KNOWLEDGE TRANSLATIONAL IMPLICATIONS OF THE CONTEXTUAL, MULTILEVEL NATURE OF MATERNAL HEALTH INEQUITIES: HOW SHOULD INTERVENTIONS RESPOND TO SUCH KNOWLEDGE?

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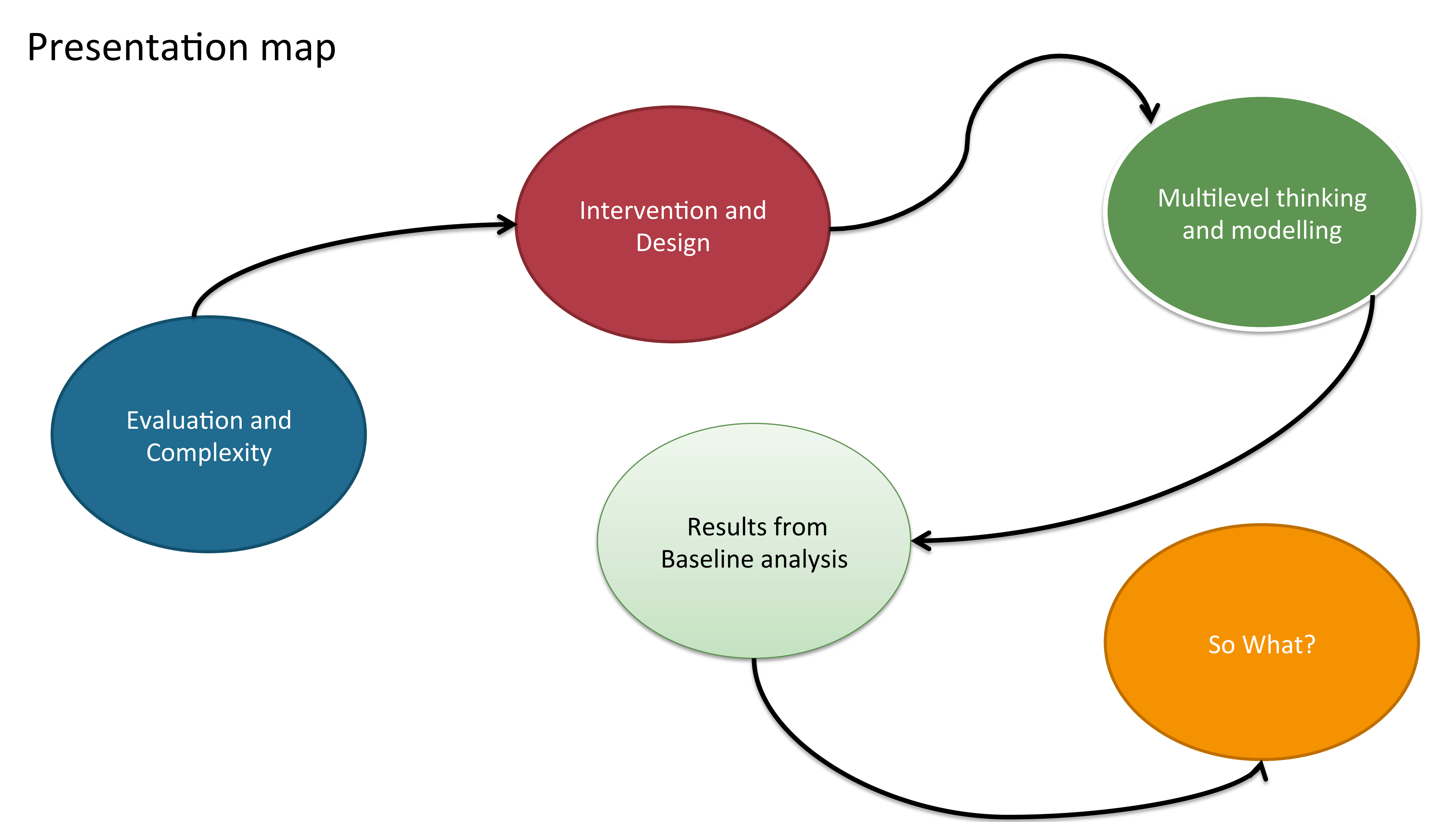
Initial observations

