CML Journey

2014-2020

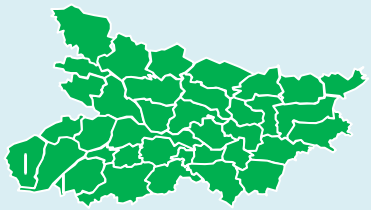
Methodology

RMNCH+N focused Household Survey: design and timelines

Household Survey

Round	Achieved sample size	Starting month	Ending month	Type of tool used
R12	15687	Oct-20	Dec-20	Digital CAPI
R11	15687	Sep-19	Nov-19	Digital CAPI
R10	15687	Sep-18	Nov-18	Digital CAPI
R9	15687	Sep-17	Dec-17	Digital CAPI
R8	15687	Oct-16	Jan-17	Digital CAPI
R7	15687	Sep-15	Dec-15	Paper based
R6	15687	May-14	Sep-14	Paper based

Coverage in R12



Districts covered in Household Survey

534 blocks across **38** districts

15,687 sample size/age group

78,435 respondents

Mothers of children aged:

- 0-2 months
- 3-5 months
- 6-8 months
- 9-11 months
- 12-23 months

Sampling / Program reach

- Mixed (population-based and LQAS) sampling methodology
- Proportional cluster random sampling at Aanganwadi level followed by a systematic component at individual level (using a random start)
- To evaluate block-level program performance (ROC*curve based Pass/Fail), state & district level point estimates and change in estimates for all RMNCH+A indicators
- Primary data collected in all 534 blocks across all 38 districts
- Data quality assurance through:
  - Logic Check
  - Spot Check
  - Back Check
  - Audio verification (physical file & meta data)

Alpha (Type-I) error	5%
Beta (Type-II) error (1 - Statistical Power)	20%
Absolute precision	5%

*Receiver operating characteristic

care

Comprehensive Facility Assessment

Modules of facility Assessment	*Scope of Assessment*
HR	Availability (Positions sanctioned, filled, vacant, deputation in and out, contractual staff) of Specialist doctors, Medical Officers, Staff Nurse, ANMs, OT assistants & Lab technicians)
Labor Room	Infrastructure, Supplies (drugs, consumables and equipment), Infection Control, Review of Records .
Operation Theatre	Infrastructure, Supplies (drugs, consumables and equipment), Infection Control, Review of Records .
Maternity Ward	Infrastructure, Supplies (drugs, consumables and equipment), Infection Control, Review of Records .
Drug Store	Infrastructure, Supplies (drugs, consumables), Infection Control, Records , Inventory management practices
Laboratory	Supplies (Kits, Reagents, Equipment), Service provision (types of lab tests done)
Ambulance	Availability and service provision (trips, distance travelled)
Condemned Article	Location, type and floor area of condemned articles
Bio-medical Waste Management	Collection, Segregation, and Disposal (outsourced agency and manual disposal)
Exit Interviews	Care & Counselling provided to recently delivered mother & newborn at Post Natal Ward before discharge

Framework for the assessment of facilities

Facility Based

Objectives	Methodology
To understand the gaps in the inputs in health facilities that are hampering their readiness for service delivery (maternal and newborn care).	▪ It is a cross sectional quantitative study conducted through structured questionnaire which was pilot tested and validated. ▪ Trained BMLEs collected data from each facility over the period of around 2-6 man days.

Supplies	Infrastructure	Human Resource
		
Maternal Care	Labor Room	Staff Nurse (ANM + GNM)
Neonatal Health	New Born Care Corner	Medical Officer
Child Health		Specialist (Obstetrician, Pediatrician, General Surgeon & Anesthesiologist)
Family Planning		
Cross cutting (e.g. Antibiotics)		

Married Women of Reproductive Age (MWRA)

