Promoting Nurturing Care for Early Childhood Development Through India's Public Health System

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Implementing the nurturing care framework (NCF) for early childhood development (ECD) is essentially multisectoral, requiring coordination amongst all sectors and harmoniously integrating it within the existing contact opportunities in the health sector. This paper discusses the relative strengths, persisting gaps, challenges, and the way forward to implement nurturing care for ECD through the public health system. The vast network of frontline health workers and health facilities; community, home, and center-based service delivery; health and wellness centers located close to the communities have the potential to promote nurturing care. Persisting gaps include limited capacities of health workers in the nurturing care domains, lack of community engagement for ECD, weak referral linkages, inability to reach the most vulnerable children, missed opportunities for early identification of children at risk, and early intervention for children developmental delays and difficulties. Moving forward, incorporating nurturing care components into essential services packages, enhancing competencies of health workers, engaging with parents, establishing a mechanism for tracking children at risk, and developmental surveillance by trained service providers can provide the much-needed impetus to ECD.

Keywords: *Developmental surveillance, Early intervention, Health workers, Training.*

The Nurturing Care Framework (NCF) for early childhood development (ECD) provides a roadmap for all sectors, including the health sector, to support the healthy development of all children. Although ECD covers children aged 0–8 years, the NCF Framework focuses on the period starting from pregnancy to three years of age as this is a sensitive period for brain develop- ment, and children are most susceptible to environmental influences. This age group is usually not well addressed in programming for ECD. The health sector is unique in providing nurturing care through its extensive reach to women, children, and families and the possibility of intervening across the life course. However, healthcare workers need to collaborate with nutrition and social workers to engage with pregnant women, families with young children (0-3 years), and other stakeholders in the community [1]. While health and young child nutrition are essential services provided through the public health system, there are several missed opportunities for promoting the five nurturing care domains. In this paper, we discuss the potential to advance nurturing care for ECD through the public health system. We discuss the relative strengths, some of the persisting gaps and challenges in promoting ECD and propose a set of actions as the way forward for the public health services.

LEVERAGING THE STRENGTHS OF THE PUBLIC HEALTH SYSTEM

The reach of the public health system is extensive: Population coverage with a large cadre of Community Health Officers and Auxiliary Nurse Midwives (ANM) at every sub-center or Health and Wellness Centre (HWC), Accredited Social Health Activists (ASHAs) (one per 1000 population) is a unique strength for service delivery. Through various health programs, these health workers have the mandate to reach out to the adolescents, pregnant women, families, and mothers of 0-3 year olds and young children themselves. With HWCs becoming functional closer to the community, it enhances their capacity to mobilize the local population to avail primary care. They can directly reach out to the families with advice on various components of nurturing care after assessing risk factors in individual households through home-based services.

Health and wellness centers (HWCs) bring services closer to the community: Under Ayushman Bharat, 150,000 HWCs are being created by transforming existing sub-centers and Primary Health Centers (PHCs). They will deliver comprehensive primary health care, focusing on wellness and delivery of an expanded range of services, including free essential drugs and diagnostic services, closer to the community. Provisions include universal coverage of the target population and establishing a continuum of care through a two-way referral system between various facility levels. This means streamlined referral of children at risk or those requiring indicated support (special care) to higher levels with electronic records accessible across the facilities.

They will then be referred back to the primary care physician (or Community Health Officer), with precise feedback on the diagnosis and continued treatment. Health cards and family health folders for all service users, when in place, will ensure access to health care entitlements and enable a continuum of care. They also create the possibility of organizing center-based activities for children 0-3 years and their families to promote ECD through caregiver counseling and engagement, especially for 'at risk' children and vulnerable families.

Multiple contact points can be leveraged: The public health system provides several platforms that offer the opportunity to integrate ECD with an additional focus on responsive caregiving and early learning. Home visiting programs, the Home-Based Care for the Young Child (HBYC), and the Home-Based Newborn Care (HBNC) deliver evidence-based interventions in four key domains, namely nutrition, health, childhood development, and WASH (Water, Sani-tation and Hygiene). There is an increased focus on responsive parenting with the revised Mother and Child Protection (MCP) card. While community campaigns such as MAA (Mothers' Absolute Affection) program promote breastfeeding and infant and young child feeding (IYCF), the community and center-based (Anganwadi center) screening services through Rashtriya Bal Swasthya Karyakram (RBSK) provide for early identification of 4 Ds viz., defects at birth, deficiencies, diseases, development delays. Special Newborn Care Units (SNCU) provide family-participatory care for sick newborns, while the Nutritional Rehabilitation Centers (NRCs) at the district and subdistrict hospitals provide inpatient management of children with severe acute malnutrition with counseling of caregivers related to feeding, play and stimulation. **Box I** lists a wide range of programs and schemes under the National Health Mission (NHM) flagship that serve as vital contact points for home, community, and facility-based service delivery.

