

# QUALITATIVE RESEARCH – A COMPLEMENTARY APPROACH

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McGill TB Research Methods Course 2015

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# Outline

1. Principles of qualitative research
  2. Comparing paradigms
  3. *Doing* qualitative research
    - Sampling, data collection, analysis
  4. Ethical considerations
  5. Evaluation criteria
  6. Mixing methods
  7. Key references
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# Expected outcomes

1. Obtain a basic understanding of qualitative methods
2. Realize its relevance and contributions to TB research
3. Understand the difference and complementarity between qualitative and quantitative methods



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# What is qualitative research?

- Studying social phenomena in terms of the **meanings** people attribute to them
  - Naturalistic inquiry – collects evidence from the perspective of the local population in their natural setting
  - Produces findings without guessing them in advance
  - Inductive – develops theory
  - Informs how those theories and findings may be applied
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# Discovering the hidden layers

Focus on **meaning**, depth, detail

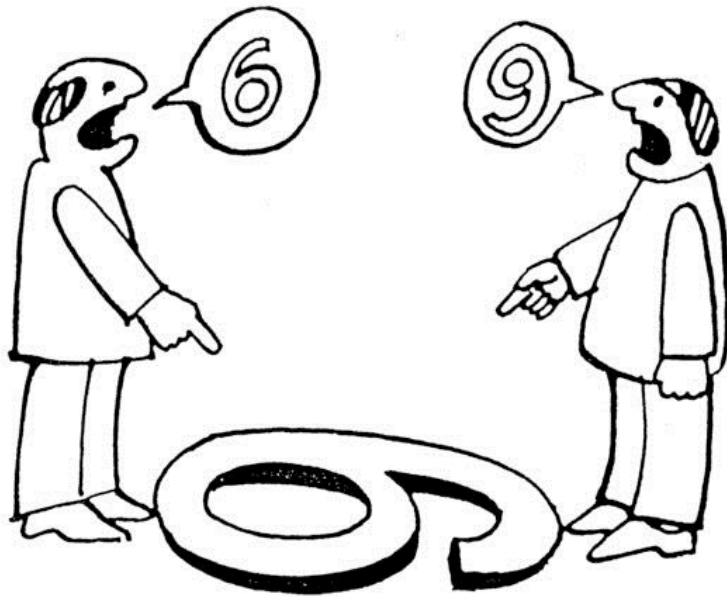
Why, how, in what way

versus

Whether, how many, how much



# Premise



- **Meanings** that people assign to social phenomena (e.g., TB) reflect how they experience it, how they interpret that experience, and how they make sense of it
- If we can understand how people make sense of their worlds (meaning), we can understand their perceptions, values, motives, and behaviours

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# Comparing paradigms

Our participants have been telling us valuable stories. We've learned so much about what we're doing right and where we can improve.



Did you get their emails? If so, we can survey them and get some real evidence.



[freshspectrum.com](http://freshspectrum.com)

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## QUANTITATIVE

## QUALITATIVE

An objective truth exists  
Can be measured, predicted

### PREMISE

Multiple truths (realities) exist  
Depend on context, meaning

Confirm / refute hypotheses  
Describe characteristics  
**Quantify** variations  
**Predict** relationships ( $X \rightarrow Y$ )

### GOAL

**Explore** / develop hypotheses  
Describe experiences  
**Explain** variations / relationships  
(why/how does X relate to Y)

Structured  
Closed ended  
Fixed, **pre-conceived**  
Surveys, questionnaires

### INQUIRY

Semi-structured  
**Open ended**  
Subject to change (spontaneity)  
Interviews, observations

Numerical  
**Objective**

### DATA

Textual (audio, video, notes)  
**Subjective**

Data used to prove theory  
**Stable** throughout  
Subject to statistical  
assumptions / conditions

