



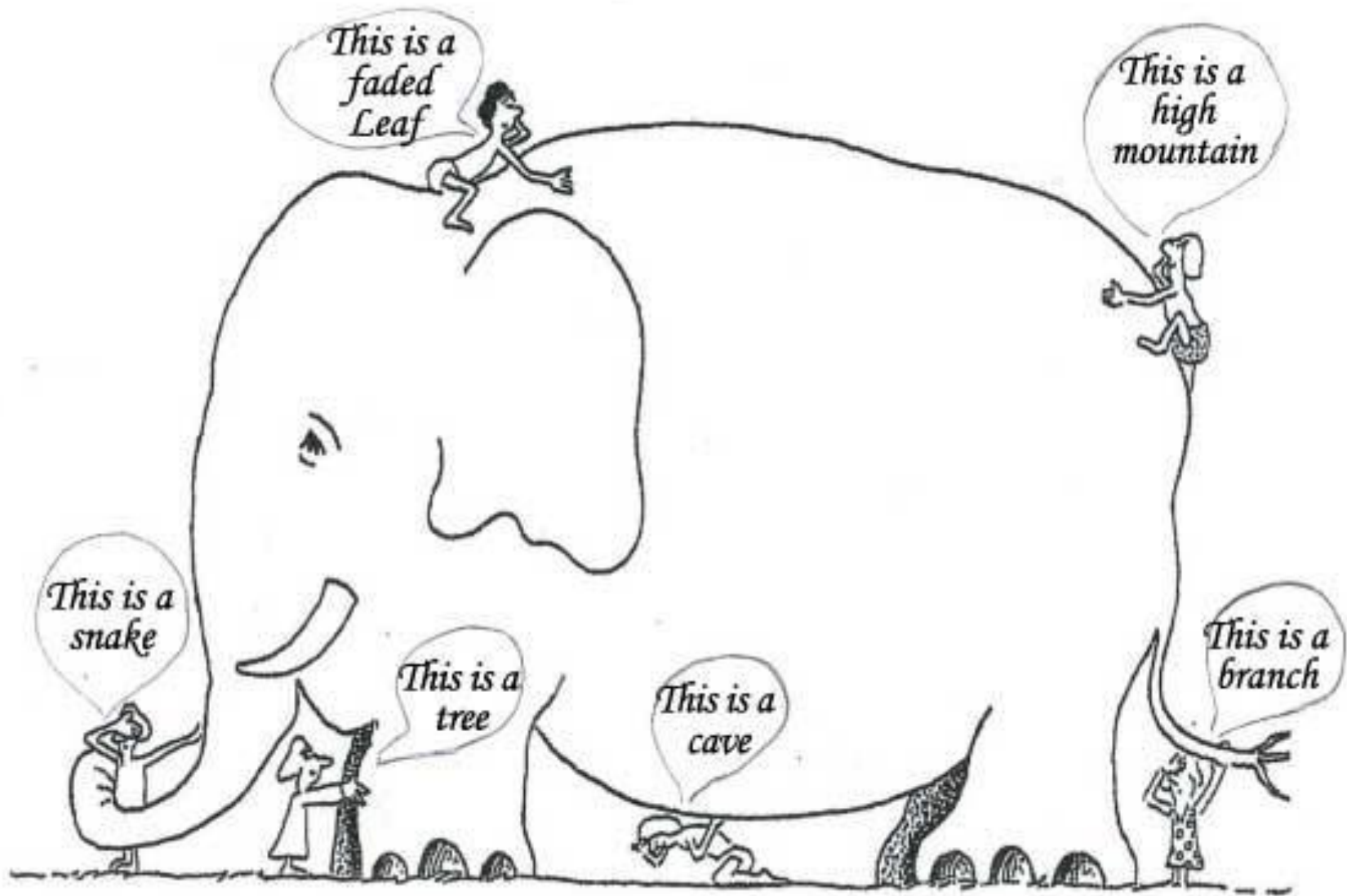


# Session outline

- Why use systems thinking tools – mental models
- What is a rich picture?
- How do we develop a rich picture?
- How do we define the boundaries of our rich picture?
- Using rich pictures in the field

# Session outline

- **Why use systems thinking tools – mental models**
- What is a rich picture?
- How do we develop a rich picture?
- How do we define the boundaries of our rich picture?
- Using rich pictures in the field



6 blind men describe an elephant (old indian fable)

