Module 4b: Qualitative data collection, analysis and presentation
Six steps in the IR process

STEP 1: Contextualize challenges

STEP 2: Develop a proposal

STEP 3: Plan and conduct project

STEP 4: Analyse and present data

STEP 5: Disseminate research findings

STEP 6: Monitor and evaluate the project
Expected outcomes

Key concepts
1. Qualitative data collection
2. Analysis of qualitative data
3. Presentation of qualitative data

Application of key concepts
Expected outcomes

Able to describe:

- Appropriate sampling strategies, qualitative data collection techniques and tools
- Data analysis processes in a qualitative study
- Various options for data presentation
Key concept 1: Data collection – *Sampling*

**Sampling strategies**

Purposive sampling – sample selected intentionally

- Convenience sampling
- Snowball sampling
- Maximum variation
- Outliers
- Intensity sampling
- Homogenous sampling
Key concept 1: Data collection

Method

Depends on:

- research questions
- study objectives
- specific information you are interested in
Key concept 1: Data collection

Adapted from Ryan & Bernard (2000) – Data management and analysis methods: Handbook of qualitative research
Key concept 1: Data collection

Qualitative techniques in the IR process

- Interviews
- Discussions
- Observations
- Vignette
- Diagrams
- Photo voice
- Transect walk
- Problem trees
- Community map
- Seasonal calendar
- Ranking and scoring
- Systematic data

Pre intervention

Implementation with continuous monitoring

Evaluation
Key concept 1: Data collection
IN-DEPTH INTERVIEW
Key concept 1: Data collection
TRANSECT WALK
Key concept 1: Data collection

PROBLEM TREE
THE CURRENT NYC SCHOOL SYSTEM ISN’T WORKING

"Problem Tree" Identifies Root Causes & Illustrates How and Why the Problems Grow

WHAT FEEDS THE SYMPTOMS?

- SOCIAL CONTROL
- RACISM
- POWER/LACK OF RESPECT
- RESOURCES ARE NOT TAKEN CARE OF
- MYSTERIOUS MATH
- INVESTMENT
- MATERIAL CONDITIONS
- INVITATION: SCHOOL FAILS
- FUNDING
- COMMUNICATION AND ACCESS

WHAT ARE THE ROOTS?

- A BELIEF THAT POWER/KNOWLEDGE COMES FROM THE TOP
- SO THE EASIER WAY TO DO THINGS IS ON TOP DOWN
- PEOPLE ARE DISEMPowered
- SCHOOL’S PURPOSE IS FOGGY, NOT AGREED UPON
- CAPITALISM: EVERYTHING IS RELATED TO MONEY

THE CURRENT NYC SCHOOL SYSTEM ISN’T WORKING

A problem tree is a visual representation of a hierarchy of causes and effects. It can be used to identify root causes of problems and understand how they grow. In the context of education, it can help identify the underlying issues that contribute to the current state of the NYC school system and illustrate how these issues are interconnected.
Key concept 1: Data collection
PROBLEM TREE / GROUP DISCUSSION
Box 1. An example of a specific health state vignette

"A woman of about your age. Recently she was treated for breast cancer which involved surgery to remove her breast and underarm glands. She takes a daily tablet as continuing treatment. She now finds herself in physical health as good as before with the exception of occasional discomfort around her chest wall and stiffness in her shoulder as a result of the treatment. The nature of the surgery means that she must now take extra care with her appearance, especially with the clothes she can wear. Mentally, her state of health has also returned to its former level. She is not unduly anxious about her diagnosis of cancer."

