EARLY CHILDHOOD DEVELOPMENT: EARLY MOMENTS MATTER

A Scientific Workshop

30th-31st July 2019; Hyderabad



KNOWLEDGE TO ACTION

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INDIAN INSTITUTE OF PUBLIC HEALTH HYDERABAD

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Inaugural of Advanced Collaboration for Early Childhood Development and Empowerment

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"The discussion covered the entire spectrum of the ECD ranging from nutrition, health, responsive care, safety and security, special needs children, early education through a life cycle perspective and was very helpful in building an overall in-depth understanding of the task at hand."

"..offered an opportunity for others to reflect upon their own program and identify the areas that they could work upon for further improving the quality and impact of work that they are undertaking"

"We work in our own individual areas and domains, often unaware of the other projects, learnings and contribution."

"The workshop helped us network with other like-minded organizations and get inputs from them for improving our own program"

"We realise the importance for investing into standard monitoring frameworks and also measure intermediate and long-term outcomes of our projects."

" ... we need to develop integrated and scalable approaches embedded within the newer programs in the government systems."

"The ministry of H&FW have ECD on its priority agenda. We would like to see how the newer programs are effectively implemented in the field. The integrated role of AAAs and use of new MCP card is essential. Also consider how to incorporate the ECD in Health and Wellness Centres. We look forward to specific recommendations form the gorup."

- Some feedback from participants

EARLY CHILDHOOD DEVELOPMENT: EARLY MOMENTS MATTER
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During the first years of life, neuron form new connections at an astounding rate of 700 to 1000 per second.

- Jack Shonkoff

At 3 years of age, a child's brain is twice as active as an adult brain.

- Sean Brotherson

EARLY CHILDHOOD AND DEVELOPMENT

It is estimated that 43% children under-five years of age are not achieving their developmental potential, resulting in an estimated US$177 billion annual global income loss [1]. Every aspect of early human development is affected by prenatal and early childhood period and children who are not receiving adequate health, nutrition, early stimulation, learning opportunities, care and protection tend to have lower cognitive, language and psychosocial outcomes [1].

Multi indicator cluster surveys (MICS) in 20 countries in children 2-9 years old found 14-35% of children screened positive for functional and developmental difficulties. Of the 43% children (250 million) at risk of impaired cognitive and social–emotional development, 88 million live in South Asia [2]. In India, as per census 1.24% 0-6 year olds are disabled [3]. A nationwide community-based study using clinical tools reported that 9.2% of 2-5 years old had some neuro-developmental disorders (NDDs), these are much more than that estimated using self-reported diagnosis [4]. The risk factors for NDDs were found to be neonatal illness requiring hospitalization, postnatal neurological infections, stunting and low birth weight/ prematurity [4]. Poverty and severe psychosocial deprivation contribute to and are also consequences of developmental delays and disabilities [5].

Early childhood refers to the period from prenatal development to the age of eight years and is said to be crucial for growth and development.

*Early childhood development (ECD) refers to a child's **cognitive**, **social**, **emotional** and **physical** development.*

Early childhood provides an important window of opportunity to prepare the foundation for life-long learning and participation, while preventing potential delays in development. The delays in early detection and management lead to disability. Life term consequences of disability include stigma, poverty, and exclusion. Years lived with disability is of major concern in children compared to adults. There are inadequate legislation and policies, negative attitudes, inadequate services, and lack of accessible environments for those with impairments, restricting their active involvement in the society [5].

Economists advocate that investing in early childhood interventions is one of the most cost effective ways to achieve sustainable growth with a high rate of return in learning and earning potential of individuals, as well as reduced strain on health, justice, and child and social

protection systems [6]. However, there is a huge mismatch between investment and highest opportunity. Interventions during the first 3 years of life are more effective and less costly than later efforts to compensate for early adversities and to promote human development. Estimates suggest that for every $1 invested, ECD can provide a return of up to $17 in terms of economic productivity in adult life [7].

There are known biological and contextual risk factors affecting development of a child; parents and parenting, family and community environments being contributor to many of the risks. Evidence suggests that accumulated adversities are often more detrimental to children's development than single adversities [8].

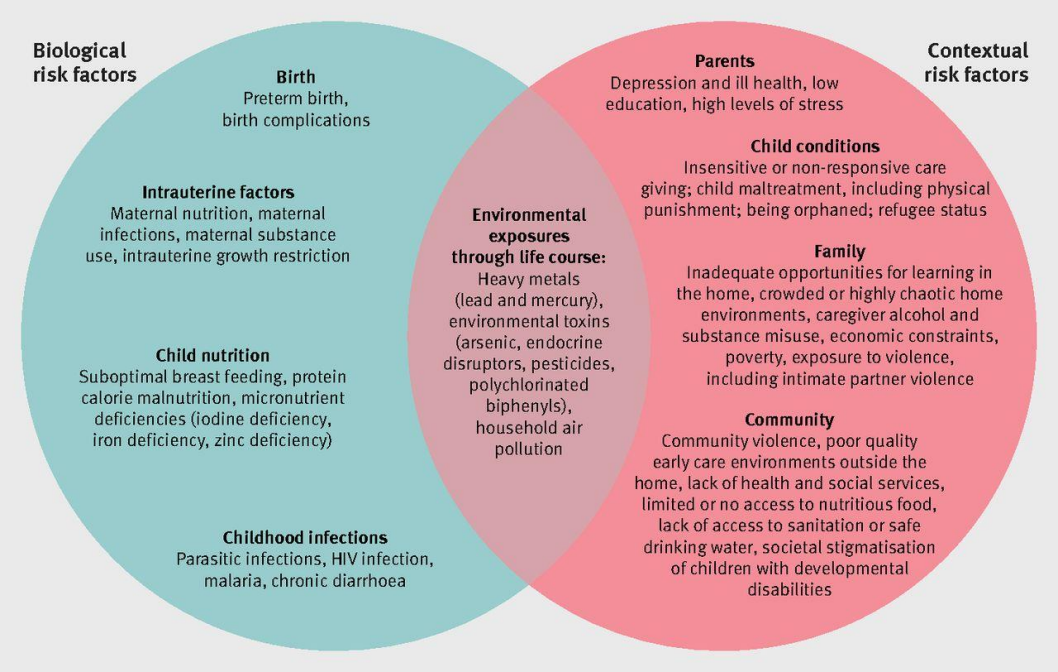


Figure 1: Risk factors for developmental delays and disabilities in children [8]



Figure 2: Risk and adversities for ECD

NUTURING CARE: COMPREHENSIVE, INCLUSIVE, SYSTEMIC

Every child requires **nurturing care** that is defined as a stable environment created by parents and other caregivers that ensures children's good health and nutrition, protects them from threats, and gives young children opportunities for early learning, through interactions that are emotionally supportive and responsive [9].

Early stimulation and learning includes sensory information that engages a young child's attention and provides information through interactions with people and the environment; examples include communicating through talking and smiling, showing and pointing, demonstrating and helping the child achieve goals, with or without objects.

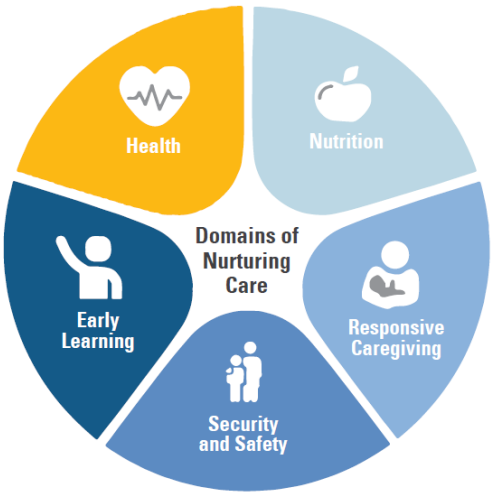


Figure 3: Domains of nurturing care for young children [9]

Responsive care encompasses both sensitivity and responsiveness. Sensitivity is awareness, from birth, of a young child's acts and vocalizations as communicative signals to indicate needs and wants. Responsiveness is the capacity of parents and caregivers to respond appropriately to these signals.

Security and safety of young children is responsibility of the family and community all together. The understanding of child protection is often limited to older children/ adolescents and there is lack of definition of "child protection" specific to young children. It is observed that ECD interventions are not inclusive of child protection aspects (physical abuse/ emotional abuse/ sexual abuse/ neglect). The burden is more often of neglect than abuse. The young children have limited ability to understand and report abuse/ neglect, and the child care workers and parents lack awareness and ability to identify and manage child protection issues of the young children. The social protection and mental health aspects need to be built-in the ECD interventions.

There are only two lasting bequests we can hope to give our children. One of these is roots, the other, wings

– Hodding Carter

The girl child often faces discrimination in nutrition, access to health and education. They are at higher risk of violence compared to boys. Those from socially disadvantaged castes and poor often have poor access to services. **Equity** with respect to gender, societal and economic deprivations are the aspects ECD interventions should be sensitive of, across the life course.

The adaptation to the environment occurs right from conception and affects development throughout. Our approaches should target caregivers and children with effective interventions throughout the life course, with the sensitive period from conception to 2-3 years of age being of particular importance [10].

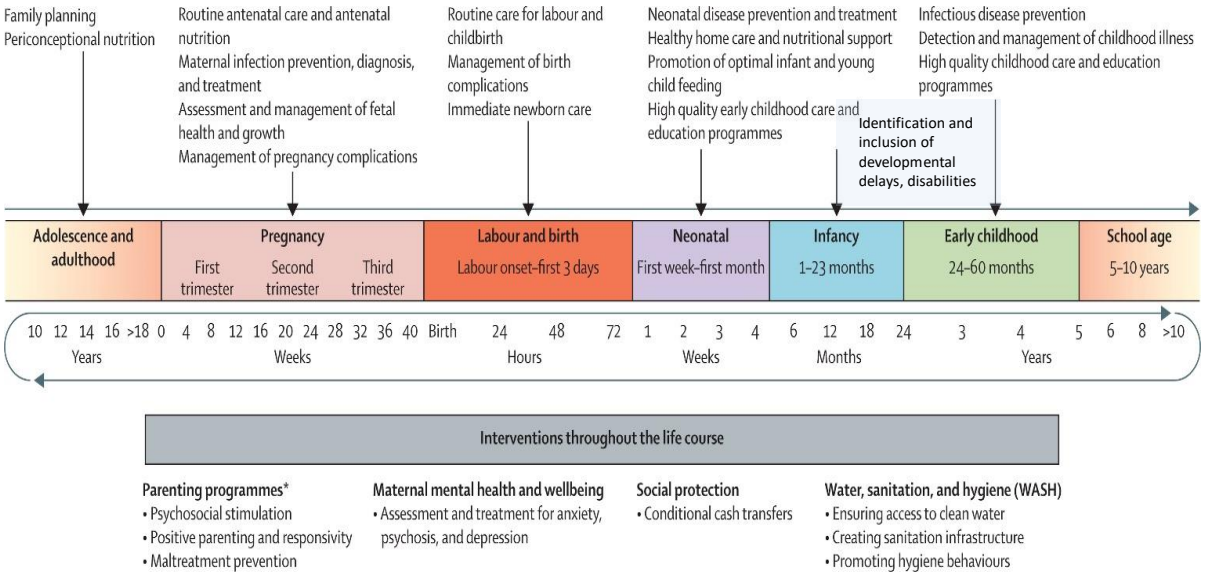


Figure 4: Nurturing Care and its Contributions through the Life Course [10]

ECD should be **inclusive of children with special needs**. ECD programs should include early assessment for delays, plans for targeted clinical, behavioural and social interventions. As per census 2011, 75% of the children at the age 5 with any disability do not attend schools; 27% of those aged between 5-19 years never attended any educational institute [11] [12] . The health care services, education systems, social services, and child protection shall be inclusive, providing an equal opportunity to the children with special needs [5]. From an ethical perspective it is a fundamental responsibility of parents and care providers in society to nurture children to integrate into societal mainstream. Promoting health & development of children with developmental issues and disabilities increases their likelihood of preparation and participation in contributing to economic productivity in adulthood.

Nurturing care is fostered by **supportive environments**. It is provided by parents and caregivers. Their capacity to provide nurturing care is affected by their wellbeing, safety, and security. National policies shall support families and caregivers and guarantee the services they require eg. social protection. Integration into a community health, nutrition, education, social and child protection services, strengthen the capacity of parents and caregivers [8].

Investment for promoting nurturing care and having impact in the society requires **long term political vision, commitment and perseverance**; scalable and sustainable evidence-based, comprehensive, and inclusive ECD programs; and capacity building and systems strengthening through collaborations and partnerships.

In India, the health programs cater to most of the recommended activities for ECD across the life course; except for the early responsive care, and maternal mental wellbeing.

Departments of H&FW, W&CD, Water and sanitation, and Institute of Local governance (PRI) are important stakeholders

The **Ministry of Health and Family Welfare,** India aims to increase focus and investments in early childhood development by using strategies such as education (mothers education, early childhood learning opportunities and pre-school education), social protection (family health insurance and cash transfers), child protection (reduction of harsh punishments, and prevention of maltreatment), and **WASH**. The Rashtriya Bal Swasthya Karyakram (RBSK) care for identification and early intervention for 4 D's -defects at birth, deficiencies, diseases, development delays.

The **Ministry of Women and Child Development**, through ICDS provides appropriate nutrition and, early care and childhood education (ECCE) for children 0-6 years, along with women and child protection services, allowing each child to reach her/ his fullest potential. *Poshan Abhiyan* launched in 2018, is a convergence of ministries to improve overall nutrition and make the country malnutrition free by 2022[1]. The programs for nurturing care (responsive parenting, early stimulation and security and safety) also require convergence of multiple sectors, and partnerships [9].

