End date of interview	Date	
TT46	End time of interview	Time	
TT47	Interviewer's comments	Free text	
TT48	Supervisor's comments	Free text	

Form SIA – Sample Questions for a Post Campaign Survey Form

Item	Question	Responses	Skip
<i>Header, to be printed at the top of the form</i>			
SIA01	Stratum ID number*	Number	
SIA02	Stratum name*	Free text	
SIA03	Cluster ID number*	Number	
SIA04	Cluster name*	Free text	
SIA05	Interviewer number	Number	
SIA06	Interviewer name	Free text	
SIA07	Supervisor number	Number	
SIA08	Supervisor name	Free text	
SIA09	Start date of interview	Date	
SIA10	Start time of interview	Time	
<i>*Preprinted on the forms, if possible</i>			

<i>Main body of form; one entry per respondent</i>			
SIA11	Household ID	Number	
SIA12	Individual number of child (from form HM)	Copy number from Form HM	
SIA13	Individual number being surveyed (from form HM)	Copy number from Form HM	
SIA14	Individual number (from form HM) of primary caregiver of child identified in question SIA12	Copy number from Form HM	
SIA15	Latitude	##.####	
SIA16	Longitude	##.####	
SIA17	Was the child living here during the campaign? (mention the campaign dates)	1. Yes 2. No 99. Do Not Know	
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.)	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
SIA19	Other, please specify	Free text	
SIA20	Did the child receive the 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	3 or 99 : SIA25

Item	Question	Responses	Skip
SIA21	Did the child receive a vaccination card after receiving the measles/rubella vaccination during the campaign?	1. Yes, Card Seen 2. Yes, Card Not Seen 3. No Card 99. Do Not Know	
SIA22	Was the finger of the child marked with a pen after receiving the measles/rubella vaccine during the campaign?	1. Yes, Saw Mark on Child 2. Yes, Child Not Available to Check 3. No 99. Do Not Know	
SIA23	Did the child develop a reaction in the months following the vaccination?	1. Yes 2. No 99. Do Not Know	
SIA24	If so what is/was the problem?	Free text	
SIA25	<p>If the child did not receive the measles/rubella vaccine during the campaign, why?</p> <p>(Ask the question first, after the person has answered, go through the list of answers to find the main reason for non-vaccination.)</p>	<p>A. Didn't Know About The Campaign</p> <p>B. Confused With Other Vaccines (Believed That The Child Had Already Been Vaccinated.</p> <p>C. Subject Or Parent / Guardian Were Missing</p> <p>D. Injections Fear</p> <p>E. Lack Of Confidence In The Vaccine</p> <p>F. Fear Of Side Effects</p> <p>G. Site Of Vaccination Was Not Known</p> <p>H. Hours Vaccination Unsuitable</p> <p>I. Waited Too Long At The Vaccination Site</p> <p>J. Site Of Vaccination Too Far</p> <p>K. Vaccine Not Available At The Vaccination Site</p> <p>L. Missing Vaccinator At The Site</p> <p>M. Not Authorized By Head Of The Household</p> <p>N. Religious Beliefs</p> <p>O. Speaker At The Time Of Vaccination</p> <p>P. Sick At Time Of Vaccination</p> <p>Q. Absent or Travelling During The Period Of The Campaign</p> <p>R. Too Busy To Take Child</p> <p>S. Child Ill</p> <p>T. Mother Ill</p>	Anything but V : Skip next

Item	Question	Responses	Skip
		U. Child Already Received Measles Vaccine V. Other (Specify Below)	
SIA26	Other, please specify	Free text	
SIA27	Before the campaign, had the child already received the measles/rubella vaccine?	1. Yes, Date(s) On Card 2. Yes, Recall/History 3. No 99. Do Not Know	
SIA28	If the vaccination record (routine) is available, record the dates of vaccination: 1st Measles Vaccination	Date	If date: skip next
SIA29	If the vaccination record (routine) is available, is 1st Measles vaccination recorded with a tick mark instead of a date?	1=Yes, by tick mark	
SIA30	If the vaccination record (routine) is available, record the dates of vaccination: 2nd Measles Vaccination	Date	If date: skip next
SIA31	If the vaccination record (routine) is available, is 2nd Measles vaccination recorded with a tick mark instead of a date?	1=Yes, by tick mark	
SIA32	If the vaccination record (previous campaign) is available, record the dates of vaccination: 1st Measles campaign vaccination	Date	
SIA33	If the vaccination record (previous campaign) is available, record the dates of vaccination: 2nd measles vaccination	Date	

