



# USAID GLOBAL HEALTH SUPPLY CHAIN PROGRAM

## TECHNICAL ASSISTANCE, NATIONAL SUPPLY CHAIN ASSESSMENT TASK ORDER

### Guidance on updating the SurveyCTO code for the Capability Maturity Model (CMM) Survey

NSCA 2.0



DISCLAIMER: Development of the NSCA 2.0 toolkit was funded by the United States Agency for International Development (USAID). The authors' views expressed in this publication do not necessarily reflect the views of USAID or the United States Government.

## INTRODUCTION

Before reading this document, users are encouraged to familiarize themselves with the SurveyCTO programming environment. Resources available for learning SurveyCTO are provided in Annex 14 of the NSCA 2.0 Implementation Guide. Users should also review Table 8 in the NSCA 2.0 Implementation guide and the text explaining this table. Advanced understanding of the SurveyCTO coding environment should not be necessary to conduct essential updates to the CMM survey code, but some familiarity with the structure of SurveyCTO Excel coding books and how they operate is required. Some optional changes to the SurveyCTO code may require a more advanced knowledge of the SurveyCTO coding environment.

The guidance provided in this document refers primarily to the NSCA 2.0 “CMM Survey” SurveyCTO coding, which is presented in a Microsoft Excel workbook. The guidance also references two other NSCA 2.0 resources: the “Facilities\_v1.csv” worksheet and “cmm\_survey\_template for scoring”. The former is an ancillary file that supports the “CMM Survey” SurveyCTO workbook, while the latter is a Microsoft Excel platform that provides platform for analyzing CMM survey data collected in SurveyCTO.

This document is divided into four sections (subsequent to the introduction):

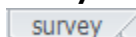
1. Brief overview of the structure of the “CMM Survey” SurveyCTO Excel coding.
2. Changes that will need to be made to the SurveyCTO coding for all NSCAs conducted. These changes include populating the SurveyCTO code with the appropriate subnational division names and the names of facilities / entities included in the sample for the assessment.
3. Optional changes that likely will be needed for most NSCAs. These changes include minor wording changes to questions / responses including some generic language that can be customized to a particular country.
4. Advanced changes that may be necessary but should be done with caution.

Assessment teams should thoroughly check the functionality of the SurveyCTO code after changes have been made. This should be done by manually going through the data collection instrument to ensure that the changes made appear properly in the SurveyCTO data collection instrument, relevant skip logic still functions properly, and spelling and other grammatical concerns are all correct.

## STRUCTURE OF THE CMM SURVEY CODEBOOK

There are five worksheets in the CMM Survey Excel workbook:

### I. Survey



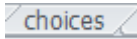
The first row of this worksheet contains headers that list the type of information to be included in each column. This includes the question types (“type”), numbers (“Names”), the questions (“Label”), question explanations / supporting text (“hint”), skip logic (“relevance”) and other information for administering the survey.

Each row is for one question. The rows are organized into introductory items and then by the eleven modules included in the CMM survey (Table I).

TABLE I: SECTIONS IN THE SURVEY WORKSHEET	
ROW NUMBERS	SECTION
1 – 26	Collection of information about the team collecting conducting the survey and information about the site being visited
27 – 42	Introduction and table of contents
43 – 122	Module 1: Strategic Planning & Management
123 – 199	Module 2: Human Resources
200 – 266	Module 3: Financial Sustainability
267 – 304	Module 4: Policy and Governance
305 – 369	Module 5: Quality & Pharmacovigilance
370 – 444	Module 6: Forecasting & Supply Planning
445 – 547	Module 7: Procurement& Customs Clearance
548 – 654	Module 8: Warehousing & Storage
655 – 743	Module 9: Distribution
744 – 836	Module 10: Logistics Management Information System
837 – 884	Module 11: Waste Management

There are no changes that will need to be made to the SurveyCTO coding on this sheet. However, optional wording changes may be made in the column “Label”. More advanced changes may also be made in the “Relevance” column, and questions may be inserted.

