Good study for good planning for better future

Logistics, Data and Human Resource management, --
Organization, Logistics, Human Resource and Data management in TB prevalence survey

Today’s session

• Experiences in Cambodia, Myanmar and other countries

• More practical tips than theories
We are ready to go!

• Fund has been secured
• Protocol has been approved
• Procurement are going on
• Clusters has been chosen
1st Pre-visit (Preparation stage)

Logistics to the cluster
Survey site mapping, basic population data
Local collaboration etc
To develop survey schedule
Preparation

- Staffing
- Part by part training
- Develop SOPs and additional guide beyond the protocol
- Team formation
- Integrated operational training
- Pilot tests (in field condition)
- Pilot survey (full operation)
2\textsuperscript{nd} Pre-Visit
(3-4w before the actual survey)
develop precise local plan
ask pre census population data
confirm survey dates
designate survey area
arrange and give guidance to
staff/volunteer

Make sure that this is on
going activities during
survey operations
Logistics (1) Cars and X-rays

- Careful Plan by Logistic Team
- Electricity for X ray
- Reserve when breakdown
- Additional car(s) for supervision
Survey day
Do in a village
Or Carry people to X-ray site
Or
Both
Logistics (2)

Lab (Expert consultation is essential)
Sputum/Specimen Transportation Plan
  – Reverse Cold Chain
  – Safety
Logistics (3)

• Part of logistics, especially non medical equipment (desks, chairs, tent, ----) and incentives (balloons, snacks, water) can be “out sourced” to private sector, and/or “decentralized” to local responsibility.
Data management in survey operation

• Clear flow

• Clear responsibility:
  – Who fills which section of which document
  – Who makes final decision

• Electric data or paper?
  – Electric data: back up files: when by who, naming rules
  – Paper documents: photocopy
Prevention is better than emergent treatment

Too precise info can’t be used, and it could be a burden on survey operation

- Researchers want to know many, however, studies with too much breakdown components often don’t have any meaningful conclusion due to limited sample size
- Time consuming individual interview could be a bottleneck in survey operation

You have >10,000 S+ cases a year by NTP. However, a survey may detect only around 100 cases.
# Registers & Forms

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<tr>
<th>Form/Report</th>
<th>Type</th>
<th>Required</th>
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<tbody>
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</tr>
<tr>
<td>ID &amp; Invitation card</td>
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<tr>
<td>Individual survey card</td>
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<td>must</td>
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<tr>
<td>X ray log book</td>
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</tr>
<tr>
<td>TB suspect list with sputum collection record</td>
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<td>optional</td>
</tr>
<tr>
<td>cluster report</td>
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<tr>
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<td>Post survey interview form</td>
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</tr>
<tr>
<td>PC data base</td>
<td>data base</td>
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</table>
Census: Confirming eligible population and asking for participation

To know population structure including children is often important especially when available population information is not reliable and when there are significant floating populations.

Do always with Local Staff and People who knows community well
Flows:

1. **Subjects** → **Reception**
   - Reception: "1 or 0" +2
   - X-ray normal
     - Checking Ticket & Incentive (“0-1” + “1-2”)
   - X-ray exempted
     - Team Leader
   - Chest X-ray (1+1)
     - X-Ray reading (1+1)
     - Abnormal
       - Explanation if necessary
     - X-ray normal
       - Checking Ticket & Incentive (“0-1” + “1-2”)
       - Team Leader
2. **Not Eligible**
   - (Central staff + Local Staff)
3. **Drivers (3) can work as assistants**
Onsite date management: survey site design of flow of “participants and date sheets” is a key for smooth operation

Rural village in Cambodia

Urban center, Viet Nam
EXIT (Check point)

• Check point
  – Screening: Completed or Not
  – Recording: Completed or Not
  – Further examination: Necessary or Not
  – Further information to provide: Necessary or Not

May need to provide some paper document to participants
Daily/Cluster data management

- Daily/Cluster report
- Responsibility to hand over the data from Field team to Central unit

Comparing a log book (register) and sample collection sheets at the end of the day (Viet Nam)
Screening results and confirmation:
Don’t mix up different information source

Symptoms
X-ray: (avoid confusion)
• Field reading for primary screening
• Central reading for QA
• Central/Panel decision

Bacteriology
• On spot smear results if applied
• Confirmation in central lab
Supervision and Mid-term review

- Define role and responsibility
- Retreat (mid term review) to exchange info.
- Minimize inter-team bias
Data from Central Teams

• X-ray reading (MMR screening if applied, Central Panel)
• Lab
• Final diagnosis
• Follow up study results if applied
Data entry and analysis

• What data sets? (No necessary to put all log books into PC)

• Entry of data from Lab, X-ray ---

• Double data entry and verification (out sourcing)

• Analysis and interpretation

• Reporting and Dissemination
Patients’ information

Case file (numerator file)