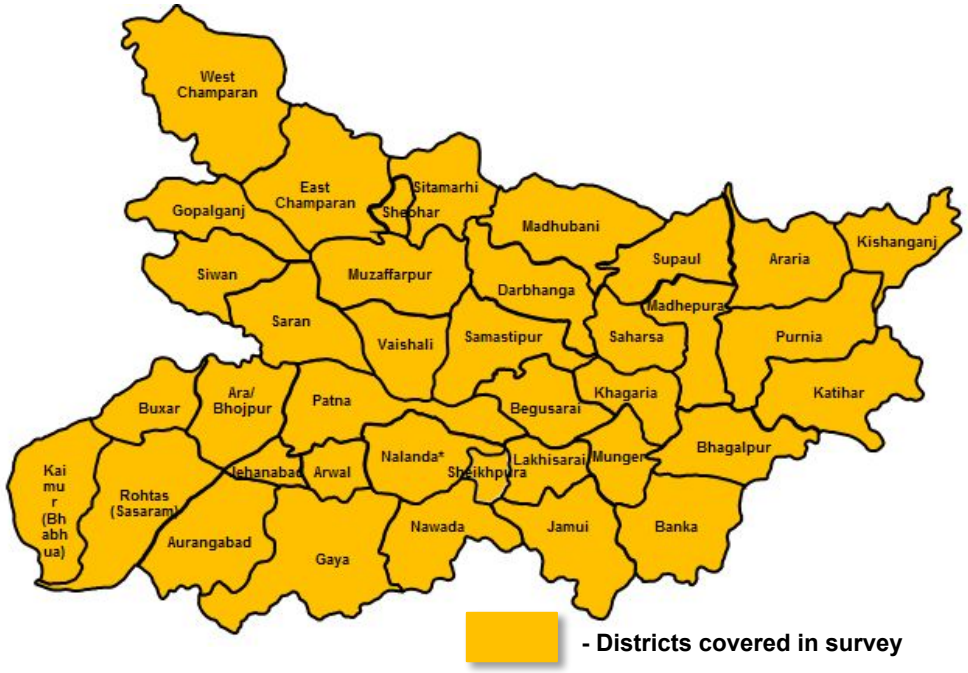
HH Survey

- **Objective:** To understand, intent and practice among Married Women of Reproductive Age (MWRA) across four key areas, namely: Family Planning, Social recognition, Mental health & Dietary diversity**.**

Study design	Sampling Strategy
Cross-sectional study in which household interviews done across all 38 districts of Bihar.	***PSU is block, SSU is AWC in rural areas/ward in urban area and TSU is structure***
The Interview of the selected respondent **conducted using a structured questionnaire.**	5 blocks per district are chosen and the 120 SSUs are equally distributed among these 5 blocks.
All the **interviews conducted by female data collectors**.	From ***each SSU***, ***5 respondents (MWRA) are selected using systematic sampling***
The **key informants are married women in the age group of 15- 49 years**.	***Total sample size= 22800 (600 per district)***

Very Low Birth Weight (vLBW) Study

- **Intervention:** Tracking was ***done to improve (i) identification of vLBW babies born in public facilities (ii) extra, immediate post-natal care practices***.
- **Study objective:** To assess the intervention and track progress over time.

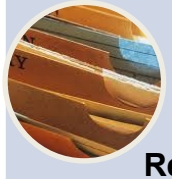


Parameter	Round 1	Round 2
Reference period	Feb – Apr 15	Sept – Oct 15
Count of facilities	178	178
Count of respondents	1408	1664

Assessment process

Families of these vLBW# babies were visited and interviewed after one month of birth

vLBW# babies were identified from records; address noted



Records collected from Labor Room registers of randomly selected facilities

**very low-birth weight (vLBW) is taken as a birth weight of an infant of less than or equal to 2 kg.*

Labor room Register Study - Objective and Methodology

The objectives of this study was:
To understand the erosion caused in key MNCH indicators due to service disruption caused during Pandemic

Methodology-Part 1(CML Data collection)

- To understand the trend of delivery outcome and complication identification a birth outcome checklist was designed to capture the trend of critical indicators over time from Jan-Jun 2020.
- The data collection was done in digital CAPI using Survey CTO platform.
- The field data collectors BMLEs after meticulous training collected the information from 552 functional facilities pan Bihar.

Methodology-Part 2(HMIS)

- Additionally, a mapping exercise was done from the secondary data HMIS to understand the trend of key indicators over the period of Jan-June 2019 and Jan-Jun 2020.
- The findings from both the exercise were pooled together to understand the MNCH scenario during pandemic

Arogya Diwas Evaluation - Methodology (1/2)

Study objective and Evaluation components

- ✔ To understand the status of service provision and essential supplies at Arogya Diwas platform
- ✔ Components of evaluation included:
  - Infrastructure
  - Availability of supplies and equipment
  - Utilization of drugs and FP products
  - Footfall measurement
  - Counselling services
  - Referral services
  - Safety practices during pandemic

Methodology

1. Block-wise micro-plan were collected in each district and they were compiled at the district office
2. Two Arogya diwas sites were randomly selected per block for the observations to be conducted on Wednesday and Friday from the micro plan
3. The observational data was collected using a structured tool.