Persisting Gaps

Despite a wide range of service delivery platforms and human resources available within the public health system, the gaps that affect the implementation of nurturing care are as follows:

Inadequate competencies of health workers: ECD is relatively a new domain for the frontline health workers (FLWs), and they have limited capacity to promote

Box I Examples of Contact Opportunities Within the Public Health System for Providing Nurturing Care

Home contacts

Home-Based Newborn Care Scheme: Counsel mothers/families on essential newborn care, exclusive breastfeeding, hand washing, and recognition of danger signs in infants 0-42 days; additional home visits for high-risk babies

Home-Based Care for the Young Child: Addresses health, nutrition, WASH (water, sanitation & hygiene), and ECD using Mother and Child Protection (MCP) Card as job aid for age-appropriate development milestones tracking, positive parenting practices, and early identification of warning signs. Prophylactic IFA supplement and behavior change communication for increasing iron intake

Health facility contacts

Antenatal checkups: Provided on 9th of every month under Pradhan Mantri Surakshit Matritva Abhiyan; screening for high-risk pregnancies

Sick child visits: Outpatient care and inpatient care (integrated management of newborn and childhood illnesses); skilled support for breastfeeding under MAA program

Nutritional rehabilitation centers: Age-appropriate feeding, counseling and demonstration on structured play therapy for psychosocial stimulation of the malnourished child

Newborn care units: Family Participatory Care to promote responsive caregiving

District Early Intervention Centers (DEIC): Diagnosis and early intervention in children screened for deficiencies, development delays including disabilities; rehabilitation support; referral services

Community-level contacts

Community-based events under Poshan Abhiyan: Creating awareness on the first 1000 days; Anemia Mukt Bharat (Anemia Free India), Intensified Diarrhea Control Fortnight, Mother's Absolute Affection (MAA) program, Universal Immunization Program, Mission Indradhanush

Village Health, Sanitation and Nutrition Day (VHSND): Shared platform to provide health, nutrition, early childhood development, and sanitation services; primary health services include growth monitoring, identification of undernourished children. Group counseling sessions, a full package of antenatal care, screening for high-risk pregnancies, and family planning services are provided.

Center-based contacts

Health and wellness centers: Focus on promotive and preventive primary care for all age groups; outpatient management of common childhood illnesses, referrals for sick and malnourished children, multisectoral convergence for community-level action for a wide range of services

Anganwadi centers: Village outpost for health, nutrition, and early learning, for children up to age six. Hub for VHSND activities and screening of children under RBSK.

nurturing care and counsel families. While the MCP card is available to them as a job aid, they require further training and supportive supervision to improve the content and effectiveness of home visits. Health workers currently play a limited role in addressing security and child safety issues of abuse, neglect, and violence against children and appropriate response, although Integrated Child Protection Scheme provides detailed guidelines.

Weak referral linkages and coordination with other sectors: Weak convergence and coordination among the interventions and activities undertaken by multiple programs from government, voluntary, and private sectors lead to fragmentation of services contrary to child- and family-centric approach, inefficient use of resources, duplication and sometimes competition. While the frontline workers from health and nutrition sectors coordinate to deliver services, there are persisting gaps for services like weighing children and plotting growth charts in MCP cards, counseling parents in responsive caregiving, complementary feeding, and child protection. Furthermore, the system suffers from weak linkages between various levels of health facilities such as SNCU with District Early Intervention Centers (DEIC), RBSK screening with home visiting program (HBYC), and with services across sectors (e.g., DEIC with Disha centers for early intervention).

Not reaching the most vulnerable children: Service gaps in reaching the most vulnerable and marginalized children (e.g., children of socially excluded groups, child drug abusers, street and working children) continue to be a weakness of the public health system.

