

## Review Article

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# From insight to action: challenges in implementing infant and young child feeding practices in India

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## ABSTRACT

Optimal infant and young child feeding (IYCF) early initiation of breastfeeding, exclusive breastfeeding for 6 months, and appropriate complementary feeding with continued breastfeeding to 2 years and beyond is among the highest-impact, lowest-cost strategies for improving child survival, growth, and neurodevelopment in India. Despite notable gains in early initiation and exclusive breastfeeding in the past decade, complementary feeding remains weak, with persistent inequities by geography, socioeconomic status, maternal education, and social group. This review synthesizes recent evidence on IYCF practices in India, identifies implementation barriers across health systems, communities, and markets, and proposes pragmatic solutions. It integrates insights on frontline worker performance, mobile health (mHealth) and mass media, regulatory environments, social norms, urbanization, and vulnerable sub-populations such as adolescents, urban poor, tribal communities, and draw on global evidence to inform program design. It concludes that with an implementation agenda for India focused on service delivery quality, rights-based regulation and maternity protection, context-specific behaviour change, workforce strengthening, and routine measurement to accelerate progress.

**Keywords:** IYCF, Breastfeeding, Complementary feeding, Challenges, India

## INTRODUCTION

The first 1,000 days from conception to two years are a critical window to prevent undernutrition and its long-term consequences, including impaired growth, cognition, and productivity.<sup>1</sup> While India has improved early initiation and exclusive breastfeeding since the mid-2000s, complementary feeding indicators remain low, and contribute to the plateauing of undernutrition after 24 months.<sup>1,2</sup> The challenge now is less about awareness of “what” to feed and more about delivering sustained “how” to support optimal feeding practices in diverse contexts, while protecting breastfeeding from commercial

determinants and strengthening enabling systems and policies.<sup>3,4</sup>

## EPIDEMIOLOGY OF IYCF IN INDIA: LEVELS, TRENDS, AND INEQUITIES

Breastfeeding indicators improved between 2006 and 2016; early initiation rose from 23% to 42% and exclusive breastfeeding from 46% to 55%, with narrowing socioeconomic gaps.<sup>2</sup> However, complementary feeding showed marginal gains: minimum dietary diversity rose only from 15% to 21%, and minimum acceptable diet stagnated around 9%. NFHS-5 analysis indicates media exposure especially

television associates positively with IYCF practices, though effects differ by urban–rural residence and by specific indicators.<sup>5</sup> This heterogeneity underscores the need for tailored media strategies.

Among adolescent mothers  $\leq 18$  years, exclusive breastfeeding was 58.7%, but complementary feeding indicators were very low. The main determinants included were maternal education, ANC visits, socioeconomic backgrounds, and region.<sup>6</sup> These data foreshadow the double burden of malnutrition in urban poor settings.<sup>7</sup> Collectively, the data shows India's breastfeeding progress is real and more equitable, but infant diet quality is the dominant bottleneck, particularly in marginalized populations, urban slums, and adolescent mothers.<sup>2-8</sup>

## WHY IYCF MATTERS: HEALTH AND DEVELOPMENT RETURNS

Breastfeeding education increases early initiation of breastfeeding by >20% and exclusive breastfeeding by 53%, and reduces diarrhoea by 24%.<sup>9</sup> Complementary feeding education improves weight-for-age and height-for-age in food-secure settings, while food provision with/without education reduces stunting.<sup>9</sup> Thus, India's policy emphasis on IYCF is well-founded; however, delivering these benefits at large scale requires overcoming entrenched implementation challenges.<sup>9</sup>

## ADVOCACY STRATEGIES IN INDIA

Advocacy strategies, including building strategic coalitions and executing “critical tasks” for Code and maternity protection, have been shown to accelerate policy change in other regions and can inform Indian efforts to strengthen enforcement and scale.<sup>4</sup>