## 2. Choices



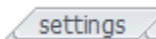
This worksheet contains the possible responses to close ended question listed on the Survey worksheet. There are four columns of relevance for adopting the coding on this worksheet:

- a. **list\_name:** Refers to the answer choices listed for a question in the “type” column on the survey worksheet. All rows with a particular list\_name will provide answers for questions with this label in the “type” column in the survey worksheet. For example, Row 51 on the Survey worksheet contains “select\_one yesnodk” in the first column. Rows 14-16 on the Choices workbook all contain “yesnodk” under list\_name, indicating these are the possible answers for the question listed on row 51 of the Survey worksheet (note that “select\_one” indicates only one answer may be selected, while “select\_multiple” would allow multiple answers to be selected). The term “yesnodk” does not appear elsewhere under list\_name on the choices worksheet; it is best practice to keep the possible answers grouped together. (Readers that do not understand this explanation are encouraged to review or further read or watch SurveyCTO tutorials before proceeding with making changes to the CMM Survey workbook.)
- b. **value:** This determines how SurveyCTO will code the answer selected.
- c. **label:** This column lists the answers as they will appear during data collection. For example, for questions with the “yesnodk” list\_name, the options “No”, “Yes”, and “I don’t know” will be available for the data collection team to select.
- d. **filter:** This allows SurveyCTO to only display some of the labels for a particular list\_name; more details on this column will be provided in the section “Changes that need to be made for all assessments”.

Note that the images column is not used for the CMM survey.

The list\_values have been constructed such that, excepting answers that are used for multiple questions (in rows 14 through 35) the list\_name corresponds to the question number (“Names” on the Survey worksheet).

## 3. Settings

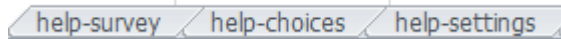


This contains information that allows SurveyCTO to identify the workbook.

**\*IMPORTANT NOTE:** When users are creating a SurveyCTO space, they may need, initially, to update this worksheet because simply uploading the CMM Survey may preclude SurveyCTO from correctly identifying the workbook. To do this, users need to create a new form in SurveyCTO; this form need not contain anything in it. The created form should then be downloaded and the information on the Settings worksheet copied and pasted into the CMM survey. The CMM survey can then be uploaded to SurveyCTO, and SurveyCTO will recognize the form correctly.

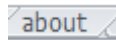
Otherwise, users should not change this worksheet.

#### 4. **help-survey, help-choices, and help-settings**



These worksheets contain standard SurveyCTO help and guidance, with each sheet corresponding to the three sheets listed above. Users are encouraged to read through these sheets, but no changes to these sheets are necessary (although changing the sheets will not affect the functionality of the coding).

#### 5. **About**



This worksheet lists information about the creation of the CMM survey for informational purposes only. Users are not expected to change this worksheet, although they may wish to use this worksheet to track dates and details about changes made elsewhere in the workbook.

### **CHANGES THAT NEED TO BE MADE FOR ALL ASSESSMENTS**

#### **UPDATING THE NAMES OF SUBNATIONAL UNITS**

Usually, entities and facilities included in the sample for the assessment will be located in discrete subnational units (such as districts or similar health or political groupings). The question on row 12 of the Survey worksheet asks data collectors to specify this subnational unit and refers to the list\_name “facdistrict” on the choices worksheet. On the Choices worksheet, there default programming lists five subnational units (rows 4 through 8); these are simply placeholders and are not meant to convey any meaning. **Users will need to update the “facdistrict” list\_name on the Choices worksheet** to match the subnational units that have been sampled for inclusion in the assessment:

1. Determine the number of subnational units included in the assessment. Users may use the appropriate subnational unit for central level entities (e.g., the subnational unit for the MoH may be the capital city) or create a ‘fake’ subnational unit for central level entities (e.g., “National entities”).
2. Insert rows under row 8 to create enough rows for all of the subnational units.
3. Copy and paste “facdistrict” in the first column of all the newly created rows.
4. Enter values for each row (e.g., D1 through DXX) in the second column.
5. Enter the names of the subnational units in the third column.