Insufficient focus on empowering parents and caregivers: Despite the centrality of parents and families in the development of children, there are several gaps in our knowledge of what works to promote positive parenting practices, particularly in vulnerable contexts. The capacity of FLWs to effectively communicate messages related to early development and engage caregivers in a child's early development is the weak link in all the programs and even more so for children at-risk. Linkages with specialized care and services in such cases remain less established.

Delay in diagnosis and early intervention for children with developmental delays and disorders: In a population-based study conducted across five geographically diverse sites in India in 2018 [2], almost one in eight children of the age 2-9 years had at least one neurodevelopmental disorder (NDD). The risk factors for childhood NDDs entailed history of delivery at home, delayed crying or difficult breathing at birth (perinatal asphyxia), neonatal illness requiring hospitalization, neurological/brain infections, low birth weight (LBW) (<2.5 kg), birth before 37 weeks of gestation (prematurity), and stunting [2]. These findings emphasize the urgent need to establish developmental surveillance for children and identifying the risk factors early in life. Provision for universal screening of children 0-6 years twice a year under RBSK and further diagnosis and management in DEIC is a significant step forward. Recent studies to evaluate the functioning of three DEICs in two states (Chhattisgarh, Odisha) point to deficiencies in human resource availability and infrastructure, and the need to strengthen the referral system for early intervention [3,4]. Disha is an early intervention and school readiness scheme under the National Trust Act for persons with disabilities in 0-10 years of age, providing day care facilities, therapies, training, and support to family members [5]. DEIC linkages with Disha Centers are not well established yet, and Disha centers have an acute shortage of trained staff. Their location at the district level hinders access to the population residing in remote rural locations.

Prevailing Challenges

ECD is not a felt need of the community: Challenging socioeconomic circumstances, which make it tough to manage the trade-offs between work and family, impact the caregivers' ability to invest quality time and resources towards the development of their children. Lack of focus on community engagement has meant that while several contact points are available, the low awareness level and utilization among families result in missed opportunities. In the absence of community understanding of the benefits of ECD programming, there is no way of increasing demand for these services at the grassroots or facility level.

No assessment of ECD outcome measures: Despite significant progress in strengthening the monitoring system, there are gaps in the generation and usage of data on ECD, especially for the measurement of child development outcomes to inform program, policy, and innovation. The NCF suggests 24 indicators linked to the Sustainable Development Goals (SDGs) to be measured at the population level [6]. While India measures progress in all other domains, currently, there is no data on the indicators measuring responsive caregiving and opportunities for early learning and safety and security aspects (e.g., children experiencing physical punishment and/or psychological aggression by caregivers).

ENHANCING SERVICE PREPAREDNESS FOR ECD: THE WAY FORWARD

Some actions can potentially enhance the preparedness of the public health system to improve nurturing care for ECD. These include the following:

Review and Update Services Packages

With multiple contact points and well-defined essential

services packages for pregnant women, mothers, and children, the first task would be to review and update the essential services packages to reflect missing components of nurturing care viz., responsive care giving, early learning, safety and security, and caregivers' mental health. It will be helpful to plan for the three levels of support, depending on children's and families' needs, from *i*) universal support that benefits everyone to *ii*) targeted support for children affected by risks (e.g., poverty, under- nutrition), to *iii*) indicated support for those identified who have additional needs. Also, it is crucial to assess how services are being provided for children with additional needs and their families, and to examine whether there is good coordination and a seamless continuum of care. For this, frontline workers and primary care providers should be informed about the specialist services, their availability and how to coordinate with them. Simultaneously, mapping the existing infrastructure, specialized services, and networks supporting children and families with special needs is required.

Systematically Leverage All Strategic Contact Points

While antenatal visits can include additional emphasis to explain the concept of nurturing care, parents' role in promoting early learning, the period around birth and postnatal care should include counseling on how to respond to baby's cues, lactation support, and promotion of parent-child bonding. Immunization and growth monitoring sessions can include assessment and counseling related to growth and development. This includes observation of the parent-child interaction, providing guidance on play and communication, and toys. Home visits should include additional focus on eliciting concerns about health, development, and behavior, observing the family environment, identifying risk factors, discussing positive discipline, how to prevent injuries, as well as identifying caregiver's physical or mental health issues and addressing them, where feasible [7].