Incorporating IYCF indicators into national surveillance systems improves policy responsiveness; Vietnam's example illustrates how timely IYCF data catalyzed legislation (e.g., maternity leave) and program planning a model relevant for India's nutrition surveillance.<sup>10</sup>

## IMPLEMENTATION CHALLENGES

### *Health system readiness and workforce constraints*

Persistent shortages and maldistribution of health workers reduce coverage and quality of counselling and follow-up, with downstream effects on maternal–child outcomes.<sup>11</sup> Frontline worker (FLW) knowledge and counselling quality vary; gaps among mothers' knowledge, attitude and practice (KAP) contrast with comparatively better, but still uneven KAP among FLWs in high-burden districts, with low maternal KAP strongly associated with stunting, wasting, and underweight.<sup>12</sup> Targeted trainings can improve FLWs worker knowledge, attitudes, and counselling delivery on IYCF,

but require periodic refreshers and supportive supervision to sustain gains.<sup>14</sup>

### *Behaviour changes in complex social ecologies*

Health messaging alone will not be able to shift IYCF practices in rural areas. Mostly, messages received by the beneficiaries are filtered through pre-existing beliefs and norms, and message receivers (often husbands) do not discuss content with women, weakening translation into action.<sup>15</sup> This highlights the need to complement direct-to-beneficiary digital services with interpersonal and community engagement to influence social norms.<sup>15</sup> Mass media can support IYCF awareness and practices at scale, but channel effectiveness varies by geography and indicator, mandating context-specific media mixes and the way messages are tailored.<sup>5</sup> Grandmothers and fathers are influential; grandmother-inclusive programming has significantly improved EBF and complementary feeding indicators, suggesting the value of engaging family gatekeepers in India's sociocultural context.<sup>16</sup> Paternal perspectives and involvement understudied in India, represent a missed opportunity for shared decision-making and support for mothers.<sup>17</sup> Psychosocial stressors, like intimate partner violence (IPV), can make it harder for mothers to feed their babies properly. This highlights the need to include emotional support and protection in child feeding programs, especially in areas where such problems are common.<sup>18</sup>

### *Urbanization, market forces, and food environment*

In urban slums, energy-dense, nutrient-poor snacks are introduced early and frequently, crowding out nutrient-dense complementary foods and shaping taste preferences. Without urban food environment interventions and social marketing, complementary feeding will remain constrained.<sup>7</sup> Persuasive commercial promotion of infant foods and formulas erodes breastfeeding, even in humanitarian contexts, formula assistance associates with lower EBF and continued breastfeeding, emphasizing the importance of stringent targeting and adherence to emergency guidelines—a lesson relevant for ensuring ethical practices in India.<sup>19,20</sup>

### *Equity and life-course barriers*

Adolescent mothers face structural disadvantages (education, Antenatal clinic visits, low socio-economic status) that predict poorer IYCF practices, especially complementary feeding.<sup>6</sup> Tribal populations with limited access to services, media, and education show very low diet adequacy and diversity.<sup>8</sup> Gender norms, decision autonomy, and unpaid care burdens limit mothers' ability to implement recommended feeding, particularly when returning to work in informal sectors without crèches or lactation breaks.<sup>2,3</sup>

## WHAT WORKS: EVIDENCE-INFORMED PROGRAM STRATEGIES

### *Strengthen the quality and continuity of counselling*

Regularly retrain and mentor frontline workers; structured training improves knowledge and counselling quality and must be institutionalized with supportive supervision, incentives, rewards, and performance feedback.<sup>14</sup>

### *Use layered, context-specific behaviour change*

Blend of interpersonal counselling, family-inclusive community dialogue, and tailored mass media; digital messaging (e.g., mHealth) should complement not replace interpersonal communication and social norm change efforts.<sup>5,15,21</sup> Engage grandmothers and fathers through structured, culturally grounded approaches to shift household norms around breastfeeding and child feeding, drawing on successful grandmother-inclusive models<sup>16</sup> and emerging paternal engagement work in India.<sup>17</sup> Add responsive feeding content to counselling; tools such as the RF counselling cards developed to strengthen UNICEF's package improved clarity and feasibility of counselling and could be adapted and localized for India.<sup>2</sup>

