Training course for Consultants and Survey Coordinators on National TB Prevalence Surveys
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Procedure for Field Operation

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Outline

1-Field preparation
   – Meeting with the village leader
   – Organization of a local volunteer team
   – Verification of the number of eligible population in the village
   – Deciding the part of village for survey
   – On-the-job-training on census taking for the volunteers
   – Mapping of the selected village(s)
   – Review of the main industry and occupations of the village(s)

2-Field implementation
   – D0: basic operation
   – D1: census taking
   – D2-D3: screening
   – D4: screening-first sputum transportation
   – D5: Tracing, data cleaning
   – D6: leave and second transportation

3-Other issues
1-Field preparation

Two to three weeks before the field operation.

• The mission consists: the team leader, Census Unit member and the driver.

• The Provincial TB supervisors and TB OD
1-Field preparation (cont’)

• Items to be brought to the village:
  – Household register
  – Leaflets about NPS
  – Brochure

• The purpose of the visit is as follows:
  – To meet with the village leader to ask to set up local collaborating team for the survey
  – To count/estimate the number of eligible population in the village(s)
  – To decide in which part of the village the field operation is conducted (optional)
  – To conduct on-the-job training for the volunteers to fill out household list
1-Field preparation (cont’)

Meeting with the village leader

The mission meets with the village leader and vice-leader and explains the procedures of the field operation of the NPS, including the dates on which field operation is conducted.
1-Field preparation (cont’)

Organization of a local volunteer team

The village leader is asked to organize a local collaborating team for the main field operation.

The candidates need to be informed in advance
1-Field preparation (cont’)

Verification of the number of eligible population in the village

The number of eligible population (i.e. 15 years old or older) in the selected village(s), including additional village(s) selected during the first visit, is counted using the village’s census data and verified if it is a little bite more than sample size. If the number is not sufficient, an additional village should be selected.
1-Field preparation (cont’)

Deciding the part of village for survey

When the field operation is being done in a part of the selected village, either it is initially or additionally selected, the part (i.e. household groups/ block of household) is being selected in one of the following manners.

- First, the mission prepares lottery numbers from one through the total number of the household groups/ block of households.
- Second, a table with household group ID numbers and the total numbers of household members, is prepared.
- Third, the village leader is asked to pick up one lottery number and then asked to go either up or down. For example, if the selected number is five (5) and the leader chooses to go up, the household groups are selected from number five of the household group going up to a number with which the total number of eligible population becomes sufficient.
Braboeung village: 4 blocks: 262+500+400+378 peoples all
SdaeungChey commune
CheungPrey district
Kg Cham province

Block 250~262 from list
1-Field preparation (cont’)

On-the-job-training on census taking for the volunteers

• On-the-job-training on how to fill the household list to the village leader, the volunteers, together with the OD TB supervisor.

• On arrival at the household, the census team explains the brief overview of the NPS, the census taking, the date of the field operation, asks for the household member’s cooperation to the NPS.

• The team then fills out the household registry form. The tasks are as follows:
  – Every person, regardless of age, who have stayed at the house on arrival of the census team is recorded on the form (i.e. name, sex, date of birth, age, and occupation).
  – The age of a person should be recorded as accurate as possible.
1-Field preparation (cont’)

Mapping of the selected village(s)
The selected village(s), including the household groups with its ID number, is mapped on a map. The tasks are supposed to have been done in the first visit but it needs to be confirmed and adjustment.
1-Field preparation (cont’)

Review of the main industry and occupations of the village(s)

• The main industry and occupations of the village(s) are reviewed.

• If most villagers are, for example, factory workers, the working hour of the field operation team needs to be adjusted for the villagers’ after work (e.g. 6-8 pm) to be able to achieve more than 90% participation rate.

• Likewise, most villagers are farmers, the working hour may need to be shifted earlier (e.g. starting from 6pm).
1-Field preparation (cont’)

Review of the villagers’ customs regarding medical procedures

The norm or customs of the villagers are reviewed, particularly the villagers’ acceptance towards medical procedures (i.e. chest X’ray test).

Seasonality in the village is also assessed to foresee the feasibility of field operation in a certain season.
2-Field operation

Day 0

• The team leader, the member of the Census / interview unit, Informed consent (IC) unit, and the driver arrive in the village by 16:00 Sunday.

