

Dissemination Event - 2026

Sustaining Impact THROUGH PARTNERSHIPS



Why malnutrition and developmental delay must be tackled together in the first three years?

Evidence from Mumbai's urban informal settlements to strengthen early childhood development programmes

This brief draws on programme data from SNEHA's (Society for Nutrition, Education and Health Action) community-based early childhood intervention in Mumbai's P/North Ward. It highlights that integrating developmental screening into routine nutrition services can help health systems identify vulnerable children earlier and strengthen child health programming.

India has made substantial investments in early childhood development through initiatives such as Integrated Child Development Services (ICDS), Poshan 2.0, Rashtriya Bal Swasthya Karyakram (RBSK), and the recently launched Samagra Shishu Bal Swasthya Karyakram (SSBSK). These programmes recognize that young children require not only adequate nutrition and healthcare but also nurturing care, responsive caregiving and early identification of developmental concerns.

Despite this strong policy framework, ensuring consistent implementation of nurturing care services, including developmental monitoring, caregiver counselling and timely referrals, remains challenging, particularly for children under three years living in urban informal settlements.¹

Our evidence demonstrates that developmental concerns are common among young children and that standardized developmental monitoring can be successfully integrated into routine community-based home visits by trained frontline workers.

KEY FINDINGS

- **Nearly one in five children (18%)** aged 12-36 months had a developmental delay, with expressive language being the most commonly affected domain.
- **Malnutrition and delay go together:** Stunted children were 1.5 times more likely to have developmental delay, and underweight children were 1.9 times more likely.
- While nutrition and health services are well established, **caregiver support for responsive caregiving and early learning deserves greater emphasis** during the first three years of life.
- **Integrating developmental monitoring with routine nutrition services** can improve early identification of children at risk.
- Trained frontline workers with secondary-level education successfully conducted developmental monitoring during routine home visits, demonstrating a **feasible and scalable approach** for existing government programmes.

THE CONTEXT

80%

of brain development happens before a child turns three

250 million

children under five in low- and middle-income countries risk not reaching their potential

41%

of Mumbai's population lives in informal settlements

Why the first three years are decisive

The first three years of life represent a singular, unrepeatable window during which over 80% of brain development occurs, laying the neural foundations for lifelong cognitive, language, social, physical and motor skills.² Optimal early childhood development (ECD) is a fundamental human right and a vital determinant of lifelong health, educational attainment, and economic productivity.³

Malnutrition and the developing brain

Malnutrition, in particular, plays a pivotal role in impairing ECD, as it adversely affects brain structure and function during critical periods of growth. Deficiencies in essential nutrients such as iron, zinc and iodine during the early years are associated with cognitive impairments and lower economic productivity in adulthood.⁴⁻⁶

Malnutrition and developmental delay also tend to occur in the same children, as they share common underlying determinants: inadequate nutrition, limited healthcare access, insufficient caregiving and frequent infections.⁷ Addressing malnutrition is therefore central to improving ECD outcomes.

Children in informal settlements are most at risk

Children living in urban informal settlements face extreme physical and social adversities, including acute overcrowding, insecure land tenure, poor water quality and inadequate sanitation facilities.⁸ Crucially, chronic undernutrition in these informal settlements severely exceed those observed in non-slum areas.⁹ Programme reach is often limited in these settings and community-based delivery becomes essential.

SNEHA's response: a community-based ECD programme

SNEHA implemented a community-based model that integrated developmental monitoring into routine home visits for children aged 0-3 years.



Fig. 1: SNEHA's early childhood intervention, adapted from the Nurturing Care Framework (WHO, 2018)¹⁰.

