



# SWABHIMAAN | 2016-21

Multi-sector integrated programme to  
improve adolescent and women's nutrition

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Impact Evaluation Results | **Bihar, Chhattisgarh and Odisha**

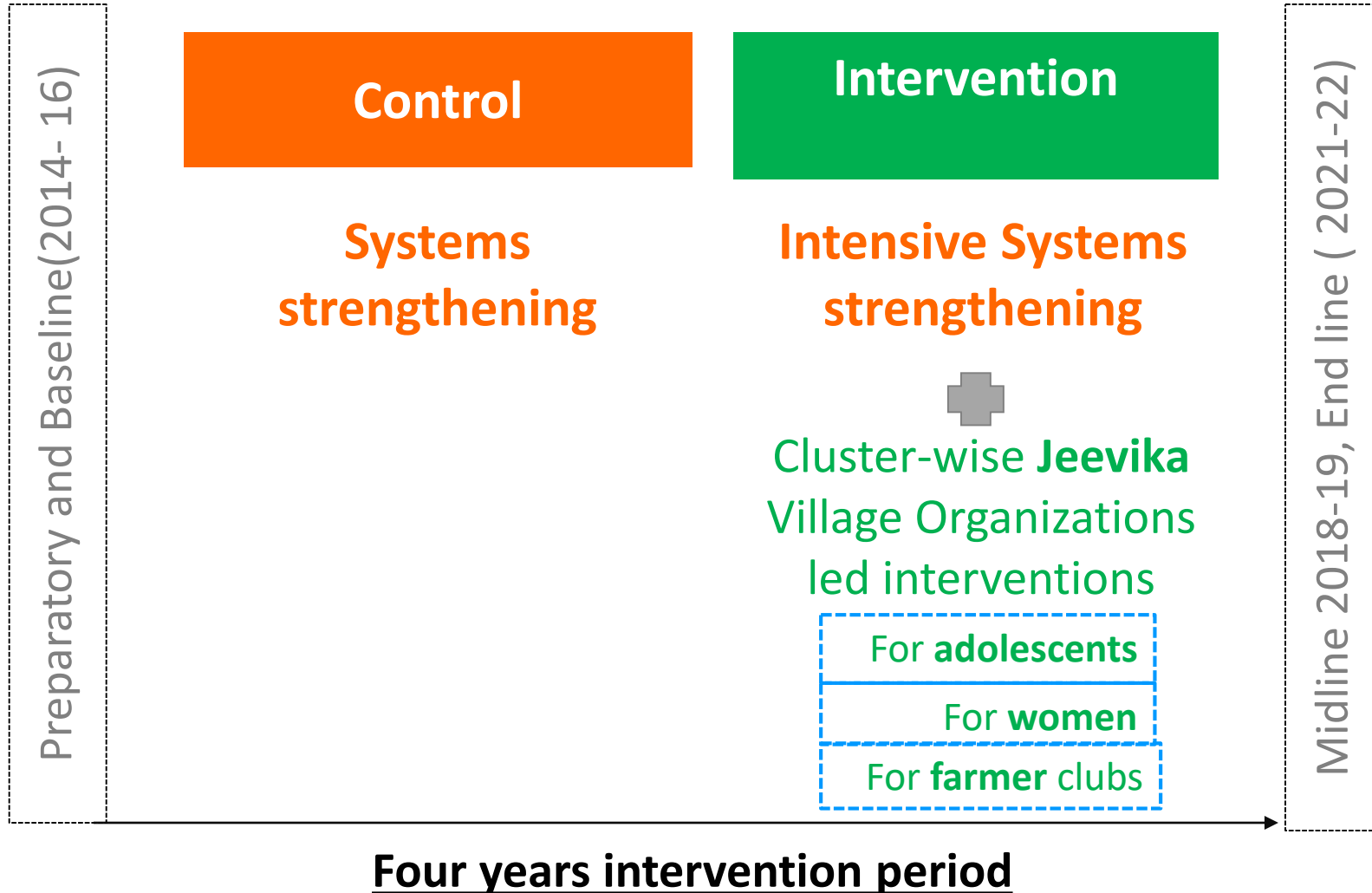
## Overview

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# **SWABHIMAAN** | Bihar, Chhattisgarh and Odisha

- **A package of community-led interventions that taps DAY-NRLM's platforms to improve the nutritional status of adolescent girls, pregnant women and mothers of children under age two years.**
- **Nutrition-sensitive and nutrition-specific interventions delivered through a combination of system and community actions.**