- Incompleteness of our thinking about programs at the outset
  - *Our programs are often insufficiently imagined*

- Complexities, multilevel drivers of health equities, and inequities
  - *Implications from a knowledge translation perspective*

- Context, mechanisms, outcomes
  - Why India provides an interesting setting for addressing questions on inequities

- Evaluation as a field
  - The role of evaluation in responding to problems of equities


Presentation map
Evaluation and Complexity
Intervention and Design
Multilevel thinking and modelling
Results from Baseline analysis
So What?

What is evaluation? A useful but perhaps incomplete definition

- Evaluation is defined both as a means of assessing performance and to identify alternative ways to deliver

- "evaluation is the systematic collection and analysis of evidence on the outcomes of programs to make judgments about their relevance, performance and alternative ways to deliver them or to achieve the same results."

Purpose of evaluation (Mark, Henry and Julnes, 2000

- Assessing merit and worth
    - Causal questions, RCT, observational studies
- Programme and organizational improvement
    - – Formative evaluation
- Oversight and compliance
- *Knowledge development*
    - – *Neglected purpose of many evaluations*

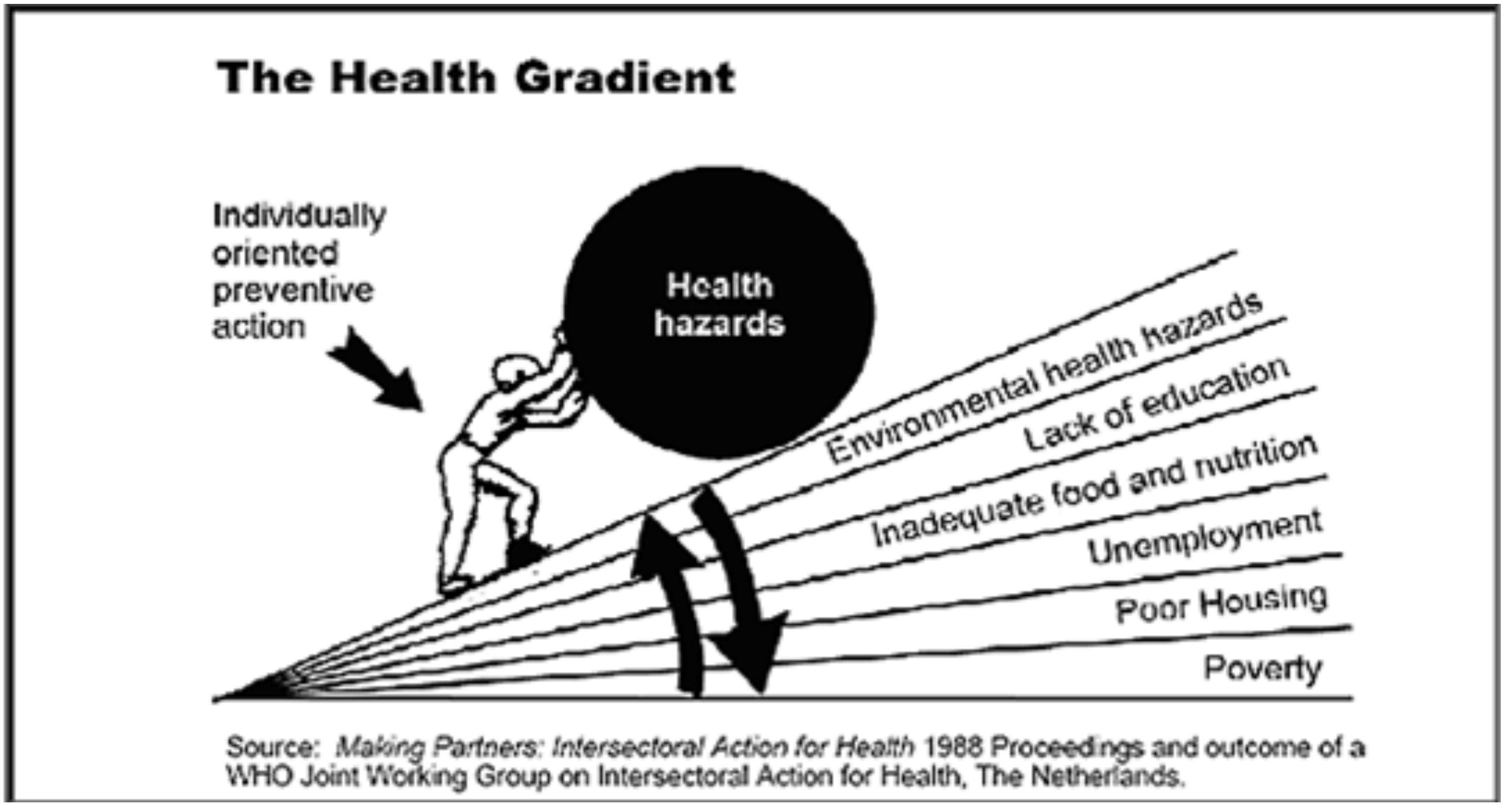
The logic of an evolutionary strategy

- Box et al (1978, p. 303):
- *... the best time to design an experiment is after it is finished, the converse is that the worst time is the beginning, when least is known.* If the entire experiment was designed at the outset, the following would have to be assumed as known: (1) which variables were the most important, (2) over what ranges the variables should be studied... The experimenter is least able to answer such questions at the outset of an investigation but gradually becomes more able to do so as a program evolves. (p. 303)

What is complexity? And why should program implementers and evaluators care?

- Multiple components
- Multiple levels
- Dynamics: Components evolve over time
- Freedom (and critical necessity) to 'contextualize' programs to local context
- Specifications of the program is often coarse or unclear at the outset