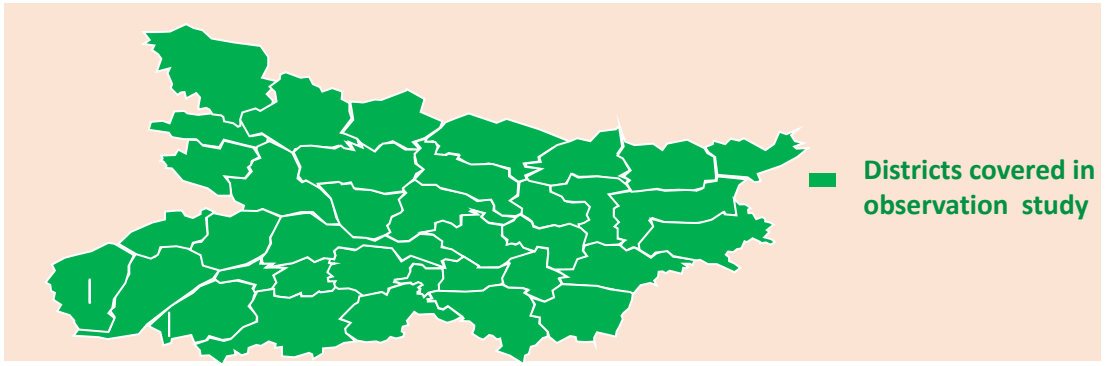
Aragya Diwas Evaluation – (2/2)

Data Collection Timeline and the Sample Size

R1 – June'17	R2 – July'17	R3 – Aug'17	R4 – Dec'17	R5 – Jan'18	R6 – June'18	R7 – Feb'19	R8 – June'20'
N=1043	N=873*	N=1018	N=1065	N=1067	N=1059	N= 999	N= 1055

Year 2017

Coverage



Current evaluation was carried out in all 38 districts

Data Quality Assurance

- 15% spot checks
- Validation in CAPI module
- Data quality and logical errors check

AMANAT Jyoti – CEmONC - Methodology

Evaluation description AMANAT CEmONC

- ✔ **Direct Observation of Delivery (DOD)** – comprising of passive observation of the delivery process by the Nurse Mentor Supervisor (NMS) at the mentored CEmONC facilities on selected days during the week(s) of mentoring.
- ✔ A standardized digital tool is administered via android tablets by the NMS. Information related to key delivery practices that are covered in different modules of nurse mentoring (including delivery practices, handwashing, assessment of vital, neonatal care practices, infection control etc.) are captured using the tool. The tool was drafted in consultation with the Capacity Building team.
- ✔ In each CEmONC facility, the CEmONC Mentor would observe one delivery anytime during the mentoring week.
- ✔ The current presentation includes findings from two different phases of AMANAT JYOTI and AJ Phase-2 nurse mentoring in Bihar

Data collection Strategy

AMANAT JYOTI Phase 2

Direct Observation of Delivery

In facilities where AMANAT JYOTI follow up (36) or AMANAT Jyoti (36) modules has been planned to be rolled out ,NMS has been instructed to collect 1 **DOD/facility** on the first day of their visit irrespective of it being a mentoring or a follow up visit.

Data collection Profile

Total Admission- 1157
Direct admission-1068
Refer in admission- 89
Total vaginal delivery-1013
Total complication- 254 (Before delivery)

Phases of Assessment

*** AJ BASELINE (Sep to Dec 2018)**
*** AJ ENDLINE (Oct to Dec 2019)**
*** AJ Phase2 Baseline (May to July 2020)**

AMANAT Jyoti – BEmONC - Methodology

Evaluation description AMANAT BEmONC

- ✔ **Direct Observation of Delivery (DOD)** – comprising of passive observation of the delivery process by the Nurse Mentor Supervisor (NMS) at the mentored BEmONC facilities on selected days during the week(s) of mentoring.
- ✔ A standardized digital tool is administered via android tablets by the NMS. Information related to key delivery practices that are covered in different modules of nurse mentoring (including delivery practices, handwashing, assessment of vital, neonatal care practices, infection control etc.) are captured using the tool. The tool was drafted in consultation with the Capacity Building team.
- ✔ In each BEmONC facility, the Nurse Mentor Supervisor (NMS) would observe <u>one delivery</u> anytime during the mentoring week.
- ✔ The current presentation includes findings from two different phases of AMANAT JYOTI and AJ Phase-2 nurse mentoring in Bihar