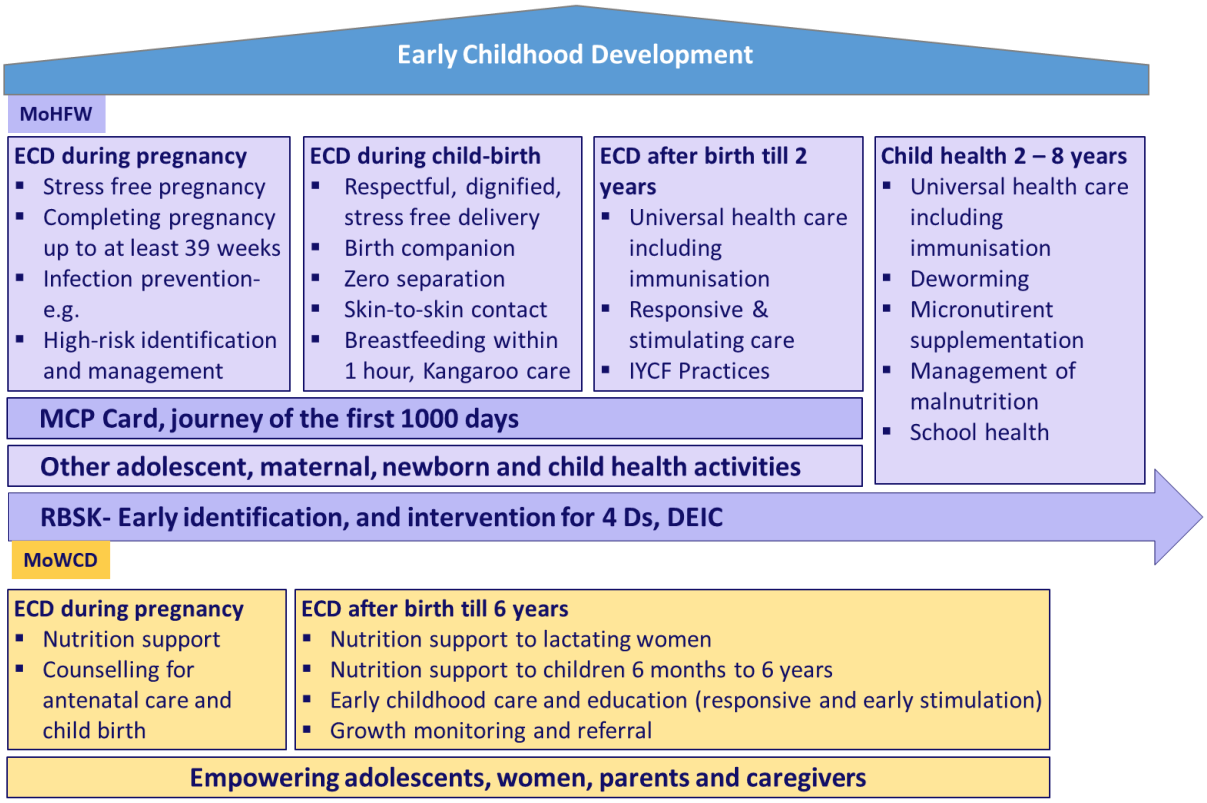


Figure 5: ECD programs by Ministries of Health & Family Welfare, Women & Child Development

[1] https://www.india.gov.in/spotlight/poshan-abhiyaan-pms-overarching-scheme-holistic-nourishment

The first 1000 days, is considered the most important window for ECD as the learning and acquiring of most positive behaviours start in this period, as shown in the figure below.

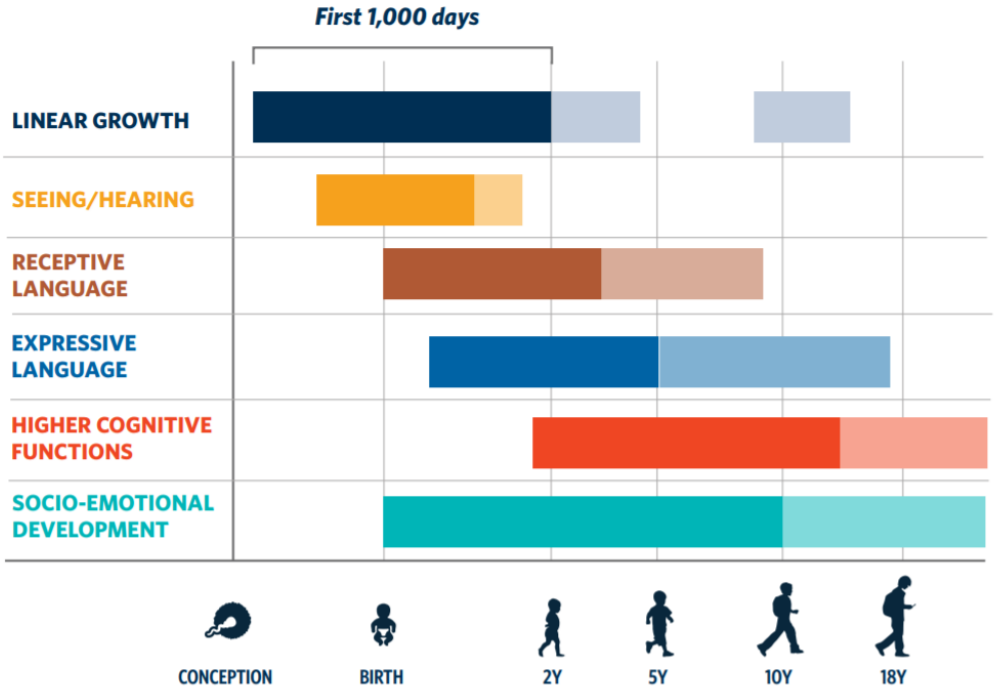


Figure 6: Cognitive, socio-emotional, and physical growth with age [13]

There are several interventions across the life course that contribute to ECD, and were discussed during the workshop, mainly those involving parenting and community support.

While parenting, in every culture, has inherent practice for nurturing care that shall be promoted with scientific understanding. Parenting may require additional understanding to holistically address the cognitive, social, emotional and physical developmental needs of the children. These include comprehensive methods- preventive, promotive, and curative interventions for health and nutrition; play and conversation for early stimulation; love and caress for responsive care; and safe physical, emotional and social environments.

Nutrition

There is evidence that the mothers' appropriate nutrition and supplementation, and physical exercises have impact on improved newborn outcomes (reduction in pre-term birth, low birth weight, neural tube defects etc.). A review on breastfeeding presents evidence that optimal breastfeeding supports improved performance in intelligence tests in childhood and adolescence. Kangaroo Mother Care has been associated with an increase in bonding indicators such as infant-mother attachment at 3 months, infant growth, and rates of early exclusive breastfeeding (at 1–3 months) [10]. Prevention and management of malnutrition in children, and micro-nutrient supplementation (Vitamin A, Iron and Zinc) has impact on reduction in stunting, diarrhoea related mortality, and micro-nutrient deficiencies. Community based management of

malnutrition is essential for managing mild to moderate acute malnutrition and follow-up of uncomplicated severe malnutrition. A combination of freshly prepared food and ready to use therapeutic food (RUTF) are used for managing malnutrition.

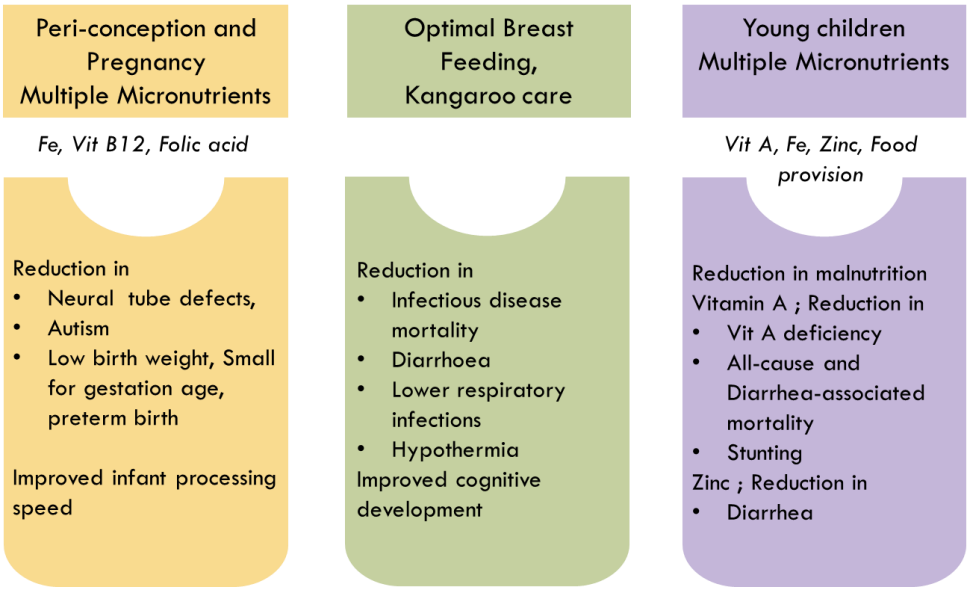


Figure 7: Nutrition interventions for ECD **[10]**

If you want your children to be intelligent, read them fairy tales. If you want them to be more intelligent, read them more fairy tales.

-Albert Einstein

Early stimulation and learning

Playing, singing and story-telling to the young children activate several neuronal synapses and learning. Play is central to early stimulation and learning of young children and age appropriate play activities accentuate the growth potential. A review of evidence on the role of play in children's development described 5 different approaches to play that have scientific basis to affect health benefits, cognitive self-regulation, social competence, academic progress, language and communication skills, mathematical ability, reasoning, narrative and spatial skills, attention and execution functions, and improved awareness to self and towards others [14].

Home access to children's books, toys, Television and other media can increase home access to early childhood development programming aimed at either children or parents.

The evidence suggests that perceiving an activity as play leads to higher levels of joy and active engagement. Pretending may lead to improved outcomes because children make more meaningful links to their own knowledge and experience. The social interactions during play are sometimes linked to improved learning outcomes. Iterative play may lead to more creative, innovative ways of thinking and problem solving [14].

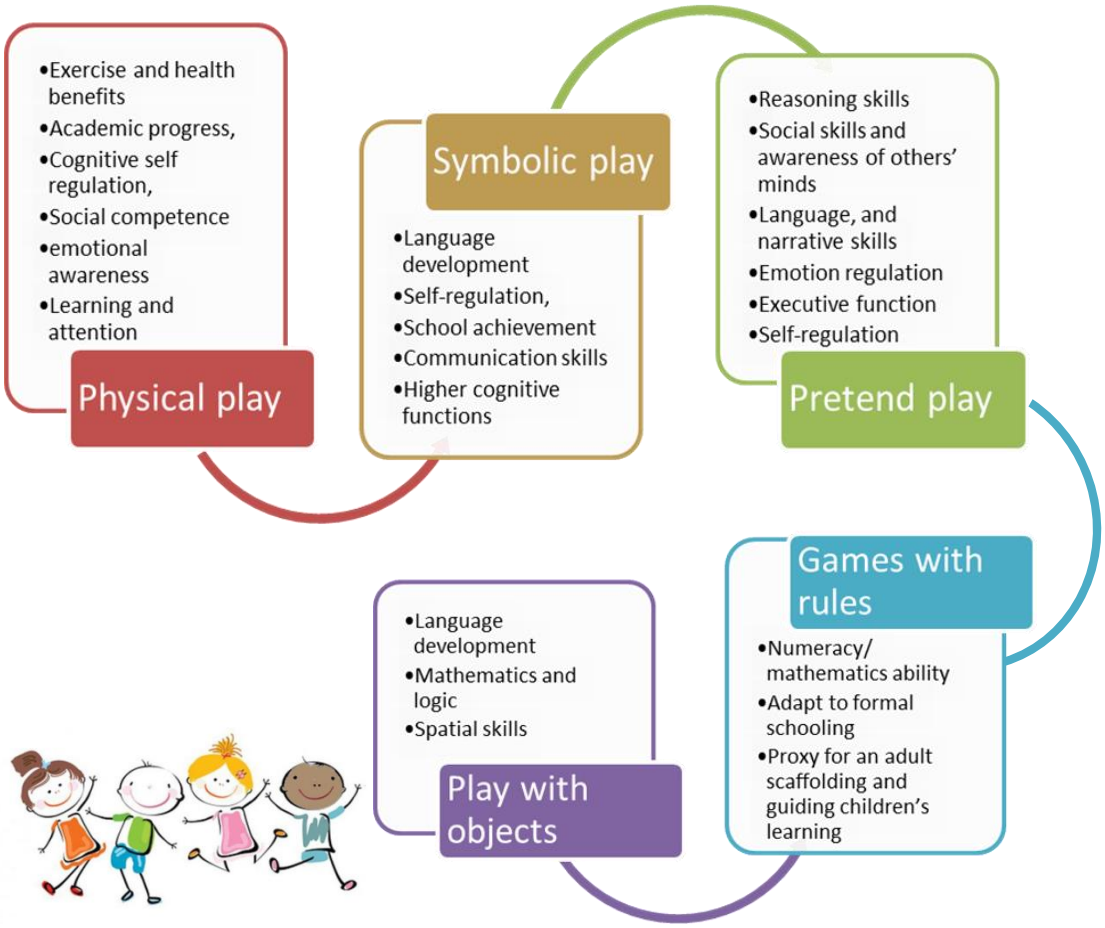


Figure 8: Type of play activities and effects on ECD

Your children will become what you are; so be what you want them to be.
– David Bly

Responsive care and child protection

Responsive care begins with parents and families and shall extend to communities, to address children's emotional and psycho-social needs. Empowering mothers, fathers and other care givers in families for parenting thus becomes core for any ECD intervention. The fathers have crucial role in providing responsive care. The interventions on improving parenting have shown impact on improved cognitive, emotional, and psycho-social development of the children [15]. But a less addressed problem is of maternal depression and anxiety that may lead to sub-optimal infant and child feeding practices, insufficient communication and play to stimulate learning, leading to poor growth and cognitive development.

There is evidence that child abuse and neglect, fights between parents, disruption of families, loss of community support systems, exposure to societal violence, and dysfunctional health systems contribute to poor psycho-social and emotional development of the children [16]. A few programs to prevent child abuse in isolation or with parenting programs have shown some evidence on improved cognitive functions and school performance.

The *Eat, play and love* are inter-linked and best delivered as mixed package to have substantial effects.