### ANALYSIS

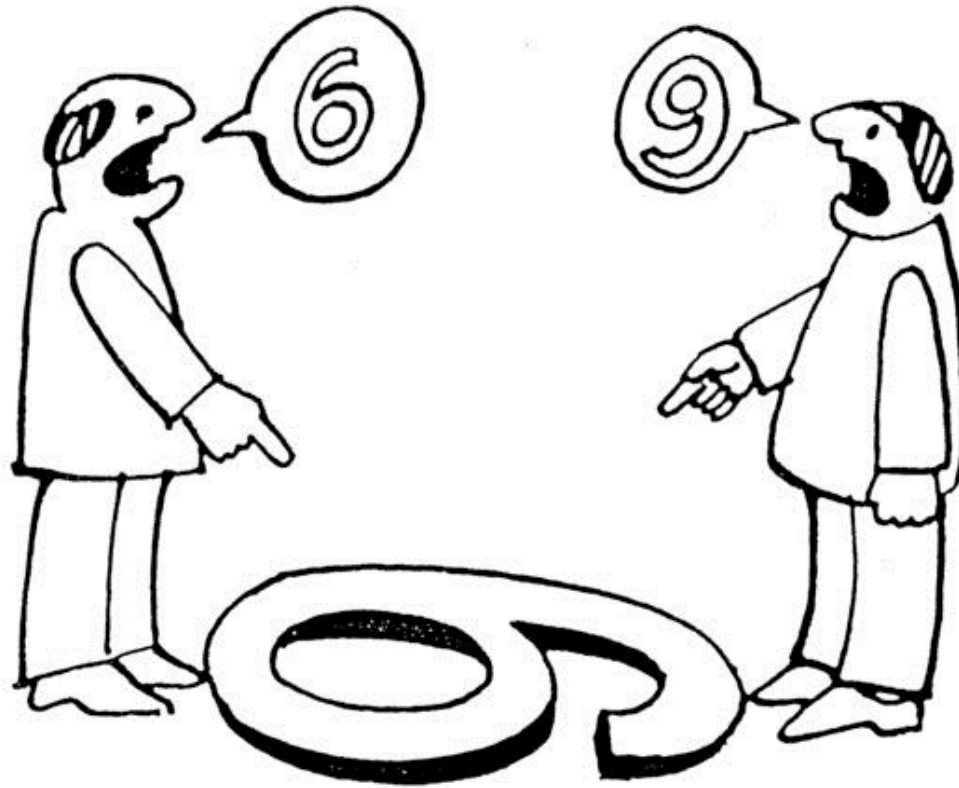
Data used to create theory  
**Flexible**, iterative, discursive  
Researchers' assumptions are  
questioned (**reflexivity**)

Detached

### RESEARCHER

Involved





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# *Doing* qualitative research

- Sampling
  - Interviews
  - Focus Groups
  - Observations
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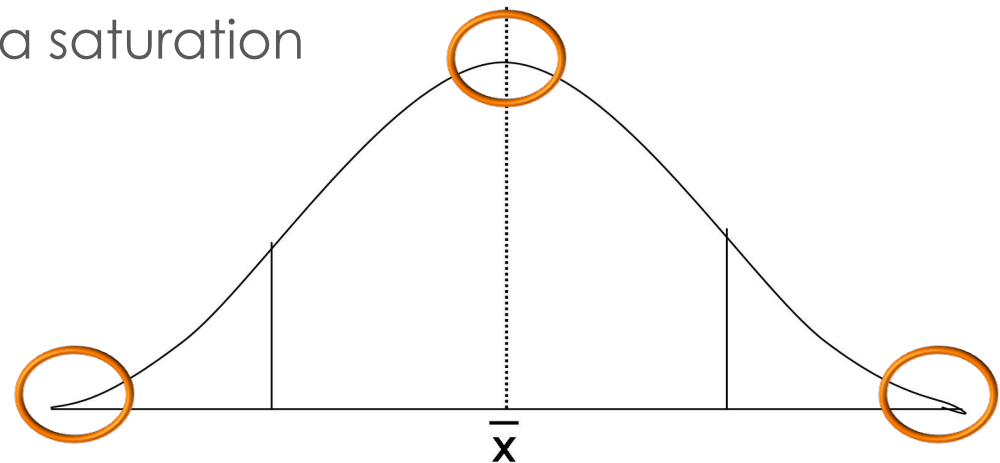
# Critical reflexivity