The end result should resemble:

	A	B	
1	list_name	value	label
4	facdistrict	D1	Agago
5	facdistrict	D2	Arua
6	facdistrict	D3	Bududa
7	facdistrict	D4	Bulambuli
8	facdistrict	D5	Bundibugyo
9	facdistrict	D6	Busia
10	facdistrict	D7	Buyende
11	facdistrict	D8	Hoima
12	facdistrict	D9	Kabale
13	facdistrict	D10	Kampala
14	facdistrict	D11	Kasese
15	facdistrict	D12	Kibaale
16	facdistrict	D13	Kiruhura
17	facdistrict	D14	Kisoro
18	facdistrict	D15	Koboko
19	facdistrict	D16	Luuka
20	facdistrict	D17	Luwero
21	facdistrict	D18	Lwengo
22	facdistrict	D19	Mbale
23	facdistrict	D20	Moroto
24	facdistrict	D21	Moyo

(although, of course, the individual labels will vary between countries).

#### UPDATING THE NAMES OF ENTITIES INCLUDED IN THE ASSESSMENT SAMPLE

Data collectors will need to enter the name of the site where they are conducting the CMM survey in response to the question listed on row 15 of the Survey worksheet. This question refers to the list\_name “facid”. In the default programming, possible for “facid” are listed in rows 9 through 13 of the Choices worksheet; these are simply placeholders and are not meant to convey any meaning. **Users will need to update the “facid” list\_name on the Choices worksheet** to match the facilities and entities that have been sampled for inclusion in the assessment:

1. Determine the number of facilities and entities included in the assessment. Each entity should be uniquely identified.
2. Insert rows under row 13 to create enough rows for all of the facilities and entities included in the assessment.
3. Copy and paste “facid” in the first column of all the newly created rows.
4. Enter values for each row (e.g., F1 through FXXX) in the second column.
5. Enter the names of the facilities and entities in the third column.
6. In the ‘filter’ column (column E), users must enter the value of the corresponding subnational unit where the facility or entity is located. For example, suppose Health Center 1 is located in District 1. In the “facdistrict” list\_name, District 1 has been given the value D1. The user should, then, enter “D1” in the ‘filter’ column. This will allow SurveyCTO to only display the names of

facilities or entities in the subnational unit selected for the question on row 15 of the Survey worksheet.

The end result should resemble:

	A	B	C	D	E
1	list_name	value	label	image	filter
35	facid	F1	Health Center 1		D1
36	facid	F2	Health Center 2		D1
37	facid	F3	Health Center 3		D2
38	facid	F4	Health Center 4		D2
39	facid	F5	Health Center 5		D2
40	facid	F6	Hospital 1		D2
41	facid	F7	Hospital 2		D2
42	facid	F8	Health Center 8		D3
43	facid	F9	Health Center 9		D3
44	facid	F10	Hospital 3		D3
45	facid	F11	Health Center 11		D4
46	facid	F12	Health Center 12		D4
47	facid	F13	Health Center 13		D5
48	facid	F14	Health Center 14		D5
49	facid	F15	Health Center 15		D5
50	facid	F16	Hospital 4		D5

(although, again, the labels will vary by country and the choice of values may also vary).

#### UPDATING THE FACILITIES\_VI WORKBOOK

The Facilities\_vI workbook allows SurveyCTO to access ‘text’ data about the facilities and entities and report these data. Thus, it allows SurveyCTO to record the subnational unit of a facility to be reported as “District 1” rather than what is entered in the value column of the Choices worksheet (e.g., “D1”). The Facilities\_vI workbook also provides necessary information in order for the SurveyCTO skip logic to function properly. Thus, the Facilities\_vI workbook must be updated and uploaded to SurveyCTO as an attachment to the CMM Survey Excel workbook. It should be saved and uploaded as a .csv file (and not, e.g., a Microsoft Excel file).

The Facilities\_vI workbook contains five columns of information:

1. **Facility Identifier:** This column contains the information from the ‘values’ column of the Choices worksheet for all “facid” list\_names.
2. **Facility Name:** This column contains the text name of the facility or entity. These two columns should be copied from the Choices worksheet (for the rows using the “facid” list\_name) in the CMM Survey workbook and pasted into the Facilities\_vI worksheet to maintain consistency between the two workbooks.
3. **District:** Contains the text name of the subnational unit where the entity listed in the second column is located. For consistency, these names should be spelled the same as the names entered in the ‘label’ column of the Choices worksheet (for the rows using the “facdistrict” list\_name) in the CMM Survey workbook.