Data collection Strategy

AMANAT JYOTI Phase 2

Direct Observation of Delivery

In facilities where AMANAT JYOTI follow up (361) or AMANAT Jyoti (47) modules has been planned to be rolled out ,NMS has been instructed to collect 1 **DOD/facility** on the first day of their visit irrespective of it being a mentoring or a follow up visit.

Data collection Profile

Total Admission- 1415
Direct admission-1414
Refer in admission- 1
Total vaginal delivery-1388
Total complication- 87 (Before delivery

Phases of Assessment

*** AJ BASELINE (May to Dec 2018)**
*** AJ ENDLINE (Oct to Dec 2019)**
*** AJ Phase2 Baseline (May to July 2020)**

Complication Story

AMANAT[1] (33 districts)

AMANAT- B (buniyadi)
- BEmONC[2] facilities
- 2015 – 2017 (4 phases)
- 319 PHCs[3]/CHCs[4]/FRUs[5]

2762 ANMs[6]
482 Grade A nurses

AMANAT-V (vyapak)
- CEmONC[7] facilities
- 2015 – 2018 (5 phases)
- 22 DH[8], 1 Medical College

195 Doctors

277 Nurses

AMANAT[1]– Jyoti (38 districts)

BEmONC
- 2018 – 2019
- 319 PHCs[3]/CHCs[4]/FRUs[5]

53 Nurse mentors
293 Mentees

CEmONC
- *2018 – 2019*
- 32 District hospitals

668 Nurse mentors
2806 Mentees

Evaluation methodology

Complication story

AMANAT

✔ A cross-sectional data collection methodology was adopted to evaluate the clinical practices using direct observation of delivery (DOD)

✔ Baseline and End-line were conducted before and after the mentoring intervention

✔ Bias was minimized by swapping the Nurse Mentors at the time

Complication management assessment

✔ To understand the occurrence, management of the maternal and neonatal complications, DOD[9] were conducted in 10 DHs[8] by independent assessors from April 2015 to April 2017

AMANAT- Jyoti

✔ DOD[9] by the Nurse Mentor Supervisor (NMS)

✔ A standardized digital tool to measure the key delivery practices is administered via android tablets by the NMS[10].

✔ In each BEmONC[2] facility, the NMSs[10] observed one delivery anytime during the mentoring week while CEmONC[7] mentor observed two deliveries during their visits to each DH[8] (lasting one to two weeks)

[1] Apatkalin Matrutva evam Navjat Tatparta; [2] Basic emergency obstetric and newborn care; [3]Primary Health Centre; [4] Community Health Centre; [5] First Referral Unit; [6] Auxiliary Nurse Midwife; [7] Comprehensive emergency obstetric and newborn care; [8] District hospital; [9] Direct observation of delivery; [10] Nurse Mentor Supervisor

ANC Clinic PMSMA - Objectives and Methodology (1/2)

Objectives

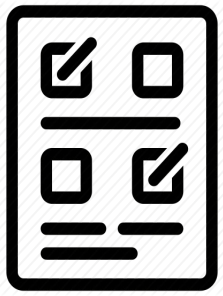
- ✔ **To assess delivery of different ANC components during PMSMA clinics**
- ✔ **To estimate the capacity of the clinics in identifying the high-risk pregnancies**
- ✔ **To understand the flow of client movement in PMSMA clinics**

Components of evaluation & tools used

- ❑ The evaluation was conducted using two pre-tested questionnaires which were designed according to the PMSMA guidelines and project requirements.
- ❑ Questionnaire 1 collected data on the following elements (either from the available records or through observation):
  - Service delivery related details of the ANC clinics conducted in the three months preceding the data collection e.g. count of client registrations and different types of lab tests conducted
  - Flow of client movement followed in the ANC Clinic on the day of observation.
- ❑ Questionnaire 2 captured the following information through Client Interviews:
  - Client's sociodemographic details, pregnancy and present/past illness
  - The OPD and laboratory services (prescribed/conducted) delivered in ANC clinic including delivery of test reports
- ❑ The investigators (CARE's Block MLE coordinators or BMLEs) underwent rigorous training to ensure standardization of data collection across the sampled study sites.