- To questions our biases and assumptions
- To bracket what is obvious
- To doubt what is taken for granted
- To be open to multiple, differing perspectives
- To mitigate “biases” during data collection and analysis

# Sampling

- Purposeful sampling
  - Targeted - intentional selection of individuals to best understand the research problem
- Non-representative – equal importance to outliers
- Aim to achieve data saturation  
e.g., interviews  
rule of thumb  
 $n = 30$



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# Interviews

- ▣ In-depth conversations with a purpose
  - ▣ With persons who have *personal* and *direct* experience with the research problem
  - ▣ To elicit a richer understanding of the research problem in the participant's own words – stories, narratives
    - ▣ Participant = expert
  - ▣ NOT... to elicit facts, knowledge, impersonal generalizations or hearsay → use a questionnaire / survey!
  - ▣ Usually audio recorded + notes + observations
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# Interviews

I'll start with a few basic questions, leading you to my own preconceived responses. Then I'll interrupt you and go into a long unrelated personal anecdote. Finally, when the interview is over, I'll attribute the lack of substantive feedback on you being quiet and uncooperative.



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Rapport is key



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# Focus groups

- Group of **interacting** participants
  - Convened by a facilitator who uses the group interaction to learn about the research problem
  - Participants may share some characteristics but data richness comes from diversity in their experience
  - Yields in-depth data on **group norms**
    - Points of divergence and convergence
  - Usually audio-recorded + notes + observations
-





"All those in favour say 'Aye'."

"Aye."

"Aye."

"Aye."

"Aye."

"Aye."

Advantages	Disadvantages
Builds on the fact that people naturally interact with and are influenced by each other	Researcher has less control over the group and direction of questions
Useful to collect data from HCW, youth	<b>Less feasible for discussion of sensitive topics</b>
<b>Helps discover nuances within shared experiences and norms</b>	<b>Requires a skilled facilitator to manage group dynamics</b>
Once arranged, data is collected quickly and at a lower cost	Takes preparation and logistic planning
May serve as a forum for change and empowerment	Does not provide valid data on individuals

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# Observations

- Documentation of social interactions and social environments
  - Via **prolonged field engagement**
  - Researcher observes people in their natural environment to gain an **insider's perspective**
  - Based in traditional ethnographic research
  - May be combined with and inform interviews and other forms of inquiry
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“Anthropologists! Anthropologists!”

Advantages	Disadvantages
<b>Insider's perspective on social and physical contexts</b>	Time consuming
Insight into relationships, interactions, behaviors that may be less known	Requires skilled documentation (memory and diligence of researcher)
Informs the iterative interpretation of other data (triangulation)	<b>Requires conscious effort at objectivity and reflexivity despite methodological subjectivity</b>
	<b>Can be ethically challenging</b>

