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WHAT WORKS IN INFANT AND YOUNG CHILD FEEDING (IYCF):

Strengthening Operational Programme Elements to Deliver IYCF Services at Scale in India

Photo credit: Ravi S Sahani/Alive & Thrive

ADVANCING HEALTH, SOCIAL, AND ECONOMIC OUTCOMES THROUGH IMPROVED NUTRITION

Nutrition is a fundamental driver of human development, and contributor to national development and economic growth. The first 1,000 days of a child's life from conception through age two is a critical window of opportunity to ensure child survival, optimal growth, cognitive development, and lifelong health. IYCF and maternal nutrition are recognized as the most effective set of interventions to prevent child deaths, disease, and undernutrition across generations.[1]

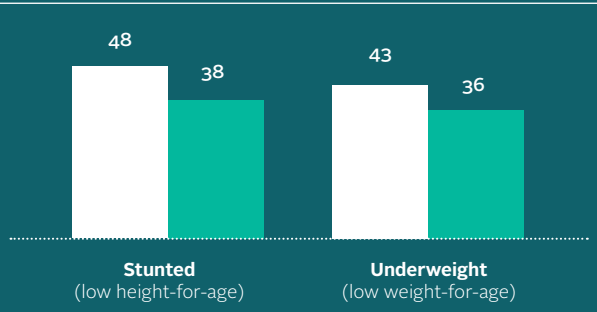
Today, we know more than ever before about key interventions to address undernutrition and how to implement them with speed and scale. Experience in India shows that high levels of undernutrition (Figure 1) can be reduced.

Reducing maternal and child mortality are important goals of the National Health Mission (NHM). Major strategic investments are being made by the Government of India to achieve these goals. Despite declines in infant and child mortality and the existence of a favourable policy environment with evidence-based strategies,[2] progress in achieving high coverage of IYCF has lagged (Table 1).

1 Lancet, 2013

2 Reproductive Maternal Newborn Child and Adolescent Health or RMNCH+A strategy, India Newborn Action Plan, National Guidelines Enhancing Optimal Infant and Young Child Feeding Practices

Figure. 1 Percentage of children aged below 5 years who are stunted and underweight, NFHS-3 & NFHS-4



Note: Nutritional status estimates are based on the 2006 WHO International References Population

Table 1: IYCF Indicators in India, NFHS-4

Indicator	Status (%)
Children under age three years breastfed within one hour of birth[3]	41.6
Children under age six months exclusively breastfed[4]	54.9
Children age six to eight months receiving solid or semi-solid food and breastmilk[5]	42.7
Breastfeeding children age six to twenty-three months receiving an adequate diet[6]	8.7
Non-breastfeeding children age six to twenty-three months receiving an adequate diet	14.3

3 Based on the last child born in the 5 years before the survey

4 Based on the youngest child living with the mother

5 Based on the youngest child living with the mother

6 Based on the youngest child living with the mother; Breastfed children receiving 4 or more food groups and a minimum meal frequency. A minimum meal frequency that is receiving solid or semi-solid food at least twice a day for breastfed infants 6-8 months and at least three times a day for breastfed children 9-23 months.