ANC Clinic PMSMA - Objectives and Methodology (2/2)

Operationalization & Data Collection



- Based on the current strength and posting of the BMLE cadre (296 in total), 296 block level facilities, out of 516 'functional' block level facilities, were selected. Block level facilities included all types of 24*7 functional facilities (PHC, CHC, RH & SDH) below district hospitals.
- At the chosen facilities, the assessment was carried out on the scheduled date of PMSMA ANC Clinic in the month of Aug'2020
- Record-based information were captured for the three months (May, June, July - 2020) prior to assessment.
- For client interview, 10 individuals were chosen using systematic sampling from the line-list of registered clients. Using a random starting point between 0 and 10 (allocated to each investigator), every 10th individual listed in the register was selected for interview. If the footfall in PMSMA clinic during the previous three months were below 100, then an interval of 5 (i.e. every 5th client was selected) was used for systematic sampling.
- In each district, random spot-checks were conducted by the District MLE Officers and Data Quality Monitoring Coordinators to ensure data quality.

Client Interview

- Selected clients were subjected to in-person interviews at the time of exit (or after all prescribed tests have been conducted).

Blood Bank Assessment

Operationalization

- The assessment was carried out by trained nurses, from BTSP's Concurrent Measurement and Learning (CML) unit and State Resource Unit (SRU), having expertise in facility based data collection.
- The nurses (designated as Clinical Assessment Facilitator and Clinical Training Expert) underwent systematic training on data collection by experts from internal team, officials from Bihar State AIDS Control Society (BSACS) and officials from State Health Society (SHS).
- Up to 2 working days were taken to complete the assessment of each Blood Bank.
- Data collection was conducted using tablets in a custom-made ODK platform, to improve the quality of the assess.

- **Assessment methods consisted of:**
  - ✔ Direct observation of infrastructure
  - ✔ Availability and functionality of various equipment & supplies (drugs, consumables) in all functional areas*
  - ✔ Assessment of available human resources through interview with the hospital staff and validated through sanction letters.
  - ✔ Availability of Records and SOPs
  - ✔ Assessment of Infection Control infrastructure and practices

***If designated rooms for each function were not available, then functional area were defined in terms of availability of essential equipment/amenities/supplies**

Continuous Quality Improvement (CQI) – 1/2 - Background & Objective

Collaborative Quality Improvement (CQI) was implemented by CARE India in 10 districts of Bihar, in partnership with IHI, supported by GoB to improve quality of maternal and newborn care.

The objective assessment was to understand

- ✔ What were the potential influencers of the change?
- ✔ What caused the change to happen?
- ✔ What could/could not be translated into practice?
- ✔ What were the facilitators/barriers to change?

- ✔ The guideline of the IDI was made in consultation with experts in the field.
- ✔ The list of participants who attended CQI sessions organized by CARE-IHI were obtained and interviews were conducted with members who played critical role in implementation.
- ✔ CML CAFs were given 2 days orientation on conducting IDI
- ✔ The interviews were conducted by CAFs followed by transcription and post coded/analyzed using ATLAS.ti.

CQI /IHI Districts

Continuous Quality Improvement (CQI) – 2/2

Themes and Sub-themes

01 Selections of Aims, identifications of process or pathways and outcomes

- Knowledge regarding CQI intervention
- Challenges faced during service delivery
- Step adopted to mitigate the challenges
- Changes observed in working environment
- Involvement and support from Leadership

02 Facility level QI meeting

- Knowledge regarding QI meeting/use of tools
- Organising QI meeting success/challenge
- Experience of attending QI meeting
- Cross learning

03 CQI program understanding

- Experience of attending learning session
- Cross learning during session & sharing of experience regarding use of QI tools
- Sharing of learning experience with colleagues, suggestion, way forward

Respondent's Profile

Category-District Superintendent

- ✔ In total 7 district superintendent were interviewed(IDI).
- ✔ Experience-Huge variation ranged from 6 months to 14 years
- ✔ Majority of DS confirmed attending 4-5 CQI session

Category-HOSPITAL MANAGER

- ✔ In total 10 Hospital manager were interviewed(IDI).
- ✔ Experience-Most of HMs had 7-10 years of work
- ✔ Majority of HM confirmed attending all CQI learning session

Category-STAFF NURSE

(SN were selected based on recommendation from SRU team)