Multi-generational nurturing package shall include essential interventions of health and nutrition for mother and child, primarily delivered by the health-care system from pre-conception up until the first 1000 days of a child's life. The elements of care, responsivity, stimulation, and protection are included for better acceptance and holistic impact on child's development.

Early learning and protection package include parenting support and protection for young children. This package needs to emphasise quality and family support through parental empowerment, guidance on nutrition and care, and child protection.

Social safety net interventions provide protection to care givers against economic burden via cash transfer programs, and community crèche services. Empowering families for building knowledge and capacities for appropriate parenting and with community support reduces stress and improves early care seeking.

Parent- and teacher-mediated interventions for children with special needs have documented that parents are the main stay of management of children with neurological developmental disorders. The parent support programs, clinic-based and community-based, have shown more positive effect on cognition and socio-emotional outcomes of such children compared to those only on clinical care. The inclusive education in pre-schools and schools provides opportunities for these children to participate in social mainstream.

Identification of platforms at community, clinic, and pre-schools can be used to coordinate the delivery of the packages targeting population segments and families in greatest need.

Safe Environment for Children

'Safe environments' can mean physical environment which include infrastructure, outdoor and indoor pollution, and can include other components which are both social and emotional. It includes physical spaces like home, school, and enroute.

We are aware of the enormous responsibility of caring for young children because some impacts may not be immediately apparent but have long term consequences like lead in paints/ drinking water, chemicals, pesticides, outdoor air pollution, road injuries, etc. Therefore, every child and young person has a right to be safe from harm at all times and the wellbeing and best interests of children are the responsibility of the entire community.

Good Practices for child safety in schools are available across the globe and India has also adopted some of them in the National Early Childhood Care and Education curriculum framework (2012), MHRD guidelines on safety and security of school children (2014). India has also adopted the school health program under Ayushman Bharat in 2018 and CBSE has also revised the school health manual in 2019.

Quality Improvement in health and development

According to Robert Wood Jhonson Foundation (RWJF) the process-based, data-driven approach to improving the quality of a product or service is quality improvement. It operates under the belief that there is always room for improving operations, processes, and activities to increase quality. Quality improvement includes those activities that improve population health, ensure healthcare roving operations, processes, and activities to increase performance.

Quality improvement is both a political and healthcare management imperative. Quality improvement principles and methods can support greater equity and enhance the health and social outcomes for a given level of investment in particular clinical areas (such as safe motherhood and treatment of childhood illness, malaria and HIV/AIDS) and there is a need for research to look into quality improvement of the various ECD parameters.

EVIDENCE ON ECD PROGRAM DELIVERY PLATFORMS FROM LMIC

Smart investments in the cognitive, linguistic, socio-emotional and physical development of young children —from before birth until they transition to primary school— are critical to put them on the path to greater prosperity, and to help countries be more productive and compete more successfully in a rapidly changing global economy.

Parenting support programs for nutrition and growth, or positive and responsive care, or early stimulation, or child protection and safety, or the combinations of these are implemented and reviewed subsequently. Few of these programs aim at strengthening overall family and community support for parenting too.

> Your children need your presence more than your presents.
>
> – Jesse Jackson

A review of **parenting programs** [17] in developing countries assessed for opportunities and challenges for preventing emotional and behavioral difficulties in children 0-12 years. The interventions were either **home-based or centre-based or a combination of the two**. They found 19 studies that trained parents to improve psycho-social stimulation in children and found improvement in emotional development among the intervention group. Another eleven interventions were more comprehensive in nature and included nutrition and growth monitoring, these unfortunately did not measure psycho-social effect. Eight studies specifically targeted preventing emotional and behavioural difficulties and showed positive pooled effect.

Another review studied centre-based and home-based interventions [18] for ECD and reduction of violence in children (0-8 years); reported positive effects for ECD and violence related practices in individual studies but there was no standard measurement of outcomes on development to be able to drive pooled effect of these interventions.

A review [19] on exclusive **centre-based child care for ECD** and their cognitive effect found only one relevant RCT from Kenya, Uganda and Tanzania/Zanzibar. The study reported improvement in cognitive function by centre-based responsive care and early stimulation, but the study did not measure pysho-social developmental outcomes. There have been several investments in the pre-school education and creches in last two decades, however, the measurement of early outcomes, and long-term impact on cognition is largely missing.

Several studies [20] reported **community engagement for child survival and early development** targeted to improvement in health and care during pregnancy, and children 0-5 years. These studies describe models of engagement, well described with theoretical insights. The successful behaviour change in the beneficiaries was noted in programs that worked in collaboration with community and those that shared leadership with the community. Unfortunately, none of these papers had any uniform measurement of childhood development; a few reported mortality and health indicators.

The Lancet series [10], states that parent support programs such as the WHO/UNICEF's *Care for Child Development* and *Reach Up and Learn*, which provide training and resources for parents—can significantly improve the quality of nurturing care for young children.

Still, much of the evidence is obtained from neuro-development sciences and small sample size studies rather than large scale programmes.

A large scale-up of ECD intervention [21] in Pakistan provided parenting support and care to the children through community-based workers who delivered the enriched interventions integrated with routine health services to caregivers and their young children for early stimulation, responsive care and quality interaction. The studies found that at 2 years of age, children who were exposed to the psychosocial stimulation intervention had significantly higher cognitive, language, and motor development scores.

The evidence from India from regional projects had definite positive change in outputs that is the parenting behaviour. But they had mixed effect on the ECD outcomes. A few ECD interventions from India do not even measure ECD outcomes.

Successful evidence on ECD comes from programs that provided at least one monthly contact with the parent and child.

Overall evidence on ECD suggest that-

- In the very early years (0-3 years), parental engagement emerges as key, as is the role of the health sector, via primarily home-based supported by centre-based activities.
- In the pre-school years (3-5 years) community-based or managed interventions show particular promise, via early childhood education in pre-schools or creches.
- The early primary years (5-8 years) are the critical transition years and require schools to be prepared for children including teacher pre and in- service training and appropriate curricula.

Despite several reviews, we still are not aware of the following – *and what we may require,* particularly in the Indian context.

- What is the burden of developmental delays? – *Sentinel Surveillance*
- How to actually implement nurturing care programs, especially in regional context? – *Implementation science research*
- How to ensure efficient and effective implementation of evidence-based interventions? – *Rigorous strategies for human resource and capacity building*
- How to measure, and uniformly assess different strategies? – *Standard indicators and measurement tools; M & E frameworks*
- What shall be scaled-up and what are the learnings? – *Mixed evaluations and high-level consultations*
- What level of advocacy is required for long term vision and consistent political commitment? – *Collective lobbying*

A study from Zimbabwe and Brazil [22], providing early childhood parenting training package, found that the program was scalable only when it was feasible and well accepted by mothers and home-visitors; training was viewed as appropriate; and visitors felt well-prepared to conduct visits. The program managers emphasised on the need for expansion of supervisor training. The

staff turn-over was the main challenge and the program was less feasible for staff with other work commitments. Another program for early child development provided perinatal home visiting in South Africa, reported eight learnings for a sustainable ECD program [23]. These are:

- Rigorous selection and hiring procedures for staff
- Standardised trainings, with pedagogic skills and core pragmatic problem-solving skills
- Feedback about quality, and monitoring
- Community and institutional support and strong rapport building with beneficiaries
- Stable leadership, consistent leadership focusing on how to optimize the potential of staff
- Implementing with sustainable, long-term change in mind; and,
- Cultivating consistency required disciplined action and disciplined focus on the visions

The successful implementation of ECD projects/programs require strong entrepreneurial leadership, rigorous measurement and active use of data in support of adaptive learning, and champions acting at subnational levels.

MONITORING AND EVALUATION OF ECD INTERVENTIONS

At a global level the SDGs, target 4.2 is to ensure that all girls and boys have access to quality early childhood development, care and pre-primary education by 2030.

The SDGs incorporate an ECD index to measure the progress.

Monitoring and evaluation of a program/ project is planned based on the understanding of the pathways of the ECD interventions, coherence, linkages and influencers. What we monitor and evaluate really depends on what the intervention is, since the inputs, outputs, outcomes and impact will really depend on the program goals.

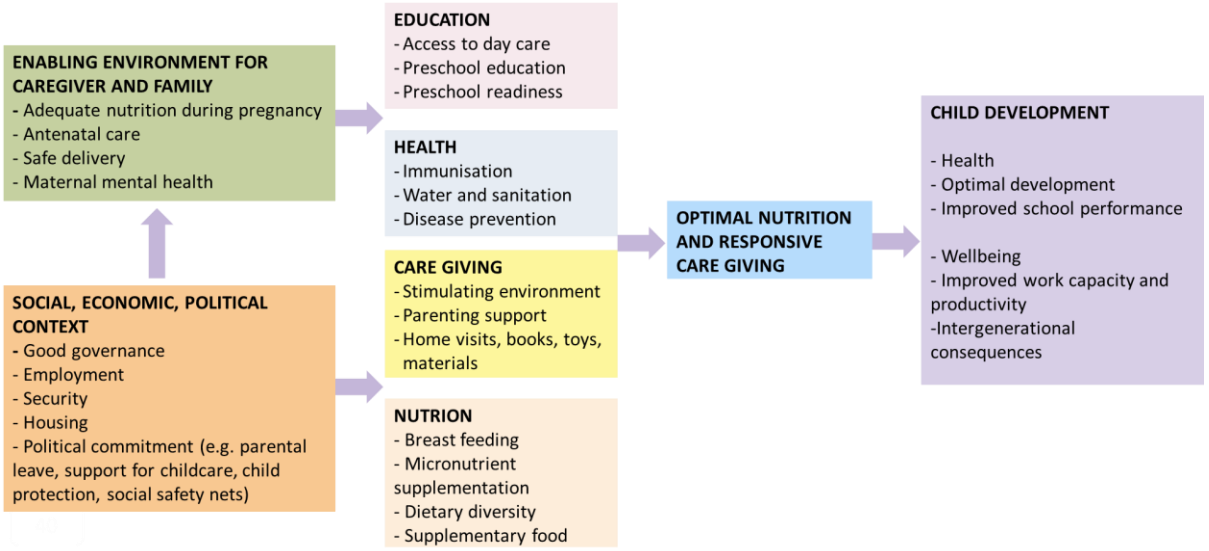


Figure 9: Pathways of change for ECD interventions [24]

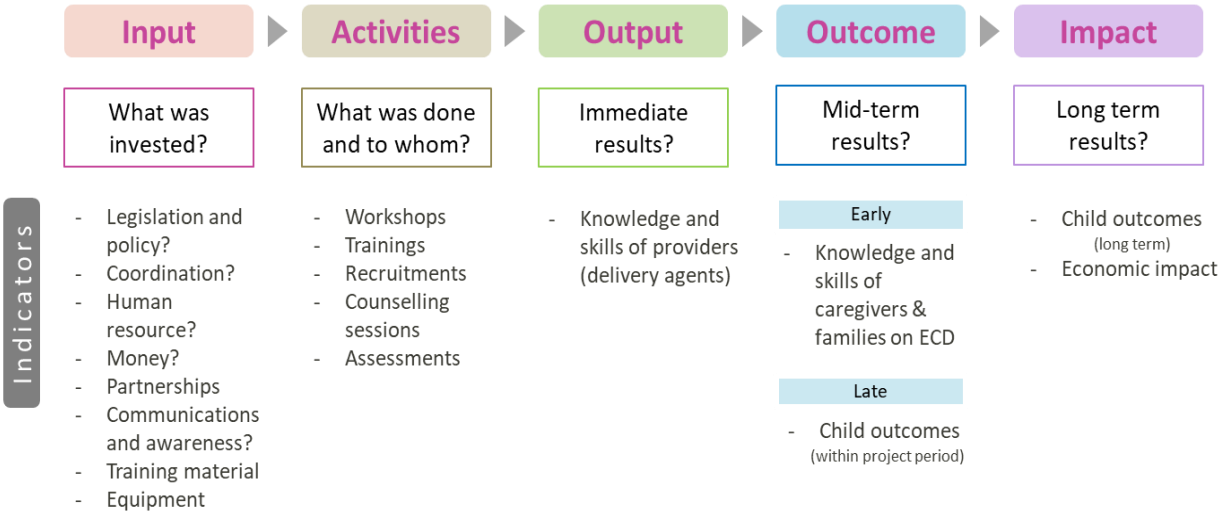


Figure 10: Logic model for an ECD intervention for parenting training

Most studies in our reviews have reported the outputs of their projects/ programs but only a few measured early and late outcomes and impact. And those do measure outcomes, use different indicators and tools. Several tools are available and have different purposes, mentioned in the tables below.

Table 1: Indicators and tools to measure early outcomes of ECD programmes

Domain of Intervention	Program goal	Standardized tools and indicators
Health	Maternal nutrition, antenatal care and attended delivery	- Food frequency Q, 24-hour recall - Proportion receiving at least 4 antenatal visits **(WHO recommendation)** - Content of antenatal visits - Proportion of institutional delivery and attended by skilled personnel
	Maternal mental health (depression, stress and anxiety) Perinatal period Delivery experience	- Depression scales (PHQ-9, EPDS, GAD-2, CES-D etc) - Parent social support - The Childbirth Experience Perception Scale - Parenting Stress Index
Nutrition	Responsive feeding and child nutrition	- **MICS (Breastfeeding and dietary intake)** - Proportion of early initiation of breastfeeding - Proportion exclusive breastfeeding till 6 months - Quality and extent of complementary feeding after 6 months (FFQ, 24-hour recall)
Responsive care	Maternal knowledge about ECD	- Caregiver knowledge of Child Development Inventory - Karitane Parenting Confidence Scale (perceived parenting self-efficacy).
	Parent-child interactions / Parenting styles and practices	- NCAST Parent Child Interaction (PCI) Feeding and Teaching Scales - Home Observation Measurement of the Environment (HOME) - Parenting Interactions with Children: Checklist of Observations Linked to Outcomes (PICCOLO) - Parent practices interview (disciplinary style)

Table 2: Indicators and tools to measure late outcomes of ECD programmes

Child outcomes	Tools (marked in bold) and Indicators
Physical growth / Nutrition	- Anthropometry (WHO standards: HAZ, WAZ, WHZ etc) - Physiological measures (Haemoglobin, Serum ferritin [iron], serum retinol [Vit A], cortisol [stress and adversity])
Age appropriate development Concerns with behavior Functional status	- **BSID-III, ASQ, DDST, Kaufman, Griffiths, RBSK, MELQO-MODEL, GSED** - **CBCL, SDQ, ECBI, PEDS** - **ICF-CY**
Health	- Practices related to WASH - Presence and type of illness - Care during illness (ORT for diarrhoea, antibiotics for pneumonia) - Hospitalization episodes - List of immunizations received
Education	- Enrolment and attendance in preschool programs - Quality of learning environment (number and age appropriate books and playthings) - Grades completed - **MELQO-MELE** - **Early childhood education quality assessment scale (ECEQAS)**
Adult outcomes (indicators from the Jamaica study*)	- Income and job type (full / part time) - IQ and mental well-being (self-esteem, depression and anxiety) - Anti-social behavior

Which tool to use, depends on the purpose, focus of dimension, mode and type of assessment and the nature of the tool itself. If the purpose is research requiring detailed diagnosis, with adequate resources then there are specific tools to be used such as PHQ-9, FFQ, etc. While if it's a large scale ECD program then a simpler tool but with acceptable sensitivity and specificity would be preferable. The WHO/ UNICEF framework for monitoring and evaluation of ECD interventions [25] , & MICS are such tools that can be used for large population based assessments.