- Confidentiality issues
- Priority in cleaning and confirmation
- Additional study data
- Arrangement of treatment and/or further examinations: Who will tell what to whom when and how

\[ S(+) \]
\[ S(-)C(+) \]
\[ S(-)C(-) \] TB suggestive by X-ray
Other disease suspected
Patient data set

The numerator

• Strongly recommend to develop a separate data set of detected patients
  – Diagnosis by different definitions
  – Categories
  – Identification of Mycobacterium
  – DST
  – Delay
  – Treatment arrangement
Access to data sets

- Electric files
  - Specific PC for the survey if possible
  - Users’ name, Pass word
  - Back up copies: clear guide to name a file

- Paper documents:
  - No eraser, No white ink, please
  - Key-locked cabinets
Data analysis

The area where technical assistance was most needed

• Expert consultation is essential
• Clear requests/instructions to statisticians and epidemiologists
• Consider implication for the program to interpret
Reporting & Dissemination

Results are assets of everybody: Neither of researchers nor the government

- Consensus meeting with experts and stakeholders to share information and to get advises for further analysis
- Early presentation of key preliminary results (no secret)
- Data clean up, further analysis, WS on interpretation
- Drafting an official report
- Consensus meeting with stakeholders
- Dissemination WS of final results
- Publish the official report
- Submit scientific papers to journals
Consultation WS
Finalizing/ Certificating the results
Typical survey schedule

- Monday: Census (may be on Sunday in urban area)
- Tuesday-Thursday: Interview, X-ray, Sputum collection (540 adults=180/day: 1,000 people, 600 aged 15 or more, 90% participation; In Myanmar Survey, 600+/cluster X ray were taken in 3 days)
- One early morning and evening operation when necessary
- Friday morning: Sputum collection, summarizing cluster activity; report to local authority
Subjects

Reception (1or 0 +2)

Chest X ray(1+1)

Abnormal

Sputum Examinations Registration & collection (1+1)

Interview (3+1)

X ray exempted

X-Ray reading (1+1)

X ray normal

Abnormal

Explanation if necessary

Flow

Not Eligible

Team Leader

Drivers (3) can work as assistants

checking Ticket & incentive (1+1)
Team members (example)

• Team leader (1)
• Receptionist/Logistic manager/Clerk (1-2)
• Census and Interviewers (3)
• Radiographer (1) and assistant (1)
• Physician or radiologist (1)
• Laboratory assistant (1)
• Drivers (3) \* No. of teams
Team member (2)

• Role of local staff
  – District TB Officer
  – Health workers
  – Community Volunteers
If smear on spot

• How many slide a day?
• 1-3 lab technicians/ site
  – Consider we have more negative slides compared with routine clinical service: take more time
Local staff

- Village Chief
- Security staff, Police
- Health workers
- Volunteers
Central staff

• Coordinator, Researchers
• X ray reading (part time)
• Lab
• Data management/ Statistics
• Administration and Logistic support
Survey Organization (1)

- **Organizing committee** (when necessary for formality): Ministries, NTP, Donors, Other Authorities

- **Steering Committee**: Primary responsibility for designing, preparing, supporting, monitoring of the survey: Researchers including PI, NTP, supporting agencies, Survey Coordinator,

- **Survey Coordinator/ Team**: Preparation, Implementation, Report

- **Technical Advisory Group**: Provide technical and Scientific advises
Survey Organization(2)

• **Central Units** (necessary to identify human resources needed for central works other than field operation)
  – Lab: Survey period + 3 months
  – Xray: Central readings
  – Epi & Stat (data): Data entry
  – Logistics:

• **Field Teams**

• **Medical Director**: Decision on Medical Intervention

• **Monitoring unit/committee**: probably essential when the operation is contracted out: supervision and monitoring will be provided independently
Training and WS

• Guidance to central staff (2 days)
• Technical training (X-ray, interview, lab, data)
  – From in house training to field training
  – From part by part training to integrated operation
    X ray: 1-2 (2-3) weeks depending on necessity of field training
    Interviewers: 1-2 weeks depending on their experiences
• Pre test
• Guidance to district officers (1-2 person/ per cluster: 3 days including orientation/TOT to recruit and guide local staff)
Training & WS (2)

• Sensitizing WS (when necessary)
• WS to finalize protocol and Develop SOPs
• Kick off (launching) WS, Ceremony
• Mid Term Evaluation and Retreat
• Field and OJT for new staff to refill
• WS on Preliminary Result (3-4M after the completion of Field operation)
• WS to finalize results (with international experts)
• Dissemination WS
Procurement

Responsibility should be clearly defined
Regulations of the country should be reviewed

- Capital Investment
  - Start to discuss with funding agency as early as possible
  - Also contact to TA agency if you intends to use new technology (We still have very limited experience of use of digital X-ray in field conditions, liquid culture in prevalence survey ----)

- Consumables
Thank you