- ✔ **In total 10 Staff nurses were interviewed**
- ✔ **Experience-Huge variation ranged from 6 to 11 years**
- ✔ **Only 2 SN reported to attend 4-5 session while majority of nurses attended 2 or less**

ANM Meeting Study - Objectives & Methodology

Objectives of the study were to understand & assess the-

- ✔ Participants' attendance & regular process of the ANM meeting
- ✔ Availability of planned learning agenda with clearly defined outputs
- ✔ Discussion on FPLMIS, e-aushadhi & AVD green channel during the meeting
- ✔ Skill building sessions take place during the meeting
- ✔ Participation of different system supervisors* in the meeting

Methodology-

- ✔ A total of 300 facilities (1 facility/block) were visited across the Bihar (based on the micro plan received from Block health officials)
- ✔ In 43 blocks, ANM meeting was not organized as per the micro plan
- ✔ In 257 blocks, ANM meeting was organized as per the micro plan and observed by the data collectors

- *To ensure data quality,15% Spot checks were conducted by respective District Quality Monitoring Coordinators*

Timeline	Sample Size
Dec' 2018	443
Jan' 2018	468
March' 2017	235
Sep'2020	257

* MOIC, BHM, MO, LS, BAM, MnEO, BM-Care and other BRG members include participants from UNICEF, WHO and development partners

Study on utilizing the Alternate Vaccine Delivery (AVD) system for delivery of IFA to pregnant & lactating women in the 2 pilot districts of Patna – Objective and Methodology

AVD Pilot-Beneficiary study

Intervention design:

- Christened as **"Arogya diwas green channel"** - The intervention aimed to streamline and strengthen the availability and distribution of VHSND commodities at the session site through Alternate vaccine delivery (AVD) system.
- The intervention pilot was implemented in 2 blocks of Patna district – **Bikram** and **Dulhin Bazaar.**

Objective of AVD pre-post assessment:

- To understand the impact of AVD intervention on supply of IFA to beneficiaries
- To estimate the distribution and utilization of IFA to pregnant & lactating women in the 2 pilot blocks.

Sample size: 313 pregnant women (in 3rd trimester) and 209 lactating mother with child aged <6m

Date of observation: 16th to 20th March, 2020

Methodology:

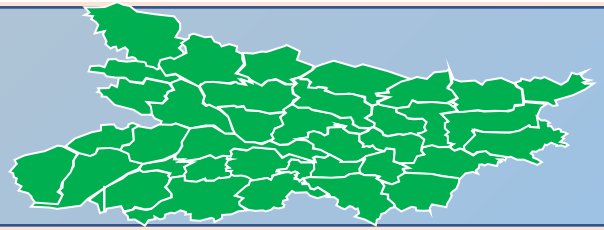
Study design:

- **104 AWCs were randomly selected from 2 block of Patna (52/block) – Bikram and Dulhin Bazar**
- **List of beneficiaries available with AWW was used as sampling frame for beneficiary selection**
- **From ASHA/AWW's line-list, details of pregnant & lactating women were obtained**
- **A random number table was used to select 3 pregnant and 2 lactating women were selected**
- **A structured computer-assisted personal interviewing (CAPI) module was used for data collection using android tablets.**

Last Mile Study - Methodology – Sampling strategy

Last mile

Sampling design:
- Multistage cluster sampling
- State-wide representative sample from all 534 blocks across 38 districts



Two Health sub-centers (HSCs) were selected using cluster random sampling from each of the 534 blocks in Bihar

From each of the selected HSCs, one AWC catchment area was chosen using simple random sampling

A. FLW component: 3 interviews were conducted in each HSC area

1) The ANM serving the HSC (if >1 ANM, then 1 was selected purposively)
2) The designated AWW of the sampled AWC
3) The ASHA providing service in the selected AWC catchment area*

FLW interview

B. Beneficiary component: Interviews with 3 types of beneficiaries from same catchment area

- List of beneficiaries available with ASHA/AWW was used as sampling frame for beneficiary selection
- From ASHA's line-list, 2 beneficiaries belonging to each of the 3 following types of were interviewed residing in the catchment area was compiled, while from the line list of AWW, 2 pregnant & 2 lactating women were interviewed
- A random number table was used to select the beneficiaries from respective line-lists

Types of interviewed beneficiaries → **Pregnant women**  **Lactating mothers**  **Eligible couples** 

Beneficiary interview

* In case multiple ASHAs were serving the sampled AWC catchment area, then the ASHA who was covering larger area of the sampled AWC catchment area was selected for interview.