---

# Optional exercise – sorting laundry

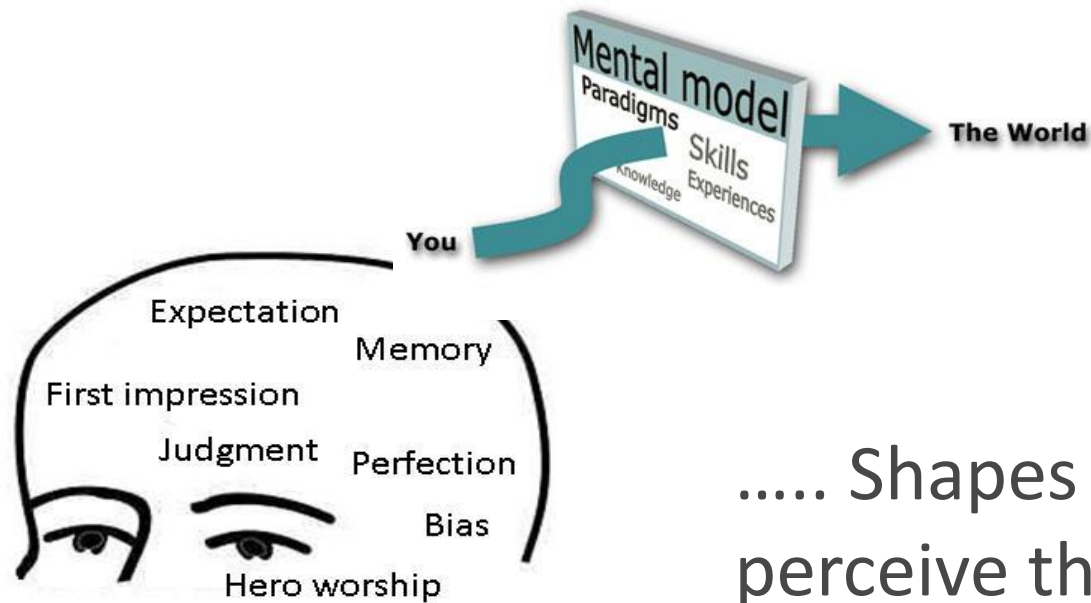
# A quick exercise: Washday

## How many piles of laundry?

1. Navy button-up dress shirt (designer)
2. Jeans (denim, new)
3. Red T-shirt (washed once)
4. Three white tank tops (cotton)
5. Athletic shorts (do not tumble-dry)
6. Bath mat
7. Fleece jacket
8. Blazer (black)
9. Soccer socks (very smelly)
10. Football pants (originally white but covered with mud)
11. Football jersey (red and blue striped; also very muddy)
12. White socks
13. Grey cable knit sweater (dry clean only)
14. Tights (black, 3 pairs)
15. Nylons (2 pairs)
16. Yankees baseball jersey
17. Four towels, - two yellow, one red-striped, one white
18. New purple underwear/boxers
19. Wool cardigan (dry clean only)
20. Dark blue sweat pants and sweatshirt
21. Oily kitchen towels
22. Grey t-shirt
23. Boxer shorts - patterned
24. Grey dress trousers
25. Trench coat (cold water wash)
26. Khaki pants (do not tumble-dry)
27. Beaded sweater with sequins
28. Cashmere sweater (dry flat, do not spin or wring)
29. Pajamas (silk)
30. Jeans (denim, torn with patches)

# Our mental models

How we learn and how we “know” ...



..... Shapes how we perceive the world

# Mental models

- We tacitly register some data and ignore other data
- We don't realize we are making interpretation
- Our conclusions feel obvious, so we see no need to test our views
- We see data that confirms our perspective and miss data that does not
- By not making our mental models explicit and not testing our views, we create misunderstandings

# Mental models

“

Mental models are deeply held **internal images** of how the world works, images that **limit us** to familiar ways of thinking and acting.

Very often, we are **not** consciously **aware** of our mental models or the effects they have on our behavior”

(Senge 1994)

---

# How do we perceive our reality?

People may hold different views on -

- whether there is a problem?

and if they agree there is a problem, then

- what is the problem?