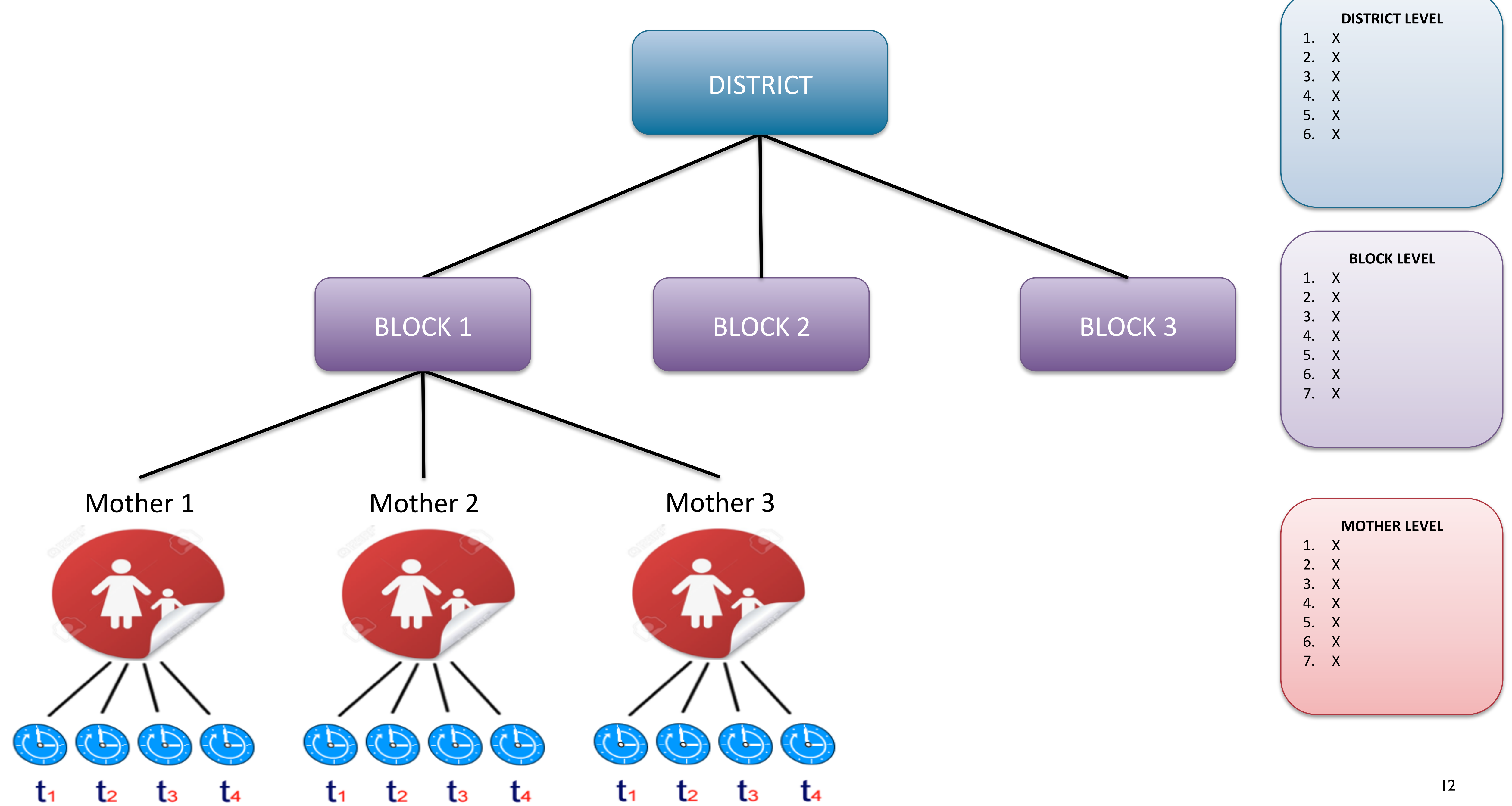
Thinking about health gradient: The multilevel nature of such a gradient