The impact of ECD is measured mostly by the beneficiaries' involvement and contribution to the society in the later age. Such as likeliness of employment, skill level of jobs, income, physical growth, cognitive gains and effective prevention of disabilities/ developmental disorders.

ECD PROJECTS FROM INDIA: SUMMARY DESCRIPTION AND LEARNINGS

The well-known projects for community-based ECD interventions from India were presented to share experience and evidence of implementing scalable ECD interventions (target 0-8 years children). Within the presented diverse range of projects some focused on early learning and responsive care, some on nutrition and health, and a project focused on security and safety; covering the various aspects of the nurturing care framework. Four projects had targeted interventions for children with special needs.

The projects Aarambh and Sneha from Maharashtra and, programs by Kalike in Karnataka worked with the Anganwadi Workers and the Anganwadi Centres for capacity building of parents. The CARING and AAM Trials by Ekjut focused on holistic nurturing care and used dedicated staff (Anganwadi like) and Creches for services provision. A child protection and integrated mental health project of NIMHANS, for young children, intervened at the Anganwadis and child care agencies.

On the other hand there were projects like SPRING implemented by Sangath, Home-Based holistic childcare by Centre for Learning Resources that worked with ASHA-like community workers in Haryana, and Mitanins (community health workers) in Chhattisgarh.

The facility-based care by MAMC in Delhi, community-based support by CARENIDHI in Delhi and, Anganwadi- and school-based interventions by St. John's Medical College in Bangalore focused on development of children with special needs and disability.

It was an opportunity to learn about their intervention packages, platforms of delivery, outcomes and learnings for scale-up. See table below for brief description on the presented projects.

The common learnings are as follows:-

Intervention package

Early learning and protection package

- It is easier and efficient to begin with early stimulation, learning and responsive care, and then extend to safety and security, nutrition and health. This will get higher focus on the missing aspects in the current programme interventions along the life-course.
- Play is central to early stimulation. The providers require wide range of options and low-cost resources to be able to choose from, and to be able to cover all play-stimulated developmental aspects. The choices are also important to ensure that there is no loss of interest by the repeated activities. The providers can develop toys and play games using local materials to engage children and parents.
- Parents training programs are crucial to improve care at home. Early stimulation, responsive nutrition and play through parents training at home by dedicated project staff/ frontline worker found significant behavior change of care givers.
- Monthly contact with parents and child is essential to achieve change in behavior of primary caregivers and outcomes.
- The age group of 0-8 years shall be segregated to 0-2, 2-5 and 5-8 years to offer age appropriate play options, screening and parents training.
- The pre-school and early school interventions require age appropriate approach to early learning than young children.

- Age group of 0-2 years well aligns with the ECD activities under MoHFW and MoWCD. It provides opportunity for coordinated efforts.
- The presented projects included responsive nutrition and WASH.
- The presented early stimulation projects from India did not include social safety and security in the package. Although they promoted responsive care but directly did not address neglect and abuse.
- The presented early stimulation projects from India were not inclusive of early stimulation of children with special needs.
- **Multi-generational package**
- Ekjut used a combination of early stimulation and multi-generational intervention, with higher focus on former. They found it efficient and effective in terms of improvement in nutrition related outcomes.
- A community-based intervention found that the Ready to Use Therapeutic Food produced from indigenous foods is highly acceptable for children with severe and acute malnutrition.
- In this workshop, we did not invite the projects that did not include early stimulation and responsive care to young children. However, during discussions it was found essential to begin early; the interventions shall begin from the Adolescents and continue through the life course. These packages require strengthening of existing interventions in health programs, quality improvement and monitoring with an ECD lens.

Social safety and security

- There is no holistic definition for 'Child abuse' for young children.
- The Anganwadi workers, pre and primary school teachers and special educators from child care agencies were not capable of identifying and managing child exposed to abuse.
- It is feasible to train the above service providers and care givers to detect children who may have experienced abuse.
- It is feasible to train young children to report misbehavior, abuse and neglect.
- The teachers could be trained for positive reinforcements and to avoid punishments.
- Role of community engagement to reduce abuse and neglect was not included in the presented projects.
- Abuse and neglect may lead to mental health concerns even at very young age, thus child protection and mental health shall be integrated into ECD interventions from an early stage.

Parents and teacher-mediated intervention for children with special needs

- The tertiary care for neuro-developmental disorders centres on parent-mediated care providing appropriate stimulation and responsive care shall be supported by a team of doctors, special educators, therapists, psychologists and physiotherapists.
- Children with special needs also have health and nutrition requirements that are often ignored.
- There is a strong need for community level follow-up and support to parents of these children while at home or near home.
- A successful community based project for parents and child support at home and in communities can improve access to care, and cognitive development compared to controls; and build responsive communities to support social participation of children with special needs.
- The Anganwadi Centres, pre-schools and primary schools are limited in their capacity to manage children with special needs in an inclusive class with other children.

Delivery processes and platforms

- A mix of centre-based and home-based service delivery for parents training has high potential to succeed.
- Involving father and other caregivers at home is beneficial.
- At least one monthly contact with the child and caregivers is crucial.
- Availability of resources at the centres and at home is important for creating stimulating environments, and activities.
- Picture based manuals with appropriate messages are useful in training parents at home and in the centre. Use of calendars with ECD messages, wall-hangings at home are good reminders and monitoring tools.
- Community fairs, picnics, participatory meetings were the most appreciated and involved large sections of the community as well, other than just mothers.
- Mobile technology shall be explored to impart trainings, parents-support, communication and self-education.
- New MCP card shall be central to any ECD intervention, it is an useful training as well as monitoring tool.
- Screening for developmental delays is possible by community workers using simple scientific tools available.

Integration into government systems

- Most presented projects worked along with MoWCD or MoHFW. The successful projects acknowledged the high level commitments and engagement of the government departments for the projects.
- Anganwadi Centres were considered to be the most suitable platform to provide centre-based intervention. Anganwadi workers also provide home visits for direct intervention with children, parents and care givers. The intervention consists of early stimulation and responsive care which includes nutrition, safety and security.
- ASHAs are considered key for reinforcing ECD through periodic home visits and can also conduct periodic screening for developmental delays. Role of ANMs in ECD is yet to be explored.
- Aarambh project by Sewagram, used twin approach to involve MoWCD and MoHFW for ECD interventions.
- There is a need for amalgamation of efforts of HFW, WCD, Education and WASH.
- Community engagement, especially with PRIs improves adoption of ECD interventions and also helps to positively modify environments.
- There is a need for referral units at secondary level of care (CHCs and District hospitals) to provide diagnosis and counselling services to the parents of suspected children with delays, and those with diagnosed delays and disabilities.
- Two projects, one on child protection and other for children with special need also included pre-schools, primary schools and child care agencies. They found it feasible, and encouraging among the providers and parents.
- Most models were NGO run or supported and had a strong supervision component, but lacked structured mentoring and monitoring framework.

Measurement of progress

- Among the presented community-based projects, accept for one, none measured the cognitive, socio-emotional, or motor outcomes of the interventions. However, most

measured the outputs such as numbers trained, behavior change of service providers and care givers; and physical growth outcomes.

- The projects had their monitoring mechanisms but except one, none could specify the use of standard tools for measurement of ECD outputs and outcomes. For two projects the mid-term results on outputs and early outcomes were awaited.
- There was a clear need of identifying standard indicators, monitoring frameworks and measurement of early and late outcomes of ECD interventions.

Sustainability and scalability

- All the presented projects had components that were scalable but except two (Ekjut and Kalike) none demonstrated a large-scale implementation.
- Most projects reported acceptability, feasibility and efficiency in terms of use of resources and thus could be considered for scale-up.
- Integration into government programs and systems with their commitment, ownership and effective leadership is essential for sustenance and scalability.
- The system based capacity building, mentoring and monitoring mechanisms that are self-sustained shall be considered scalable.
- Capacity building of trainers from within the system is likely to be a sustainable and scalable approach. Trainings provided in a cascade manner space out learning, and were found more effective than consolidated one time training. Projects also demonstrated that experiential learning and on-site coaching improved learning.
- Community-based participatory approach was found effective and can be sustained provided appropriate training and resources are provided to the frontline worker who would facilitate the community's engagement in a productive manner.
- A structured supervision and mentoring/ coaching mechanism requires most investment for a sustained project/ program that shall be scaled-up. No present model demonstrated a successful mentoring mechanism.
- Standard monitoring frameworks, use of data and accountability is vital for considering scalability. This was largely missing in the presented projects.
- Amongst others, consistent availability of resources and logistics management are critical for sustenance and plan for scale-up.

Table 3: Project summaries, outcomes and learning

Project name	Organization	State & region	Target beneficiary	End provider	Implementation strategy	Outcomes	Learnings
DEPARTMENT OF WOMEN AND CHILD DEVELOPMENT							
Arambh [2018-ongoing]	MGIMS, Sevagram, Nagpur	4 districts in Maharashtra- Pune, Palghar, Yavatmal and Aurangabad	Parents, & 0-6 years children	Anganwadi Workers (AWWs)	**Domain: Responsive Care, Early Learning** Trainings in a cascade model to WCD supervisors, who in turn train, mentor and supervise the AWWs, who provide centre-based and home visits to children, training and support to parents to promote enabling environments.	Mid-term evaluation conducted, results awaited	Early stimulation and learning is the best entry point for behavior change and communication for Nurturing Care of children. Palak melava (fair) with child and families engagement highly successful Demonstrated capacity building of the system for a sustainable program.
Strengthening early childhood education [2008-ongoing]	Kalike, Yadgir (Tata trust)	Yadgir district of Karnataka	Parents and children upto 6 years.	Anganwadi workers	**Domain: Early learning and Responsive Care** Capacity building of- AWW, Anganwadi Helpers and Supervisors- Trainings/ Workshops, Onsite support, Material support; Perspective building of ICDS Block/Project heads; Capacity building of community/village level institutions: Care givers- meetings, home visits, Balamelas, mobile library	Outputs: 10,000 + Trained AWWs in ECE curriculum; ECE weekly time table in AWCs; AWCs promoted activity-based learning; Increase in attendance of AWWs Demonstration/ Observational model AWCs	

Project name	Organization	State & region	Target beneficiary	End provider	Implementation strategy	Outcomes	Learnings
CARING trial [2012-2016]	Ekjut, Chhattisgarh	Jharkhand and Odisha	Pregnancy and children 0-2 years	Local female staff included in the project-Anganwadi like community worker	**Domain: Health, Nutrition and Early learning** Participatory Learning & Action (PLA) based group meetings and home visits. PLA group meetings through games, story-telling, role-plays, picture cards and demonstration Counseling for ANC, nutrition and safe delivery; optimal newborn care, IYCF, prevention and treatment of illness, immunization, WASH, early stimulation and responsive care	Output: Significant improvements seen in dietary diversity of mothers and children; more mothers washed their hands before feeding children; Outcome: Positive change in average Length; fewer children were underweight at 18 months; and reduction in infant mortality rate	The centre-based meetings and fairs (picnics) were the effective mode of learning, & community engagement. Home visits very important for family support. There should be emphasis on locally trained women as crèche workers (2 for maximum 20-25 children); their timely payments and monthly review meetings.
Action Against Malnutrition (AAM) [2013-2017]	Ekjut, Chhattisgarh	Seven blocks of four states (Jharkhand, Bihar, Chhattisgarh and Odisha)	Parents and children 0-3 years	Local female staff included in the project-Anganwadi like community worker	**Domain: Health, Nutrition and Early learning** Trained workers facilitated Participatory Learning & Action based group meetings and home visits Crèches for 6-36 months children, provided Early learning, nutrition support and safe environment	Had impact on reducing wasting, undernutrition and stunting	Home Visits every two weeks or more had an impact on children's cognitive scores. Creches are powerful strategy to improve nutritional status and development especially in underserved rural areas.

Project name	Organization	State & region	Target beneficiary	End provider	Implementation strategy	Outcomes	Learnings
Sneha [2018-ongoing]	Gram Mangal, Palghar	Vasai, Palghar, Dahanu, Talasari blocks of Palghar district in Maharashtra	Parents and children 0-6 years	Anganwadi worker	**Domain: Responsive Care** Capacity Building and mentoring of Anganwadi worker, Anganwadi Helper and ICDS supervisor. Provide developmentally appropriate learning aids and materials. Additional toys and play activities created by AWWs themselves Balvikasak help in government lesioning	Mid-term evaluation conducted, results awaited	Long legacy of Anganiwadi like interventions. Strong community acceptance, volunteer support Experiential learning to create learning environments for children—feasible and locally adaptive Anganwadi grading tool used—helpful strategy to monitor and motivate the providers
Initiating Community-Based Psychological and Protection Services for Early Childhood [2017-ongoing]	NIMHANS	Urban communities in Bangalore	Parents and Children 0-6 years; Anganwadi workers; Agencies providing care to 0-6 year orphans, disabled and affected by HIV/ AIDS	Project staff	**Domain : Child Protection and Mental Health** Capacity building of parents, caregivers, Anganwadi teachers and child care institution staff—who receive training and capacity building inputs in order to better meet the protection and mental health needs of young children. Manuals developed and freely available on line.	Awaited	Protection is often limited to older children/adolescents. There needs to be a definition of "Child protection" specific to young children It is feasible to integrate child protection and mental health in ECD activities through AWWs and parent support.