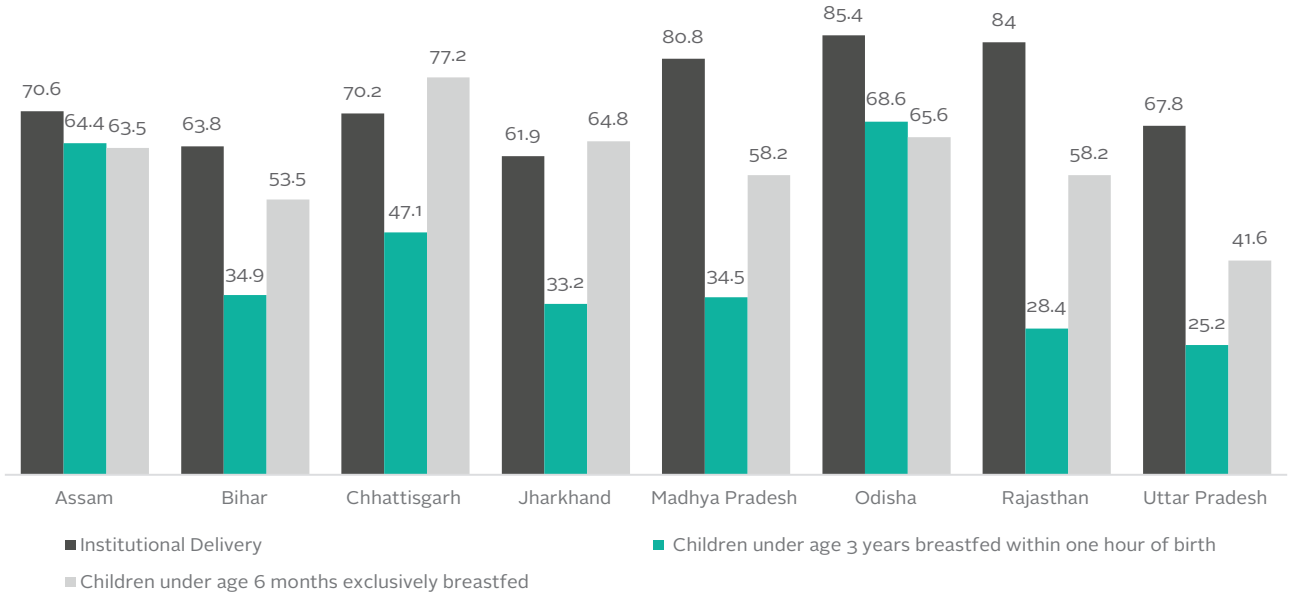
Institutional opportunities to strengthen IYCF practices are readily available

There are several immediate ways to improve IYCF practices by leveraging opportunities in the existing health system. For example, rates of institutional deliveries have risen tremendously since the launch of the National Rural Health Mission (NRHM) in 2005, from 40.8% in 2005-2006 as per NFHS 3 data to currently at 78.9%. Institutional deliveries are key to improving IYCF practices because it means more infants are being born in conditions where their mothers and families can receive clear guidance and support for adopting optimal nutrition and feeding practices. Despite an increase in the rates of institutional delivery, the rate of infants who breastfeed within an hour of birth is only 41.6% (Figure 2 shows state-level data). This illustrates a missed opportunity for newborns; by missing out on early breastfeeding, they do not receive their first inoculation against death and disease.

INFANTS WHO ARE BREASTFED IMMEDIATELY/ WITHIN AN HOUR OF BIRTH

41.6%

Fig 2: Institutional delivery and breastfeeding indicators in high burden states (NFHS 4, 2015-16)



Similarly, India has experienced rising levels of immunizations with full immunization (includes Bacillus Calmette–Guérin (BCG), 3 doses of Diphtheria, Pertussis, and Tetanus (DPT) & Oral Polio Vaccine (OPV) and measles) coverage for children 12-23 months reaching 62% as per NFHS 4. These immunizations are delivered from birth up to a child's second birthday when families need counselling on the timely introduction of adequate complementary foods. However, indicators related to introduction of complementary food remain low (Table 1). This reveals another missed opportunity: despite having the knowledge and the health personnel required, critical feeding messages aren't reaching families who need them.

Global Evidence of IYCF Programme Impact at Scale

Recent successes and global reviews have shown that rapid increases in key IYCF indicators are possible at scale.[3] Alive & Thrive (A&T) is a global nutrition initiative to save lives, prevent illness, and ensure healthy growth by promoting optimal maternal, infant, and young child nutrition. During its first phase (2009 to 2014), A&T demonstrated that innovative approaches to improve

Key factors to scale up IYCF

1. Strengthen the implementation of existing guidelines for home visits and health contacts by Frontline Workers (FLWs) during the first 1,000 days.
2. Improve the performance of FLWs in delivering quality interpersonal counselling with high coverage.
3. Layer multiple types of contacts with mothers and influentials to strengthen intensity and support for behaviour change.
4. Institutionalize the use of data from regular monitoring, as well as for designing strategies and testing innovations through special studies.