Last Mile Study - Objectives and Operational details

Objectives

- To assess the status of supply and availability of IFA tablets and FP commodities at the level of Frontline workers
- To determine the coverage of FLW-provided IFA tablets and FP commodities among different groups of beneficiaries
- To understand the usual source of IFA tablets & FP commodities received by ASHA & AWW workers
- To determine the inter-relationship between receipt and distribution of IFA tablets and FP commodities at the FLW level and triangulation of FLW reported distribution with that of the beneficiaries residing in the catchment area of the FLWs

No. of interviews conducted

FLW	Baseline	Midline
ANM	970	1068
ASHA	992	1068
AWW	1012	1069

Beneficiaries	Baseline	Midline
Pregnant women	3998	4194
Lactating women	3980	4252
Eligible Couple	1999	4246

Data Collection timeline

Baseline -July-2019, Midline-January-2020

Prism of Planning - Study Methodology

POP

- A **mixed-method multidimensional study** carried out to collect **quantitative and qualitative data concurrently**, **analysed** the two data sets separately and mix the two databases by **merging** the results during interpretation (and sometimes during data analysis). The purposes of deploying convergent design are **to obtain a more complete understanding from two databases, corroborate results from different methods,** and to **compare multiple levels within a system**.

- The study instruments are open-ended semi-structured qualitative design using in-person in-depth interview and the rationale being an attempt to capture:
  - **to capture more information at one go**
  - **to deploy easier facilitation**
  - **to have a more nuanced discussion**
  - **for better efficiency and better participation**.

- Based on the target population and logistic situation on ground a classic FGD may not be planned always, also no standalone process is conceptualized classically.

- Logistic issues may sometime reduce the group into individual (like difficulty to have more than one district participants gathered at the same place etc.).

Prism of Planning - Study Size Determination (2/3)

POP

Stakeholders by Cadre		Total Sample Size		
		Est.	Ach.	%
SEGMENT I: OUTREACH	ASHA	50	49	98%
	ASHA Facilitator	25	25	100%
	AWW	50	50	100%
	ICDS Lady Supervisor	25	25	100%
	CDPO	25	20	80%
	ANM	50	50	100%
	BCM	25	25	100%
	Immunisation IC	25	25	100%
	Medical Officer IC	25	25	100%
	Total	300	294	98%
SEGMENT II: FACILITY	ANM – Facility	100	100	100%
	HM/BHM	50	47	94%
	MOIC/MO – Facility	50	50	100%
	Total	200	197	99%
SEGMENT III: PROCESS OBSERVATION	VHSND	1068	1068	100%
	Anganwadi Checklist	1068	1048	98%

OUTREACH:

In each quintile 60 interviews are targeted across the stakeholders/cadres which has a mix of 10 ASHAs, 5 ASHA Facilitators, 10 AWWs, 5 LSs, 5 CDPOs, 10 ANMs, 5 BCMs, 5 IICs and, 5 MOICs to meet out the desired samples from 100 blocks (20 blocks in each quintile) across districts in Bihar

FACILITY

About 10 facilities are being selected from each quintile. Therefore, a total of 50 facilities chosen from different blocks across districts in Bihar. From these sampled facilities, 2 ANMs/GNM, 1 HM/BHM, and 1 MOIC targeted to meet out the desired samples.

PROCESS OBSERVATION

*Out of 534 blocks in Bihar in each 2 VHSND sessions which means a total of 1068 (534*2) process observations conducted.*

Prism of Planning - Mode of Data Collection (3/3)

POP

- Considering the present situation, all the enumerators were **onboard remotely through Android devices for data collection** with a simple hyperlink (shared via **SMS, WhatsApp**, or **other means**) or **QR code** to them in getting the app installed and configured and also the **training on survey instruments were conducted remotely**.

- **Remote accompaniment and supervision** were deployed to **ensure robust quality-control processes**. In addition to configuring survey forms to **audio-record** (A digitally empowered, audio component with probing to **capture discussion summary** and un-prompted post-coding of systemic components – **in real-time**) all interviews for later review, those same forms will be configured to call supervisors or monitors before interviews begin with following **real-time simultaneously administered components enabled with digital data capture and monitoring**.