Project name	Organization	State & region	Target beneficiary	End provider	Implementation strategy	Outcomes	Learnings
DEPARTMENT OF HEALTH AND FAMILY WELFARE							
Integration of early learning and responsive care content into the Mitanin program in Chhattisgarh [2012-2015]	Centre for Learning Resources, Pune	Chhattisgarh	Prenatal to 3 years of child's age	Mitanin Health Worker	**Domain: Early Learning, Responsive Care, Nutrition and Health** Cascade capacity-building approach integrating Early Learning and Responsive Care content into all levels of the health system and co-design home visiting manual (consisting of pictures and specific messaging) Enabler: Leadership willingness to work on home-visiting skills and strengthen content training	Motivation and basic integration achieved. Observed partial messaging, loss of interest due to repetitions, and lacked focus on infants. Supervision essential for sustainable program, but challenging due to large supervision areas. Quantitative assessment of outcomes not done.	Design to plan for cascade loss: incorporate experiential learning, on-field coaching, build different skills at different levels Changes recommended for manual: picture for each message, incorporate benefits, colour coding of age groups, improve clarity of pictures Adjust supervisor workloads/ priorities to create time for on-field coaching
SPRING [2014-2018]	Sangath, Goa	Rewari district, Haryana	Prenatal to 2 years of child's age.	Dedicated project staff- ASHA like community workers	**Domain: Nutrition, Early Learning** Training and Supervision of Community Workers who provided home-visits for counselling around feeding, interaction and play, help demonstrate skills, provide coaching, solve problems and engage family.	Improved responsive care giving, opportunities for early learning and improved feeding practices at 12 months of intervention No impact on cognitive and psycho-social outcomes of children after an year	Training & Supervision at scale and family adoption of key practices has been a challenge to maintain fidelity.

Project name	Organization	State & region	Target beneficiary	End provider	Implementation strategy	Outcomes	Learnings
TARGETED INTERVENTIONS							
Integrated service delivery for Early Childhood Care and Development of all children with special needs	Carenidhi	North-East Delhi	Parents, children with disability	Team of trained workers and professionals	**Domain: Nurturing Care and Education** Cascade model of training to build capacity of key care providers. Individual therapy sessions, group sessions/play, parent education, home-based programs, etc	Not measured	
Early Intervention centres in Schools and Anganwadis [2018-ongoing]	St. John's Medical College	Bangalore	Children with disability/ special needs	AWWs & School teachers, special educators Early intervention centres at AWW	**Domain: Nurturing Care and Education** Training of AWWs and teachers for delivering inclusive ECD and education. Capacity Building of schools with standard special education materials and basic therapy equipment.	Capacity building of 10 schools and 12 Anganwadis Teachers are motivated, Confident Satisfaction among the children with special needs; Better attendance	Special Education and Early intervention is crucial Public Private Partnership can bring sustainable solutions Barriers can be broken if there is an intent
Community-based management of SAM: RUTF preparation [2018-ongoing]	St. John's Medical College	Bangalore	Children 6mth – 6 yrs with SAM	Project staff	**Domain: Nutrition** Preparation of therapeutic food from indigenous food based on the specifications of F100	Phase 1: Ready to use therapeutic food was found acceptable by the beneficiaries Phase 2: for effectiveness, to be conducted	Use of technology helps distribution and monitoring A community-based approach is likely to increase accessibility, coverage, and compliance

BRIEF FROM THE WORKSHOP ON CONSOLIDATING EVIDENCE, EXPERIENCES AND WAYS FORWARD TO OPTIMIZE EARLY CHILDHOOD DEVELOPMENT IN PARTNER STATES

Indian Institute of Public Health-Hyderabad, in partnership with UNICEF-Hyderabad office, organized a national level workshop to create a platform for sharing learnings, and brainstorming for scale-up of ECD interventions, with a multi-sectoral systems approach. This was the first major event of the Advanced Collaboration for Early Childhood Development and Empowerment (ACEcD), where the collaboration was launched with a promise to build partnerships, consolidate resources and provide policy and programmatic support to partner states.

The workshop was blessed by representation from the child health division of MoHFW, and the departments of H&FW and WCD from three partner states of Andhra Pradesh, Telangana and Karnataka. We also had representation from select organizations across the country, who presented their experiences of implementing interventions based on the nurturing care framework to optimize early child development (ECD) in target communities. Academicians and public health experts were the third pillar who summarized the evidence on ECD interventions across the globe and advocated for a systematic and scientific approach to implementing and evaluating ECD interventions in the target states.

The workshop provided an understanding of the global and national perspectives and approaches for embedding ECD interventions into existing health systems. A life course approach for ECD was emphasized, and multiple entry points to intervene and affect ECD outcomes were highlighted. The nurturing care and its five domains should be central to designing future approaches, and should be inclusive of children with special needs. It was realized that building capacity of parents and empowering them, through a combination of home-based, community centre-based and facility-based interactions, is the most promising strategy to ensure responsive care, nutrition and early learning for every child. The role of AAAs (AWWs, ASHAs and ANMs) in an integrated manner seemed most critical for ECD than any other program in the past.

This new outlook of considering the child to be central to all interventions, rather than a sum of the individual domains of the nurturing care framework, calls for coordinated efforts across departments and requires immense capacity building in government structures to build synergy. The government machinery can be supported by various NGOs, CBOs, and development agencies, at various levels of engagements, and through sectoral collaborations. The group realized and highlighted huge gaps in measurement of outcomes and impacts of ECD interventions, almost non-existent monitoring and mentoring frameworks, and also gaps in understanding what may work for scale-up of known ECD projects or programs in the country. An evidence-based approach to scaling up ECD is impossible without first building the frameworks to collect M&E data in a systematic and universal manner.

There were a lot of learnings and recommendations from the workshop, some of which are mentioned in the main report. In this brief we list the specific action oriented recommendations for ECD programs in the partner states, targeted to the stakeholders involved.

UNICEF's vision is to build a world where every child can grow up healthy, protected from harm, and educated, so they can reach their full potential.

RECOMMENDATIONS

Ministry of Health and Family welfare, GOI

1. Consider extending the HBYC visits by ASHAs from 15 to 24 months as this aligns with the importance of the first 1000 days, includes the booster immunization of 15-18 months and also provides opportunity to screen the children for neuro-developmental delays and disorders after 18 months.
2. Consider including simple tools for screening of delays and neurological disorders in HBYC through ANMs.
3. Ensure that the capacity and skills for ECD related counselling, screening and parent support to be incorporated in guidelines for Health and Wellness Centres. Include ECD related essential skills for counsellors, ANMs and Doctors. Caregiver mental health to be highlighted.
4. Create a framework for mentoring and monitoring of large scale ECD programs, based on the present guidelines and future expansion.

Joint activity - State Departments of Health and Family Welfare & Department of Women and Child development, facilitated by IIPH-Hyderabad and UNICEF-Hyderabad office

1. Consider doing a joint activity of integrated planning for ECD interventions to ensure
   a. Common messages on ECD through programs on ECE in WCD and HBYC in H&FW, including nutrition, WASH, safety and security.
   b. Linkages between provisions of nurturing care, identification of delays, referral and back referral for inclusive support and care at community level.
   c. Work distribution among departments for mentoring and for work of AAAs at the ground level—complementary, avoiding unnecessary duplications. Therefore, consider at least monthly contacts with one of the AAAs for each target household.
   d. Identify common monitoring and review processes. Identify and encourage entrepreneurial leadership and increase accountability. Anganwadi Level Monitoring and Supported Committee (ALMSC) at the village level is one such platform to begin, under Poshan Abhiyan. Village Health Nutrition and Sanitation is another such platform.
   e. Build partnerships for systems capacity building. Expert NGOs and institutes can help in training and mentoring of human resource. However, there shall be a structured plan for sustainability before NGOs/ institutes phase-out from the program.

State Department of Women and Child development

1. Establish ECD council at the state as per the provision under ECCE policy.
2. ECD is inclusive of, and beyond POSHAN. Requires high level commitment from the states.
3. Restructure ECD implementation plan through ICDS. Enforce home visits, and community fares along with centre-based activities. These are already described in AWWs job responsibility.
4. The program intervention requires innovative package for service delivery to the parents and young children; including father and other care givers, and the community. Best practices from known projects from India shall be considered while refining the package.
5. The new MCP card shall be central to ECD interventions, and monitoring growth and development. Easier to link with health interventions and referrals when required.

6. The restructuring for ECD inclusive of nutrition requires intensive capacity building for sustained training, mentoring and supervision mechanisms. Consider partnership with expert NGOs and institutes.
7. Need to devise an efficient, cost-effective monitoring mechanism and link it with long term outcome evaluations.

State Department of Health and Family Welfare

1. Devise strategy for roll-out of efficient and effective use of MCP card and HBYC in the state. Consider innovative approaches to mentoring and supervision, and monitoring. Expert institutes can support.
2. Devise and pilot a district level plan to establish linkages between home-based ECD interventions with facility-based special care (screening, counselling and special education) and follow-up community- based inclusive care.
3. Strengthen and expand DEICs for referral care for ECD. Provide ECD related screening, counselling and special education services at CHCs. Consider parent and child support clinics in these centres.
4. ARSH clinics shall be extended and upgraded to Parent and child support clinics.
5. RBSK and RKSK to be integrated to strengthen adolescent health programs which may reduce the Low-birth weight. Improve quality of services, nutrition status, education, WASH and life skills. Consider adolescents as potential peer educators for ECD.
6. Improve quality of peri-conception, antenatal care with special focus on identification and management of complications for prevention of pre-term birth, low birth weight and avoidable congenital deformities and neurological disorders.
7. ECD counselling shall begin in antenatal period, beyond breast feeding and immunization.
8. Establish sentinel surveillance, facility and community-based, for correct estimates of burden of development delays and disabilities.

UNICEF-Hyderabad office

1. Advocate for adoption of the above recommendations at the country and state level and other appropriate platforms.
2. Convene scientific meetings to develop evidence-based, sustainable models for ECD implementation within the states.
3. Act as a catalyst for building multi-sectoral partnerships and collaborations for planning and implementation of holistic, multi-dimensional interventions for ECD.
4. Provide or facilitate strategic support and additional resources required in planning and capacity building for ECD interventions as per the needs and priorities of the states.

Advance Collaboration for Early Childhood Development and Empowerment

1. Advocate for adoption of the above recommendations with target states and other stakeholders.
2. Provide strategic support for planning road map for ECD interventions with the states.
3. Conduct rapid assessments for identifying good practices, scalable aspects and attributes for sustainability among the known ECD projects from across the country.

4. Devise a model district ECD implementation plan based on the learnings from the workshop and with series of scientific consultations to refine it.
5. Provide strategic support in planning and facilitating capacity building for the above stated interventions.
6. Provide technical support to build a framework for M&E for scaled-up ECD interventions.
7. Build partnerships and assemble resource to be able to deliver above stated tasks of ACEcD, and for research to fill gaps in knowledge and evidence on implementation science in ECD from India.

Immediate next steps for ACEcD

1. Communicate learnings with the stakeholders
2. Build formal collaborations through ACEcD
3. Advocacy with the states, identify priority and potential areas of work under ECD, and develop road map for next year
4. Scientific documentation of evidence from India and develop policy brief
5. Build framework for practical, sustainable and scalable ECD interventions for a model district

ANNEX 1: SUMMARY OF PROJECTS FROM INDIA

1. EXPERIENCES FROM IMPLEMENTATION OF PROGRAMS ON NURTURING CARE: EKJUT

Summary of the project activities and results

Ekjut was involved in two important pieces of work for combating undernutrition. These were as follows:

A. CARING (Community Action Research to Improve Nutrition & Growth) Trial: (A collaborative research with University College London, PHFI, and Ekjut) was a Cluster Randomized Controlled Trial to test the effect of a combined intervention of 'Participatory Learning & Action (PLA) group meetings and Home visits for counseling on linear growth of under-2 children in Jharkhand & Odisha states of India. PLA meeting cycle approach is a systematic and progressive capacity building of communities, especially women that happens through planned meetings on a sustained basis, facilitated by a facilitator who is from the same village and speaks local language. These meeting cycles makes use of adult learning methods like games, storytelling, role plays, picture cards, & demonstrations. PLA meetings covered immediate and underlying causes of undernutrition for e.g. nutrition in pregnancy, WASH, women's empowerment, family planning, stimulation & Early Childhood Development (ECD) while home visits covered immediate causes of undernutrition for e.g. ANC care & nutrition in pregnancy, plan for a safe delivery, optimal new-born care practices, IYCF, illness prevention & care during illness, immunization, responsive caring & ECD