• The team meets with the village leader and the volunteers and verifies the feasibility of the operation. The Census unit then receives the household registry which the village leader and the volunteers have been asked to fill out at the time of the team’s second visit.

• The Census unit, together with the team leader and Inform Consent unit, then holds a brief meeting with the volunteers on the census taking day.
Interagency collaboration with flexible budget support is essential to assist a country to carry out a prevalence survey.
2-Field operation (cont’)

Day 0

- After the meeting, the team does a couple of internal works: assigning dates of field operation to the household groups. The whole household groups are divided into six subgroups depending on each size and assigned date and time to come to the field operation centre for interview and chest X-ray.

- Then, the team prepares invitation letters for the participants for interviewing and chest X-ray taking. The letters are handed out to each family chief during each household visit for census taking.

Table X: The number of participants to be assigned to come to the field operation centre for interview and chest X-ray

<table>
<thead>
<tr>
<th></th>
<th>Day 2</th>
<th>Day 3</th>
<th>Day 4</th>
<th>Day 5</th>
</tr>
</thead>
<tbody>
<tr>
<td>AM</td>
<td>About 120-130</td>
<td>120-130</td>
<td>120-130</td>
<td>For tracking non-responders</td>
</tr>
<tr>
<td>PM</td>
<td>About 80-90</td>
<td>80-90</td>
<td>80-90</td>
<td></td>
</tr>
</tbody>
</table>
2-Field operation (cont’)

D1-Verification of the census registry

• Every person, regardless of age, who have stayed at the house for two weeks or more before the arrival of the census team is recorded on the form (i.e. name, sex, date of birth, age, and occupation).

• If there is any person who has stayed more than two weeks and who has not yet on the household registry, the person should be added at the end of the registry. If there is any person who is on the registry but has moved out of the household, has long been out for some reason, or has died, the person should be crossed out from the registry.

• If a person continuously stays at two locations, the person should be registered at the place he or she stays longer.

• Each eligible person (i.e. ONLY 15 years old or older) is assigned a registration number, which has 7 digits.
**Flow of census taking (D1)**

**Direction of sample selection**

1. Give back household registry to family chief
2. Pasting household number (3 digits) + RDV
3. Identifying eligible people by census staff
4. Finalizing eligible-sample size by Team Leader

**Legend:**
- Survey staff
- Local volunteer
- Family chief
Pasting Household number
2-Field operation (cont’)

Given the invitation letter

After the verification, the Census team member gives the invitation letters to each family chief and cordially asks all eligible household members (i.e. those who are 15 years old or older) to visit the field operation centre for interview and chest X-ray test.

The Census team needs to explain that the date and time are designated for the household members, however, they can actually visit any day and any time while the survey team is operational.

In the invitation letter, the date and time designated to the household member for the interview and chest X-ray is written previous day.

Also, a brochure and a leaflet in which the brief overview of the NPS is printed are provided to each household.
2-Field operation (cont’)

Arrival of the X-ray collection units

The members of the X-ray and Laboratory units arrive in the village on the day 1.

The X-ray unit members set up the X-ray machine, X-ray protection curtain, automatic processor, and a generator.

It normally takes 40 minutes to set up the X-ray facility.
2-Field operation (cont’)

Days 2-4

- On days 2-4, the team conducts screening of the eligible population in the selected village(s). The field operation normally opens from 7:00-12:00 and 13:30-17:00. The details should be decided by the team leader.

- The whole household groups in the selected village(s) are divided into six groups and each subgroup of households are assigned date and time (either morning or afternoon and either day 2, 3, or 4) to come to the field operation centre for interview and chest X-ray.

- In operation in urban areas, the team has to consider conducting field operation after hours (17:00-20:00) depending on the participation rate.
Under house were the most place that we used for operation site. Its benefits: close to subject, light reduction to X-ray unit, protect from rainfall, reduce hot climate for all.
2-Field operation (cont’)

Reception and informed consent

The participant is first led to the reception by a volunteer. If there is a long queue in front of the reception, the participants are requested to wait at the waiting area.

- At the reception, the receptionist, explains the overview of the NPS and procedure of interview and chest X-ray, and sputum test (optional to symptomatic or abnormal shadow by chest X-ray), using the IC sheet to the participant.

- After the explanation and clarifications, if any, the participant is requested to sign on the IC sheet.

