NITI Aayog Social Sector Best Practices:

Community Process: Rollout of Home Based Young Child Care (HBYC) Periodic Assessment in Eight aspirational districts of Madhya Pradesh.

State: Madhya Pradesh

Title of Project: Periodic Assessment of Home Based Care for Young Child (HBYC) program in Aspirational Districts of Madhya Pradesh, India: A Cross-Sectional Study

Objective and Target Group: To assess the knowledge and practices of ASHAs and other frontline workers for accomplishing their roles under HBYC program and to assess the knowledge and child care practices of mothers who had children between 3 to 15 months of age.

Implementation Department and Partner: National Health Mission (NHM) Madhya Pradesh and Norway India Partnership Initiative (NIPI)

Duration of project/initiative: The data collection was conducted in the month of February 2021.

Project implementation Site: The evaluation was conducted in all eight aspirational districts (Badwani, Damoh, Chhatarpur, Guna, Khandwa, Rajgarh, Singrauli and Vidisha) of Madhya Pradesh where HBYC program was implemented.

About the project/intervention: In 2018, GoI has launched Home Based Care for Young Child (HBYC) program. The intervention include five structured home visits (3, 6, 9, 12 and 15 months) schedule by ASHAs to improve nutrition by promoting infant and young child development practices, ensuring adequacy of diet, and promote growth and early childhood development through effective play and communication activities.

In Madhya Pradesh, the state government with technical assistance from Norway India Partnership Initiative (NIPI), started implementing the HBYC program in all eight
aspirational districts (Badwani, Damoh, Chhatarpur, Guna, Khandwa, Rajgarh, Singrauli and Vidisha). These are NITI Aayog designated districts having poor socio-economic indicators as well as high levels of newborn and child mortality. (13)

To assess the implementation of the program, assessment was undertaken in 8 Aspirational district to take stock of programme implementation and take corrective actions.

The objective of the assessment, conducted in all aspirational districts of Madhya Pradesh, was to determine knowledge and practices of frontline health workers (ASHAs, AWW, ANMs and ASHA facilitators) with respect to HBYC program. Additionally, knowledge and practices of eligible mothers who had children between 3 to 15 months of age were also assessed on providing home based care for young child.

**Study design**

This study employed a cross sectional evaluation design to assess knowledge and practices of frontline health workers as well as beneficiaries with respect to HBYC. The data collection was conducted in the month of February 2021.

**Study Settings and Participants:**

The evaluation was conducted in all eight aspirational districts (Badwani, Damoh, Chhatarpur, Guna, Khandwa, Rajgarh, Singrauli and Vidisha) of Madhya Pradesh where HBYC program was implemented. The study participants were primarily ASHAs, ANMs, AWWs, ASHA as well as eligible mothers who had children between 3 to 15 months of age. The programme managers at district and state level also interviewed.

**Sample Size:**

For ASHAs, sample size required was calculated using expected prevalence of 80.3% drawn from previous studies (14); 95% confidence interval; 10% non-response rate; design effect of 1.5 and relative desired precision of ±10%. Conversely, the sample size for mothers were also calculated with same method using expected prevalence of 80.3% (immunization coverage among children as per NFHS4). (15) Therefore, total sample size of ASHAs and
mothers were came out to be 102 and 103 respectively, which we rounded off to 100 per category and divided them equally among two randomly selected blocks taking block as a cluster.

The sample size (4 participants per category per block) for other frontline health workers (ANMs, AWWs, ASHA Facilitators) was selected based on convenience sampling approach and viability of data collection within four days in each of the districts.

**Sampling:**

A multistage cluster sampling method was employed to select the study sites and participants. For study sites, two blocks in each of the districts were selected through simple random sampling whereas four villages from each of the blocks having highest population were selected. The total sample size of ASHAs and other health workers were then divided equally in the two blocks, whereas sample size of mothers were divided equally into four villages.

The participants for study were selected using cluster sampling method. 50 ASHAs per block from PHCs close to National Health Mission (NHM) office were called for structured assessment, whereas ANM, AWW and ASHA facilitators were selected through convenient sampling method. Similarly, interviews of 100 randomly selected eligible mothers were conducted at their respective houses.