3 Lancet 2016, Menon et al 2016, Menon et al 2015

Figure 3: Improvements in exclusive breastfeeding in three A&T intervention countries among children less than 6 months (IFPRI 2014)

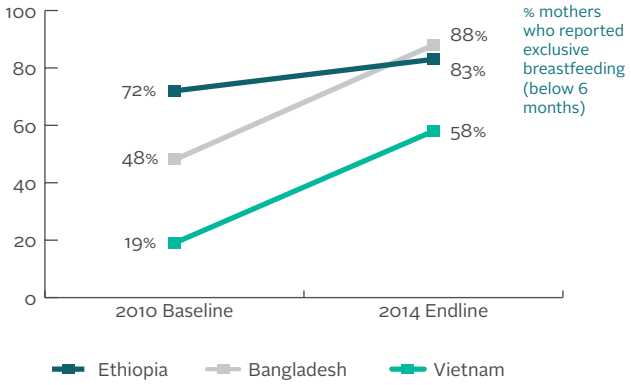
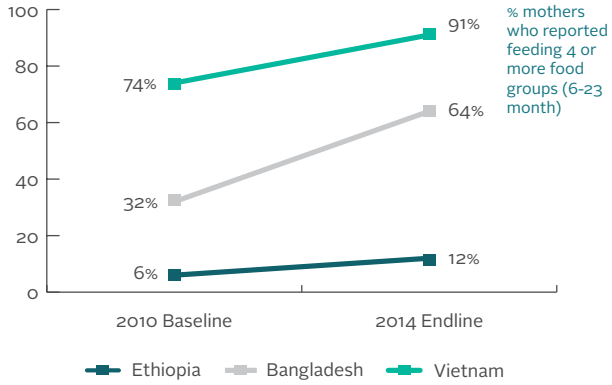


Figure 4: Improvements in complementary feeding in three A&T intervention countries, by the percent of mothers who reported feeding four or more food groups to children 6-23 months (IFPRI 2014)



feeding practices could be delivered with impact and at scale in three contexts: Bangladesh, Ethiopia, and Vietnam. Data from 2010 and 2014 surveys conducted by the International Food and Policy Research Institute (IFPRI) in these countries revealed an increase in exclusive breastfeeding levels (Figure 3). The change was dramatic in Bangladesh and Viet Nam where baseline rates were as low as 49% and 19% respectively. Even in Ethiopia where exclusive breastfeeding was high to start, rates increased by 11 percentage points.

In all three countries, complementary feeding indicators also changed at scale, and the percentage of children in Bangladesh who consumed a diverse diet increased by 30 percentage points in four years (Figure 4).

What Works in IYCF: Lessons for India

Based on a review of lessons learned from leading nutrition programmes, cross-country learning visits, expert consultation meetings and an analysis of feasible operational actions here in India, the following have emerged as key factors to scaling up IYCF with impact. These areas provide clear direction on what can be done to achieve results by optimizing the use of existing platforms—including the National Health Mission (NHM), Integrated Child Development Services Scheme (ICDS), community mobilization initiatives such as Self Help Groups, and mass media—to ensure high coverage of IYCF information and services.

1 Strengthen the implementation of existing guidelines for home visits and health contacts by FLWs

The timing of home visits and the nature of health contacts are significant factors in the success of nutrition programmes. In the Alive & Thrive Bangladesh programme, FLWs conducted eight to 14 contacts with each mother between pregnancy and the child's second birthday.

51%

OF MOTHERS AND NEW-BORNS WERE VISITED IN THE FIRST WEEK AFTER BIRTH AT HOME BY FLWS

In India, the coverage of household visits by FLWs continues to remain low, with wide inter-state variations. Nationally, only 51% of mothers and new-borns were visited in the first week after birth at home by FLWs (Figure 5). In addition, over burdensome workloads and lack of skills results in FLWs who are unable to effectively provide information, coach, and help families solve problems or build mothers' confidence to adopt and practice the recommended IYCF behaviours.