- The remote accompanier will **share comments and advice before and after the interview**, listening in on speakerphone during the interview itself (and intervening as appropriate).

- The mechanism of assessment will execute a hybrid model of easy and real-time triangulation of qualitative and quantitative, in-person and remote data capture to generate insights through multidimensional approach collating individual and systemic, personal & group, perceptions, and observations-based problem and solution exploration

Observation of Processes

Through direct observation with a structured checklist, we try to capture coverage and quality

Coverage

Quality

HSC meeting

CF day celebration

CF day

ANM Tuesday Meeting

C-ACASI based FLW Study

Eligibility criterion

Respondent

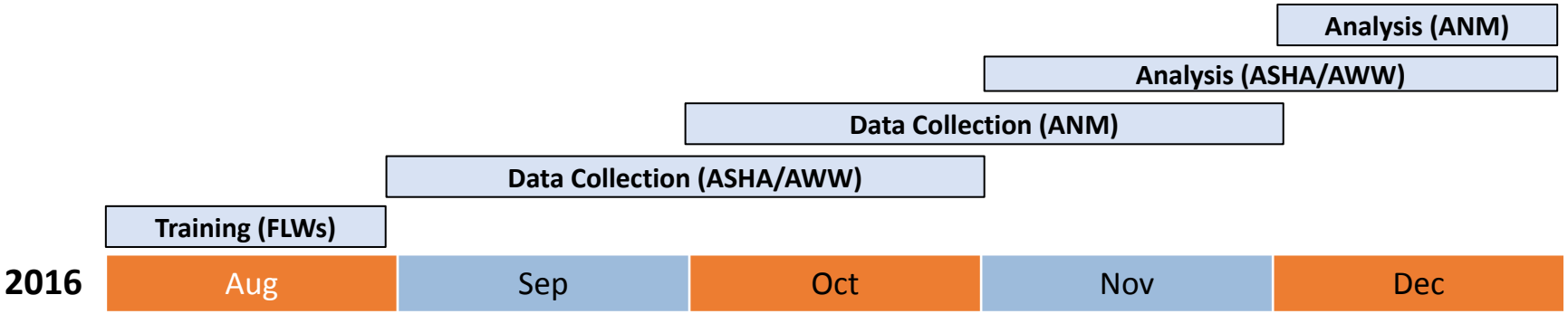
=

Randomly selected ASHA, AWW and ANM of 15-49 year age

Data Quality Assurance

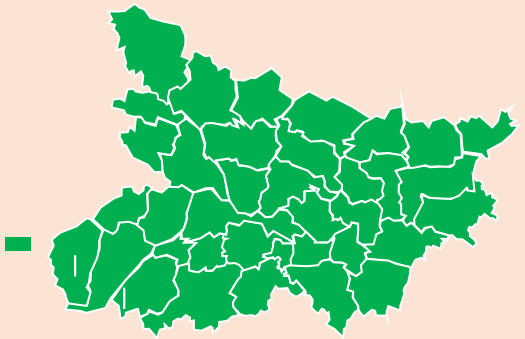
1. Data collector (Block) → Interview via C-ACASI → To ensure no external influence during interviews
2. Supervisor (At district) → Spot/Back check via paper based tool → To ensure reliability & validity of collected data

Timeline of Study



Assessment of Infant/Neonatal Mortality

Coverage



Districts covered in Mortality study

221 wards (1 per selected block) across **37** districts

On an average 160 households/ward;
35304 HH

Minimum Sample Size Required

- Approximate NMR was taken as 32/1,000 live births*
- Relative precision was set at ±20%,
- Type-I error or α was taken as 0.05
- Type-II error or β was considered 0.2 (power=0.8)
- Design effect (for potential clustering) = 1.5

Required sample size: **10,024 live births**

- Crude birth rate in Bihar is 28/1000 population per year**.
- Average population/ Ward = ~2000
- Live Births during previous 2 years i.e. approximately 112 (=28*2*2) live births in each Ward area
- Thus, estimated no. of wards to be selected was:

10,024/112 = ~90

In order to account for lack of access (closed door, refusal etc.), it was decided to sample twice this number. Moreover, as the avg. no. of HHs in the surveyed wards was lower than expected, another ~25% additional wards were selected.

Thus, the final no. of wards to be selected were:

90*2*1.25 = 225

Source: *Annual Health Survey, 2012-13; **SRS 2013