<i>Footer, to be printed at the bottom of the form</i>			
SIA34	End date of interview	Date	
SIA35	End time of interview	Time	
SIA36	Interviewer's comments	Free text	
SIA37	Supervisor's comments	Free text	

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

Item	Question	Responses	Skip
<i>Header, to be printed at the top of the form</i>			
RIHC01	Stratum ID number*	Number	
RIHC02	Stratum name*	Free text	
RIHC03	Cluster ID number*	Number	
RIHC04	Cluster name*	Free text	
RIHC05	Interviewer number	Number	
RIHC06	Interviewer name	Free text	
RIHC07	Supervisor number	Number	
RIHC08	Supervisor name	Free text	
RIHC09	Name of health facility	Free text	
RIHC10	Latitude	##.####	
RIHC11	Longitude	##.####	
RIHC12	Arrival date at health facility	Date	
RIHC13	Start time of records review	Time	
<i>* Pre-printed on the form, if possible</i>			

<i>Main body of form; one entry per respondent</i>			
RIHC14	Household ID	Number	
RIHC15	Individual number of child (from form HM)	Number	
RIHC16	Name of child (full name)	Free text	
RIHC17	Name of child's father	Free text	
RIHC18	Name of child's mother	Free text	
RIHC19	Sex of child	1. M 2. F	
RIHC20	Name of head of household	Free text	
RIHC21	Date of birth (according to card seen in home (preferred) or caregiver recall on HH listing)	Date	
RIHC22	Date of birth (according to register)	Date	
<i>(Note: The specific vaccines and doses, as well as the order in which they appear may vary from survey to survey, so the following section may be adapted to correspond closely to Form RI for your survey.)</i>			
RIHC23	BCG	Date	If date recorded on card : Skip next
RIHC24	BCG - Tick mark on card	1. Yes 2. No	
RIHC25	Hepatitis B (birth dose)	Date	If date recorded on card : Skip next
RIHC26	Hepatitis B (birth dose) - Tick mark on card	1. Yes 2. No	

Item	Question	Responses	Skip
RIHC27	Polio at birth (OPV0)	Date	If date recorded on card : Skip next
RIHC28	Polio at birth (OPV0) - Tick mark on card	1. Yes 2. No	
RIHC29	Penta/DPT-Hib-Hep 1	Date	If date recorded on card : Skip next
RIHC30	Penta/DPT-Hib-Hep 1- Tick mark on card	1. Yes 2. No	
RIHC31	Pneumococcal 1 (PCV-1)	Date	If date recorded on card : Skip next
RIHC32	Pneumococcal 1 (PCV-1)- Tick mark on card	1. Yes 2. No	
RIHC33	Polio 1 (OPV1)	Date	If date recorded on card : Skip next
RIHC34	Polio 1 (OPV1) - Tick mark on card	1. Yes 2. No	
RIHC35	Rotavirus 1	Date	If date recorded on card : Skip next
RIHC36	Rotavirus 1 - Tick mark on card	1. Yes 2. No	
RIHC37	Penta/DPT-Hib-Hep 2	Date	If date recorded on card : Skip next
RIHC38	Penta/DPT-Hib-Hep 2 - Tick mark on card	1. Yes 2. No	
RIHC39	Pneumococcal 2 (PCV-2)	Date	If date recorded on card : Skip next
RIHC40	Pneumococcal 2 (PCV-2)- Tick mark on card	1. Yes 2. No	
RIHC41	Polio 2 (OPV2)	Date	If date recorded on card : Skip next
RIHC42	Polio 2 (OPV2) - Tick mark on card	1. Yes 2. No	
RIHC43	Rotavirus 2	Date	If date recorded on card : Skip next
RIHC44	Rotavirus 2- Tick mark on card	1. Yes 2. No	
RIHC45	Penta/DPT-Hib-Hep 3	Date	If date recorded on card : Skip next
RIHC46	Penta/DPT-Hib-Hep 3 - Tick mark on card	1. Yes 2. No	
RIHC47	Pneumococcal 3 (PCV-3)	Date	If date recorded on card : Skip next
RIHC48	Pneumococcal 3 (PCV-3)- Tick mark on card	1. Yes 2. No	
RIHC49	Polio 3 (OPV3)	Date	If date recorded on card : Skip next
RIHC50	Polio 3 (OPV3) - Tick mark on card	1. Yes 2. No	
RIHC51	Rotavirus 3	Date	If date recorded on card : Skip next
RIHC52	Rotavirus 3 - Tick mark on card	1. Yes 2. No	
RIHC53	Polio (IPV)	Date	If date recorded on card : Skip next
RIHC54	Polio (IPV) - Tick mark on card	1. Yes 2. No	
RIHC55	Measles (1 st)	Date	If date recorded on card : Skip next