# SWABHIMAAN | Programme



# Impact | Hypothesis:

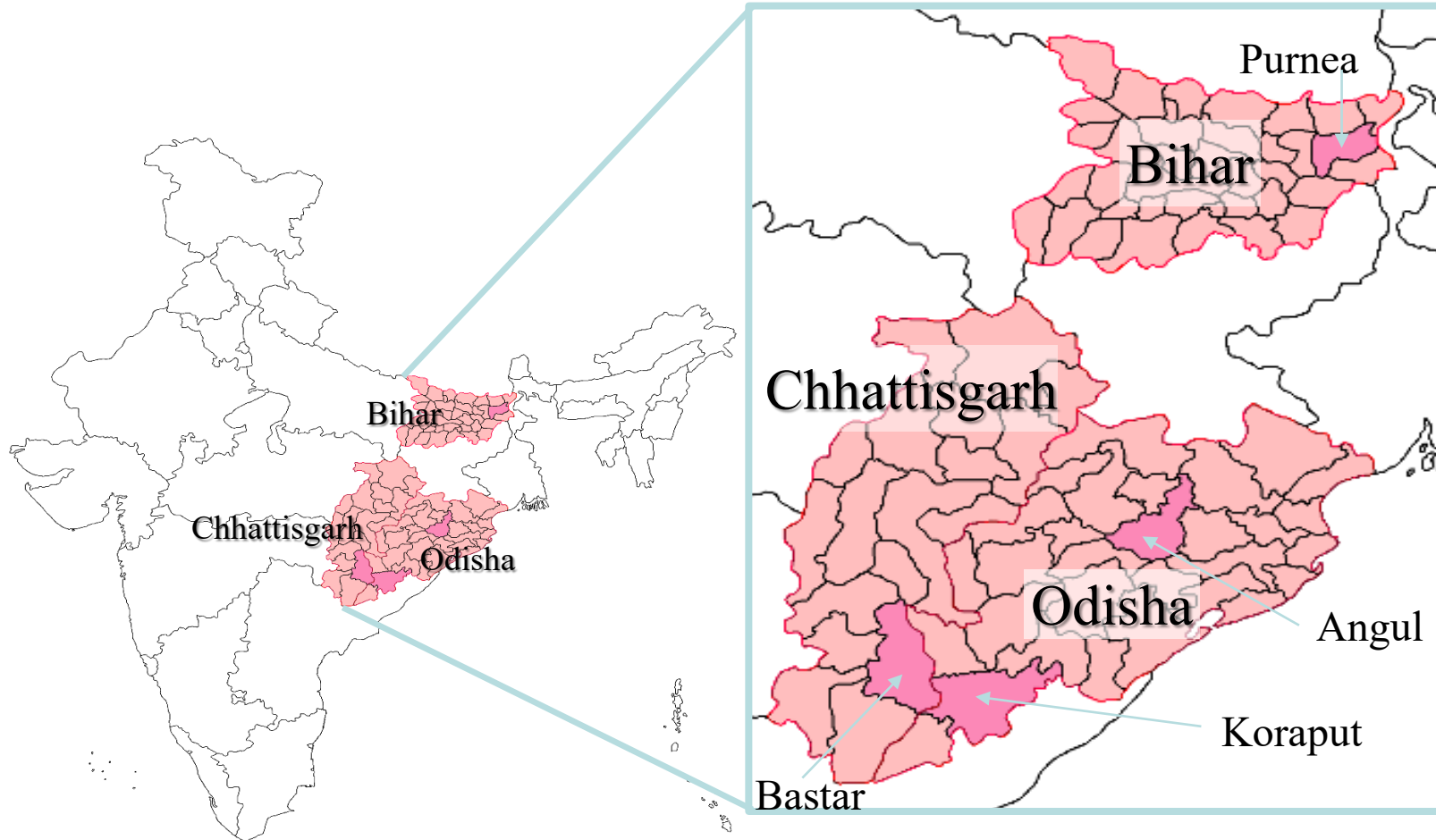
1. 15% reduction in the proportion of **adolescent girls** with a BMI<18.5
2. 15% reduction in the proportion of **mothers of children under two** with a BMI<18.5
3. 0.4 cm improvement in mean MUAC among **pregnant women**, over the intervention period of three years.
4. Improvements of between 5% and 20% in the coverage of 18 interventions over three years.