**Data collection:**

The data collection was carried out by a team of four independent investigators in the eight selected districts using a pre-validated structured questionnaire for each category of study participants. The investigators were received an orientation on the HBYC program, study objectives, data collection tools and processes prior to data collection. The data was collected using a mobile based, open source District Health Information Software (DHIS) version 2. (16)

Interviews of ASHAs from the nearby PHCs of each block were scheduled at the block office, whereas ANM and ASHA facilitators and were interviewed based on their availability.
Mothers were interviewed at their respective houses and AWWs were interviewed at their respective AWCs in the villages.

The questionnaire for assessing knowledge and practices of frontline health workers were included considering their roles and responsibilities provisioned under HBYC program. This include frequency of home visitation, key task being performed like counselling on exclusive breastfeeding, complementary feeding, hand washing, distribution and dosage of Iron folic acid (IFA) and oral rehydration solution (ORS) as well as knowledge about danger sign which require refer of children to health facilities.

Similarly, availability of Mother Child Protection (MCP) cards, ORS packets and IFA syrup with mothers as well as their knowledge and practices on hand washing, immunization, growth monitoring and danger signs were also assessed.

**Source of fund/funding support:** Norway India Partnership Initiative (NIPI) and National Health Mission, Madhya Pradesh.

**Outcome and impact:** It was found that 82% of ASHAs were trained and 79% were conducting home visits under HBYC. >80% ASHAS & other workers had knowledge on timely initiation of complementary feeding & administration of IFA, 88% on preparation of ORS and 47% on danger signs in infants. 70% of mothers received HBYC home visits from ASHAs, 85% had knowledge on exclusive breastfeeding. However only 40% of mothers were aware about timely initiation of complementary feeding, IFA supplementation and washing hands at critical times. Similarly, only 18% mothers were knowing correct method of ORS preparation. A statistical significant association were observed between ASHAs home visits with availability of ORS with mothers and their knowledge on correct Initiation of IFA
The findings concluded that most of the ASHAs were conducting structured home visits and were aware about their tasks under HBYC program. It was found that ASHAs workers and other frontline health workers had adequate knowledge on correct ORS preparation, exclusive and complementary feedings as well as timely initiation of paediatric IFA syrup for young child.

However, there is a gap between the counselling provided by ASHAs and the practices of mothers on complementary feeding, IFA administration, ORS preparation and hand washing. Less than half of mothers were knowing about correct frequency of meals during each day. Knowledge about danger signs that require infant referral to facility were found to be grossly sub-optimal across the study participants.

There is a need of appropriate actions at all levels (health system strengthening, human resource development and capacity building) in order to accelerate the uptake of the HBYC program. Capacity building and reorientation of all cadres are required on key skills including ORS preparation, complementary feeding, identification of danger signs and effective communications. Supportive supervision mechanism should also be strengthened through orientation and training of supervisors and uninterrupted supplies of training.
material and medicines also need to be ensured to optimize their performance. Additionally, nutrition education should emphasize on improving mothers’ nutrition knowledge regarding infant and young child feeding recommendations and supporting mothers to overcome barriers to feed their children with adequate diets.

**Challenges faced, if any:** There are a few limitations to the study. This was a self-reported assessment and therefore might not be the reflection of actual skills being practices in communities. Assessing skills and competence of the participants was beyond the scope of this study. Also, the socio-demographic and educational statuses of beneficiaries were not recorded in this study. Follow up of these participants is required in the future to assess the impact of the HBYC program.

**Reward and recognition:** under peer review

**Plan for scale up or mainstream implementation:** Yes

**Any other relevant information:**

The activity is part of HBYC operational guideline issued by Govt. of India. The periodic assessment is demonstrated in the state of Madhya Pradesh and can be replicated to all other state where HBYC programme is rolled-out. The state of Madhya Pradesh has proposed the HBYC programme in Atmanirbhar Madhya Pradesh and will be rolled out in all 51 districts. The Periodic assessment using the state workforce will be conducted in other districts as well.