We need to make our mental models explicit

# Session outline

- Why use systems thinking tools – mental models
- **What is a rich picture?**
- How do we develop a rich picture?
- How do we define the boundaries of our rich picture?
- Using rich pictures in the field

# Rich Pictures

- Simply a drawing of the way you see a given situation
  - Represent all of the elements, relationships, emotions, and interactions relevant to the issue at hand
- Used in the synthesis phase as a mechanism to gather and capture information about complex situations
- Ideally built through an iterative process of engagement and reflection with a group of key stakeholders

# Why use Rich Pictures?

- Sweep in multiple perspectives
- Understand the relationships amongst stakeholders
- Represent dynamics of interactions over time
- Make tacit knowledge explicit
- Surface assumptions
- More effective at capturing complexity (compared to verbal and written media)
- Gain insight into complex issues
- Identify system boundaries

# Session outline

- Why use systems thinking tools – mental models
- What is a rich picture?
- **How do we develop a rich picture?**
- How do we define the boundaries of our rich picture?
- Using rich pictures in the field

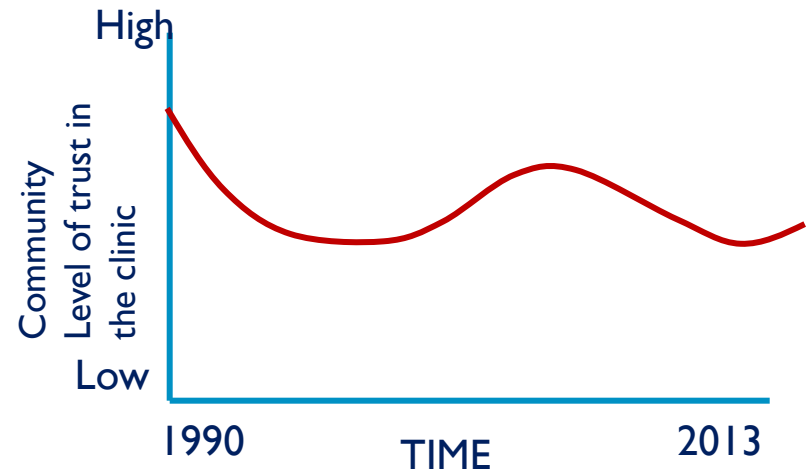
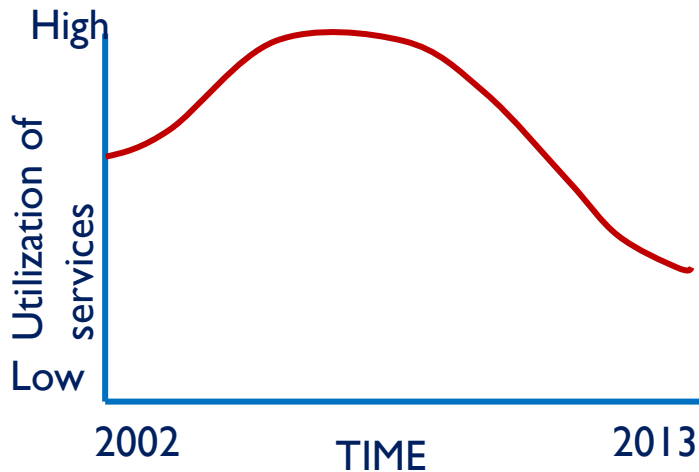
# Developing a Rich Picture

When developing a rich picture include the following elements:

- Issues and Concerns
- Structure
- Process and dynamics
  - Attend to relationships and feedback
  - Avoid wordiness – use symbols
  - Sweep in multiple perspectives
  - Remember to consider “behaviour over time” graphs

# Behaviour over time graphs

- Focus on patterns of change over time rather than on isolated events, leading to rich discussions on how and why something is changing



# Rich Pictures—avoiding the traps

- Trap 1: representing the problem and not the situation
- Trap 2: the impoverished rich picture
- Trap 3: interpretation, structure, and analysis
- Trap 4: words and wordiness
- Trap 5: the final version trap

# Session outline

- Why use systems thinking tools – mental models
- What is a rich picture?
- How do we develop a rich picture?
- **How do we define the boundaries of our rich picture?**
- Using rich pictures in the field

---

# A note about system boundaries

Systems thinking starts with:

- Understanding the context
- Correctly defining the problem
- Understanding the boundaries of the problem

---

# A note about system boundaries

- Select the theme or **issue of focus**
- Identify **time horizon**
- Think about **primary level of interest**
- Think about **secondary levels**
- Consider **key stake holders**
- Understand the **implications of your boundary decisions** – what and who is being left out?