# Interventions | Thematic areas

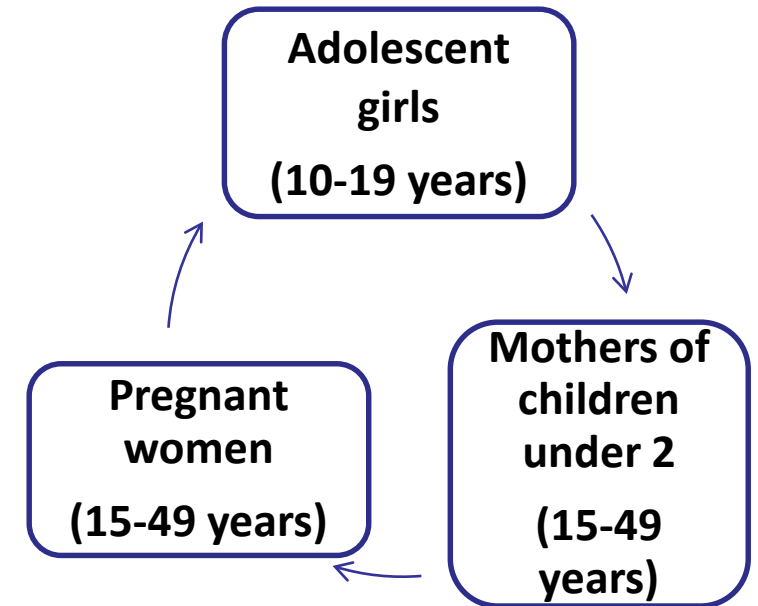
- Coverage of 18 interventions, clustered around five thematic areas.
  1. Improving food and nutrition intake
  2. Prevent micronutrient deficiencies and anemia
  3. Increase access to prenatal and postnatal health services
  4. Increase access to education and WASH commodities/services
  5. Prevent early, poorly spaced and repeated pregnancies.
- Participation in SHG and decision making

# COVERAGE AREA AND TARGET GROUP

- 4 Districts: Purne, Bastar, Koraput, Angul
- Five Poorest Aajeevika Resource Blocks