**Photographs/documentation/video clip or link from field/ project site:**
District Fact Sheets – Prepared Based on HBYC periodic assessment

Findings

National Health Mission - Madhya Pradesh

Fact Sheet for HBYC Assessment

<table>
<thead>
<tr>
<th>Aspirational District</th>
<th>Overall 8 ADs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Population</td>
<td>12,971,612</td>
</tr>
<tr>
<td>Total Annual Live Births</td>
<td>248,144</td>
</tr>
<tr>
<td>Total US Population</td>
<td>1,555,617</td>
</tr>
</tbody>
</table>

Home Based care for Young Child (HBYC) is a package of intervention to improve the health and nutritional status of children. Under HBYC, ASHAs conduct 5 structured home visits at 3, 6, 9, 12 and 15 months of age focusing on counselling of mothers/caregivers for Exclusive Breastfeeding, Complementary Feeding, Growth monitoring, Immunization, use of ORS during diarrhoea, IFA prophylaxis, WASH practices, Mph risk identification and referral. HBYC program was rolled out in 8 Aspirational Districts of M.P. in 2019.

Key Interventions Under HBYC Home Visit

- At 3 Months: EBF*, Immunization, WASH and Growth monitoring
- At 6 Month: Complementary feeding, ORS, IFA and Immunization
- At 5 Month: Quality of Complementary feeding and Full Immunization
- At 12 Month: Quality and Quantity of feeding, Developmental Milestone
- At 15 Month: Different types of food and Complete Immunization

Screening for Danger sign and identification of High Risk during all visits

HBYC Periodic Assessment Methodology

Periodic assessment of HBYC program was conducted in 8 aspirational districts in February 2021 with objectives of assessing the knowledge and practices of Health and ICDS Frontline Workers and Eligible Mothers. More than 1800 interviews were conducted during the assessment including 801 ASHAs and 787 Mothers. Cluster sampling method was used with 95% confidence Interval and relative desired precision of ±10% for calculating sample size of ASHAs and Mothers.

Key Findings From the HBYC Periodic Assessment

Training Status, Supportive Supervision and Home Visitation provided by ASHAs under HBYC

- 82% ASHA trained on HBYC
- 12% ASHAs conducting HBYC visits
- 79% ASHA quarterly supervised by ASHA facilitator
- 82% Mothers having MCF card
- 89% Mothers received HBYC scheduled visits

ASHA Performance Indicators on Knowledge & Practices of ASHAs and Mothers

(Vaccination & WASH)

- 57% ASHA recalled verifying age appropriate Vaccination
- 48% Infant received age appropriate Vaccination
- 78% ASHA recalled providing counselling on Hand washing
- 41% Mothers washing hand on all critical times

Source: HBYC Periodic Assessment conducted in Madhya Pradesh during February 2021
HBHC Performance Indicators on Knowledge & Practices of ASHAs, AWW and Mothers
(IFA, ORS, Sickness Management, Nutrition and Growth)

**Screening, Identification and Referral**
- ASHA having correct knowledge on initiation of IFA syrup: 85%
- ASHA distributing ORS packets to Mothers: 83%
- Mothers having IFA syrup at home: 78%
- Mothers having correct knowledge on frequency of IFA syrup: 85%
- Mothers having correct knowledge on ORS preparation: 67%
- Children having diarrhea: 25%
- Mothers giving ORS to child in last 2 weeks: 29%
- ASHA referring 5% infants to health facility in last 6 months: 4%
- ASHA nationals knowledge on danger signs: 89%

**Nutrition**
- Mothers receiving counseling on EBF*: 90%
- ASHA providing counseling on EBF*: 62%
- Infants > 6 months received EBF*: 85%
- Infants receiving complementary feeding: 40%
- Infants receiving ORS: 37%
- Infants receiving adequate quantity of CF*: 28%
- Children under age 6 months exclusive breastfeeding: 58%
- ASHA referring children age 0-6 months receiving inadequate diet: 7%
- ASHA referring children age 0-23 months receiving adequate diet: 93%

**Growth**
- ASHA knowledge of correctly plotting weight on Growth Chart: 88%
- ASHA recalled verifying growth chart during last home visit: 49%
- Infant with weight plotted on chart: 27%
- ASHA reporting having low birth weight in last 6 months: 18%

**Key Actionable Points for the District**
- Training of ANMs on HBHC
- Age Appropriate Vaccination
- Better Coordination Between ASHAs and AWW for Growth Monitoring
- ASHAs knowledge on danger signs
- Improving Knowledge of Mothers on Sickness Identification & Referral, Adequacy of Complementary feeding, IFA Supplementation, Knowledge and use of ORS during Diarrhoea and WASH Practices

Source: HBHC Periodic Assessment conducted in Madhya Pradesh during February 2021