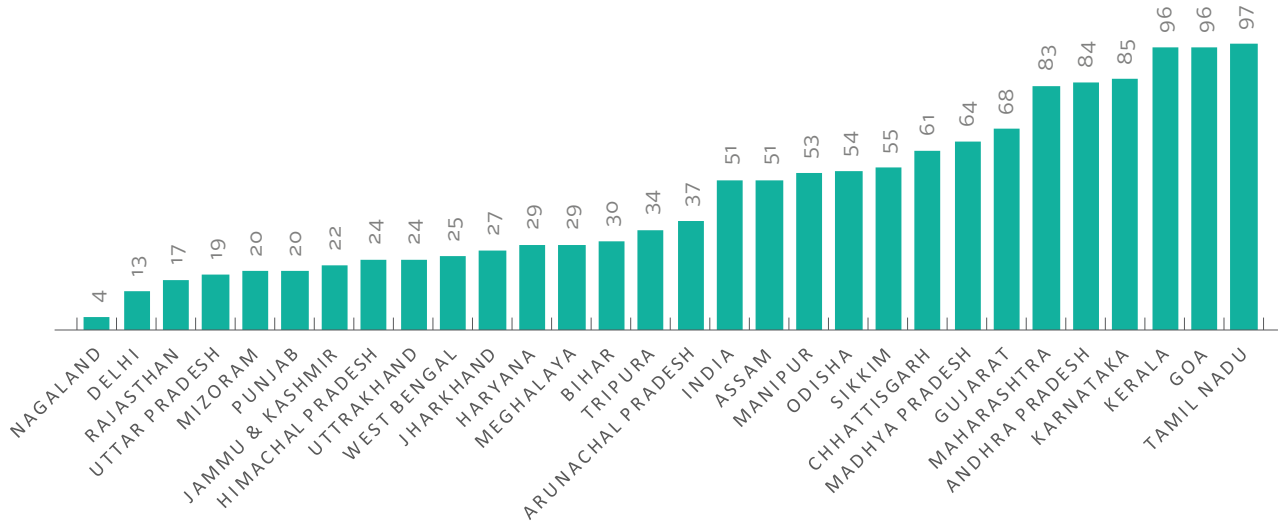
Achieving high-quality contacts is as important as increasing the overall number of contacts. During home visits, FLWs in Bangladesh focused on:

- Providing hands-on support to mothers for breastfeeding.
- Demonstrating how to prepare and feed complementary foods in the required quantity, consistency, and quality using what was available in the family kitchen.
- Building skills, confidence, and beliefs in the benefits of proper IYCF.

To support the visits, simple illustrated job aids served as reminders for FLWs to focus each contact on a few high priority and age-specific practices. In Bangladesh, counselling also targeted family and community members who influence a mothers' behaviors, especially mothers-in-law. Attitude changes among family and community members contributed to changes in the feeding habits of mothers and children.

Areas for continued exploration in India include direct engagement with fathers and grandmothers, including through community mobilization discussions.

Fig 5: Percentage of women visited by a care giver within seven days of delivery or discharge from a health facility after delivery by state (RSOC 2013-14)



ACTIONS FOR CONSIDERATION

- **Update the national guidelines on IYCF counselling:** The national guidelines on integrating IYCF counselling within existing contacts made by FLWs need be updated and should include monitoring to track the delivery of IYCF counselling.
- **Clarity on the overall number of home visits:** The number of required home visits should be specified for different stages during the 1,000-day period from conception until the child's second birthday. This number should be clearly communicated to FLWs and contacts should be supervised and monitored. Health and nutrition FLWs can be allocated to cover different age specific contacts to avoid overlaps and gaps.
- **Optimize Home Based Newborn Care programme:** The content of each home visit needs to reflect the most critical issues that mothers face at each stage. Specific points for discussion, including coaching and demonstration on optimal breastfeeding, should be clearly conveyed at each of the six visits (or seven in case of home delivery as per the existing guildelines). Accredited social health activities (ASHAs) and ASHA facilitators should be incentivized for achieving high-quality and frequent contacts, and their work should be accompanied by monitoring and supervision to improve the quality and content of the contact.
- **Utilize immunization and nutrition contacts:** Auxiliary nurse midwives (ANMs) should be encouraged and mentored to provide/reinforce age appropriate IYCF messages during the scheduled immunization contacts in the first year of life. Similarly, Anganwadi workers (AWWs) should be motivated to improve the content of IYCF counselling during their mandated home visits, Anganwadi centre based growth monitoring and promotional activities, mothers group meetings, and other community based events.