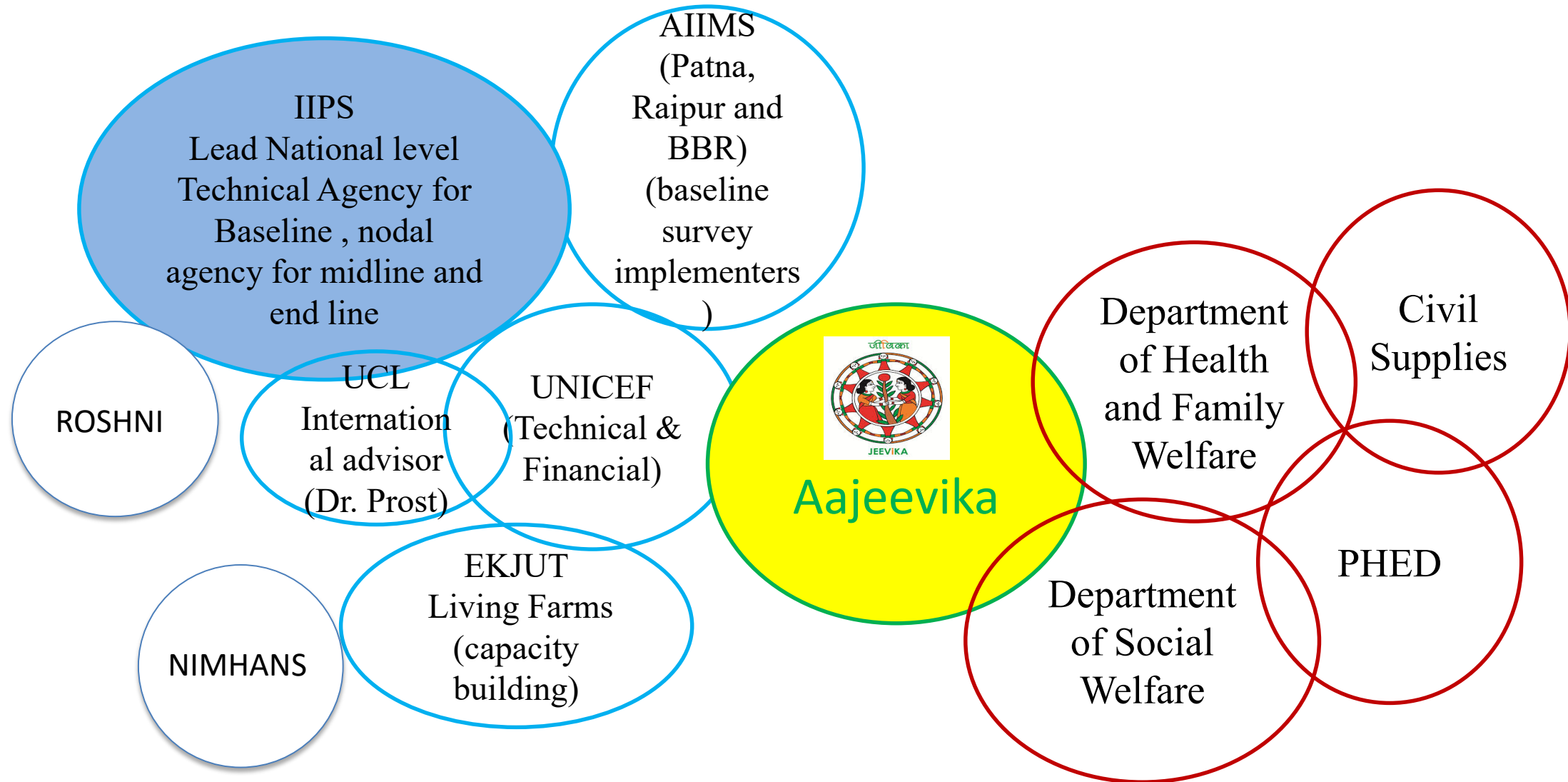
## Target Groups



## Overview of Intervention and Control Areas in Three States

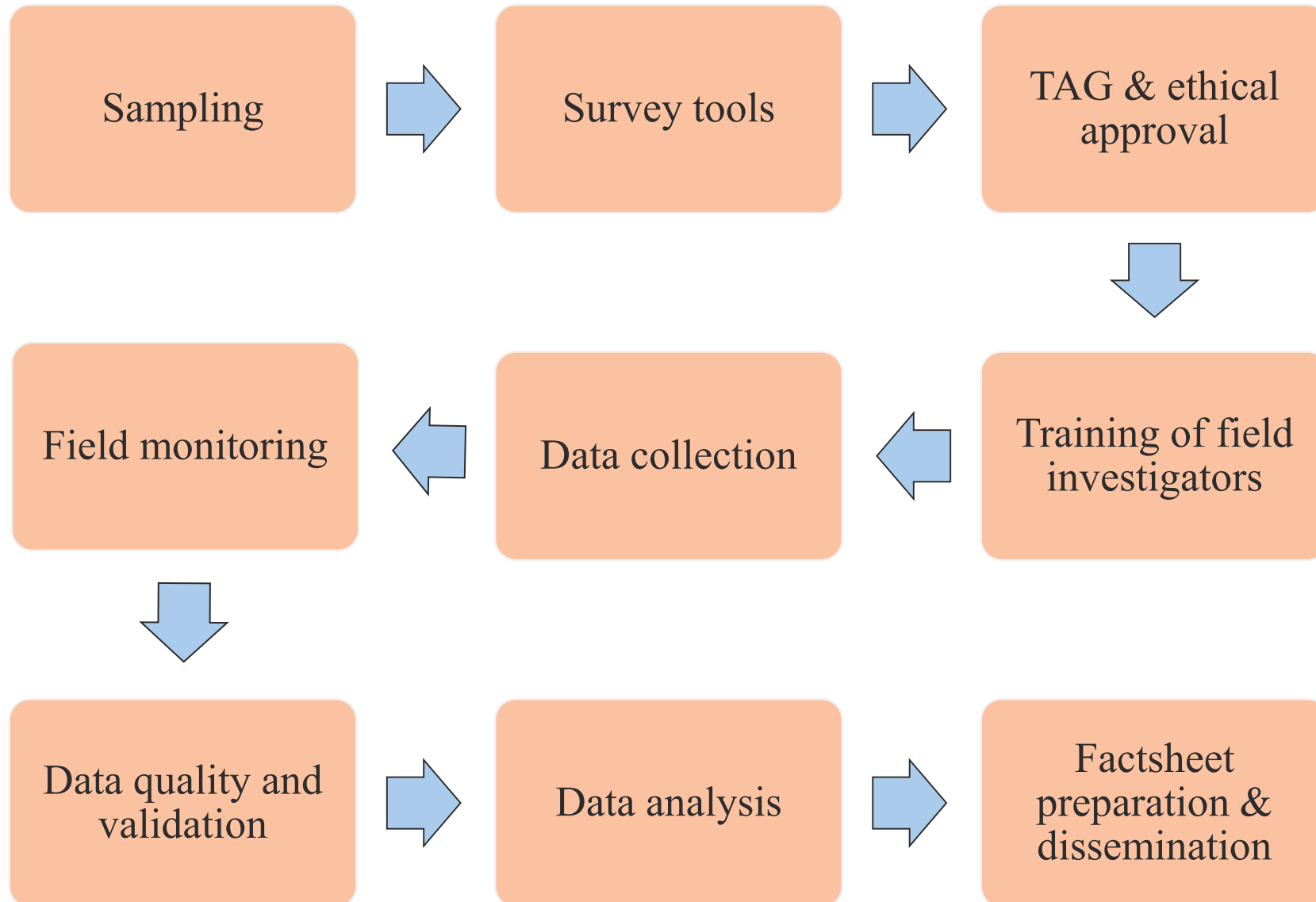
| STATE        | INTERVENTION   | CONTROL  |
|--------------|--|--|
| BIHAR        | 42 villages in Kasba and Jalalgarh Blocks, Purnia District | 31 villages in Kasba and Jalalgarh Blocks, Purnia District |
| CHHATTISGARH | 110 villages in Bastar Block                               | 114 villages in Bakawand Block                             |
| ODISHA       | 88 villages in Koraput and Palahara Blocks                 | 88 villages in Koraput and Palahara Blocks                 |
|              |  |  |