Item	Question	Responses	Skip
RIHC56	Measles (1 st) - Tick mark on card	1. Yes 2. No	
RIHC57	Yellow Fever	Date	If date recorded on card : Skip next
RIHC58	Yellow Fever - Tick mark on card	1. Yes 2. No	
RIHC59	Photo file name(s) of digital photo(s) or scan(s) of the EPI register	Free text	

<i>Footer, to be printed at the bottom of the form</i>			
RIHC60	End date of interview	Date	
RIHC61	End time of interview	Time	
RIHC62	Interviewer's comments	Free text	
RIHC63	Supervisor's comments	Free text	

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

Item	Question	Responses
<i>Header, to be printed at the top of the form</i>		
TTHC01	Stratum ID number*	Number
TTHC02	Stratum name*	Free text
TTHC03	Cluster ID number*	Number
TTHC04	Cluster name*	Free text
TTHC05	Interviewer number	Number
TTHC06	Interviewer name	Free text
TTHC07	Supervisor number	Number
TTHC08	Supervisor name	Free text
TTHC09	Name of health facility	Free text
TTHC10	Latitude	##.####
TTHC11	Longitude	##.####
TTHC12	Start date of record check	Date
TTHC13	Start time of record check	Time
<i>*Pre-printed on the forms, if possible</i>		

<i>Main body of the form, one entry per respondent</i>		
TTHC14	Household ID	Number
TTHC15	Individual number of mother (from form HM)	Number
TTHC16	Individual number of child (from form HM)	Number
TTHC17	Name of mother (full name)	Free text
TTHC18	Name of head of household	Free text
TTHC19	Mother's date of birth (according to HH listing)	Date
TTHC20	Mother's date of birth (according to register)	Date
TTHC21	TT1 (according to register)	Date
TTHC22	TT2 (according to register)	Date
TTHC23	TT3 (according to register)	Date
TTHC24	TT4 (according to register)	Date
TTHC25	TT5 (according to register)	Date
TTHC26	TT6 (according to register)	Date
TTHC27	Photo file name(s) of digital photos or scans of the register record	Free text

<i>Footer, to be printed at the bottom of the form</i>		
TTHC28	End date of interview	Date
TTHC29	End time of interview	Time
TTHC30	Interviewer's comments	Free text
TTHC31	Supervisor's comments	Free text

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Form CM – Cluster-level Metadata

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

Variable	Label	Responses
HH01	Stratum ID number	Number
HH02	Stratum name	Free text
HH03	Cluster ID number	Number
HH04	Cluster name	Free text
province_id	Province ID number (VCQI will later rename this level2id)	Number
expected_hh_to_visit	Number of HH survey team expects to visit in this cluster (or cluster segment)	Number
urban_cluster	Is the cluster urban?	1=yes; 0 = no Or we might say: 1=Urban 0=Rural
psweight_1year*	Post-stratified sampling weight for one-year cohorts (RI & TT)	Number
psweight_sia*	Post-stratified sampling weight for SIA cohort	Number

* Note that VCQI assumes that every RI and TT respondent in the same cluster will have the same post-stratified weight and every SIA respondent in the same cluster will have the same post-stratified weight. This is commonly true, but not universally true. If the survey weights can vary within a cluster, code the variables psweight_1year and psweight_sia with missing values. The weights can either 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 weights after the analysis dataset is assembled, but before the analyses in Block F. Contact Dale Rhoda for details on how to use VCQI with weights that can vary within a cluster.