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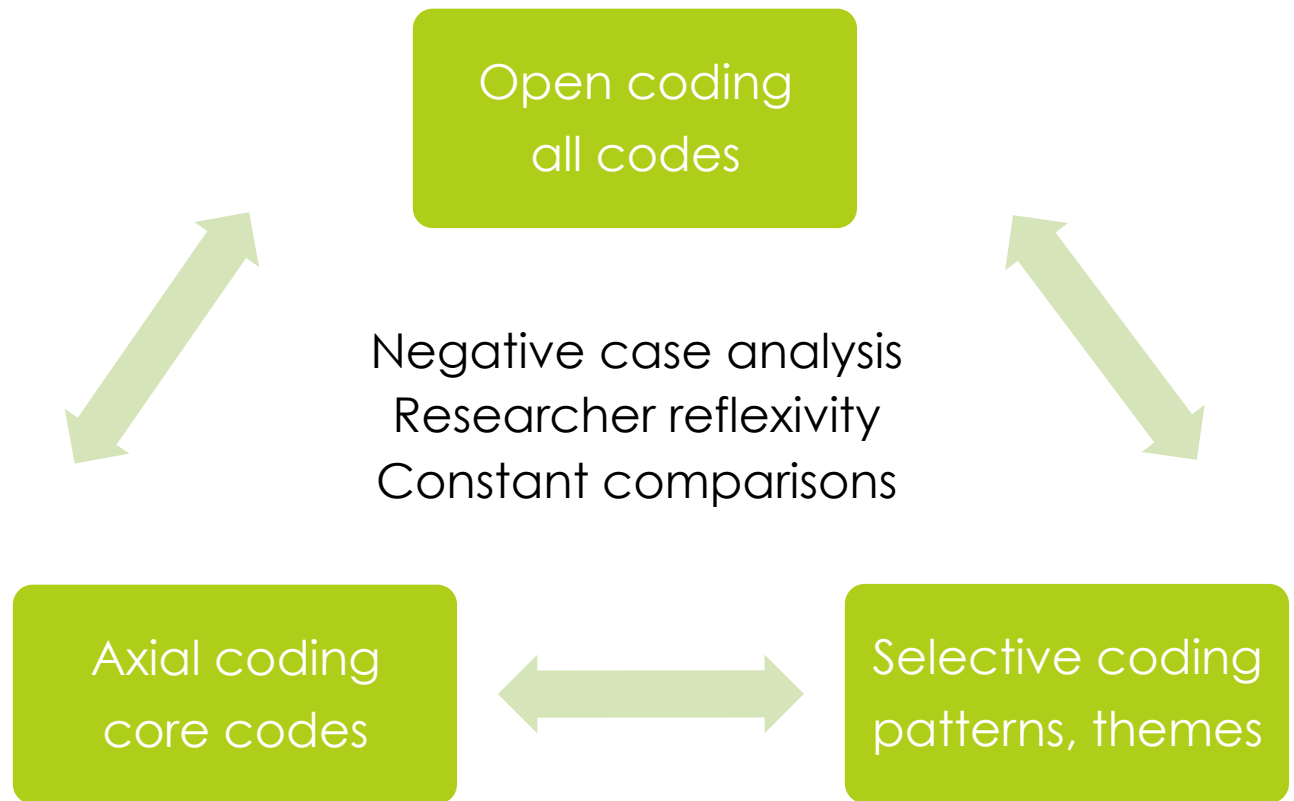
# Qualitative analysis

- ▣ Findings are typically **grounded** in the data
  - ▣ Researcher is continuously **reflexive**
    - ▣ Questions his/her biases and assumptions
  - ▣ Mainly **inductive**: bottom-up approach
    - ▣ Collect data → detect patterns → infer conclusion
    - ▣ But also deductive → verify patterns via repeated readings of the data
  - ▣ Optional use of software (e.g., N-vivo, Atlas-ti, MS Word)
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# Analysis is iterative

## Sample schematic



# Evaluation criteria

Common critiques	Suggested responses
Not rigorous	Rigorous... we just use different criterion!
N is too small	Interest in how/why > how much/how many Interest in outliers > average Time consuming
Researcher bias	Researcher is involved but always reflexive Open ended questioning allows for new and unanticipated findings
Subjective	So are behaviours, norms, decision-making! Managed by theoretical lens, researcher reflexivity



Conventional quantitative inquiry	Naturalistic qualitative inquiry	Methods to ensure quality
Internal validity	Credibility	Member checks Prolonged field engagement Data triangulation
External validity	Transferability	Thick description, context (setting, participants)
Reliability	Dependability	Audit (researcher's documentation of data, methods and decisions) Researcher triangulation
Objectivity	Confirmability	Audit and reflexivity

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# Ethical considerations

- ▣ Adherence to core principles of respect, beneficence, justice – researcher reflexivity
  - ▣ Emphasis on confidentiality
    - ▣ Personal stories = data
    - ▣ Boundaries between researcher and participant
    - ▣ Ongoing process of consent (form ≠ consent!)
  - ▣ Collaborative, participatory approach
    - ▣ Gatekeepers, field observations
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# Mixed methods research