4. **Facility Type:** This column contains information not available in the CMM Survey workbook. Users can enter any relevant information here about the type of entity – e.g., whether the entity is a health center, hospital, referral hospital, warehouse, MoH, etc. Data entered should be spelled consistently because the type of facility is usually of interest in the analysis phase (e.g., results are usually presented disaggregated by the type of facility / entity) and this variable will be used to sort and/or filter data coming out of SurveyCTO.
5. **Facility Level:** In this column, the entity’s level of the health system should be entered. The levels of the health system refer to one of the four levels of the health system around which the CMM survey is structured. There are four levels (SDP, Referral Hospital, Intermediate and Central Warehouse, and Central / MoH Level), each of which has separate sets of questions and maturity scoring. In order for the correct set of questions to be asked at each entity, which of the four levels is relevant for each entity needs to be determined and then entered here. **Note** that the spelling of these levels **MUST** exactly match the data entered in the default programming of the Facility\_v1 workbook: “SDP”, “Referral”, “Warehouse”, and “Central”. “Warehouse ” and “Ware house” (with extra spaces) will cause errors in the SurveyCTO code. For this reason, users should copy and paste the existing text in the default Facilities\_v1 as appropriate (rather than typing in the data).

The resulting file should resemble:

A	B	C	D	E
Facility Id	Facility Name	District	Facility Type	Facility Level
F1	Health Center 1	District 1	Health Center	SDP
F2	Health Center 2	District 1	Health Center	SDP
F3	Health Center 3	District 2	Health Center	SDP
F4	Health Center 4	District 2	Health Center	SDP
F5	Health Center 5	District 2	Health Center	SDP
F6	District Hospital 1	District 2	Hospital	SDP
F7	Hospital 2	District 2	Regional Referral Hospital	Referral
F25	Hospital 1	District 3	Regional Referral Hospital	Referral
F26	Health Center 26	District 4	Health Center	SDP
F27	Health Center 27	District 4	Health Center	SDP
F28	Health Center 28	District 4	Health Center	SDP
F110	CMS	District 5	Central Warehouse	Warehouse

(with appropriate identifiers, facility names, districts, types, and levels entered).



## OPTIONAL CHANGES THAT LIKELY WILL BE NEEDED FOR MOST NSCAS

### CHANGING THE WORDING OF QUESTIONS TO FIT THE COUNTRY-SPECIFIC CONTEXT

Assessment teams and stakeholders should review the CMM survey instrument in the preparation stages of an NSCA. During this review, some of the terminology or wording of questions may want to be refined in order to make questions more easily understood by respondents (and data collectors). As one example, question HR-101 (row 132 of the Survey worksheet) asks “Is there a human resource workforce plan...” In a particular context the ‘human resource workforce plan’ may have a specific title or nomenclature, and the assessment team may want to use that specific title or nomenclature in lieu of ‘human resource workforce plan’. Another example includes question WS-203 (row 562 of the Survey worksheet). This question asks, “Do you receive a distribution schedule in advance from the Issuing Warehouse or Supplier?” and is only asked at SDP and Referral Hospital Levels. For this question, the assessment team may want to replace “Issuing Warehouse or Supplier” with the specific entity of interest in the country (e.g., Central Medical Stores or an intermediate warehouse). Similar wording changes may also be appropriate for some of the answer categories listed on the Choices worksheet. For example, the answers to question HR-503 (rows 309 to 315 on the Choices worksheet) may be altered to match country-specific titles. Finally, all of the modules begin by identifying likely respondents for that module; these respondents may need to be customized to a particular country.

To change the wording of a question, users should change the text in the ‘label’ column (Column C) of the Survey worksheet. In order to ensure compatibility of interpretation, users should also make the same changes in the “QbyQ” worksheet of the “cmm\_survey\_template for scoring” (if they are using the template).

Note that wording changes should serve to *clarify* questions for a particular audience, but should not *alter the underlying meaning* of a question. If the underlying meaning of a question is changed, then the answers may no longer be appropriate and the maturity scoring of the question may also no longer be appropriate.