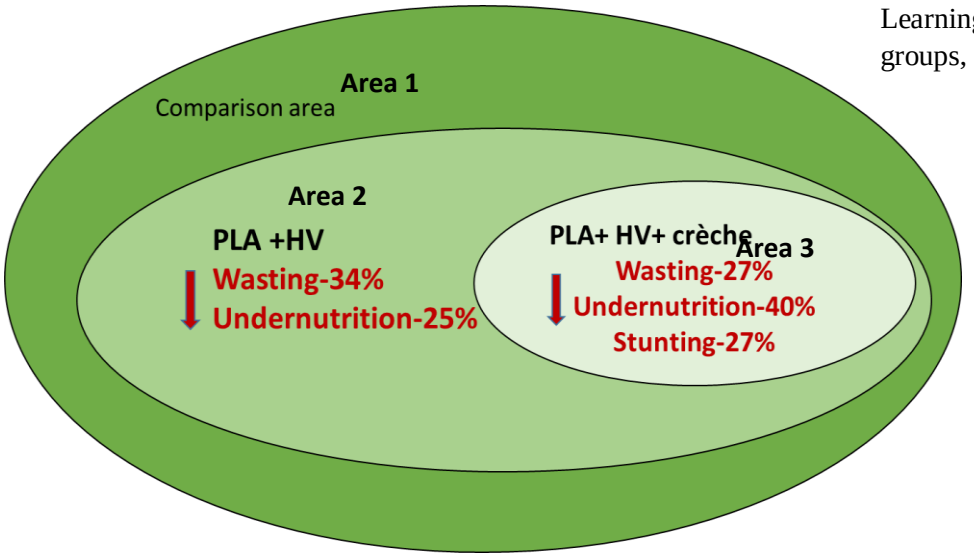
CARING trial followed a cohort of 2500 children for anthropometry and information related to home care & IYCF practices, care during illness at 7 time points. While the trial showed a positive change of 0.11SD in average Length for age z score (LAZ) in intervention area compared to control area, significant improvements were seen in dietary diversity of mothers (adjusted odds ratio [aOR] 1.39, 95% CI 1.03-1.90) and children (aOR 1.47, 95% CI 1.07-2.02), more mothers washed their hands before feeding children (aOR 5.23, 95% CI 2.61- 10.5), fewer children were underweight at 18 months (aOR 0.81, 95% CI 0.66-0.99) and reduction in infant mortality rate (aOR 0.63, 95% CI 0.39-1.00). [1]

B. Action Against Malnutrition (AAM), was a multi-strategy intervention in seven blocks of four states (Jharkhand, Bihar, Chhattisgarh and Odisha) implemented by partners CINI, PHRS, IDEA, CHAUPAL, & Ekjut and was supported by Tata Trusts. We selected 5 blocks purposively in Jharkhand and Odisha states for evaluation. Each block was divided in 3 areas; area 1 served as control, in area 2 trained local female workers facilitated PLA meetings and offered counselling to mothers of under-3 children at home, in area 3 trained workers facilitated PLA meetings, did home visits and Crèches were opened for 6-36 months old children. The program was universalised with a preferential option for the most disadvantaged.

The crèches are day-care centres that provide co-location of services e.g. safe & secure environment, nutrition, responsive stimulation, clean drinking water and sanitation, smoke free environment and regular growth monitoring for children aged 6-36 months. Psychosocial stimulation activities done with children are age appropriate and make use of low cost handmade toys.

The impacts of intervention on anthropometric indicators are as shown in figure 1 below

PLA- Participatory Learning and Action groups, HV-Home visits



Gope et.al. *BMC Public Health 2019*

Moreover, the impact seen was equitable. In both areas 2 and 3, intervention had strong effects on wasting among children from the most marginalised families when compared to the most marginalised children in area 1 (aOR: 0.53, 95% CI:0.34–0.82 and aOR: 0.44, 95% CI: 0.28–0.69, respectively). [2]

Key attributes that make the project sustainable and scalable

i) **Past evidence demonstrated that change in practices through PLA is replicable and sustainable.** [3]

ii) **Sustainability through systems scale up**

We are talking about the three track approach to deliver nurturing care a) At community level through PLA, b) At family level through home visits c) At individual level through crèches

a) Community mobilization PLA meeting cycle approach has already been scaled up in many states and is currently under scale up in all the districts of Jharkhand by NHM Jharkhand with technical support of Ekjut. PLA approach is being used to tackle multiple social problems and is becoming a new norm

b) Home visits: Home Based care for Young Child (HBYC) has already been adopted by government, although quarterly visits recommended under HBYC may be too diluted to improve ECD as against the evidence suggesting more frequent home visits; every two weeks or more had an average effect of 0.32 SD (95% CI 0.23, 0.42) on children's standardized cognitive scores.[4]

c) Centre based care: India's 12th National Plan (2012-7) suggested converting 5% of Anganwadi Centers (AWC) into AWC-cum-crèches for children under three. [5] Crèches are a powerful strategy to improve children's nutritional status and development, especially in underserved, rural areas. We propose this on the basis of the systematic review by Leroy et al., which features mostly Latin American studies (as evidence from India is limited) but

found positive effects of daycare centers on child development [6], and on the basis of our own quasi-experimental study (improved nutritional outcomes). [2]

Through Ekjut's previous work on themes survive and thrive in Odisha, we have been able to influence **District Mineral Foundation (DMF), Odisha** to unlock resources for running 60 crèches. We see DMF fund as a potential source for mainstreaming crèches in 12 states where DMF operates and 5 of which (Madhya Pradesh, Chhattisgarh, Jharkhand, Odisha, Rajasthan) where 48% of India's tribal population resides.

New learnings about the project after attending the workshop

a) After attending the workshop, I felt good that we are already collocating the various components of nurturing care (safety & security, health, responsive feeding & nutrition, and an enabling environment for early learning) through the three track approach that I already mentioned in my note above i.e. at 1) community level; recommended to address various themes like survive and some aspects of thrive. We will build on potential of participatory groups to deliver Early Childhood Care and Development (ECCD) enhancing interactive sessions 2) family level; our existing home visits for combating undernutrition work will be bundled with ECCD enhancing counselling 3) Child centric; while we are getting incremental response in favor of mainstreaming crèches for co-location of services (responsive feeding & nutrition, health, early childhood stimulation, safety and security) we will seek resources for measurement of child development.

b) Realized the gap in our work that we need to develop more understanding on neurodevelopmental delays and disabilities and provision of special care to these children

c) There is a limited evidence on implementation science and lack of evaluation studies on scale ups of early childhood development programs in India. Ekjut is in the process to seek resources for child development measurement related activities and do operational research to inform the scale ups of ECD programs**.**

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2. AARAMBH: MGIMS, SEWAGRAM

Summary of the project activities and results

MGIMS with support from UNICEF Maharashtra is implementing an ECD initiative. Overall, this initiative's goal is that children aged 0–6 years will benefit from an integrated package of ECD interventions (nutrition, psychosocial stimulation and positive parenting). More specifically, the initiative will aim to use a twin track approach and build the capacity of ICDS and health system functionaries, including frontline workers (AWWs, ASHAs, ANMs and mobile health teams) with the prime objective to raise awareness and build capacity of parents and caregivers on providing nurturing care, positive parenting and early stimulation which in turn will positively influence the development trajectory of children.

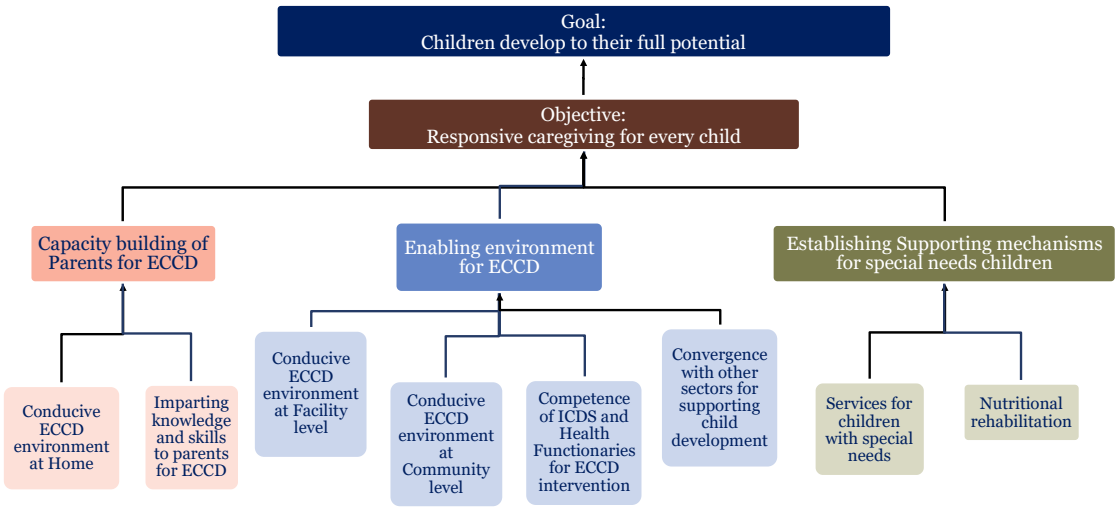
Goal –

Overall, this initiative's goal is that children aged 0–6 years will benefit from this integrated package towards enhanced brain development, improved infant and young child feeding, cognitive skills development, social and emotional development and well-being, physical and motor development, school readiness, and ultimately better health and nutrition, and learning outcomes in school and higher levels of education. [Fig 1 depicts the Theory of implementation]

Objective –

To develop a scalable model for empowering family and community for nurturing care for children 0-6 years through the current opportunities available within ICDS, health and other sector

Fig 1: Theory of implementation



Approach –

The proposed integrated ECD intervention covering children 0-6 years is being proposed keeping scale in mind. The results of the intervention will be to show proof of principle and gather evidence to advocate for the Government to replicate the interventions with its own resources and with quality standards, systems strengthening and equitable outcomes. The approach is to use existing government structures and personnel, such as AWWs, ASHAs and ANMs, as feasible

and available, and their contact points with parents and caregivers and communities (such as through home visits, ECCE Days, VHNDs, Mothers' meeting and Community Group Meetings), to promote early stimulation and positive parenting.

Reach:

The program is currently being piloted in selected blocks of the 4 districts (Pune, Aurangabad, Yavatmal and Palghar) to reach out to the most deprived communities in these areas (urban, rural, and tribal respectively). MGIMS Sevagram is partner supporting its implementation in Aurangabad and Yavatmal districts for Maharashtra. The target beneficiaries are every caregiver and household of children between 0-6 years of age in the given area. The details of ICDS projects included are as follows –

Table 1: ICDS Projects included

District	ICDS projects included	AWC functional	Mini AWC functional	ICDS sectors	ASHA	Total population	Population of children 0-6 years
Yavatmal	Babhulgaon	102	14	4	109	88173	6289
	Digras	99	14	4	105	117827	11810
	Ghatanji	146	29	6	133	116245	9153
	Pandarkawda	180	34	7	162	123397	9982
	Ralegaon	158	24	6	141	108163	7149
	Zari	106	30	4	97	79887	5899
Aurangabad	Aurangabad 1	181	53	7	120	165755	17942
	Kannad 2	219	12	9	109	161657	15799
	Khultabad	108	45	4	86	106794	10579
	Paithan 1	209	32	8	135	161795	16609
Total for MGIMS, Sewagram		1508	287	59	1105	1231985	111211

***** The figures in the above table are based on information provided from ICDS, except for the column on ASHA, information for which was received from District Health System.

Cascade model of Capacity building

A context analysis was undertaken to understand the needs and context of parenting education to aid in the deciding the nature of the intervention for empowering parents for responsive parenting.

A five-cycle capacity building package will be developed (Fig 1), whereby five cycles of five-days training will be conducted for the trainers (i.e. AWW supervisors and ASHA facilitators). The trainers, in turn, will conduct training of frontline workers (i.e. AWW and ASHA) within their system in a monthly one-day training program over 3-4 months duration. It is envisaged that this training will be conducted either at sector level or PHC level. Wherever applicable, efforts will be made to conduct this training jointly for both AWW and ASHA.

Table 2 lists the major strategies being considered following discussion with important stakeholders. The strategies have been categorized as core and supplemental strategies. Core strategies will be utilized universally in the project area. Supplemental strategies may not have universal reach and will be utilized in part of the project area, based on decision of the authorities and mid-level managers.

Fig 2: Cascade model of Training

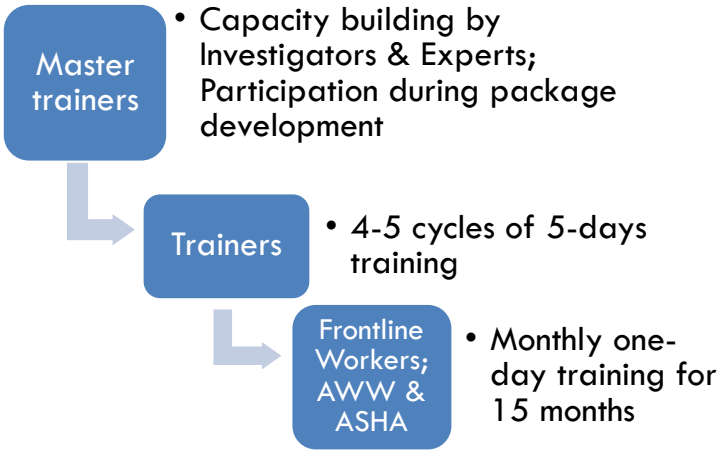


Table 2: List of strategies to be promoted through the project

Type of strategies	Strategies targeted to households with children		Strategies for community norm building
	0-3 years	3-6 years	
Core strategies	**ICDS in lead role**		- Engagement with PRI - Wall writing and posters at strategic places in community & facilities
	- Home visits by AWW - Centre-based parents' meetings (for dissemination of ECD and Infant & Young Child Nutrition messages using MCP Card)	- Centre-based parents' meetings (ECCD day to showcase progress of child and child craft) - Home visits by AWW - Toy-making workshops	
	- Palakatwa Melawa/ karyashala		
	Health sector in lead role		
	- Home visits by ASHA - Village Health and Nutrition Days	- Village Health and Nutrition Days	
Supplemental strategies	- Growth monitoring and promotion - Engagement with other family members - Antenatal & Postnatal counselling at facilities including PMSMA - Promote ECD during sick child contact at health facilities - Display of messages in OPDs - Play therapy area to be established in all NRCs - Parenting Guide for Caregivers		- Utilization of community events for dissemination of messages - Engagement with religious leaders - Referral linkages with RBSK

Monitoring and Evaluation Framework

The project is collecting information on the following indicators:

Process indicators

- Coverage & quality of parent empowering approaches

1. MCP Card available (0-6 years) ; 2. Caregiver knows weight of the child (0-6 years) ; 3. Home visit by ASHA in the last month (includes short visits) (0-3 years); 4. Home visit by ASHA in the last month, where demonstration was done (0-3 years); 5. Home visit by AWW in the last month

(includes short visits) (0-3 years); 6. Home visit by AWW in the last month, where demonstration was done (0-3 years); 7. Mother attended mothers' meeting in the last month (0-6 years)

Outcome indicators

- Child feeding practices

Proportion children 0 – 5 months reported exclusively breastfed in the last 24 hours; Proportion children 6-8 months received complementary feeding in the last 24 hours; Child in 1-2 years age-group received breastfeeding in the last 24 hours; Child (6-72 months) received at least 4 food groups in the last 24 hours; Responsive feeding score

- Child Caregiver Interaction for children 0-6 years

Child Caregiver Interaction Score ; Child Father Interaction Score

- Home environment for children (0-6 years)

Print material Score; Play material Score

- Child disciplining practices (0-6 years)

Caregivers reported no verbal abuse in last one month; Caregivers reported no physical abuse in last one month

Impact indicators

- Child anthropometry

Proportion of children underweight (weight for age < - 2SD) ; Proportion of children stunted (height for age < - 2SD) ; Proportion of children wasted (weight for height < - 2SD)

- Child development

Development quotient; Social quotient

The following approaches are being used for collecting information on the identified indicators:

Concurrent monitoring: A monthly monitoring format has been developed for Anganwadi workers and ASHA to provide information regarding conduct of home visits, mothers' meetings, Palak Melawa or any other community-based event related to nurturing care.