- To address research questions that call for real-life contextual understandings, multi-level perspectives and cultural influences
  - Employs intentional integration of
    - Quantitative methods to assess magnitude / frequency of constructs
    - Qualitative methods to assess the meaning and understanding of those constructs
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# Rationale

- To contextualize the research problem (fuller picture, multiple perspectives)
  - To triangulate findings (validate subjective findings with objective data)
  - To inform data interpretation (explanatory – why does X cause Y)
  - To inform data collection (exploratory – identify survey categories)
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# Key considerations

- Logic – what is your analytic logic / fundamental basis
  - Timing – will they be used in sequence or concurrently
  - Priority – are they equal or is one embedded in the other
  - Point of interface – at what point will you ‘mix’
  - Phases – will you conduct one study or multiple studies
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# Sample designs

- Convergent, parallel or concurrent
- Sequential explanatory or sequential exploratory – use one data set to inform the other
- Embedded or nested – data collected / analyzed in tandem
- Multiphase – involving multiple smaller studies

\* List not exhaustive or mutually exclusive!

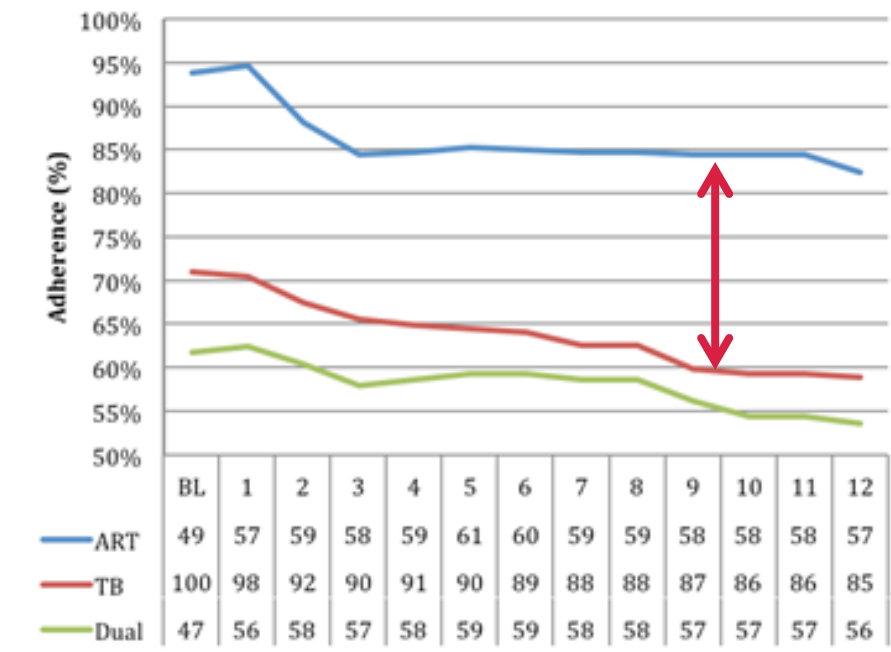
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# Example – PROX Study

