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# Principles of data collection

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## Data quality

- Reliability
  - Reproducibility/repeatability/precision
  - Ability of a measurement to give the same result or similar result with repeated measurements of the same thing
  - Refers to stability or consistency of information
- Accuracy
  - Ability of a measurement to be correct on the average

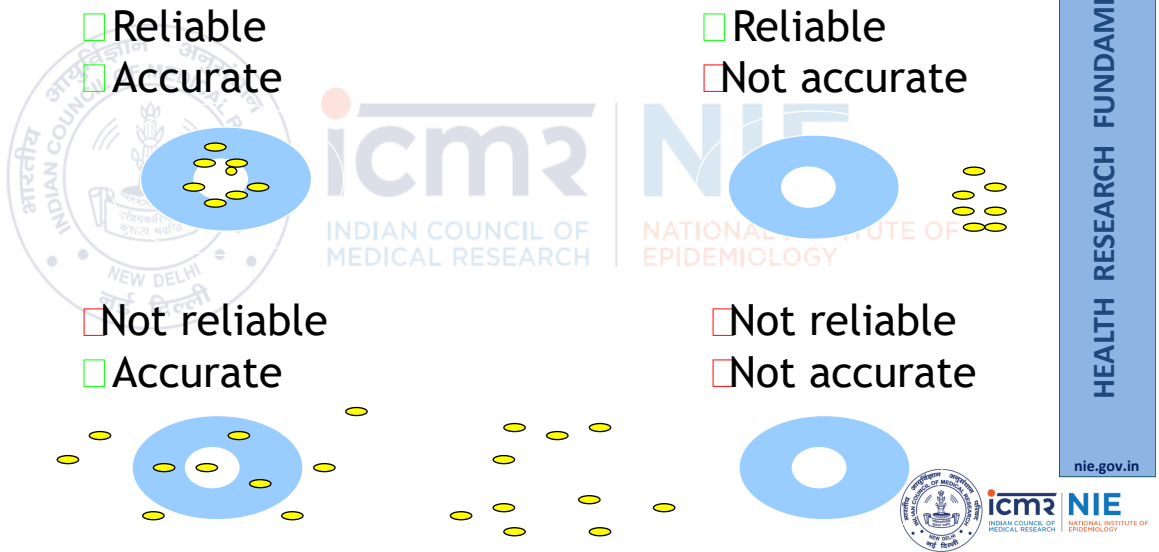


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## Reliability and accuracy



## Six steps in data collection

1. Draft question-by-question guide
2. Train staff members who will collect data
3. Initiate data collection and ensure quality
4. Review collected data for quality and completeness
5. Debrief to trouble shoot difficulties
6. Validate

# 1. Draft question-by-question guide

- Short document to be understood as a guide for field workers
- Consider each question, number by number
- Provide guidance as to how the data should be collected
- Used as a road map for good data collection
  - Drafted initially
  - Revised as issues arise and are addressed

## Example of Q by Q guide

- Question 6 (Housing):
  - Observe the house and note if made of mud or bricks
- Question 12 (Household income) :
  - Identify all the persons with financial income in the household
  - Estimate each source of income
  - Sum up to generate household income

## 2. Train staff who will collect data

- Select good, experienced investigators
- Present the study and its objectives
  - Slide presentation
- Distribute the q-by-q
- Walk people through the q-by-q
- List tasks to be conducted
- Answer questions
- Simulate interviews within the team

## 3. Initiate data collection and ensure quality

- Do pilot on site interviews under supervision
  - Note issues that may come up, resolve them as a group
  - Continue until the procedure is clear to everyone
- Plan data collection process with a supervisor and investigators
  - Ensure study forms are verified by the supervisor every day for any errors
  - Be available to answer questions
  - Do onsite visits
  - Do not press for quick completion

## 4. Review collected data for quality and completeness

- Each team checks the data collection instruments before the respondent leaves
- The supervisor checks the instruments before leaving the location
- All take responsibility for the instrument:
  - Names and signatures
- Principal Investigator checks instruments as they come



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## Checks to conduct

- Completeness
  - Did the field worker fill all items?
- Readability
  - Is the writing readable?
- Consistency
  - Do the answers make sense?
  - Is there internal consistency?



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## 5. Debrief to trouble shoot difficulties

- Regular meetings
  - Evening or morning
- Facilitate a discussion about
  - Issues identified
  - Clarification needed
- Make note of decisions on the q-by-q if needed

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## 6. Validate

- Select a number of study participants at random
- Conduct a second interview
- Compare results
- Debrief discrepancies with:
  - Individual worker if the errors are made by a particular investigator
  - Whole team if the issue is relevant for all

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## Take home message

- Understand the concepts of data quality
- Good training off site and onsite is essential
- Supportive supervision and team work are key to good quality data collection

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Thank you

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