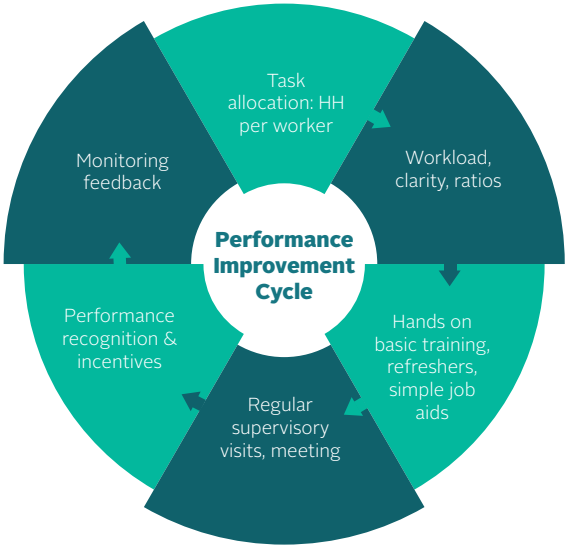
2 Improve the performance of FLWs in delivering quality interpersonal counselling with high coverage

Often, nutrition trainings for FLWs attempt to cover too much information without building the necessary skills, knowledge, and confidence to change child feeding beliefs and practices during home visits. In Bangladesh, experience shows that a sequence of multiple and ongoing steps is required to improve the performance of FLWs (Figure 6), including:

- Clearly defined roles and responsibilities for different cadres of FLWs, including feasible workload and ratios of FLWs assigned to a certain number of households.
- Hands-on basic training, including refresher trainings and job aids to support counselling visits.
- Supportive supervision and follow-up meetings with supervisors to discuss areas for recognition and improvement.
- Performance-based recognition and incentives.
- Monitoring feedback delivered back to the programme level.

This performance improvement cycle systematically builds the ability, confidence and motivation of individual FLWs to perform their counselling duties. Currently, however, the roles and responsibilities of FLWs and volunteers like ANMs, AWWs, and ASHAs may not be well-defined, feasible, equitable, and tracked regularly. This contributes to low motivation, confusion, and overlaps or gaps in the coverage and delivery of various IYCF services. Inadequate supervision and follow-up reduces the focus of the FLWs on effective engagement with mothers, family members, and community. Trainings without follow-up or supportive supervision and recognition do not help build confidence and motivation of FLWs to translate knowledge and skills into practice. Ultimately, what is not recorded and reported is not implemented.

Fig. 6. Performance improvement cycle for FLWs (A&T, Bangladesh)



ACTIONS FOR CONSIDERATION

- Roles and responsibilities of FLWs in health and nutrition need to be well-defined to ensure high-quality nutrition counselling with high coverage.
- Adequate ratios of supervisors to FLWs need to be maintained for providing feasible workloads and adequate support for workers at both levels.
- The capacity of FLWs needs to be enhanced through hands-on practice for effective counselling, problem solving, and negotiation with mothers and families, along with setting up follow-up supportive supervision and monitoring mechanisms.
- Develop simple job aids: FLWs need simple tools (e.g. pocket reminders) to support their counselling visits with families. These tools remind them of key counselling messages and, when possible, serve as leave-behinds. Job aids need to be designed and tested to ensure that the messages are consistent for each age specific contact by all cadres of FLWs, and they should contain problem solving information for common difficulties.
- Ongoing regular sessions with FLWs need to be planned using existing monthly meeting platforms to address gaps identified through supportive supervision and monitoring. Refresher trainings also need to be provided on key topics at regularly scheduled intervals.
- The capacity of supervisors needs to be built along with clearly-defined supervision protocols for visits and appropriate checklists.
- Follow up mentoring support: FLWs need to be adequately trained and followed up with mentoring visits by supervisors to build their understanding of age specific IYCF counselling; FLWs should also engage influencers in the family and the community.
- A system for monitoring and assessing the performance of workers needs to be strengthened along with grading and recognition of good performance using transparent criteria. A mechanism for providing performance-based incentives to community workers and volunteers should be considered.

