



Guide to Cold Chain Equipment (CCEM) Data Collection Guide Pakistan Version 2.1

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Revised CCEM Pakistan Version 2.1

Supplement to CCEM Data Collection Field Guide for Pakistan

1. Each data collector must have: one set of: seven Questionnaires (1 to 7 and calculation sheet), one CCEM Data Collection Guide and one Equipment Identification Booklet (Pictorial Booklet);
2. Every participant must have: My Clear Bag, Cardboard, Measuring Tape, Lead Pencil, Eraser, Sharpener and one writing pad with Ballpoint;
3. Please make sure that during training you have seen and the can identify easily when in field:ILRs, Refrigerators, Cold Boxes, Standard Vaccine Carrier, Rotary Vaccine Carrier, Ice Packs commonly found in the field, thermometers, and can use EPI Stock Register and EPI Daily for data collection;
4. Have very well acquainted with Pictorial Booklet and are able to use it to match different Cold Chain Equipment found in it by matching, picture, model and make;
5. Are able to do measurements for the equipment (ILRs/Refrigerator/Cold rooms/Cold Box/Vaccine carrier/ice packs) not found in the booklet;
6. Familiarise yourself with seven types of Forms, Data Field Collection Guide, Equipment Identification Booklet (Pictorial Booklet) and calculation sheet,see all the stuff carefully and before leaving the training hall make sure that you can use Field Guide and Equipment Identification Booklet;
7. Go through each form one after the other from 1 to 7 and calculation sheet in details with trainerand learn the questions you will ask to fill the form for each question;
8. Write down your Code Number you will be using it in the field;
9. List of equipment which needs to be coded are: **1) ILR, 2) Freezers, 3) Refrigerator, 4) Cold Boxes, 5) Standard Vaccine Carriers 6) Stabilizer and 7) Generator** found at health facility/EPI store/Hospital and **NOT** to be coded are **1) Rotary Vaccine Carrier, 2) Ice Packs and 3) Transport;**
10. At the end of training session after completing Questionnaires,
 - a. Make data collection plan with your DHCSO, this will be daily activity with Names of Health Facilitiesfrom which you are supposed to collect the data.
 - b. Get required number of Sets of Questionnairesaccordingly. You will need one set for each health facility. Sets must have:Health Facility = 1, ILRs = 3, Vaccine Carriers = 1, Stabilizer = 2, Generator= 1 per person, Transport= 1, Calculation sheet = 1, Guide Books = 1/person and Equipment Book = 1/person.
11. Make plan such that all the health facilities assigned to you are covered in stipulated time;Data from District Stores to be collected by DHCSOs.
12. After collecting data from each health facility data collectors will form set of filled forms which will include: one Health Facility Questionnaire -1 as main form and all the other forms related to that facility will be attached with that including 1 calculation sheet for each EPI center/store. Each filled form set will have one Health Facility Questionnaire -1 with one calculation sheet, while number of other Questionnaires may vary depending on availability of equipment at health facility and number found. For example if generator is not available at health facility,generator form for that will not be filled at that particular health facility and will not be attached. Only filled forms should be attached together to form a set;
13. DHCSOs to check all the form thoroughly after data collection going through each question looking at completeness and quality, do correction if needed, ask the data collector to go back in field for correction if needed and only when form is completed according to instructions it will be accepted by DHCSO signed . DHCSO will give them number in sequence;
14. After data collection all the stuff including; Measuring Tape, Field Guide and Equipment Identification Booklet (Pictorial Booklet)with all the left over blank forms in addition to filed form should be submitted to DHCSO.

Instructions for filling Questionnaires

NOTE: Only Questions needing explanation are given below with serial numbers, the omitted ones are self-explanatory.

FORM 1

One form to be filled for each EPI center where there is an ILR/Refrigerator or Freezer

1. See questionnaire.
2. See questionnaire.
3. See questionnaire.
4. Write name even if it is a district store, district hospital, tehsil store, tehsil hospital etc. as CCEM will not move if UC name is not entered. If more than one UCs is served by this health facility write names of all. But first UC must be the one in which health facility is located.
5. See questionnaire.
6. Add "Tehsil/Taluka vaccine store" and "Others" and mark what is appropriate. In case of "Others" write nature of facility as well.
7. Catchment area population, not "target population". This is EPI target for the area not for polio target. Please consider following:
 - Enter the total population currently living in the area served by this health/EPI facility. E.g. total population of BHU Nasir Bagh catchment area is 32,000, therefore this figure will be written here.
 - In case of BHUs vaccinator may be consulted to calculate population. Ask him about the figure used to prepare his monthly plan. In most cases this figure will be the total population of that UC. In case there is one EPI centre in that UC than UCs total population will be written here.
 - In case there are more than one EPI centres in that particular UC, data on separate forms will be collected from all centres. Population for each centre will be entered in accordance with their EPI work load. Let us consider an example of a UC having a total population of 25,000 where one BHU and one dispensary are located and both are providing EPI services. In that case UCs population will be divided in accordance with facilities' EPI workload e.g. if BHU is roughly providing EPI services to 2/3rd of the population and dispensary is serving to the rest 1/3rd than 16,600 will be written in Questionnaire being filled for BHU and 8,400 will be written in the Questionnaire being filled for the dispensary. EPI staff, MO in charge or other staff involved in immunization services may be consulted before writing these figures.
 - In case an EPI centre is also providing EPI services to the population of an adjacent UC where there is no EPI facility, than population of that particular UC will also be counted into this facility's population. It is important to write population figures that closely match facility's catchment area's population/EPI work load to avoid overestimation or underestimation of cold chain/vaccine logistics requirements.
 - For urban clinics where population data may not be easily available, calculate down BCG vaccine consumption over the last 3 months and multiply by 4 and write under live-births per year, leaving total population box blank.
 - For District vaccine stores, use the total district population, for Provincial vaccine stores, use the total province population and for National vaccine stores, use the total country's population.
 - For any other facility providing EPI services e.g. DHQ or Teaching Hospital while entering population figures care must be taken to take into account all other EPI centres located in the same UC and from where data will be also be gathered. It is important to enter the respective population figures in accordance with the population size being served for EPI services.
8. In Urban areas or in some other Hospitals if catchment area population is not available please leave the Question 7. blank and instead fill this, by counting total BCG administered during previous 3 months and multiply by 4 and write the number here.