# COLLABORATORS





# ACTIVITIES OF IIPS FOR SWABHIMAAN



# SWABHIMAAN: SAMPLE SIZE

| Sample size for Swabhimaan baseline (2016) and endline (2022) surveys |                  |         |                |         |                               |         |       |
|---|------------------|---------|----------------|---------|-------------------------------|---------|-------|
|   | Adolescent girls |         | Pregnant women |         | Mother of children under 2yrs |         | Total |
|   | Baseline         | Endline | Baseline       | Endline | Baseline                      | Endline |       |
| Bihar   | 1704             | 1119    | 936            | 443     | 2612                          | 1162    | 7976  |
| Chhattisgarh  | 2921             | 2078    | 823            | 715     | 2539                          | 2082    | 11158 |
| Odisha  | 1727             | 1111    | 814            | 540     | 3604                          | 1522    | 9318  |
| Total   | 10660            |         | 4271           |         | 13521                         |         | 28452 |

# SURVEY TOOLS AND INSTRUMENTS

## Household

- HH members, HH characteristics, banking & HH assets, utilization of PDS, agriculture & farming activities, nutrition garden, WASH, SHG finance & loans and, COVID-19 knowledge & practices

## Adolescent girls

- Background, education, diet, access to health & ICDS services, nutritional assessment, KAP, WASH, Jeevika programme, vocational training & work, decision-making, gender and mental health (only in Chhattisgarh endline survey) and anthropometric measurements

## Pregnant women

## Mothers of children under age 2

- Background, education, diet, food security & coping mechanism, ANC, natal and PNC, access to VHSND, utilization of ICDS, family planning, WASH, Jeevika programme, work and empowerment, husband's background, gender and mental health (only in Chhattisgarh endline survey) and anthropometric measurements

## Children under age 2 years

- Background, birth care, feeding practices, food intake practices, utilization of ICDS, child morbidity and feeding practices during illness, immunization, personal hygiene and weight-growth measurements.

# Preparatory Work for Data collection

## Identification of target groups

- Listing of three target groups by complete house listing of selected villages.
- Selected required number of each target group from the list.

## Recruitment of investigators/ Tools

- Candidates who were at least graduated from the same district
- Preference was given to those with some basic knowledge of using computer/laptop and survey experience
- Bilingual questionnaires
- **Weighing machine**
- **Stadiometer**
- **Measurement Tape**
- **Calibration**

## Training of investigators

- 10-12 days training programme and reorientation.
- Training and practice session on **anthropometric measurements**.
- Field practice of administering all questionnaires using CAPI .
- At the end of training, test was conducted. All those who qualified were continued for the data collection.

## Data Monitoring and Quality Components

| <b>Key features</b>           | <b>Process</b>  | <b>Components</b>  | <b>IIPS</b>  |
|-------------------------------|---|--|--|
| Handholding                   | Spot-checks tables –<br>Initial stage of survey                       | Spot-Checks and<br>reorientation                               | Coordinator and<br>Project Officers                |
| Validation                    | Back-checks tables –<br>Daily   | Matching with soft<br>data and filled<br>questionnaire         | Project Officer<br>back-checks<br>Matching by IIPS |
| Validity and<br>consistency   | Field-checks tables-<br>teams<br>Weekly                               | Household, and<br>target groups<br>response and<br>measurement | Data Analyst cum<br>programmes, Co-PI              |
| Validation and<br>consistency | Data consistency<br>intervention and<br>control villages<br>Bi-weekly | Higher level analysis<br>of age and<br>anthropometric          | Data Analyst cum<br>programmer and<br>PI/CO-PIs    |

# Monitoring data quality through field check tables

- Field-check tables are one way of monitoring data quality when the field work is still in progress.
- Field-check tables on important aspects of data quality are produced regularly using STATA.
- Use of the field-check tables is crucial especially during early stages of fieldwork when the option to retraining or modifying procedures are still feasible.
- These Field check tables are run by the JPMs every week starting after entering the first batch of PSU data.
- As fieldwork progresses and becomes more settled and routine, the checks become bi-weekly.