# study

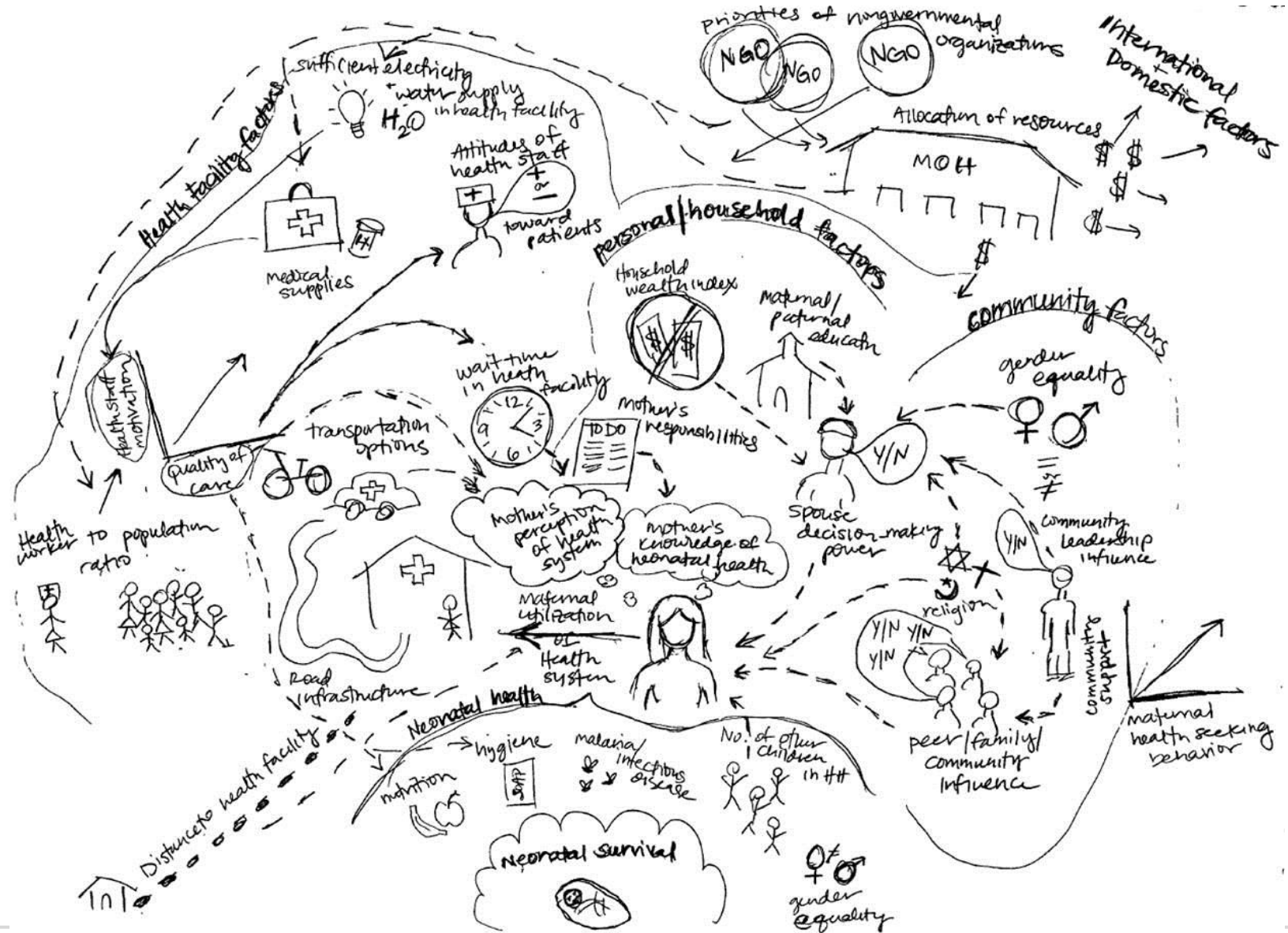
## group exercise—develop a Rich

- Review the case study provided
- Draw a “Rich Picture” to describe the situation – stagnation of neonatal deaths
- Use the information provided in the case study, as well as draw upon your own experience and existing literature.
- Be prepared to share your “Rich Picture” with the other groups

# Reflecting on the Rich Pictures

- Briefly describe the situation
- Identify:
  - Relationships and connections
  - Stakeholders
  - Behavior over time
  - Locations
  - Activities
  - Different “stories”
- What makes this a complex system?