Update the Competency Profile of the Workforce and Strengthen its Capacity

Human resources capacity for ECD greatly influences service quality at scale and outcomes for children. The in-service training material for ASHAs, Community Health Officers, and ANMs should be enhanced, with opportunities for self-learning through digital, online learning platforms, or 'in person' short refresher courses.

To address the multidimensional needs of children, standardization of the content, curricula, and development of competence in pre-service programs for professionals and para-professionals, such as the medical, nursing, and midwifery education curriculum is required. In addition, development of the capacity to offer early intervention with additional or specialized training and development of the disciplines related to developmental pediatrics should be initiated.

To address the reduction of violence, abuse, and neglect, frontline workers (FLWs) need the training to assess risk factors and identify children who require care and protection. This training will enable them to report to Childline (toll-free number 1098) or connect to the nearest child protection committee (village, block, or district). Service providers' training should also prepare them to recognize that sexual abuse of children occurs commonly, when and where to report and how to respond appropriately in their clinical practices when sexual abuse is suspected. Advice on protecting children from sexual abuse should be part of the anticipatory guidance given to all parents.

Monitor a Child's Development With Timely Referrals

Often children with additional needs are only identified when they reach pre-school or school age. Simple assessment tools can be made available as mobile apps to facilitate screening and early diagnosis, and referrals by service providers at all levels of care, including the RBSK mobile health teams. RBSK maintains a database of all children referred from the community and tracks each child until the identified health condition is resolved or the family connected to appropriate service support. Wider availa-bility of information for parents and caregivers in local languages through social media channels and app-based services for children registered in various centers will help in effective and timely intervention.

Establish Developmental Surveillance Mechanism

Developing an information-gathering process that is flexible, longitudinal, and continuous will help in the early detection of problems and developmental delays. The home visiting program and RBSK provide the contact point for universal screening activities, track children at risk, and further link them to DEIC and specialized care. A database of all these children will allow for long term follow-up, tracking outcomes, and mobilizing support from other sectors such as education and social welfare.

Encourage Parent and Caregiver Involvement

To provide nurturing care for young children, caregivers require information, assistance, and parenting skills. While using the community platforms for sensitization and awareness on ECD, FLWs should utilize contact opportunities such as home visits to observe child-caregiver interaction and demonstrate age-appropriate play and early learning

activities (such as toys, storytelling, book reading, use of local language). National Family Health Survey (NFHS 4) data shows that 89% of women registered during pregnancy received the Mother and Child Protection (MCP) card. This card must be used as a family empowerment tool right from the early stages of pregnancy for monitoring the mother's health and nutrition and child's growth and development. The Journey of the First 1000 Days booklet [8] for expectant mothers (parents) and the Ayushman Bhava app developed under the RBSK program should be disseminated during contacts for maternal and childcare and through digital platforms.

Robust Communication Strategy to Engage Parents and Communities

Messages for ECD integrated into different themes can be addressed through community platforms. Importantly, awareness should be created about the adverse impact of harsh disciplining, neglect, maltreatment, and preventing accidents and child abuse issues by including them as essential themes for community-based events, including the Village Health Sanitation and Nutrition Day (VHSND). A welcome step is the Ministry of Health's proposal to set up integrated ECD Call Centers to provide personalized advice to the caregivers, with emphasis on enhancing their knowledge and building upon what the caregivers are currently doing well and what more they can do to promote the development of their children [9].

Establish a Collaborative Learning Network of Academic and Research Organizations

Implementation research and impact evaluation is required to generate evidence on the most effective intervention designs for integrating responsive care into existing service delivery platforms. Documentation and learning from good practices from different states and other countries will ensure that the national ECD programs can evolve with time.

Involve the Private Sector

Recognizing that the government has competing priorities for resource allocation, the private sector can be involved as a potential partner for increasing investments in ECD, as they have financial and technical capacities to support growth in quality ECD in low-resource settings. Collaboration with the private sector will help enlist their support in creating family-friendly policies such as parental leave and breastfeeding breaks during work hours [10].