Supervisory checklist for quality of interventions: Checklists for supervisors have been developed to assess quality of interventions; i.e. field trainings, home visits, mothers' meetings and Palak Melawa. These formats help in improving supportive supervision and at the same time will provide information on quality of these interventions.

6-monthly LQAS survey: The plan is to conduct 6-monthly survey using LQAS methodology to capture information on coverage and quality of all services as well as household practices related to nurturing care of children. Apart from this, at baseline and endline, additional data is to be collected for nutritional status of children as well as development of the children (using Vineland Social Maturity Scale and Development Screening Test)

Qualitative information including Participatory Learning & Action tools: At baseline and endline, the project also plans to collect qualitative information using focus group discussion and in-depth interviews with different stakeholders. In addition, PLA tools in form of daily activity calendar for children in different age-groups and a complementary feeding calendar has been designed to capture family and community level practices related to different components of nurturing care.

3. SUSTAINABLE PROGRAM INCORPORATING NUTRITION AND GAMES (SPRING): SANGATH

किलकारी परियोजना (Kilkaari Pariyojna)

Summary of the project activities and results

The goal of SPRING was to develop and evaluate an innovative, feasible, affordable and sustainable community based approach that could achieve delivery at scale of known effective interventions that would maximise child development, growth and survival. The vision was to work in close collaboration with government programmes to develop an innovative intervention package that:

1. Was designed from the outset to be feasible, affordable and appropriate for delivery at scale.
2. Was delivered by low cost community based workers through home visits from pregnancy through the first 2 years of life, which:
    1. Promoted evidence-based newborn and child survival interventions
    2. Used a problem solving and counselling approach, rather than the standard didactic approach, using techniques informed by evidence from the cognitive behaviour and interpersonal psychotherapy fields.
    3. Taught care giving skills, such as early recognition of infant signals and capacity, enhancing mother baby interactions, providing stimulation for cognitive growth and development.
    4. Supported optimal infant and young child feeding practices.
    5. Encouraged participation of other family members, e.g. fathers and grandmothers.
    6. Was informed by the Care for Development Package developed by the WHO and the UNICEF.
3. Included regular supervision, monitoring and evaluation to support the community based workers and ensure the quality of the intervention activities carried out.
4. Included a range of supporting activities developed to provide an enabling environment for mothers and families to carry out the interventions and skills promoted. These included, community group meetings, and sensitisation sessions with health staff.

The SPRING intervention was evaluated at two sites: Rewari District of Haryana in India, and Punjab Province in Pakistan. In India, the formative research and intervention development was conducted by Sangath after some initial work which was conducted by Action Research and Training for Health, in Udaipur, Rajasthan. In Pakistan, a similar process was followed by the Human Development Resource Foundation, Rawalpindi. All activities were led by research partners in the London School of Hygiene and Tropical Medicine, in the United Kingdom. The results were two culturally appropriate intervention packages, *Kilkaari* and *Roshal Kal,* in the two sites respectively. *Roshan Kal* materials were designed for delivery by the health system Lady Health Worker in Pakistan, while the *Kilkaari* intervention materials were designed for delivery by project appointed community based workers.

Key Activities in India

Community Sensitization and Health System Engagement: Key stakeholders at different levels of the health system were sensitized to create awareness of the Kilkaari program and to mobilize existing community resources to support study activities, this included the Mission Director and

Director Child Health of the National Health Mission, Haryana and the Director of the Department of Woman and Child Development, Haryana. A Memorandum of Understanding was signed between the National Health Mission and Sangath in July 2014. The District Immunization Officer, Rewari was designated as point person at the district level. In addition, during formative research, group discussions and key informant interviews were conducted with district level ICDS functionaries - the Child Development Program Officers (CDPOs) to sensitize them about the intervention and get their perspectives on community beliefs and practices in child care, feeding and stimulation. During the mapping activity, information sheets in Hindi were circulated by the team to key frontline health workers (AWWs and ASHAs) in all villages of the study area.

Mapping of Study Area: SPRING defined a cluster as the catchment area of a Sub centre with a functional ANM. Twenty six clusters were shortlisted in the Rewari district where the mapping activity was carried out over three weeks of which twenty four clusters were selected.

Surveillance team: The surveillance field team comprised of 4 supervisors and 24 field workers (FW) who were responsible for the baseline study followed by 8 weekly routine surveillance cycles and end line survey of the SPRING trial.

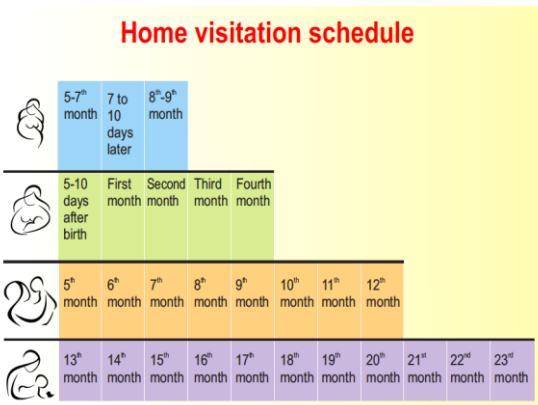
Baseline Survey: The Baseline survey was conducted in all 24 clusters between June and October 2014. Objectives of the baseline survey included: The identification of eligible women, obtaining written informed consent from all eligible women in the study area for participation in the SPRING trial, Assigning permanent Kilkaari household numbers to all houses at the village level, Continued sensitization activities in the community regarding Kilkaari.

Intervention Delivery: SPRING was delivered through monthly home visits by community-based agents (CBAs) from pregnancy through the first 2 years of life. The focus was on promoting best child care practices, including infant and young child feeding mother-child interaction and stimulation through play with encouragement of family support and involvement. The aim was to improve child growth and development, assessed at 18 months of age. Core SPRING implementation was centred on home visits but also included training, supervision, job aids and sensitization activities.

The content of the SPRING interventions (Table 4) covered visits during pregnancy and throughout the first two years of life. It was based on formative research into current behaviours, and into barriers to and facilitators for adopting desired behaviours. The desired behaviours for play were adapted from the WHO/UNICEF Care for Development curriculum, and those for infant and young child feeding from UNICEF/WHO guidelines.

SPRING Intervention: content of home visits: The intervention comprised of a manualised series of illustrations delivered at monthly home visits. The intervention addressed core areas of care in pregnancy, infant and young child feeding [WHO and UNICEF guidelines] and responsive child stimulation activities

Recruitment, training, embedding and delivery by Kilkaari Workers: A total of 75 candidates were shortlisted from 150. The shortlisted candidates were called in for a face to face interview of which 42 were called in for training. Two primary trainings (five days each) were conducted for Kilkaari workers between 17th and 28th of November 2014. Supportive supervision: which included individual and group supervision sessions conducted by supervisors. Approximately 6000 children received intervention from Dec-2014 to Mid-2017 across the 12 intervention clusters.





Outcome assessments: Conducted by an independent team at 12 (anthropometry, HOME, Maternal Depression and Social Stress and Support, Feeding practices, Hair and Salivary Cortisol) and 18 months (anthropometry, child development)

Initial Results

SPRING field data collection was completed in March 2018 and currently data is being analysed. The team is expecting to have the main results of the SPRING trial by end-2019. However, some preliminary results are now available. These results show that the households who had Kilkaari worker visits were more likely to feed their babies well by introducing solid food at 6 months of age. These babies were also more likely to have an acceptable diet when they were one year old. However, these changes were not enough to translate into benefits for the children's growth or their language skills, motor skills or cognitive development when we measured these at 18 months of age. When children were one year old, we had collected key information about challenges that they might have faced, such as a serious illness, separation from their mother and stress in the household. We found that most of the children we examined had faced at least one challenge in the first year of life. About half had faced 4 or more of these. Saliva and hair samples were collected to measure this stress level that children may have faced. The data reveals that the higher the number of challenges the higher the stress level. The hair samples were much better at measuring this than the saliva samples. The stress meant that children were less likely to do well on the developmental tests which was conducted at 18 month of children age. It affected their language, motor and cognitive abilities. Their growth also wasn't as good so they weighed less and were shorter. These results are the first from a large population-based study in an LMIC to show that increasing adversity in multiple domains increases risks to child growth & development at a very early age. There is an urgent need to act to improve these outcomes for young children in LMICs and these findings suggest that Early Childhood programmes should prioritise early childhood adversity because of its impact on developmental inequities from the very start.

Acknowledgements

We wish to acknowledge our dedicated field teams and their supervisors and study participants who made this study possible. We also acknowledge National Health Mission, Ministry of Health and Family Welfare, Government of Haryana for their support and agreement to conduct the study at District Rewari. The work was led by Prof Betty Kirkwood at the London school of Hygiene and Tropical Medicine (LSHTM).

4. INTEGRATION OF EARLY LEARNING AND RESPONSIVE CARE CONTENT INTO THE MITANIN PROGRAM IN CHHATTISGARH: CENTER FOR LEARNING RESOURCES

Summary of the project activities and results

The global ECD community has strongly recommended utilizing existing platforms, such as at-scale health systems, to support parents in providing early learning (EL) and responsive care (RC) for children from birth to three years. In this project, we aimed to integrate EL & RC content into the "*Mitanin*" program, the community health worker program in Chhattisgarh with a strong pre-existing health and nutrition focused mandate. The project was a partnership between the State Health Resource Center (SHRC), Chhattisgarh and Center for Learning Resources (CLR), Pune funded and facilitated by UNICEF, Chhattisgarh.

Existing infrastructure of the Mitanin program: On average, Mitanins have 10 0-3 year olds in their case-load. The recommended frequency of home-visits is 1 visit/ month during pregnancy, 7 visits in the first 42 days of child birth, 1 visit/ month during 6-12 months, 1 visit/ 2 months during 1-3 years. The multi-level structure to train and coach the Mitanin include Mitanin Trainers at the sector level, Block Coordinators at the block level, District Coordinators (DC)/ Program Associates (PA) at the district level, and Project Coordinators at the state level. In this hierarchy, each level takes on the role of trainer, monitor, and coach for the next level, with training for the entire cascade occurring every year.

Intervention: The CLR intervention included: 1) the development of an integrated home-visiting manual for prenatal to 3 year old children that included health, nutrition, and EL & RC content; 2) a cascaded training and supportive supervision program across the five administrative levels of the Mitanin hierarchy. In their annual training in September, 2013; 3 days were dedicated to EL & RC content and 4 days for health and nutrition content. CLR trained the DC's and PA's and the training was subsequently cascaded down the hierarchy. The training covered sensitive periods of child development; stimulation activities and the steps in conducting an effective home-visit.

Implementation Study: After 15 months of implementation at the Mitanin level, we conducted a study to assess the extent of integration of the new content into different levels of the hierarchy and the factors fostering or inhibiting this integration. As to the *extent of integration*, the study revealed a system-wide shift towards a holistic view of child development, which included health, nutrition, and EL & RC. This was evidenced in changes in organizational routines, beliefs about child development, and the fact that EL & RC content was delivered in a majority of the home-visits. While the motivation for EL & RC messages seems to have been achieved, mastery and depth of the content and communication skills for effective home-visiting were not fully achieved, leading to poor quality home-visits. We saw evidence for "cascade loss", a systematic decline in the quality of EL & RC messages as we went down the hierarchy. As to the *factors fostering and inhibiting this integration*, the top-leadership commitment to the agenda of holistic development emerged as a critical enabler. It brought the new content into the mainstream narrative of the organization, by seamlessly integrating it into their home-visiting manuals, trainings, and supportive supervision practices. A central inhibiting factor was the overburdening of functionaries across hierarchy which affected the quality of ongoing coaching and monitoring which is implicated in the low quality of home-visits as well as the observed "cascade loss".

Our project addresses the ambivalence amongst health policy-makers on integrating EL & RC content into their mandate. It illustrates that not only is this inclusion viable, but that the

workforce readily appreciates the relevance of the new content. It recommends that such integration can be achieved through leadership commitment and by investing in rigorous decentralized training and coaching systems.

Key attributes that make the project sustainable and scalable

First and foremost, the sustainability and scalability of this project is strongly rooted in the fact that, contrary to expectations, the entire workforce finds this new content meaningful to their beneficiaries as well to their own lives. Most of the members of the workforce brought their personal experiences with parenting to bear on understanding and communicating the new content, which greatly enhanced its value and ability to sustain itself.