3 Layer multiple types of contacts with mothers and influentials to strengthen intensity and support for behaviour change

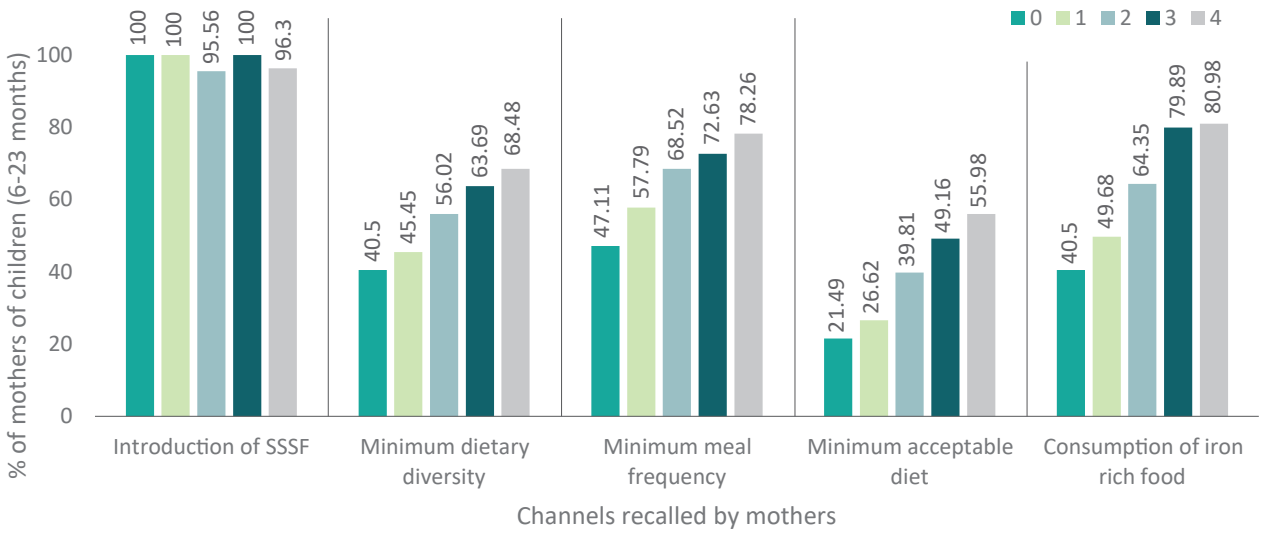
Results from evaluations of A&T programmes (IFPRI 2014) show that mothers who received IYCF messages through multiple channels it contributes to greater improvement in IYCF indicators (Figure 7). For this to work, messaging and support should be focused on the same prioritized behaviours and address the key determinants for changing those behaviours by directly counselling mothers and engaging those who support and influence them. The priority communications channels are:

- **Interpersonal communication:** This includes strengthening the quantity and quality of contacts between health care professionals and families. During home visits, FLWs need to provide timely counselling and practical demonstration, personalize the message for each situation, assess unique barriers for specific households and ways to overcome them, identify two to three key practices and work directly with the mother and family members to follow them, and offer ongoing encouragement and support.
- **Community mobilization:** Specific events and forums need to be planned and implemented to engage in meaningful dialogue with specific members of influential groups such as fathers, local doctors, religious leaders, NGOs, and others who influence key behaviours. Examples include husbands' forums and local opinion leader orientations where specific groups of influentials are invited to watch short video films and TV commercials, followed by discussions and interactive quizzes, before making commitments to support improved nutrition.
- **Mass media:** In addition to reinforcement at the individual, household, and small group levels, new social norms require broader community awareness and endorsement. This is achieved through community events including edutainment, such as videos, followed by discussion, Q&A, and quizzes. Popular theatre is another good way to build broader community awareness.

ACTIONS FOR CONSIDERATION

- Develop a national strategy for social behaviour change. Plans should be linked to adequate funding and a strong monitoring and accountability system. This will require an integrated approach involving all stakeholders—central government ministries, state government, technical experts, funders, NGOs, health professionals, and organizations.
- Develop and implement national and state-level mass media strategies. The recently launched MAA initiative to promote breastfeeding has created a window of opportunity for a sustained mass media campaign using the national TV and radio platforms to spread key messages and create awareness around issues related to IYCF and nutrition.
- Guidelines alone or sporadic, one-time efforts may not deliver the desired results. Resources are required, and leaders need to be committed in order to ensure field implementation, track progress, make adjustments as needed, and conduct impact evaluations.

Fig 7: Increasing impact on complementary feeding behaviors with exposure to more communication channels (A&T Bangladesh evaluation, IFPRI, 2014)



Note: The programme intensity score is the sum of four possible channels of communication: visited by volunteers, visited by community health workers, recalled mass media, and recalled community mobilization events.