WHAT WE FOUND

Nearly one in five children showed a developmental delay

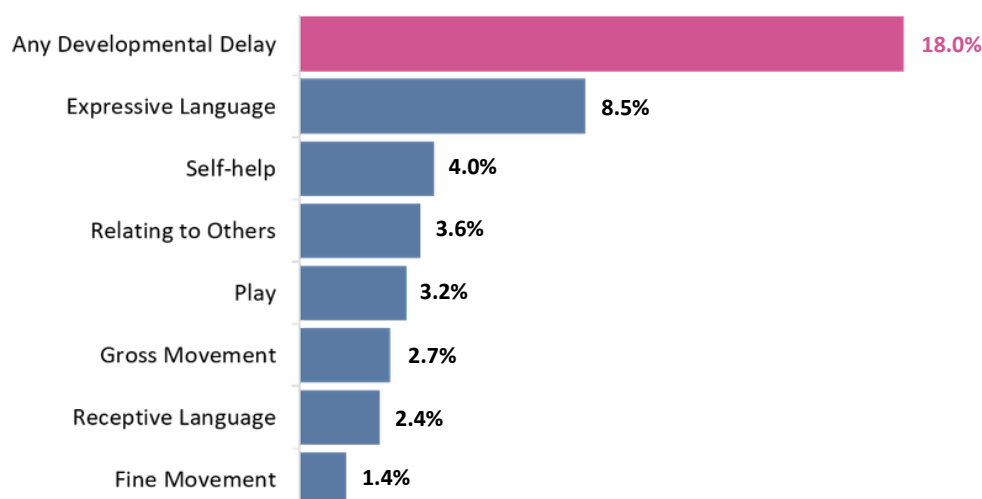


Fig. 2: Prevalence of any developmental delay and of domain-specific delay among children aged 12-36 months (N=1355); Source: SNEHA monitoring data

Malnutrition was common and closely linked with delay

Indicator	Children affected	Odds of delay
Stunting (low height for age)	22.7%	1.5x higher
Underweight (low weight for age)	19.0%	1.9x higher
Wasting (low weight for height)	10.1%	No clear link

Odds adjusted for the child's sex and age, maternal age, education and occupation, paternal education, household socioeconomic status, family type and household size. Chronic undernutrition was linked to delay; acute undernutrition (wasting) was not.

Developmental delay is a significant public health concern

Among 1,355 children aged 12-36 months living in Mumbai's informal settlements,

- 18% had a developmental delay in at least one domain.
- Expressive language was the most frequently affected domain (8.5%).

These findings indicate that developmental concerns are common during the first three years of life, when timely identification and support can have the greatest impact. Expressive language was the most commonly affected developmental domain, highlighting the important role of caregiver-child interactions, including talking, responsive communication and play, in supporting early development.

Nutrition and development are closely linked

Nearly one-quarter of children were stunted and one in five were underweight. Children who were stunted had 1.5 times higher odds of developmental delay, while those who were underweight had 1.9 times higher odds. The findings reinforce that chronic undernutrition and developmental delay often occur together and share common underlying determinants.

Fathers' education was associated with child development

Children whose fathers had attained higher levels of education had approximately half the odds of developmental delay compared with those whose fathers had lower educational attainment. This finding suggests that the broader family environment, including paternal education and engagement, may influence children's developmental outcomes, underscoring the role of fathers and other caregivers alongside mothers.

Task shifting developmental monitoring to frontline workers at scale is feasible

Thirty-four locally recruited community organisers with secondary-level education were trained to administer developmental monitoring as part of routine home visits. The programme demonstrated that standardized developmental monitoring can be delivered reliably outside specialist settings, providing evidence for its feasibility within community-based service delivery models.

RECOMMENDATIONS

01. Strengthen implementation of developmental monitoring

Growth and nutrition are routinely monitored through ICDS and other national programmes; developmental monitoring should receive similar priority. Support frontline workers to assess child development using standardized tools during existing home visits and routine child health contacts.

02. Increase emphasis on nurturing care

Expand caregiver counselling beyond nutrition to include responsive caregiving, communication, play and early learning. As the first three years are critical for brain development, parents and caregivers should be supported to provide nurturing care from infancy.

03. Integrate nutrition and developmental support

Address nutrition and child development together. Children identified with stunting or underweight should also receive developmental assessment, caregiver counselling and referral, recognizing that nutrition and developmental outcomes share common underlying determinants.

04. Strengthen frontline worker capacity and referral systems

Scale up developmental monitoring through trained Anganwadi Workers, ASHAs and other frontline workers. Standardized tools such as the GMCD can be incorporated into routine home visits to identify developmental concerns early, counsel caregivers and facilitate timely referrals. Establish clear referral pathways linking frontline workers with RBSK, SSBSK and specialized child development services.

Nutrition and early childhood development should be addressed together, not separately. Strengthening developmental monitoring, caregiver support and referral systems within existing government programmes can ensure children receive timely support during the critical first three years of life.

Embedding developmental monitoring into routine home visits offers a practical, scalable approach to identifying children early, leveraging the existing frontline workforce.

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*The International Guide for Monitoring Child Development (GMCD)¹¹ provides a comprehensive, family-centered package to assess developmental milestones, identify developmental delay and provide developmental support and early intervention. It has been validated in four diverse countries, including India and is rated among the best for developmental monitoring in low-resource settings.