### *Protect, promote, and support breastfeeding*

Scale up Baby-Friendly Hospital Initiation (BFHI) with high-fidelity implementation and monitoring; ensure lactation counselling during antenatal, immediate postnatal, and follow-up contacts.<sup>1,3</sup> Expand maternity protection for informal workers and ensure workplace lactation support and crèches; EBF and continued breastfeeding rely on adequate leave and supportive environments.<sup>3</sup>

### *Improve complementary feeding at scale*

Leverage ICDS platforms to improve access to diverse, nutrient-dense foods and counselling, with a focus on urban poor and tribal areas.<sup>8</sup> Address unhealthy food environments; restrict marketing of ultra-processed snack foods to young children, use social marketing to shift norms, and promote affordable, local complementary foods.<sup>7</sup> Integrate social assistance with high-quality BCC; group sessions plus individualized counselling, adapted to context, are promising, but conditionalities may be counterproductive and should be used judiciously.<sup>21</sup>

### *Targeted strategies for vulnerable groups*

Adolescents integrate IYCF education into adolescent health services and delay age at conception; bolster ANC visits to improve breastfeeding and complementary feeding.<sup>1,6</sup>

Tribal communities tailor content and delivery using local languages and with real food displays; expand media access and community platforms; improve maternal education linkages.<sup>8</sup>

Urban informal settlements deploy urban ASHA/Anganawadi workers outreach with water-sanitation support, safe feeding in constrained spaces, and market-based interventions to improve food access and affordability.<sup>7</sup>

### *Research and innovation priorities*

Implementation research to optimize contact frequency, content, and delivery channels (including digital) for India's diverse contexts, building on evidence that single-channel mHealth is insufficient for complex behaviours.<sup>15</sup> Trials evaluating family-inclusive models, including grandmother and father engagement, on complementary feeding and growth outcomes.<sup>16,17</sup> Investigations into psychosocial stressors (e.g., IPV, maternal depression) and integration of nurturing care within IYCF programs to support dietary diversity and acceptance.<sup>18</sup> Urban food environment interventions to reduce ultra-processed snack consumption among infants and toddlers and improve access to nutrient-dense foods.<sup>7</sup>

## POLICY IMPLICATIONS FOR INDIA

Shift leadership and accountability for essential nutrition interventions in the first 1,000 days more squarely into the health system, while maintaining strong ICDS convergence, to maximize contact points during ANC and immunization.<sup>1</sup>

Enhance maternity protection and workplace supports, especially for the informal sector, as necessary complements to breastfeeding promotion.<sup>3</sup>

Invest in the frontline: adequate staffing, equitable deployment, continuous training, supportive supervision, and incentivization aligned with IYCF outcomes.<sup>11-14</sup>

Protect breastfeeding through robust regulation and monitoring of breastmilk substitute marketing, paired with scale-up of BFHI and routine lactation support.<sup>3</sup>

Finance and scale context-tailored Behaviour Change Communication that blends interpersonal, family-inclusive, and media strategies, avoiding over-reliance on any single channel.<sup>5,15,16,21</sup>

## CONCLUSION

India advances in breastfeeding are encouraging and more equitable than a decade ago, but the stagnation in complementary feeding, especially dietary diversity and minimum acceptable diet poses a major barrier to overcoming undernutrition. The pathway forward is not a single new program but a re-commitment to deliver

quality and equity, well-trained and supported frontline workers, family and community engaged behaviour change, robust protection from commercial determinants, maternity protection, and routine measurement for adaptive management. With sustained, context-sensitive implementation and rights-based policy enforcement, India can accelerate progress toward optimal IYCF practices and the SDG nutrition targets.

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