9. Leave blank in all cases.
 10. Leave blank in all cases.
 11. (a) This will be ticked storage in all cases as we are filling form 1 of those facilities where ILR or fridge/freezer are present.
 - 11b. Tick whichever is applicable.
 12. Number of staff should be entered e.g. all dispensers even if they are not doing vaccination
 13. Only cold chain and vaccine management trainings, which are none currently. Training means a full day on cold chain or vaccine management.
 14. Count all entries of any one antigen e.g. BCG (under the column "Received" in Stock Register) during last six months and use formula. (Explain how to count receipts in stock register and practice):
 - a. From EPI Stock Register get total number of entries for receipt of BCG during the last 6 months, multiply with 2 to get total number of times BCG arrived for one year. To get weekly resupply interval divide 52 with the answer **(52/ Total # of BCG entries found in Stock register X 2)**.
 - b. If stock for the last six months is not being maintained then take entries of last 3 months and use formula: **(52/ Total # of BCG entries found in Stock register X 4)**
 15. Step 1: From Stock Register find balance stock before of one antigen (say: BCG) for last six entries. Add all the six, take average by dividing by 6. These are on average doses left for BCG when new supply comes.
- Step 2: Ask for annual target children of BCG for facility and divide it by 52 to get weekly target for children to be vaccinated for BCG each week
- Step 3: Use formula Answer of Step 1 / Answer for Step 2 (Number of Doses left for reserve / Weekly Target)
16. Use formula:

Step 1: Static: 4Litres for one carrier X # of vaccine carries prepared (for static) in one day X # of immunization days in one week.

Step 2: Outreach: 4Litres for one carrier X # of vaccine carries prepared (for outreach) in one day X # of immunization days in one week.

Step 3: If in vaccine delivery question "Collected" or "Both" is marked ask how many cold boxes they use to bring vaccine and use formula: Number of Cold Boxes used X 14 litre / 4

Step 4: Add answer for Step1 to Step 3 and write in the form
 17. Ask total number of mobile teams, total number of transit teams, total number of fixed teams, total number of AICs and use the following formula:

$$(1\text{litre} \times \# \text{ of mobile teams}) + (4 \text{ litre} \times \# \text{ of transit teams}) + (4\text{litre} \times \# \text{ of fixed sites teams}) + (4\text{litre} \times \# \text{ number of AICs}) = \text{Answer}$$
 18. See questionnaire.
 19. See questionnaire.
 20. See questionnaire.
 21. Get it from stock register; go back three months from today. If there is "Nil" or "0" for BCG or Penta at any time in "Balance" column mark "Yes" in the form. Ask team to practice.
 22. See questionnaire.

23. Leave blank.

FORM 2

You need one form to be filled for each Refrigerator, ILR and Freezer.

Use Coding system you were explained during training and put appropriate code on equipment found in each facility.

1. See questionnaire
2. See questionnaire
3. See questionnaire
4. See questionnaire
5. See questionnaire
6. There are four boxes: use first for Province code which are (1 = Punjab, 2 = Sindh, 3 = KP, 4 = Balochistan, 5 = AJK, 6 = GB, 7 = Islamabad, 8 = FATA)
Give unique number for each equipment
7. Find the model and make of each refrigerator/ freezer/ILR in the **Equipment Identification Booklet** and enter the correct **Catalogue ID** in this data field and proceed to answer questions #7 to 13. If the refrigerator cannot be identified in the **Equipment Identification Booklet**, then leave this field blank and answer questions #8-19.
For ILR / Refrigerator / Freezer not in Guide Book take measurements Length, Height and Width separately for +4 and -20 and write in the Questionnaire (do practice)

Add MKF 074 in Equipment Identification Booklet (Pictorial Booklet)

FORM 3

One form to be filled for each facility unless there are more than 20 types of cold boxes and vaccine carriers. In that case add one more form.

Explain one row to be filled for one type of cold box or vaccine carrier

1. .
2. .
3. .
4. .
5. .

Ask the participants to open Guideline, tell them how to use that. Tell them, while in field, try to identify the equipment with picture in guide, then confirm by matching Make/Manufacturer and model only then write the E code.

For those which are not found in the guide booklet, write model name/number, manufacture and everything in this column.

Give your CODE NUMBER to everything Except: Non Standard Vaccine Carrier (Rotary Carrier JVVC 900), No code for ice packs and no code for Transport

Add boxes and write number of all sizes of ice packs which are not given here

Measurements for Ice Packs: Take measurement in cms (L X H X W) / 1,000 = Size of Ice Packs in litre

NOTE: Please do all calculations on Calculation Sheet and attach it with each set and then submit to VM team.
Take all the measurement in centimetres however measurements for Cold Room are in Meters.