# Rich Picture base on Uganda neonatal case study



# Session outline

- Why use systems thinking tools – mental models
- What is a rich picture?
- How do we develop a rich picture?
- How do we define the boundaries of our rich picture?
- **Using rich pictures in the field**

# When to use a rich picture?

- Working with diverse groups with different perspectives – often time efficient
- Start thinking about the different factors that are impacting or are part of your “problem situation”
- As the first step towards identifying key variables that are drivers, outcomes and leverage points in a situation
- Facilitator does not require extensive content knowledge to facilitate rich picture development

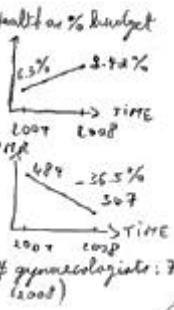
---

# Examples of good Rich Pictures

Note the:

- “Richness”
- Inclusion of many stakeholders
- Use of behavior over time graphs
- Relationships amongst different elements

**DONORS**  
 (WHO, Worldbank,  
 Int. NGOs, bilateral org, multilateral org)



**MINISTRY OF HEALTH**

**MEDICAL EQUIPMENT SUPPLIERS**

**SUPPLIERS GENERICS**

**CENTRAL DRUG PROCUREMENT AND DISTRIBUTION AGENCY (CAMEL)**

**BLOOD BANK**  
 (#4)

**SUBSIDY POLICY - 2006**

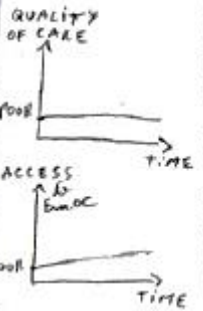
you cover 80% of cost of deliveries and c-section  
 you cover transport between CSPS and hosp

**UNIVERSITY HOSPITAL**  
 MATERNITY UNIT (#3)  
 BLOOD PRESERVATION UNIT

**REGIONAL HOSPITAL**  
 (#3)  
 SURGICAL SERVICE

**DISTRICT HOSPITAL**  
 (#4)  
 SURGICAL SERVICE

**HEALTH AND SOCIAL PROMOTION CENTRE CSPS**  
 (#1352)  
 DELIVERY ROOM



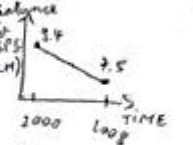
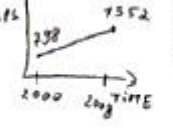
Good electric supply