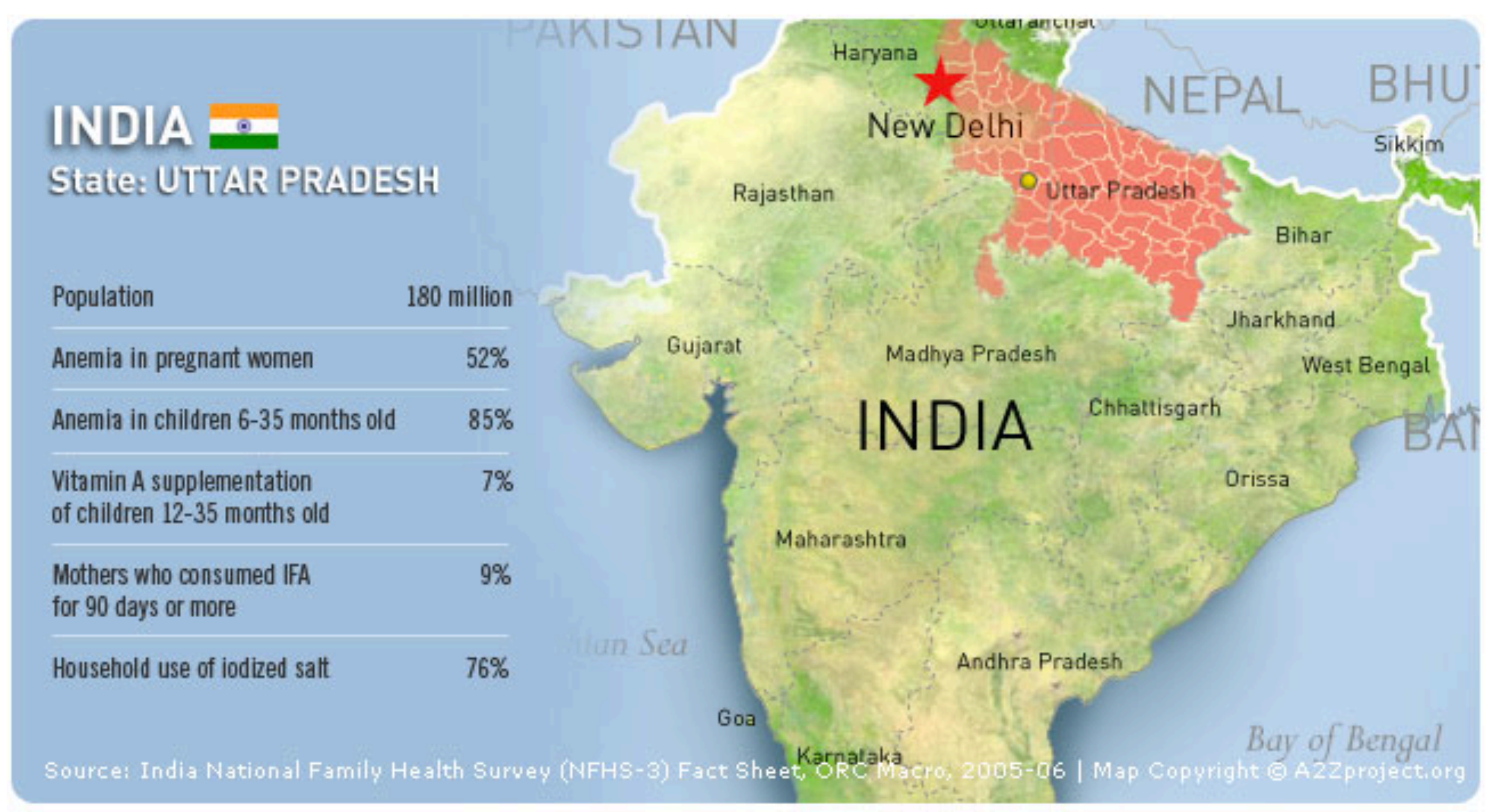


Interventions and Equity

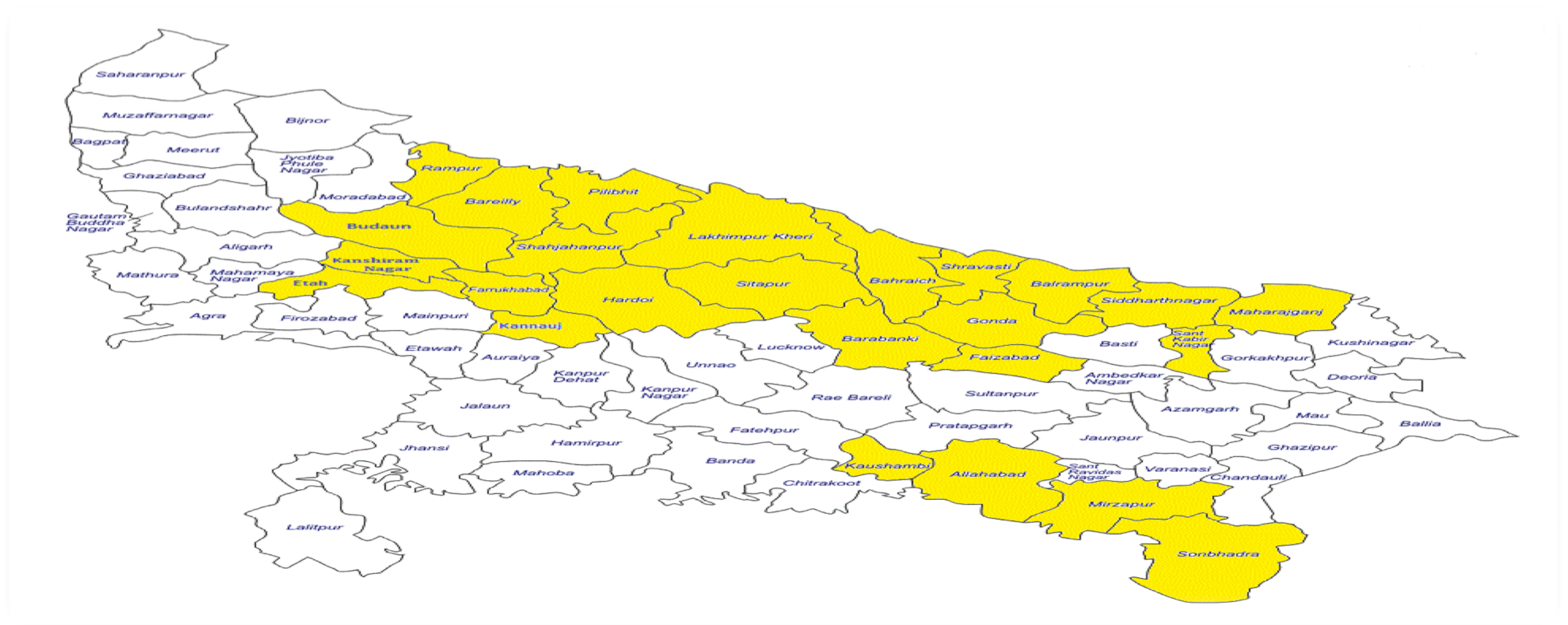
- In the Indian context socioeconomic gradient should incorporate caste, religion, illiteracy, poverty