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Names of RI Dose-related Variables

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

- | | |
|-----------------------|-------------------------|
| a) In the RI dataset: | b) In the RIHC dataset: |
| a. mcv_history | a. mcv_date_register_m |
| b. mcv_date_card_m | b. mcv_date_register_d |
| c. mcv_date_card_d | c. mcv_date_register_y |
| d. mcv_date_card_y | d. mcv_tick_register |
| e. mcv_tick_card | |

VCQI is somewhat flexible concerning the way the doses are named. The variables named above start with a dose name prefix of *mcv*. There is nothing special about those letters. The variables could be named with a prefix *mr* to stand for measles-rubella or *sar* for the Spanish *sarampión* or *rouge* for the French *rougeole*.

Here are some guidelines for naming conventions for doses 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-dose antigens and three-dose antigens. Those dose names must use a root string or word that is five characters or less, because the last character will be a number that indicates the dose number. Examples include: *penta1*, *penta2*, *penta3*, *mcv1*, *mcv2*, *hepb1*, *hepb2*, *hepb3*. Note that *pneumo* is 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

This document lists dates as single questions (or items or variables; e.g., RI32 is the date of birth as recorded from a child's home-based routine immunization card). But in most cases dates will be collected using the individual month, day, and year fields and the datasets will provide each component in a separate variable. VCQI expects to see datasets where the components are separate.

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, then 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

The following two Stata programs are intended to serve as examples of how to break dates into their components (if needed) and name the date of birth and dose-related variables in a manner that is consistent with VCQI requirements.

```

/*****
Program Name:      RI_PP1_FORMAT_CARD_DATES.do
Date Created:     9/30/2015
Date Modified:
Comments:        Break dates into separate fields for day, month, year
Author:          Mary Kay Trimmer

Stata version:   14.0
*****/

use "${VCQI_RI_DATA_FOLDER}/${VCQI_RI_DATASET}", clear

set more off

*create new variables to separate dates into month, day, year

foreach v in RI09 RI142 RI32 RI33 RI35 RI37 RI39 RI41 RI43 ///
           RI45 RI47 RI49 RI51 RI53 RI55 RI57 RI59 RI61 RI63 RI65 RI67 {
    gen `v'm = month(`v')
    label variable `v'm "`: var label `v'' - month"
    gen `v'd = day(`v')
    label variable `v'd "`: var label `v'' - day"
    gen `v'y = year(`v')
    label variable `v'y "`: var label `v'' - year"
    order `v'm `v'd `v'y, after(`v')
    drop `v'
}

rename RI32d dob_date_card_d
rename RI32m dob_date_card_m
rename RI32y dob_date_card_y
rename RI21 dob_date_history_d
rename RI22 dob_date_history_m
rename RI23 dob_date_history_y

rename RI33d bcg_date_card_d
rename RI33m bcg_date_card_m
rename RI33y bcg_date_card_y
rename RI34 bcg_tick_card
rename RI35d hep_b_date_card_d
rename RI35m hep_b_date_card_m
rename RI35y hep_b_date_card_y
rename RI36 hep_b_tick_card
rename RI37d opv0_date_card_d
rename RI37m opv0_date_card_m
rename RI37y opv0_date_card_y
rename RI38 opv0_tick_card
rename RI39d pent1_date_card_d
rename RI39m pent1_date_card_m
rename RI39y pent1_date_card_y
rename RI40 pent1_tick_card
rename RI41d pc_v1_date_card_d
rename RI41m pc_v1_date_card_m
rename RI41y pc_v1_date_card_y
rename RI42 pc_v1_tick_card
rename RI43d opv1_date_card_d
rename RI43m opv1_date_card_m