Average electric supply

Low electricity supply

Low communication

AUX. MIDWIVES



I have been asked by physician/nurses to buy drugs

If you pay me, I will take care of you

low pay - poor work conditions

PATIENT FAMILY/FRIENDS

HEALTH PROVIDERS

Non-generic drugs

PHARMACY

TO UNIVERSITY, REGIONAL HOSPITALS

TO DISTRICT HOSPITAL

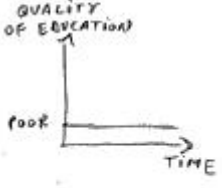
TO CSPS

**MEDICAL SCHOOL**  
 NURSES + (PHYSICIANS)  
 MIDWIVES + AUX. MIDWIVES

Help + CSPS barriers  
 FOOD QUALITY + HYGIENE  
 FINANCIAL  
 CULTURAL

FOOD QUALITY + HYGIENE  
 FINANCIAL  
 CULTURAL

DELAY  
 Traditional birth attendants

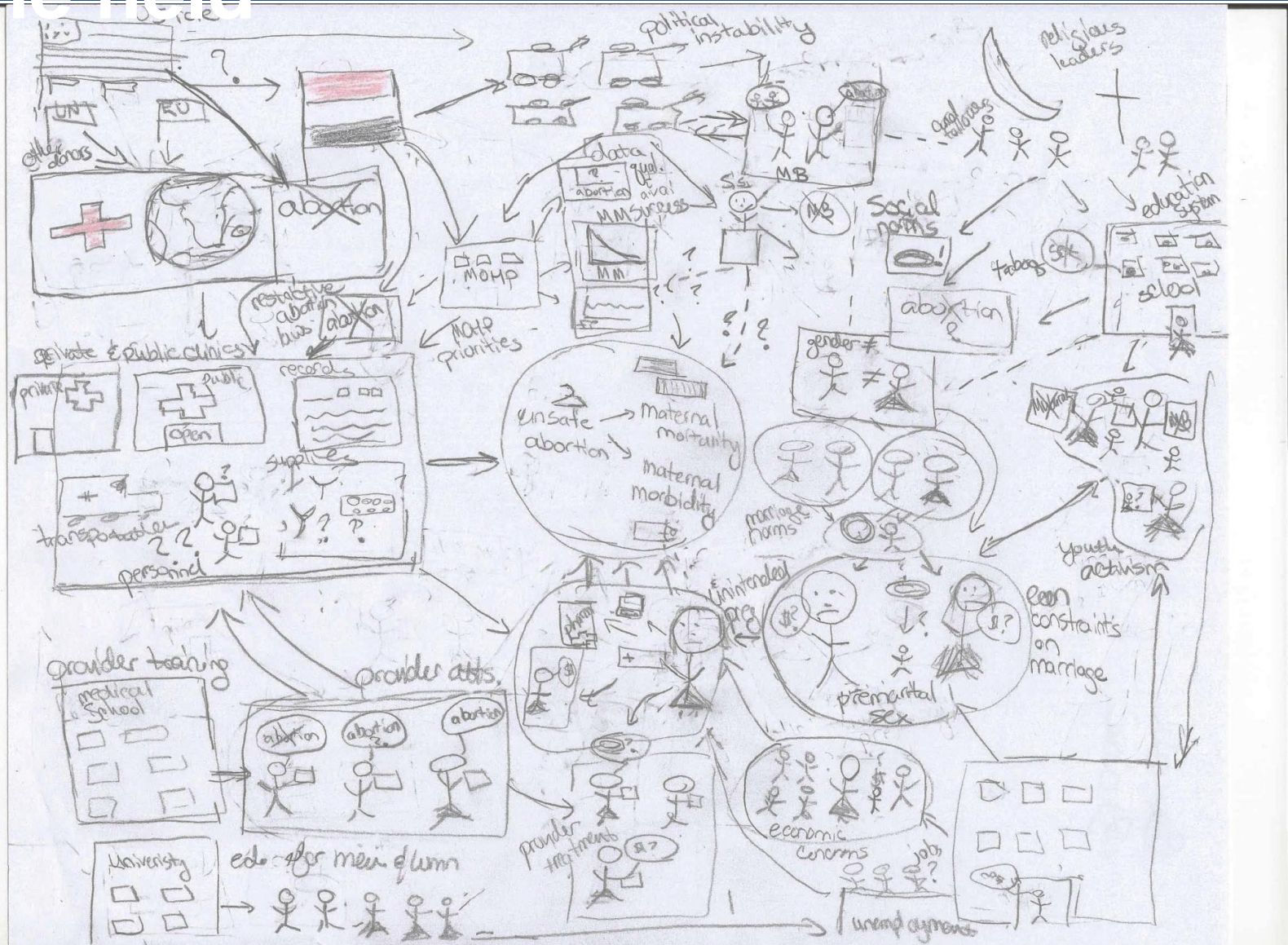


Nurses care needs  
 Too poor to go to CSPS  
 CSPS is dusty

No transport to I will

Traditional birth attendants

# Examples of using rich pictures in the field







# References

- Senge P. *The Fifth Discipline Fieldbook: Strategies and Tools for Building a Learning Organization*. Crown Business; 1<sup>st</sup> edition. 1994.
- Bell S & Morse S. (2013). How people use rich pictures to help them think and act. *Systemic Practice and Action Research*, 26(4), 331-348.
- Checkland P & Poulter J. (2006). *Learning for action: A short definitive account of soft systems methodology and its use for practitioners, teachers and students*. Chichester: John Wiley & Sons Ltd.
- Systems Thinking and Practice: Diagramming. The Open University. Source <http://systems.open.ac.uk/materials/T552/>

---

# Thank you



Presentation developed by Helen de Pinho MBCh, MBA, FCPH  
assisted by Anna M. Larsen BS, MPH

Averting Maternal Death and Disability Program (AMDD)  
Heilbrunn Department of Population and Family Health  
Mailman School of Public Health  
Columbia University

February 2015

This work was coordinated by the Alliance for Health Policy and Systems Research,  
the World Health Organization, with the aid of a grant from the  
International Development Research Centre, Ottawa, Canada.

---