

# Evaluation of Qualitative Evidence *or* *Using “soft” data to solve hard clinical problems*

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## Acknowledgment:

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## Agenda for this session

Qualitative and quantitative approaches compared  
Clinical questions with qualitative answers  
Appraising qualitative research for truth value  
Applying qualitative evidence to practice

# Qualitative and Quantitative Research Approaches

What's different?

## Underlying Assumptions

Quantitative	Qualitative
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Potential answers can be known *a priori*

Potential answers can be proven improbable

Samples represent populations

Investigators' biases should not impact the results

Answers emerge (with help) from the data

Many answers are possible

Samples represent the experience

Investigators' interpretations are central

## Underlying Assumptions

### Quantitative

The researcher is the expert

Measurement is repeatable

### Qualitative

... and so are the informants

Experiences are unique

## Methodology

### Quantitative

Procedures are fixed in advance to avoid bias

- Hypotheses to be tested
- Measures
- Sample criteria
- Sample size
- Analysis
- Outcomes

### Qualitative

Procedures evolve as data are analyzed

- Clustering of data into themes
- Probes modified
- Sampling strategy
- Saturation
- Analysis open-ended

## Standards for Output

### Quantitative

Reliability

Validity

Generalizability

### Qualitative

True

Engaging

Convincing

## Nature of the Output

### **Quantitative**

Probabilities – what is  
likely to be true

### **Qualitative**

Possibilities – what is  
true for some

# Nature of the Clinical Questions Answered

## **Quantitative**

Therapy

Harm / Etiology

Diagnosis

Prognosis

## **Qualitative**

Meaning / values

Context

Human experience /  
process

## Nature of the Clinical Questions Answered

**Quantitative:** Which therapy is likely to achieve a specified outcome?

**Qualitative:** What outcomes are important to patients like mine?

Why isn't my patient adhering to the therapy I prescribed?

## Nature of the Clinical Questions Answered

**Quantitative:** What are the risk factors for some specified undesirable outcome?

**Qualitative:** Why do some of my patients act to reduce their risk factors and others don't?

How do persons with non-modifiable risk factors deal with the threat to their health?

## Nature of the Clinical Questions Answered

**Quantitative:** What combination of signs, symptoms and tests are most accurate for establishing this diagnosis?

**Qualitative:** How do patients decide that their symptoms require health care?

How do patients understand symptoms and disease?

## Nature of the Clinical Questions Answered

**Quantitative:** Given this diagnosis and stage of illness, what is the expected progression of the disease?

**Qualitative:** How do patients manage their lives during a disease arc?

What influences the decisions patients make about their health care?

## Nature of the Clinical Questions Answered

**For a growing number of chronic (and some acute!) health concerns, the answers to the qualitative questions are more important than the answers to the quantitative questions as we strive to achieve the health goals we share with our patients.**

# Appraising Qualitative Evidence: How do I know if it's worthy?

# Appraising Evidence for Practice: The Centre for Health Evidence\* Approach

Are the results valid?

What are the results?

How can I apply them to the care of my patient?

\* <http://www.cche.net/usersguides/main.asp>



*Auditability*

*Credibility*

*Transsubjective*

What is “validity” for qualitative research?

*Rigor*

*Quality*

*Confirmability*

*Truth value*

*Dependability*

*Trustworthiness*

*Transferability*

*Plausibility*

## Common issues, different terms

For the qualitative studies that support our knowledge of human response, context and meaning questions, there are only three crucial issues for validity

- Did the investigators ask the “right” informants?
- Did they accurately “hear” what the informants were telling them (the data)?
- Was their analysis of those data systematic and believable?

## Are the results valid? Informants

Were participants relevant to the research question and their selection well reasoned?

- If you want to know how people cope with cancer, ask people who are doing it.
- If you want to understand cultural influences on health decisions, immerse yourself in the culture.
- Qualitative study samples are not expected to represent a population, but should comprehensively represent the phenomenon of interest (purposive sampling, saturation)

## Are the results valid? Data Collection

How were accuracy and completeness of data assured?

- Different qualitative traditions employ different criteria and techniques. Evaluate according to the standards and activities identified by the investigators (usually in the methods section)
- Logic check: were the methods appropriate to the question?
- Sufficient engagement of the investigator with the phenomenon is basic to all sets of criteria

## Are the results valid? Analysis

Were the data appropriately analyzed? Do the data support the findings?

- Different traditions endorse different activities to produce an interpretation of the data.
  - Coding data
  - Writing memos
  - Comparing new data with previous interpretations
  - Discussing with other researchers
- Observations / quotes presented so reader can evaluate researcher's interpretation
- Variations on general themes are identified

## Are the results valid? Analysis

Are the results plausible and believable?

- Do the conclusions “make sense” to you?
- Does the description engage your emotions?
- How do the findings fit with existing knowledge in the field?

## What are the results?

The findings of qualitative research may consist of

- Rich narrative description
- Themes, patterns and/or processes
- Theory
  - Taxonomy of concepts
  - Relationships proposed

How can I apply the results to patient care?

Clinical decision-making in EBP calls for incorporation of evidence with the patient's values. Qualitative research findings broaden your awareness of potential patient values and the contexts that influence patient decisions and actions.

How can I apply the results to patient care? A brief nod to multimethod research

Qualitative findings may contribute to quantitative investigations by enriching researchers' knowledge of the realm of possible answers to their clinical questions.

## How can I apply the results to patient care?

- Qualitative research findings have clinical utility to the extent that they allow you to understand your patient in a new way.
- All qualitative research findings are possibilities that need to be validated with your patients and their circumstances.

How can I apply the results to patient care?

To what situations and persons might these findings apply?

- Would you expect these findings to apply to your patient?
- What seems to be unique about the subjects' experiences and responses?
- What might be common to others? In what situations and settings?

## How can I apply the results to patient care?

Do these findings help me understand how my patient may respond to health issues?

- Are the results useful for altering my assessment or management of patients encountering this health issue? (Will I look at my patient in a different way?)
- Are the results useful for counseling or educating patients? (What they might expect.)

# How can I apply the results to patient care?

Assessment – what processes should I be looking for? What’s the “typical course”?

- Example – stage of change for person with an unhealthy habit or addiction

Management – how can I use my knowledge of this process to facilitate my patient’s well-being?

- Example – referral to support group for spouse of hospice patient

# How can I apply the results to patient care?

## Counseling –

- “Many parents find it hard to concentrate when their child is in intensive care. Some parents find it’s helpful to keep a notebook to write down questions for the care team as those questions occur to them.”

How can I apply the results to patient care?

Do these findings help me understand how my patient may respond to health issues?

–Do the results help me to understand my patient's relationship with the health care system, including me?

# How can I apply the results to patient care?

Do these findings help me understand my patient's values?

- Will the findings help me understand the personal, ethical, social and/or cultural contexts that impact my patient's responses and decisions?
- Will the results make me a more observant, sensitive and empathic counselor/teacher/care provider?
- Do the results help me to understand the patient's point of view?

How can I apply the results to patient care?

Do these findings help me understand my own and others' values?

- Will the findings help me understand the personal, ethical, social and/or cultural contexts that impact my responses and decisions, or those of other caregivers?
- Do the results help me to understand my own point of view or that of other caregivers?

How can I apply the results to patient care?

In other words, can I use these findings to

- Build a more effective partnership with my patient for the achievement of health-related goals?
- Build a more effective health care system?



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