Example presented by Ritu Sadana at the WHO informal consultation in January 2000 (17).
Key concept 1: data collection (FGD)

Before data collection

- Have your data collection tool ready
- Make appointments early
- Ensure you adhere to selection criteria
- Agree on an appropriate venue
  - e.g. easy to access, no distractions, neutral place
Key concept 1: Data collection

FOCUS GROUP DISCUSSION
Key concept 1: Data collection
Discussion guide

Topic guide for FGD with adult men and women about community attitudes and perceptions towards antimalarial combination treatments (ACT)

FGD IDNO: ____________________________

Audio IDNO: ____________________________ AUD

Date of interview: ____/____/____ (DD/MM/YYYY)

District: ____________________________ Community: ____________________________

Malaria Transmission Season (circle): High / Low

FGD type (circle): Adult men / Adult women and / or pregnant women / Caretakers / Other ____________________________

FGD No (circle): 1 2 3

No of FGD participants: _______

Moderator: ____________________________ Note-taker: ____________________________

Introduction:

I am ____________________________ from ____________________________ (moderator)

I am ____________________________ from ____________________________ (note-taker)

Introduce group using first name

Demographic details – using first name for discussion

General purpose of the study To understand participants experiences with some health problems in the community and the kinds of health care they use
Key concept 1: Data collection (FDG)

Ground rules

Only one person talks at a time
It is important for us to hear everyone’s ideas and opinions
There are no right or wrong answers to questions
It is important for us to hear all sides of an issue – the positive and the negative
Turn cell phones off
Confidentiality is assured
Any questions?
Consent
Key concept 1: Data collection (FGD)

During data collection

Carefully record data, field notes, documents, tape recordings

Write out detailed notes immediately after data collection

Transcribe tapes systematically

Describe and document data collection process as rigorously as possible
Reflection activity
Key concept 2: Data analysis

1. Detailed description of techniques and methods used to select respondents and generate data

2. Carefully specified analysis, with attention to issues of validity and reliability

3. Triangulation
Key Concept 2: Data analysis

Qualitative data analysis steps

- Transcribing / Translating verbatim
- Coding
- Annotating (Comments)
Key concept 2: Data analysis

Analysis of qualitative data

Manual data analysis

Software-assisted data analysis:
  Atlas-ti
  Nvivo
  MaxQDA
  Etc.
Key concept 2: Data analysis

Analysis of textual material

The basic process for the analysis of text includes:

- Identification of similar phrases, themes and relationships between themes
- Identification of similarities and differences between population sub-groups
- Initial attempts to generalize
- Critical review and revision
There are four stages in theme analysis:

- Identify main issues raised by the interviewees – the themes
- Group more detailed topics within each of these themes to construct a taxonomy of sub-categories
- Specify what was actually said, the components within each sub-category
- Exploration of inter-relationships between the various themes
Key concept 2: Data analysis

Thematic analysis

Theme identification

Index texts, identifying topics line-by-line

Collate these topics across all interviews to identify a preliminary list

Some will recur more frequently than others and some of the latter can be classified as sub-topics

Systematically combine related topics to develop a list of just a few fairly broad themes
Key concept 2: Data analysis potential themes from a study exploring experiences at antenatal care

**Themes**

**Motivators**
- **WHY ATTEND ANTENATAL CARE?**
  - Health check [Fear of risks, positive reassurance]
  - Health promotion
  - Material gain [food, milk]
  - Insurance [sterilization, good birth]

**Medical process**
- **WHAT HAPPENS AT ANTENATAL CARE?**
  - Take information
  - Give information
  - Physical Examination
  - Sterilization
  - Vaccinate
  - Refer
  - Send for tests

**[EVALUATIONS]**
- **DIMENSIONS OF USERS EVALUATIONS**
  - Organization
  - Interpersonal behaviour
  - Technical practice
  - Information

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**Positive**

**Negative**
Following an initial analysis, many analysts apply a systematic coding procedure. Codes are assigned to specific occurrences of words or phrases within a document.
### Developing a code book

<table>
<thead>
<tr>
<th>Name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>01. Illness Narrative Interview (INI)</strong></td>
<td>THIS CODE USED FOR INI ONLY to capture information specific to the most recent malaria or fever. Code information about quality of care, drug supply, etc. into the appropriate tree nodes for Drug shop (DS), Health Facilities (HF), Prayer Groups (PG), Self-Treatment (ST), or Traditional Healers (TH)</td>
</tr>
<tr>
<td><strong>INI 1st symptom</strong></td>
<td>THIS CODE IS USED FOR INI ONLY to document symptoms of first symptoms of the most recent episode of malaria or fever</td>
</tr>
<tr>
<td><strong>INI 1st tx source-DS</strong></td>
<td>THIS CODE IS USED FOR INI ONLY to capture the respondent's 1st choice of treatment for their recent fever episode when it was a drug shop like a pharmacy, chemical seller and drug peddlers.</td>
</tr>
<tr>
<td><strong>INI 1st tx source-HF</strong></td>
<td>THIS CODE IS USED FOR INI ONLY to capture the respondent's 1st choice of treatment for their recent fever episode when the person sought for care at a HF such as a mission, private, public health facilities</td>
</tr>
</tbody>
</table>
### Key concept 2:
Summary extract from manual analysis