- *How can an intervention modify the gradient?*


DISTRICT
BLOCK 1
BLOCK 2
BLOCK 3
Mother 1
Mother 2
Mother 3
t1
t2
t3
t4
t1
t2
t3
t4
t1
t2
t3
t4
DISTRICT LEVEL
1. X
2. X
3. X
4. X
5. X
6. X
BLOCK LEVEL
1. X
2. X
3. X
4. X
5. X
6. X
7. X
MOTHER LEVEL
1. X
2. X
3. X
4. X
5. X
6. X
7. X


INDIA
State: UTTAR PRADESH
Population 180 million
Anemia in pregnant women 52%
Anemia in children 6-35 months old 85%
Vitamin A supplementation of children 12-35 months old 7%
Mothers who consumed IFA for 90 days or more 9%
Household use of iodized salt 76%
PAKISTAN
Haryana
New Delhi
NEPAL
Sikkim
Rajasthan
Uttar Pradesh
Bihar
Jharkhand
Gujarat
Madhya Pradesh
West Bengal
INDIA
Chhattisgarh
Orissa
Maharashtra
Andhra Pradesh
Goa
Karnataka
Bay of Bengal
Source: India National Family Health Survey (NFHS-3) Fact Sheet, ORC Macro, 2005-06 | Map Copyright © A2Zproject.org

Uttar Pradesh. Focus is on Reproductive, Maternal, Newborn, Child and Adolescent Health (RMNCH + A)