```

```

rename RI43y opv1_date_card_y
rename RI44 opv1_tick_card
rename RI45d rota1_date_card_d
rename RI45m rota1_date_card_m
rename RI45y rota1_date_card_y
rename RI46 rota1_tick_card
rename RI47d penta2_date_card_d
rename RI47m penta2_date_card_m
rename RI47y penta2_date_card_y
rename RI48 penta2_tick_card
rename RI49d pcv2_date_card_d
rename RI49m pcv2_date_card_m
rename RI49y pcv2_date_card_y
rename RI50 pcv2_tick_card
rename RI51d opv2_date_card_d
rename RI51m opv2_date_card_m
rename RI51y opv2_date_card_y
rename RI52 opv2_tick_card
rename RI53d rota2_date_card_d
rename RI53m rota2_date_card_m
rename RI53y rota2_date_card_y
rename RI54 rota2_tick_card
rename RI55d penta3_date_card_d
rename RI55m penta3_date_card_m
rename RI55y penta3_date_card_y
rename RI56 penta3_tick_card
rename RI57d pcv3_date_card_d
rename RI57m pcv3_date_card_m
rename RI57y pcv3_date_card_y
rename RI58 pcv3_tick_card
rename RI59d opv3_date_card_d
rename RI59m opv3_date_card_m
rename RI59y opv3_date_card_y
rename RI60 opv3_tick_card
rename RI61d rota3_date_card_d
rename RI61m rota3_date_card_m
rename RI61y rota3_date_card_y
rename RI62 rota3_tick_card
rename RI63d ipv_date_card_d
rename RI63m ipv_date_card_m
rename RI63y ipv_date_card_y
rename RI64 ipv_tick_card
rename RI65d mcv1_date_card_d
rename RI65m mcv1_date_card_m
rename RI65y mcv1_date_card_y
rename RI66 mcv1_tick_card
rename RI67d yf_date_card_d
rename RI67m yf_date_card_m
rename RI67y yf_date_card_y
rename RI68 yf_tick_card

rename RI71 bcg_history
rename RI72 bcg_scar_history

gen opvttotal = RI74 + RI75 if RI73 == 1 & RI74 != 99 & RI75 != 99
replace opvttotal = RI74 if RI73 == 1 & RI75 == 99 & RI74 != 99
replace opvttotal = RI75 if RI73 == 1 & RI74 == 99 & RI75 != 99

```

```

gen opv1_history = opvtotal >= 1 & !missing(opvtotal)
gen opv2_history = opvtotal >= 2 & !missing(opvtotal)
gen opv3_history = opvtotal >= 3 & !missing(opvtotal)

drop opvtotal

gen penta1_history = RI77 >= 1 & !missing(RI77) & RI77 != 99
gen penta2_history = RI77 >= 2 & !missing(RI77) & RI77 != 99
gen penta3_history = RI77 >= 3 & !missing(RI77) & RI77 != 99

gen mcv1_history = RI80 == 1
gen yf_history    = RI83 == 1

gen rota1_history = RI87 >= 1 & !missing(RI87) & RI87 != 99
gen rota2_history = RI87 >= 2 & !missing(RI87) & RI87 != 99
gen rota3_history = RI87 >= 3 & !missing(RI87) & RI87 != 99

gen pcv1_history = RI79 >= 1 & !missing(RI79) & RI79 != 99
gen pcv2_history = RI79 >= 2 & !missing(RI79) & RI79 != 99
gen pcv3_history = RI79 >= 3 & !missing(RI79) & RI79 != 99

* the current survey doesn't have questions to assess
* these three vaccines by history

gen hepb_history = 0
gen opv0_history = 0
gen ipv_history  = 0

* put these outcomes on the 1=yes 2=no scale, to correspond to what might
* have come from the questionnaire
* The only thing the DV code cares about is the value 1, but the DQ code
* checks for valid values and it expects to see a 2 instead of a 0.
foreach d in opv1 opv2 opv3 penta1 penta2 penta3 mcv1 yf rota1 ///
    rota2 rota3 pcv1 pcv2 pcv3 hepb opv0 ipv {
    replace `d'_history = 2 if `d'_history == 0
}

compress

save "${VCQI_OUTPUT_FOLDER}/RI_mdy", replace