Reinforcing messages over a sustained period using mass media is likely to contribute significantly to changing social norms. The intensity of exposure through mass media also helps FLWs recall priority messages, and prepares them for engaging more confidently with families and communities. Currently, there is limited effort by the government and stakeholders to use mass media or digital platforms to create widespread understanding of IYCF practices, nutrition, and increasing awareness or demand for IYCF services available through national level programmes.

4 Institutionalize regular monitoring and use data strategically to design programmes

The appropriate use of data can ensure programmes are designed to address the greatest opportunities for impact—and to continually improve programme performance over time. Initially, existing data from various surveys, research and assessments can be utilized to set programme priorities. As barriers and bottlenecks arise during implementation, rapid operational research studies can be conducted to test alternative solutions. In India, programmes often lack effective mechanisms for ongoing system checks to improve programme design and identify mid-course corrections. In Bangladesh, Ethiopia, and Vietnam, A&T instituted timely supervision and performance monitoring to ensure data from home visits was reaching supervisors and programme managers. This helped identify gaps early and build FLW capacity while also providing a valid basis for recognizing performance. A&T used a three-layered monitoring system in Bangladesh (Table 2).

Table 2: Three-layered monitoring system (A&T Bangladesh)

1	**Routine record-keeping by FLWs:** Checked by supervisors monthly; compiled and sent to sub-district and district levels. This data is used for identification of FLW performance for incentives.
2	**Validation of routine records:** A random sample survey is conducted by a non-implementation team where each catchment area is visited. Monitors take a copy of the latest reported coverage and cross-check the home visits made and the contents of home visits by directly speaking with mothers/pregnant women. The core indicators are a sub-set of the routine monitoring; occasionally extra questions are added for special issues to address bottlenecks. One full-time monitor oversees two sub-districts and spends ten days a month on field visits.
3	**Concurrent monitoring:** This is conducted by an external agency (e.g. a consulting agency hired by central government or a development partner organization) and is based on a random sample of supervisors. A sample is selected from the catchment area (e.g. one household with pregnant women, one mother of under-six months old infant, and one mother with a child of seven to 24 months) on the day of a visit. Here the indicators expand to include all sources of information and messages over the past month, including: interpersonal counselling, community mobilization, health contacts, and media channels.
Triangulation or cross-checking across the three layers of monitoring provides a basis for discussion and decisions regarding mid-course corrections, additional resources, and problem-solving.	

Note: In A&T between 12-19% of programme budgets are allocated to monitoring.

ACTIONS FOR CONSIDERATION

- Strengthen the existing system for continuous programme monitoring to provide timely feedback for corrective actions and to build capacity of service providers and FLWs. Attention should be paid to nutrition programme indicators to ensure accountability.
- Establish monitoring and data collection methods that can be used rapidly to inform changes in the programme, enhance its ability to fill gaps, and recognize FLW performance.
- States can adapt and test the three-layered monitoring system (Table 2) so that data can be triangulated for validation of findings. Joint ownership of monitoring results and joint decisions can be taken if more than one agency is involved. Accountability of managers and supervisors is fixed for ensuring upward trends for key coverage and practice indicators.
- Routine record keeping and reporting formats should include the number of visits made during first 1,000 days of life, note the content of those visits, and report on a few key priority IYCF behaviours.

India can successfully scale up improved infant and young child feeding practices by developing a comprehensive package of interventions and approaches for the first 1,000 days, with a clear focus on operational elements. We are fortunate to have an existing favourable policy environment and system preparedness, as shown by rapidly improving health and economic indicators. Sustainable IYCF nutrition interventions that have been designed based on current data, focused on priority indicators, implemented and monitored systematically, and rigorously evaluated will lead the way for improving overall health and nutrition levels of all children in India.

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5. World Bank
6. Save the Children
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8. AIIMS
9. Indian Council of Medical Research (ICMR)
10. Public Health Foundation of India (PHFI)
11. Project Concern International (PCI)
12. C3 (Centre for Catalyzing Change)
13. IPE Global
14. PATH
15. National Neonatology Forum (NNF)
16. National Rural Health Mission
17. Nutrition International (NI)
18. Coalition for Food and Nutrition Security
19. ICDS -ISSNIP
20. John Snow India (JSI)
21. Norway India Partnership Initiative (NIPI)

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