# MONITORING DATA QUALITY THROUGH FIELD CHECK TABLES

### Table 1 Field-check: household response rates

[illegible]

**Table 2: Field-check: Target group coverage rate and response rate**

|           | Results of interview of Target Groups |             |           |         |                   |       |       |        |
|-----------|---------------------------------------|-------------|-----------|---------|-------------------|-------|-------|--------|
| Team      | Completed                             | Not at home | Postponed | Refused | Partial interview | Other | Total | Number |
| Team 1    |                                       |             |           |         |                   |       |       |        |
| Team 2    |                                       |             |           |         |                   |       |       |        |
| All teams |                                       |             |           |         |                   |       |       |        |

# MONITORING DATA QUALITY THROUGH FIELD CHECK TABLES

**Table 3: Response rate of Height/Weight/MUAC measurement (In numbers): Target Groups**

[illegible]



# MONITORING DATA QUALITY THROUGH FIELD CHECK TABLES

| List of spot-check tables- investigator wise |   |            |                          |        |
|--|---|------------|--------------------------|--------|
| Sr no  | Check   | Assessment | Action taken on the spot | Remark |
| 1  | How investigator describing the purpose of survey? (language and mannerism) |            |                          |        |
| 2  | Age probing by investigators  |            |                          |        |
| 3  | Diet diversity  |            |                          |        |
| 4  | Decision making questions (scale)   |            |                          |        |
| 5  | Services accessed in AHD/kishori divas                                      |            |                          |        |
| 6  | ANC history   |            |                          |        |
| 7  | Delivery and postnatal care   |            |                          |        |
| 8  | Role of Jeevika   |            |                          |        |
| 9  | Anthropometric measurements   |            |                          |        |