- Then, the receptionist fulfil the survey number, name, age, sex and occupation of participant on individual interview sheet and leads the participant to the interviewer.

- It should be emphasised that the documents should never be given to the participant to avoid misplacing them somewhere or taking them the participant’s home.
2-Field operation (cont’)

Interviewing

• The interviewer conducts an interview using the individual survey sheet.

• The actual interview starts with the respiratory symptom, health seeking behaviour, and treatment history of TB, which needs to be selected just one from either Yes or No.

• After the interview, the interviewer gives the ID card to a volunteer and the volunteer leads the participant to the radiology assistant.
2-Field operation (cont’)

Chest X-ray taken

- The radiology assistant receives the ID card from Interview unit. He verifies the identity and he puts the participant’s X-ray ID number on the film cassette.
- The technician makes the participant the position for chest P-A view.
- He then informs the participant to wait outside the chest X-ray area and relax until the film is interpreted by the film reader.
- Another radiology technician develops the film immediately.
- He gives the film as well as other documents to the chest X-ray reader.
- The result is recorded in the X-ray examination registry, ID card as well as in the individual survey form.
Flowchart of screening days (D2-D5)

Legend
- Survey staff
- Local staff
- Volunteer
- Subject

Lab-tech

Film processing

Safety line

Inform consent

Waiting space for screened subject

Circulator

Interviewing

Team leader

Radiologist

X-ray assistance

X-ray taking space

Subject

Survey staff

Local staff

Volunteer

Legend

Safety line

Safety line

Safety line

Safety line

Safety line

Safety line
2-Field operation (cont’)

Decision regarding sputum collection

• When the participant has any symptoms or chest X-ray abnormality suggestive of TB, the leader orders sputum collection for the participant and do re-interview about symptoms, action taken and TB treatment history according to the backside of the individual interview sheet.

• Then, the leader gives the documents to a volunteer and the volunteer leads the participant to the Laboratory unit waiting outside.

• When the participant does not need sputum collection, the leader performs the final check of the documents and the participant to leaves.
2-Field operation (cont’)

Sputum collection

• The Laboratory unit receives the ID card from the volunteer and the fills out the sputum test request form.

• Then, Laboratory unit gives the participant instructions how to excrete good sputum into a sputum cup and asks to put sputum into the cup on the spot. The participant should produce sputum in open-air to avoid any possible TB infection to others.

• Sputum cups with sputum taken should be tightly screw-capped and stored in an icebox with ice until transported to the culture centre.

• The Laboratory unit gives the participant another sputum cup labelled the identical serial number and written down on it(D1), and explains that the participant needs to take sputum next morning (D2) again and that he or she has to bring the cup to the field operation centre as soon as the sputum is taken.
One spot specimen on day 1, and one early morning specimen on day 2
2-Field operation (cont’)

Final check before the participant leaves

• The team leader/TB Supervisor receives the documents and performs the final check of the documents, particularly the individual survey sheet, if the necessary columns are accordingly filled out, before the participant leaves.

• If anything is missing, the leader asks the participant necessary inquiry and fills out the questionnaire or asks the participant to sign the IC sheet, etc.

• When everything is OK, the leader thanks the participant for his or her cooperation, provides with a gift, and the participant leaves the field operation centre for home.

• If the participant needs to take sputum as TB suspect, the leader makes sure the participant comes back to the field operation centre next morning with the sputum cup with morning sputum taken.
2-Field operation (cont’)

Day 5

• On day 5, the survey team conducts tracking down non-responders and preparing the field report.

• Part of Census unit and the volunteers visit households to ask the non-responders to come to the field operation centre for interview and chest X-ray test.

• An elderly or a disabled person who cannot come to the field operation centre may be visited by a team member to take two sputum specimens on the spot to secure higher participation rate.
2-Field operation (cont’)

Day 6

• On day 4 and 6, the sputum cups are transported to the designated culture centres.

• After the team shuts down the field operation centre, and the team leader thanks the village leader, the volunteers, the OD and provincial supervisors, the team leaves the village and moves either back to Phnom Penh or to the next district where field operation is taking place.
Other issue

Field data cleaning:

• Interview sheet should be arrange by household in order to verify the attendance and non attendance

• Finalizing the sample size(eligible), attendance, absentee and refuse.

• Arranging and packing chest x-ray film and x-ray log book

• Summary report on field operation
Thank you for your attention!