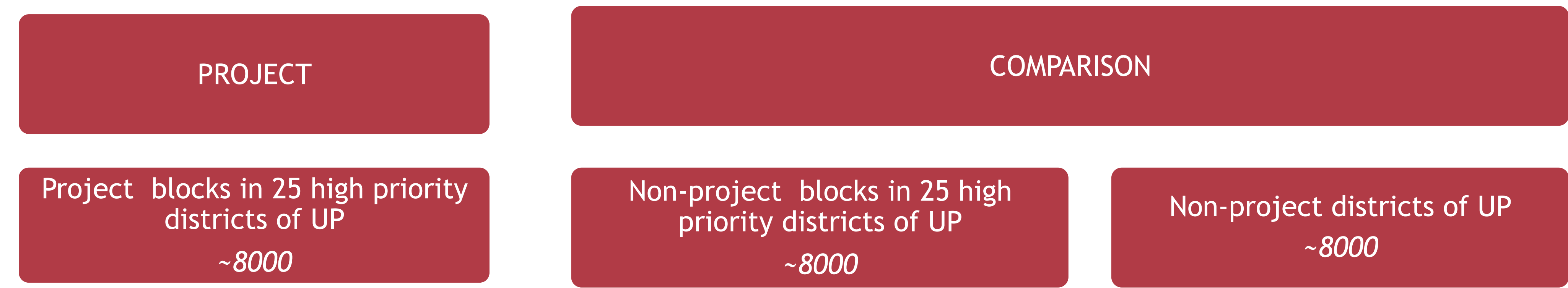


UP TSU: Framework and Objectives

- Support GoUP in improving the quality and quantity of frontline worker interactions at the community level and within households to drive the priority RMNCH+A behaviors
- Support GoUP in improving the quality of RMNCH+A services at facilities
- Support GoUP in improving strategies and systems required to deliver improved frontline worker capabilities and service delivery at primary care facilities
- Support GoUP in improving its capacity to fund, contract, regulate, mandate private providers
- Support GoUP in improving the scale and quality of community accountability mechanisms

Impact Evaluation of the TSU

- Impact evaluation to ascertain attribution of TSU's effort in improved RMNCH+A outcome
- Quasi Experimental, Pre-Post design with three arms:



- Conducting baseline (2014) and endline (2016) assessment to assess the changes in key process, output and outcome indicators
- Disaggregation of outcomes by Key Indicator/Target Group/Equity

Target Sample

-
- Women with a child aged 0-5 completed months
- Women with a child aged 6-11 completed months
- Women with a child aged 12-23 completed months
- Currently married women in the age group of 15 – 49 years
- Adolescent girls in the age group of 10-19 years
- Women whose pregnancy terminated in an abortion / miscarriage or a still birth in the last one year

Multilevel modeling

- Strengths:
  - Modeling contextual effects: Determinants of health are shaped by the local context;
  - The context can operate on multiple levels including community and individual levels
  - **Baseline analysis**

Dependent measures

- Delivery at home
- Registered the pregnancy
- Received any antenatal care

Contextual District-level measures

- Proportion of district population female
- Illiteracy rates
- Proportion of population in marginalized work
- Proportion of population schedule caste/tribe
- Average distance of communities to the district head quarters
- Total number of Community Health Centers at the district
- Total number of Primary Health Centers at the district

Individual measures

- Religion
- Class
- Ownership of home
- Bank account
- Measures of empowerment
- Age at interview
- Schooling
- Age at marriage
- Husband's schooling
- Wealth index
- Living arrangements

Results

Registration

- Owning a house (+ve)
- Having a bank account (+ve)
- **Husband's schooling (+ve)**

- Age of Marriage less than 16 (-ve)
- Living arrangements (-ve)

- Not much happening at the district-level

Home Delivery

- Age at marriage less than 16 (+ve)
- Ever had a job (+ve)
- Caste (+ve)

- **Average distance (+ve)**

- Wealth Index (-ve)
- Literacy (-ve)
- Having a bank account (-ve)
- Husbands schooling (-ve)

Antenatal care

- **Proportion female (+ve)**
- Owning a house (+ve)
- Literacy (+ve)
- Ever held any job (+ve)
- Husband’s education (+ve)
- Wealth Index (+ve)

- Age at Marriage less than 16 (-ve)
- Caste (-ve)
- **Proportion illiteracy among females (-ve)**
- Age at interview (-ve)

What kinds of leverage to programs really have to address inequities? How do we set realistic expectations for programs to impact inequities?

- Leverage
- The Macro-Micro linkages in health equities
- How does an intervention modify such linkages?
  - *How can we take a longer term view of such modifications?*
- Potential non-linearities in programming

Models of Causation

(Successionist vs. Generative Models of Causation)

Ecology of Evidence

Program Theory and Incompleteness

Integrating Knowledge Translation with evaluation

Capacity Building

Time Horizons and Functional forms

Development al evaluation in Complex Dynamic Settings

Portfolio of designs and approaches

Spread, Scaling up and Generalization