```

```

/*****
Program Name:      RI_PP2_FORMAT_REGISTER_DATES.do
Date Created:     9/30/2015
Date Modified:
Comments:        Break dates into separate fields for day, month, year
Author:          Mary Kay Trimmer

Stata version:   14.0
*****/

use "${VCQI_RI_DATA_FOLDER}/${VCQI_RIHC_DATASET}", clear

set more off

*create new variables to separate dates into month, day, year
foreach v in RIHC12 RIHC21 RIHC22 RIHC23 RIHC25 ///
           RIHC27 RIHC29 RIHC31 RIHC33 RIHC35 RIHC37 RIHC39 ///
           RIHC41 RIHC43 RIHC45 RIHC47 RIHC49 RIHC51 RIHC53 ///
           RIHC55 RIHC57 RIHC60 {

    gen `v'm = month(`v')
    label variable `v'm "`: var label `v'' - month"
    gen `v'd = day(`v')
    label variable `v'd "`: var label `v'' - day"
    gen `v'y = year(`v')
    label variable `v'y "`: var label `v'' - year"
    order `v'm `v'd `v'y, after(`v')
    drop `v'
}

rename RIHC22d dob_date_register_d
rename RIHC22m dob_date_register_m
rename RIHC22y dob_date_register_y

rename RIHC23d bcg_date_register_d
rename RIHC23m bcg_date_register_m
rename RIHC23y bcg_date_register_y
rename RIHC24 bcg_tick_register
rename RIHC25d hep_b_date_register_d
rename RIHC25m hep_b_date_register_m
rename RIHC25y hep_b_date_register_y
rename RIHC26 hep_b_tick_register
rename RIHC27d opv0_date_register_d
rename RIHC27m opv0_date_register_m
rename RIHC27y opv0_date_register_y
rename RIHC28 opv0_tick_register
rename RIHC29d pent1_date_register_d
rename RIHC29m pent1_date_register_m
rename RIHC29y pent1_date_register_y
rename RIHC30 pent1_tick_register
rename RIHC31d pcv1_date_register_d
rename RIHC31m pcv1_date_register_m
rename RIHC31y pcv1_date_register_y
rename RIHC32 pcv1_tick_register
rename RIHC33d opv1_date_register_d
rename RIHC33m opv1_date_register_m
rename RIHC33y opv1_date_register_y

```



```

rename RIHC34 opv1_tick_register
rename RIHC35d rota1_date_register_d
rename RIHC35m rota1_date_register_m
rename RIHC35y rota1_date_register_y
rename RIHC36 rota1_tick_register
rename RIHC37d penta2_date_register_d
rename RIHC37m penta2_date_register_m
rename RIHC37y penta2_date_register_y
rename RIHC38 penta2_tick_register
rename RIHC39d pcv2_date_register_d
rename RIHC39m pcv2_date_register_m
rename RIHC39y pcv2_date_register_y
rename RIHC40 pcv2_tick_register
rename RIHC41d opv2_date_register_d
rename RIHC41m opv2_date_register_m
rename RIHC41y opv2_date_register_y
rename RIHC42 opv2_tick_register
rename RIHC43d rota2_date_register_d
rename RIHC43m rota2_date_register_m
rename RIHC43y rota2_date_register_y
rename RIHC44 rota2_tick_register
rename RIHC45d penta3_date_register_d
rename RIHC45m penta3_date_register_m
rename RIHC45y penta3_date_register_y
rename RIHC46 penta3_tick_register
rename RIHC47d pcv3_date_register_d
rename RIHC47m pcv3_date_register_m
rename RIHC47y pcv3_date_register_y
rename RIHC48 pcv3_tick_register
rename RIHC49d opv3_date_register_d
rename RIHC49m opv3_date_register_m
rename RIHC49y opv3_date_register_y
rename RIHC50 opv3_tick_register
rename RIHC51d rota3_date_register_d
rename RIHC51m rota3_date_register_m
rename RIHC51y rota3_date_register_y
rename RIHC52 rota3_tick_register
rename RIHC53d ipv_date_register_d
rename RIHC53m ipv_date_register_m
rename RIHC53y ipv_date_register_y
rename RIHC54 ipv_tick_register
rename RIHC55d mcv1_date_register_d
rename RIHC55m mcv1_date_register_m
rename RIHC55y mcv1_date_register_y
rename RIHC56 mcv1_tick_register
rename RIHC57d yf_date_register_d
rename RIHC57m yf_date_register_m
rename RIHC57y yf_date_register_y
rename RIHC58 yf_tick_register

compress

save "${VCQI_OUTPUT_FOLDER}/RIHC_mdy", replace

```