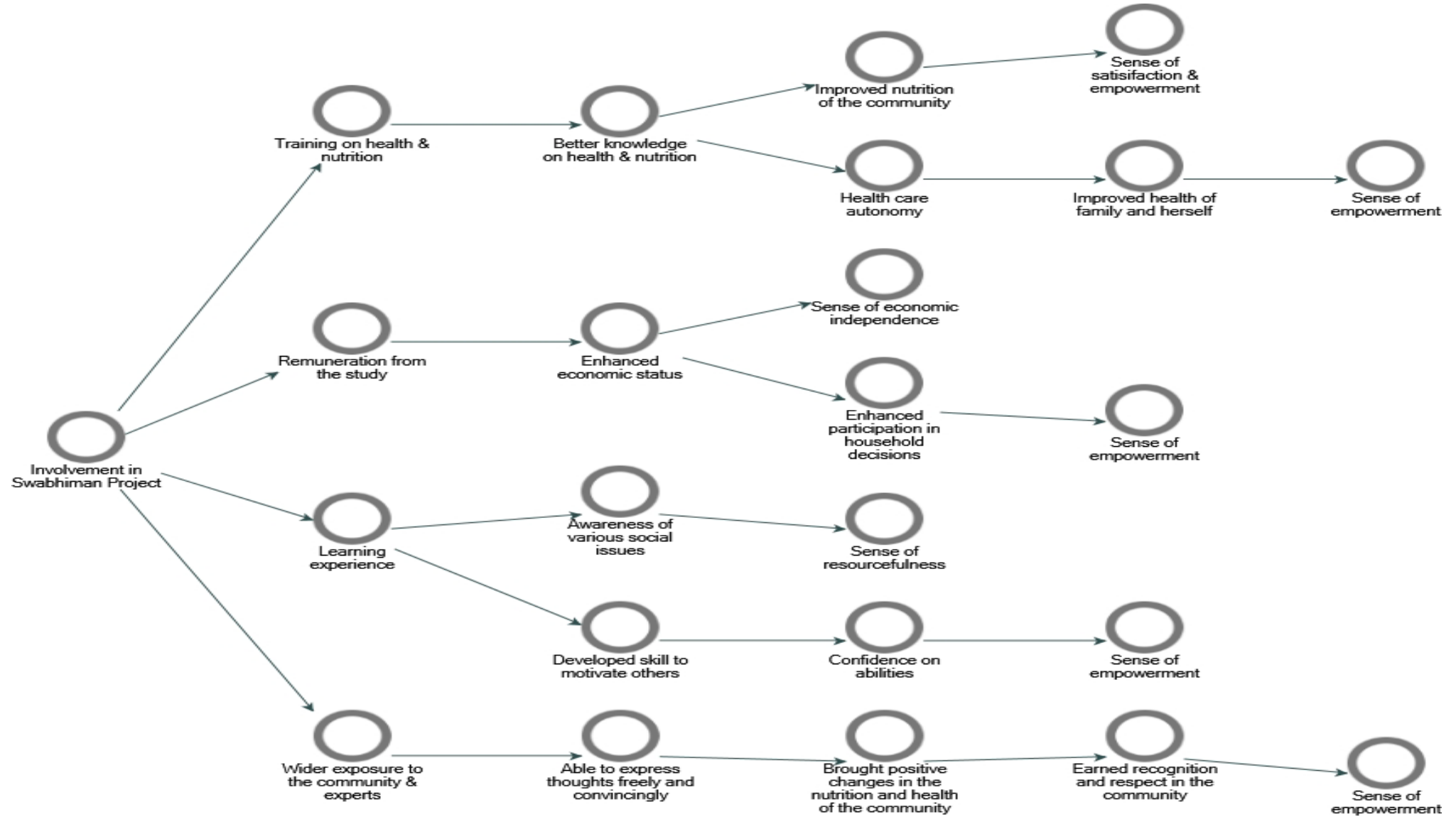
# MONITORING DATA QUALITY THROUGH FIELD CHECK TABLES

| List of back-check tables- investigator wise/team with comparison of questionnaires or soft data (Weekly) |                                 |            |                      |       |
|---|---------------------------------|------------|----------------------|-------|
| Sr No.  |                                 | Back check | Filled questionnaire | match |
| 1   | Age of target group individuals |            |                      |       |
| 2   | Religion or caste/tribe         |            |                      |       |
| 3   | Education status                |            |                      |       |
| 4   | Source of water                 |            |                      |       |
| 5   | Type of toilet                  |            |                      |       |
| 6   | Type of ration card             |            |                      |       |
| 6   | Salt tested and result          |            |                      |       |
| 7   | Calcium tablets                 |            |                      |       |
| 8   | Place of delivery               |            |                      |       |
| 9   | Timing of first ANC             |            |                      |       |
| 10  | Food security                   |            |                      |       |
| 11  | Height                          |            |                      |       |

# Direct and indirect gains through Swabhimaan project

- **Community Development** – (Will be discussed in the following presentations)
  - Knowledge transferred to community
  - **Employment generation**(300 investigators, Programmers, Data Analyst, Technical Writers)
- **Empowerment of Poshan Sakhi**
  - Capacity building of investigators and research staff
  - Workshops at IIPS for staff and research scholars
    - Sampling
    - CSPro
    - GIS
    - Qualitative techniques and tools, analysis by NVivo
- **Research Publications**

# Mind Map of Poshan Sakhi



# PUBLICATIONS

| S.N | Authors  | Title  | Journal, Year;Vol(Is):Page   |
|-----|--|--|--|
| 1   | Onori F, <b>Dhillon P, Dinachandra K, Jaleel A, Saraswat A, RS Reshmi, Unisa Sayeed, Sethi V</b>   | <b>An adaptation of the Food Insecurity Experience Scale (FIES) for measuring food insecurity among women in socially-backward communities</b>                   | <i>Asian Journal of Agriculture and Development</i> , 2021;18(1):66-82 |
| 2   | <b>Saraswat A, Unisa S, Reshmi RS, Dwivedi LK, Pedgaonkar S, Sethi V</b>   | <b>Assessment of nutritional status of pregnant women based on mid-upper arm circumference (MUAC) and associated factors in poverty pockets of eastern India</b> | <i>Journal of Family Welfare</i> , 2021;64:134-145                     |
| 3   | <b>Unisa S, Saraswat A</b> , Bhanot A, <b>Jaleel A</b> , Parhi RN, Bhattacharjee S, Purty A, Rath S, Mohapatra B, Lumba A, Sinha S, Nita Kejrewal N, Agrawal N, Bhatia V, Ruikar M | <b>Predictors of the diets consumed by adolescent girls, pregnant women and mothers with children under age two years in rural eastern India</b>                 | <i>Journal of Biosocial Science</i> , 2021;53(5):663-82.               |
| 4   | Sethi V, Gupta N, <b>Pedgaonkar S, Saraswat A, Singh KD, Rahman HU, De Wagt A, Unisa S</b>   | <b>Mid-upper arm circumference cut-offs for screening thinness and severe thinness in Indian adolescent girls aged 10–19 years in field settings</b>             | <i>Public Health Nutrition</i> , 2019;22(12):2189-99                   |