- Prospective Study on XDR-TB, South Africa (PI: O'Donnell M)
    - Sequential, explanatory, multi-phase mixed method study
  - To characterize adherence to XDR-TB and HIV treatment in coinfecting patients
  - Quantitative aim
    - To measure adherence to second-line TB medications and ART
    - To identify the association between patients' knowledge, attitudes and beliefs on adherence
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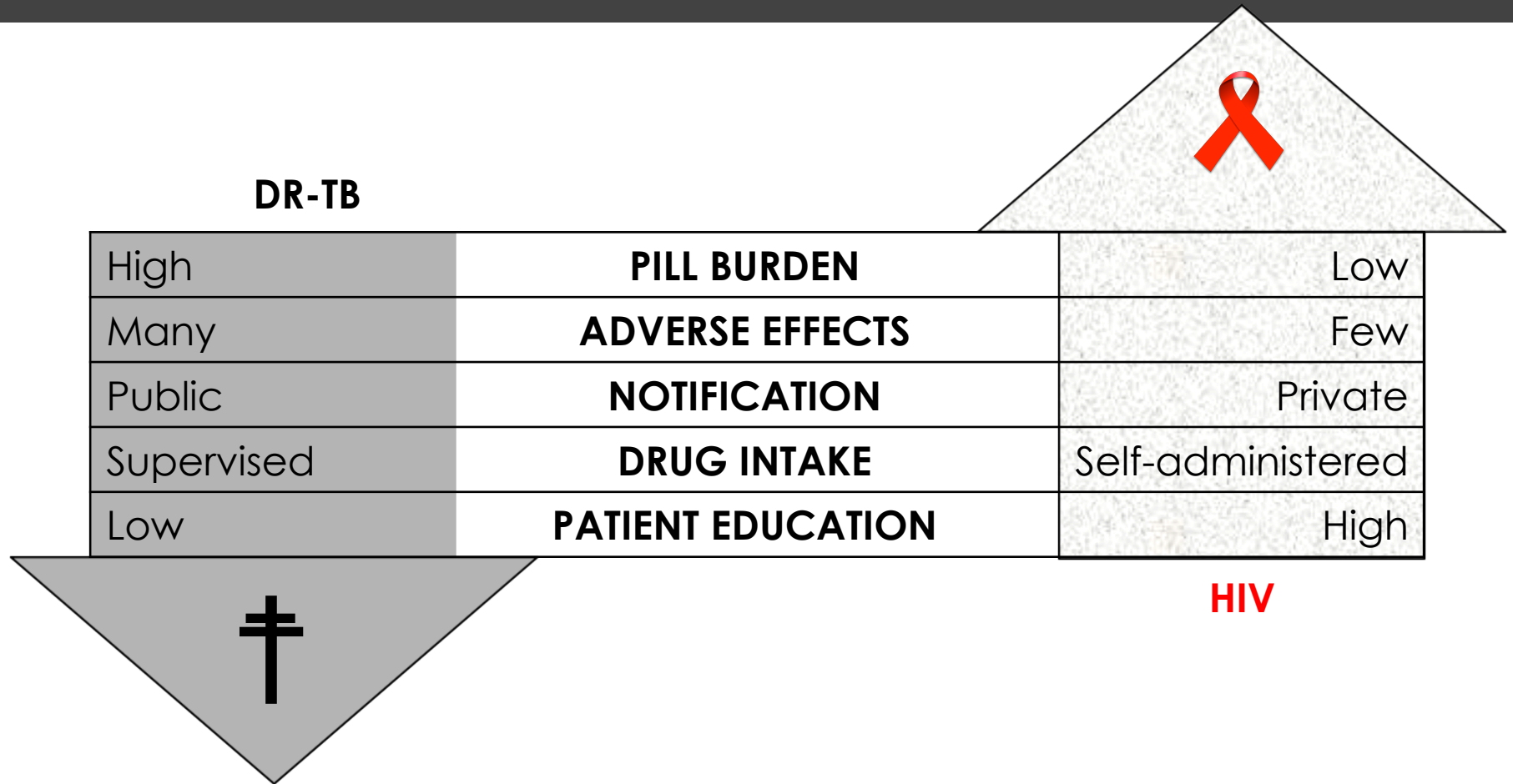
# Quantitative findings – “what”



- Adherence to ART > XDRTB treatment
- No correlation to baseline knowledge, attitudes, beliefs (KAB)
- Qualitative aim: To understand adherence barriers and facilitators from the patient perspective



# Qualitative findings – “why”



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# Example – ENRICH Study

- Enhance Initiation and Retention in IPT Care for HIV Study, Ethiopia (PI: Howard AA)

→ A nested, parallel mixed methods study

- To evaluate the effectiveness of a combination intervention package (CIP) for IPT use in HIV patients
  - Quantitative methods to *measure* the effectiveness and cost-effectiveness of the CIP vs. standard of care
  - Qualitative methods to *examine* acceptability of the CIP components – interactive voice response (IVR)
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