<table>
<thead>
<tr>
<th>MALSIGN</th>
<th>Village A Women</th>
<th>Village A men</th>
<th>Village B women</th>
<th>Village B men</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hot body</td>
<td>Bloody stool</td>
<td>Hot body</td>
<td>Hot body</td>
<td>Hot body</td>
</tr>
<tr>
<td>Yellow eyes</td>
<td>Hot body</td>
<td>White lips</td>
<td>Yellow eyes</td>
<td>Yellow eyes</td>
</tr>
<tr>
<td>White lips</td>
<td>Yellow eyes</td>
<td>Yellow eyes</td>
<td>White lips</td>
<td>Yellow eyes</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Bloody stool</td>
<td>Bloody stool</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>MALCAUSE</th>
<th>Village A Women</th>
<th>Village A men</th>
<th>Village B women</th>
<th>Village B men</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mosquitoes</td>
<td>Mosquitoes</td>
<td>Mosquitoes</td>
<td>Mosquitoes</td>
<td>Fresh mangoes</td>
</tr>
<tr>
<td>Fresh mangoes</td>
<td>Standing in the heat</td>
<td>Standing in the heat</td>
<td></td>
<td>Mosquitoes</td>
</tr>
<tr>
<td></td>
<td>Fresh mangoes</td>
<td></td>
<td>Fresh mangoes</td>
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</tbody>
</table>
Key concept 2: Data analysis

Extract from software (Nvivo)

Affordability

Reference 1 - 1.20% Coverage
R14-You know, you are usually asked to swallow the two together, so if people are complaining, it is about the two medicines. Some time ago, the artesunate alone was given to people but now they have added amodiaquine to it for people to swallow. So the complain is about the two.

Reference 2 - 0.47% Coverage
M-How much is the medicine?
R14-We have registered with National Health Insurance Scheme so I will not know.
Objectives
Transcribe
Use information from all the techniques
Incorporate all notes and observations
Code
Sub-themes
Matrix

Summary

Key concept 2: Data analysis
Key concept 2: Data analysis

Summary

Triangulation
Various topics/themes based on objectives of study
Add quotes, proverbs, local sayings
Community recognition of drug side-effects

Generally, there was poor recognition of drug side-effects/adverse reactions. They were often associated with:

Drug not good person’s blood

“When you immediately see that, it means that it is just not good for your blood, you must not take that drug anymore, and you must change it.” (A 25 year old JHS graduate)

Drug not good for person’s biological make up
Key concept 3: 
Presentation of data - graphic presentation

Treatment seeking for simple malaria

Onset of fever/malaria

Self-treat

Health facility

Herbal preparations
- Neem tree concoction
- Bitter leaf concoction

Drugs bought from DS or DP

Home remedies-
- Steam inhalation
- Hot sitz bath
- Drinking or bathing in sea water

Alcohol consumption
Community perception - Causes of malaria

- Vector (mosquito bite)
- Drinking contaminated water
- Dirty stomach among children
- Environmental
  - Busy surrounding
  - High humidity
  - Dirty environment
- Diet related
  - Eating starchy and oily food
- Flies settling on food
- Standing or working in the sun
In your research team, discuss:
How you plan to analyse your qualitative data?
How will you ensure validity and reliability of your data?
What kind of analysis will you undertake?
Will you be using any software for your data analysis?
Discuss the reasons for your decision to use (or not use) software for your analysis.
How will you present your data?
Example:
Innovative Participatory Health Education [IPHE] in South Sudan

An educational inivative and solution for Improving the life of girls and women worldwide by the reproductive and child health research unit [RCRU]