# PUBLICATIONS

| S<br>·<br>N | Authors  | Title  | Journal,<br>Year;Vol(Is):P<br>age               |
|-------------|--|--|---|
| 5           | <b>Chattopadhyay A</b> , Sethi V, <b>Nagargoje VP</b> , <b>Saraswat A</b> , <b>Surani N</b> , Agarwal A, Bhatia V, Ruikar M, Bhattacharjee S, Parhi RN, Dar S, Daniel A, Sachdev HPS, Singh CM, Gope RK, Nath V, Sareen N, De Wagt A, <b>Unisa S</b>   | <b>WASH practices and its association with nutritional status of adolescent girls in poverty pockets of eastern India</b>  | <i>BMC Women's Health</i> , 2019;19(1):89       |
| 6           | <b>Fulpagare PH</b> , <b>Saraswat A</b> , <b>Konsam D</b> , <b>Surani N</b> , Parhi RN, Bhattacharjee S, Somya S, Purty A, Mohapatra B, Kejrewal N, Agrawal N, Bhatia V, Ruikar M, Gope RK, Murira Z, De Wagt A, Sethi V   | <b>Antenatal care service utilization among adolescent pregnant women—evidence from Swabhimaan Programme in India</b>  | <i>Frontiers in Public Health</i> , 2019;7:369. |
| 7           | Sethi V, Bhanot A, Bhattacharjee S, Gope RK, Sarangi D, Nath V, Nair N, Singh U, Daniel A, Parhi RN, Sinha, S Loomba A, Somya S, Purty A, Ali N, Mohapatra B, Agrawal N, Bhatia V, Ruikar M, Sahu B, <b>Reshmi RS</b> , <b>Pedgaonkar S</b> , <b>Dwivedi LK</b> , Saiyed F, Prajapati M, Mishra P, Prost A, Kejrewal N, De Wagt A, Sachdev HPS, <b>Unisa S</b> | <b>Integrated multisectoral strategy to improve girls' and women's nutrition before conception, during pregnancy and after birth in India (Swabhimaan): protocol for a prospective, non-randomised controlled evaluation</b> | <i>BMJ Open</i> , 2019;9:e031632                |
| 8           | <b>Reshmi RS</b> , <b>Dinachandra K</b> , Bhanot A, <b>Unisa S</b> , Menon GT, Agrawal N, Bhatia V, Ruikar M, Daniel A, Bhattacharjee S, Parhi RN, Sachdev HPS, Gope RK, De Wagt A, Sethi V  | <b>Context for layering women's nutrition interventions on a large scale poverty alleviation program: Evidence from three eastern Indian states</b>  | <i>PloS One</i> , 2019;14(1):e0210836           |

**THANKS FOR YOUR ATTENTION!!!**

# COVERAGE OF INDICATORS

|   | Adolescent girls | Pregnant women | Mothers |
|---|------------------|----------------|---------|
| Improve food and nutrient intake  |                  |                |         |
| Access to generalised household ration through Public Distribution System (PDS), a food subsidy scheme  | *                | *              | *       |
| Balanced energy protein supplementation through access to supplementary rations   | *                | *              | *       |
| Access to knowledge and choices about how to increase maternal dietary diversity  | *                | *              | *       |
| Access to knowledge and support for nutrition-sensitive agriculture at home (kitchen garden) and community-based food insecurity coping strategies. | *                | *              | *       |
| Prevent micronutrient deficiencies and anemia   |                  |                |         |
| Iron and folic acid (IFA) supplementation   | *                | *              | *       |
| Universal use of iodised salt   | *                | *              | *       |
| Calcium supplementation and deworming   | x                | *              | *       |
| Access to information and commodities like insecticide treated bed-nets for malaria prevention  | *                | *              | *       |
| Access to information on preventing tobacco and alcohol use in pregnancy  | x                | *              | *       |
| Increase access to health services and special care to nutritionally “at risk” women  |                  |                |         |
| Early registration in outreach services   | *                | *              | x       |

\* = relevant target group; x = non-relevant target group



# COVERAGE OF INDICATORS

|   | Adolescent girls | Pregnant women | Mothers |
|---|------------------|----------------|---------|
| Recording and monitoring of nutritional status and special community-based at-nutritional risk package  | x                | *              | x       |
| Quality reproductive health, antenatal and postnatal care   | *                | *              | *       |
| Access to knowledge and entitlements for promotion of institutional deliveries and maternity benefits   | x                | *              | *       |
| Increase access to education and commodities for water, sanitation and hygiene (WASH)   |                  |                |         |
| Sanitation and hygiene (including menstrual hygiene) education  | *                | *              | *       |
| Access to safe drinking water and sanitation commodities  | *                | *              | *       |
| Prevent early, poorly spaced or unwanted pregnancies  |                  |                |         |
| Promotion of secondary education and education for delaying the age at marriage to legal age  | *                | x              | x       |
| Access to information and family planning commodities for delaying age at first pregnancy and prevention of repeated pregnancies                              | *                | *              | *       |
| Women's collective voice and empowerment for decision-making to prevent child marriage, violence against women, child spacing and other gender-related issues | *                | *              | *       |
| * = relevant target group; x = non-relevant target group  |                  |                |         |

# TIMELINE