Monitor Progress at the Population Level

In 2020, an updated version of the ECD index (ECDI 2030), covering children from 24 months of age, was recognized by the UN Statistical Commission as a suitable measure for assessing SDG target 4.2 and its indicator 4.2.1 (Proportion of children 24-59 months of age who are developmentally on track in health, learning, and psycho-social well-being). Work is in progress to develop a complementary instrument (Global Scale for Early Development, GSED) to measure children's development from birth to 3 years, and the final versions will be available in 2021. This scale can be used for national surveys to provide the overall status of children's health and development, the coverage of interventions, and family-care practices [6].

Create Synergies With Other Sectors

Aspirational Districts' Program and the umbrella schemes of Ministry of Women and Child Development viz., Mission Vatsalya, Saksham Anganwadi, and Mission POSHAN 2.0 provide the opportunity to bring synergistic support for all domains of NCF. A National Curricular and Pedagogical Sub-Framework for Early Childhood Care and Education for children 0-3-year-olds under development by the Ministry of Education will guide parents and early childhood care and education institutions.

To conclude, health and nutrition services already contribute to nurturing care before, during, and after birth. The NCF draws attention to the significant opportunities for service delivery through the public health system and clearly defines the actions that promote the often overlooked but important aspects of nurturing care. The responsibility for promoting nurturing care at the home and community level rests on the shoulders of the widespread network of FLWs who require adequate training for this new role. At the same time, the role of specialists and specialized services in early intervention, high-quality care, and follow-up to optimize neurodevelopmental outcomes in at-risk and affected children has to develop further. It is equally important that all officials involved in implementing programs are oriented to the essence and importance of the policy to promote ECD. Key actions to realize the vision of the 2030 Goal of 'leaving no one behind' requires a review of essential services packages, pre-service and in-service curriculum, a robust communi-cation strategy, greater engagement of families and key influencers, leveraging digital technology, establish-ing the continuum of care through well-defined referral pathways and coordination with the private sector and professional associations.

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REFERENCES

1. World Health Organization, United Nations Children's Fund, World Bank Group. Nurturing care for early childhood development: A framework for helping children survive and thrive to transform health and human potential. Accessed February 27, 2021. Available from: *https://nurturing-care.org/ncf-for-ecd*
2. Arora NK, Nair MKC, Gulati S, et al. Neurodevelopmental disorders in children aged 2-9 years: Population-based burden estimates across five regions in India. PLoS Med. 2018;15:e1002615.
3. Prabhu SA, Shukla NK, Roshni MS. Rapid assessment of Rashtriya Bal Swasthya Karyakram program implementation and beneficiary feedback at two district early intervention centers in Chhattisgarh State in India. Curr Med Issues. 2021;19:3-7.
4. Panigrahy BK, Swain A. A cross-sectional study to evaluate the functioning and infrastructure of mobile health teams and DEIC at Koraput district of Odisha under RBSK. WJPMR. 2019;5: 165-72.
5. The National Trust, Scheme Guidelines. 'Disha – Early Intervention and School Readiness Scheme'. Accessed May 12, 2021. Available from: *https://www.thenationaltrust.gov.in/upload/uploadfiles/files/disha_eng.pdf*
6. World Health Organisation, World Bank group, UNICEF. Nurturing care handbook (working draft). Strategic action: monitor progress. Accessed February 27, 2021. Available from: *https://nurturing-care.org/nurturing-care-handbook-monitor-progress/*
7. World Health Organisation, World Bank group, UNICEF. Nurturing care handbook (working draft): Strategic action: strengthen services. Accessed February 27, 2021. Available from: *https://nurturing-care.org/nurturing-care-handbook-strengthen-services/*
8. Ministry of Health & Family Welfare, Government of India. Journey of The First 1000 Days. Accessed February 27, 2021. Available from: *https://nhm.gov.in/images/pdf/programmes/RBSK/Resource_Documents/Journey_of_The_First_1000_Days.pdf*
9. Ministry of Health & Family Welfare Government of India. Guiding Note for Early Childhood Development (ECD) Call Center. Accessed February 27, 2021. Available from:*https://nhm.gov.in/images/pdf/programmes/RBSK/Operational_Guidelines/ECD_Guideline.pdf*
10. World Bank Group, the Inter-American Development Bank, and UNICEF for the G20 Development Working Group (DWG). G20 Development Working Group: Investing in Early Childhood Development. March 2018. Accessed May 12, 2021. Available from: *https://www.ecdan.org/assets/background-study-early-childhood-development.pdf*