SYSTEMS TOOLS FOR COMPLEX HEALTH SYSTEMS: A GUIDE TO CREATING CAUSAL LOOP DIAGRAMS
SESSION TWO
RICH PICTURES
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
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6 blind men describe an elephant (old Indian fable)
Optional exercise – sorting laundry
# A quick exercise: Washday

**How many piles of laundry?**

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

• **How do we develop a rich picture?**
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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
• 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?
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
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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
Examples of using rich pictures in the field
Examples of using rich pictures in the field
Examples of using rich pictures in the field
References


• Systems Thinking and Practice: Diagramming. The Open University. Source http://systems.open.ac.uk/materials/T552/
Thank you

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