### OMITTING IRRELEVANT QUESTIONS

Some questions may not be relevant for a particular country or the particular supply chain(s) included in the assessment. For example, questions FS-701 through FS-703 (rows 249 through 251 on the Survey worksheet) ask about health insurance payments to health facilities. Some countries may not have health insurance that interacts with (for example) government-owned health facilities, and asking people working in government-owned health facilities about health insurance payments may lead to confusion.

Omitting questions should be done with care – some items or processes in the CMM instrument may not be thought to be present / done in a country, but *could* (and perhaps should) be present / done in a country. These questions remain relevant and collecting data on them can help provide robust assessment results. Omitting questions should only be done in cases where the question is asking about something that could not be done in a country. In the example above, in some countries health facilities could not accept payment from health insurance even if they desired to do so; in this case omitting the questions may be acceptable.

Questions that are irrelevant to a particular country can be omitted from the survey instrument by typing “yes” in the ‘disabled’ column (Column J) of the Survey worksheet. In the example above, “yes”

would be typed in cells J248 (because the header also is not relevant), J249, J250, and J251. In order to ensure accuracy of maturity score results, users should also change the maturity classifications on the “Reference” worksheet of the “cmm\_survey\_template for scoring” (if they are using the template). Generally, the maturity category for omitted questions should be changed to ‘Descriptive’ so that the question does not contribute to the overall maturity score. In the example above, the scoring category for question FS-702 (in Cells M453 and N453 on the Reference worksheet of the “cmm\_survey\_template for scoring”) could be changed to ‘Descriptive’ (since the maturity category for questions FS-701 and FS-703 are already ‘Descriptive’).

## **ADVANCED CHANGES THAT MAY BE NECESSARY BUT SHOULD BE DONE WITH CAUTION**

### **ADDING QUESTIONS**

Assessment teams may have a particular topic or problem that they want to gather further information about but that is not included in the CMM Survey. Extra questions can be added to the survey without compromising the SurveyCTO code by adding rows in the appropriate place on the Survey worksheet and filling in the required information (understanding how SurveyCTO coding is written will be necessary to complete this step). Answer categories can be added to the end of the Choices worksheet if needed. Care should be taken to ensure that the added questions do not make the data collection process overly long (i.e., a limited number of questions should be added).

When adding questions, users should consider the following:

1. The “cmm\_survey\_template for scoring” will not produce any results for the added questions. Analysis of additional questions is the responsibility of the analysis team.
2. The numbers (in the ‘name’ column or column B of the Survey worksheet) of existing questions cannot be changed to maintain the functionality of the “cmm\_survey\_template for scoring”. That is, users cannot add a question in the middle of a section and then re-sequence the numbering of the remaining questions in a section and retain functionality of the “cmm\_survey\_template for scoring”. For example, if the assessment team wants to insert a question after question HR-201, they should NOT number the new question HR-202 and renumber the remaining HR-200 series of questions. Rather, a new number (e.g., HR-201 I or HR-201 b) should be used for the inserted question.

### **SKIPPING MODULES FOR SPECIFIED HEALTH SYSTEM LEVELS**

The four health system levels (SDP, Referral Hospital, Intermediate and Central Warehouse, and Central / MoH Level) programmed into the CMM survey have different questions and (in some cases) different modules that are asked of respondents. However, there may be settings where a particular module may not be relevant to a particular health system level. In this case, users may want to ‘block’ or ‘skip’ a module based on the level of a health system. For example, in some countries’ referral hospitals may not perform procurement, while the default programming in the CMM Survey workbook assumes that they do. In this case, the ‘referral’ level may be changed to indicate that this level should not be asked about procurement. To do this, the health system level of interest should be removed from the ‘module#group’ of relevance. In the case of procurement, the relevant question is ‘module7group’, found on row 446 of the Survey worksheet. To skip this module for the referral level, users should go to cell I446 (in the ‘relevance’ column). There, users can delete ‘or \${faclevel}="Referral"' from the

formula, indicating that this group is NOT relevant for the “Referral” level (it is considered relevant if the health system level is specified).