Second, CLR's approach to this project was to integrate the new content seamlessly into the existing at-scale infrastructure of the SHRC and to avoid creating a parallel system. To this end, we co-designed a home-visit manual and process which integrated health, nutrition, and EL & RC. We also designed the training and coaching processes in a way that they could fit easily into SHRC's training and monitoring routines. These decisions were made to reduce overburdening and to ensure sustainability and scalability. While this seamlessness demanded, to some extent, dilution of content, home-visiting process, as well as capacity-building processes, we saw the goal of integration at-scale into the health system as the first paramount step. Based on the results of our study, SHRC acknowledged that the new content was valuable to their workforce and beneficiaries. They are now interested in a second generation program to improve the quality of home-visits.

The sustainability and scalability of this project were greatly aided by the strong capacity-building infrastructure in SHRC, without which the integration would not have gone as far as it did. The Mitanin program had annual residential trainings which is largely uncommon in health and education systems. In addition, each level of the hierarchy served as the trainer, monitor, and coach for the level below them, thus ensuring continual reinforcement of the new content. Both these attributes ensured a good level of absorption of the new content across all levels.

New learnings about your own project after attending the workshop

Mother-Child Protection Card: The proposed roll out of the Mother-Child protection card across the country demand that we think about how best to use the MCPC in the design of home-visiting and community meeting processes.

HBYC guidelines/ Home-visit frequency: The new HBYC guidelines recommend quarterly visits upto the age of 15 months. Most of the well-established home-visiting programs are designed for monthly visits. The new guidelines demand that we design as well as test the efficacy of low-dose home-visiting programs.

HBYC guidelines/ Capacity-Building processes: The distribution of home-visiting responsibilities between ASHA, AWW, and ANM call for thoughtful attention to what each of their individual trainings and coordinated trainings should comprise. They also require that we examine and strengthen their coaching and supportive supervision infrastructure and processes. If we do not pay attention to these capacity-building issues, we will be left with poor quality home-visits which will not be effective in improving children's development.

5. INITIATING COMMUNITY-BASED PSYCHOSOCIAL & PROTECTION SERVICES FOR EARLY CHILDHOOD: NIMHANS

Summary of the project activities and results

This project is implemented and executed by Dept. Child and Adolescent Psychiatry, NIMHANS, Bangalore. We are supported by UNICEF.

Location and Target Population

The direct beneficiaries of the proposed project are children between ages 0 and 6 years— who will receive direct services by way of individual and group interventions in areas pertaining to child protection and mental health; the indirect beneficiaries are parents, caregivers, anganwadi teachers and child care institution staff—who will receive training and capacity building inputs in order to better meet the protection and mental health needs of young children.

The project is implemented primarily in urban communities in Bangalore. It will assist the psychosocial and mental health needs of vulnerable children in i) Anganwadis (set up under ICDS scheme); ii) Child care agencies that provide care and protection to 0 to 6 year olds, including agencies that work with orphan and abandoned children, children with disability and children infected/ affected by HIV/AIDS.

The overall goal of our project is to ensure increased access to quality mental health and protection services to young children between the ages of 0 to 6 years, by extending and integrating such services into other agencies and institutions located in the community. More specifically, the objectives are:

i) To examine the mental health problems and socio-emotional vulnerability issues of young children, and provide interventions specific to their contexts of vulnerability by:
   a. Providing mental health assistance and services to vulnerable children residing in institutions and open communities, including those with specific developmental disabilities and psychosocial health issues.
   b. Providing direct services to enhance early stimulation and promotive child development programs.

ii) To build the capacity of childcare workers and service providers in anganwadis, child care institutions (governmental and non-governmental agencies) and other child protection services, to address the mental health and protection needs of young children.

iii) To draw from implementation experiences to develop initial materials for use in community-based early childhood care and protection services for those in vulnerable socio-economic contexts.

6. EARLY INTERVENTION IN SCHOOLS AND ANGANWADIS: KARNATAKA

Summary of the project activities and results

The principles of inclusive education were adopted at the UNESCO -Salamanca World Conference (1994) on Special Needs Education and were restated at the Dakar World Education Forum (EFA, 2000). It says that inclusive education means that schools should accommodate all children regardless of their physical, intellectual, social, emotional, linguistic or other conditions. Inclusive education is about the participation of all children and young people and the removal of all forms of exclusionary practice. Inclusive special education has been found to be cost-effective and the most beneficial type of education for people of all ability levels. Developmental approach to address the learning needs of all children, youth and adults with a specific focus on those who are vulnerable to marginalization and exclusion (UNESCO)

Sarva Shiksha Abhiyan (SSA) is a noteworthy initiative by the government of India towards inclusive education. SSA ensures that every child with special needs (CWSN), irrespective of the kind, category and degree of disability, is provided education in an appropriate environment. A 'zero rejection' policy is adopted by the SSA so that no child is left out of the education system.

National Focus Group Position Paper on Education of Children with Special Needs 2006

The paper proposes an inclusive curriculum for all students without discrimination on the basis of gender, ethnic origin, socio economic group, disability or ability. An inclusive curriculum recognises the need of schools to be organised with the individual differences of students in mind and is flexible enough to enable all students to achieve their goals. The recommendations of the group were :

Make all early education and care programmes (from 0–6 years) sensitive and responsive to the special needs of children, including training of Anganwadi workers in identification of needs of the children with disabilities, use of age-appropriate play and learning materials and the counselling of parents

Make all schools inclusive by removing physical barriers; building the capacity of teachers to function in an inclusive setting; making support services available in the form of technology (including ICT); teaching–learning materials and specialists; and mobilise special schools as resource centres that provide support to inclusive schools

Objective of the Project:

1. The children with disability have an access to rehabilitation, learning and resources according to their needs with community support and network
2. The children with disability and their caregivers have equal opportunity to livelihood thereby empowering them to participate in community developmental activities

Project Strategy:

At the level of Anganwadi:

- Anganwadi workers to be trained in stimulation exercises and developmental education
- Anganwadi centers will be equipped and made accessible to be used as "Early Stimulation Centers"

At the level of Schools:

- Retraining of the existent special educators and pre-trained school teachers in special education
- Capacity building of the school with standard special education materials and basic therapy equipments

Process of Identification of Schools: Schools were selected from the rural Government Schools of Anekal Taluk. Selection of schools/ Anganwadis was based on the maximum enrollment and the strength of students', and trained teachers with positive attitudes. 15 schools were selected based on the above criteria.

The project is funded by CSR , HAL and cbm, Germany.

Procurement of materials: In consultation with the Special Educators from Private Special schools a list was prepared

- Large School – 30 items- Activity based
- Small School – 25 items

Transfer and Arrangement in Resource Centre: The materials were shifted to the Anekal Main office. The teachers / AWWs were summoned and the materials were distributed. The materials were shifted by their own transport from Anekal office to their respective schools and the stock registers of the school and Angwanwadi were updated. The centres were then formal Inauguration.

Community Based Resource Centres: A specific independent room was allocated and the materials were arranged appropriately. A Specific teacher was identified in the schools for being the In-charge of the centre. The arrangement was supervised by our staff, BEO, BRCO, CRPs.

Training of teachers: The teachers were trained in the following

- Disability and types
- Communication Skills
- Initial Assessment of a Child with Special Needs
- Visual Impairment and Special Education
- Hearing Impairment and Speech therapy
- Learning Disability and Special Education

Outcomes: The outputs included the capacity building of the school and the teachers. We could change the attitudinal barriers and teachers were motivated and confident to manage children with special needs. The children with special needs were satisfied by using the materials and had better attendance in the School/ Anganwadi.

Monitoring: Done once in 3 months by a team of Community Health Worker, Medico Social Worker, Rehabilitation Therapy Assistant, and Community Health Physician

Lessons Learnt: Special education and early intervention is crucial. Public Private Partnership helps in carrying such projects for sustainable solutions. By this project our own attitude changed and we also learnt that the barriers can be broken if there is an intent.

7. PROJECT CONDUCTED IN CHILDREN WITH SEVERE ACUTE MALNUTRITION: ST. JOHN'S MEDICAL COLLEGE

Summary of the project activities and results

A large proportion of the children with SAM usually do not present with complications and can be managed through a community-based approach of providing appropriate and specifically designed food products to ensure catch-up growth as most mothers or families are unable to admit their children in health care institutions largely because of socio-cultural reasons. Indigenous foods which use culturally appropriate, cost effective and locally available ingredients prepared in a hygienic manner will be more acceptable. Thus, providing a therapeutic food to children with SAM through a community-based approach could succeed in India.

Phase 1: A therapeutic food was designed specifically for children with SAM and through a study conducted in Raichur and Bangalore. We aimed to evaluate the acceptability of an indigenous food (Bal Poshan Ahaar) prepared based on the specifications of F100 with vitamins and minerals added, in children with SAM aged between 6 months up to 60 months. This food product contains, cereal, legume, skim milk powder, oil and sugar along with appropriate addition of vitamins and minerals as per UNICEF recommendations. Three food products- regular and 2 variants with added flavors of cardamom and apple-cardamom were tested. Information, communication and technology (ICT) model for linking beneficiaries and the health workers and administrators was planned for monitoring progress of these children. The project was conducted under the Grand Challenges Karnataka, where the Government of Karnataka funded Phase 1 of the study to test the acceptability of the food product and an FSSAi approval for use under special medical purposes was obtained.

Phase 2: Been approved to assess the effectiveness of the food product in promoting weight gain and body composition on a sub sample of children. A preliminary pilot market study to enable scale-up of the marketing of the food product will also be conducted. The findings from the 2nd Phase will enable scale-up of the food product for use across Karnataka.

Key attributes that make the project sustainable and scalable

Political will and investments for promoting Community based management of Acute malnutrition.

The project produces and generates evidence for a cost-effective solution that combines a targeted medical and nutrition therapy that is sustainable as it is locally developed from indigenous food. The product is found acceptable in first phase of the study.

A large community need; large proportion of the children with SAM usually can be managed through a community-based approach. Providing a special purpose energy dense food to children with SAM through a community-based approach could make programs more viable.

Further, a community-based approach is likely to increase accessibility, coverage, and compliance to treatment. Scaling up of such community-based model is therefore needed in a country like India.

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ANNEX 3: PROCEEDINGS OF THE WORKSHOP

PHFI has partnered with UNICEF in India to establish an Advanced Collaboration for Early Childhood Development and Empowerment (ACEcD) with an aim to form national and international collaborations and networks to further the agenda for Early Childhood Development (ECD) in India. The collaboration aims to provide policy support, build capacity, conduct research and evaluations, design and implement program, and support governments for comprehensive and equitable interventions for ECD, taking a multi-sectoral approach at multi-level interactions, through a sustained institutional structure. In this regard they organized their first scientific workshop in Hyderabad.

The National Workshop on "Early Childhood Development: Early Moments Matter" was organized by Indian Institute of Public Health – Hyderabad, PHFI and UNICEF-Hyderabad office on 30thand 31st July 2019. The workshop was inaugurated by Dr Renu Shrivastav (Advisor, Ministry of Health and Family Welfare, Government of India), Mr. Sonukutty George (Child Protection Specialist, UNICEF), Dr Sanjeev Upadhyaya (Health Specialist, UNICEF Hyderabad), and Dr. GVS Murthy (Director, IIPH Hyderabad and SACDIR).

The aim of the workshop was for sharing of learnings and brainstorming for systems approach to ECD interventions and measurement of progress. Policymakers, Program managers from relevant Government departments, implementing agencies, scientific and academic institutes/ groups, development specialists, public health systems specialists working towards early nurturing care for healthy survival were present for this workshop. (Please find the list of attendees in Annex 2)

In the Inaugural session, Dr. Sanjay Upadhyaya spoke about UNICEF's vision to create a healthy, safe and learning environment for children and how achieving ECD is the way forward to achieve major goals of SDGs. He highlighted that investment at early childhood yields to 17 times return in terms of productivity.

Dr. Renu (MOHFW) informed us that ECD interventions are a priority for the health department currently and increased attention towards ECD has led to many programs/interventions around ECD in India. 'It is important to recognize the entry points for the Ministry of Health in the systematic implementation of ECD'. She further requested the system experts and academicians to help draft recommendations on how to efficiently implement and measure outcomes of ECD intervention.

Mr. Sonykutty George spoke about child safety and security and emphasized on the need to create evidence to know the impact of neglect and abuse in children**. Dr. Chaitra** presented a case study integrating child protection and mental health in ICDS. **Dr. GVS Murthy (IIPHH)** spoke about the importance of inclusive ECD care with special attention to children with disability.

In session two, scientific evidence was presented on multi-dimensional interventions in early life. **Ms. Alugu Varshini** chair of the session spoke about the importance to not completely forget traditional science.

Dr. Samiksha Singh presented on 'Early Responsive Care and Learning'. She presented scientific evidence on various approaches for ECD interventions and their impact. She highlighted gaps in

evidence on outcome and impact on cognitive and psycho-social aspects. **Dr. Giridhar Babu** gave a life course perspective and spoke about the key role played by 'nutrition', 'play' and 'growth' in ECD. The presentation suggested that successful, smart, and sustainable interventions to improve developmental outcomes need to: promote nurturing care and protection; be implemented as packages that target multiple risks; be applied at developmentally appropriate times during the life course; be of high quality; and build on existing delivery platforms to enhance feasibility of scaling up and sustainability**. Dr. Shailaja Tetali** presented on Safe environments for children. She explained the understanding of 'School Safety' and spoke about packages of services under School Health and MHRD guidelines on safety and security of school children. She also presented evidence from the ground which highlighted the gaps in implementation of these guidelines. **Dr. Rajan Shukla** spoke about quality improvement in health and development and made the central argument that Quality Assurance along with Quality Improvement leads to improved quality of service delivery. The final presentation in this session was made by **Dr. Debarati Mukherjee** on 'measuring the progress of ECD interventions'. She explained the Monitoring and Evaluation framework and spoke about outputs, early outcomes, late outcomes and impact, taking example of nurturing care. She mentioned about the available tools and instruments and focussed on the two primary instruments commonly in use, which are the HOME and MICS questionnaire.

The next session on the first day was on 'Community Based ECD interventions in India' where experience and evidence of implementing scalable ECD programs on the ground was shared. **Dr. Abhishek V Raut** shared about the experience of the project "Arambh" which aims to provide responsive care to children of 0-6 years to achieve their fullest potential. This project focussed on capacity building of parents for ECCD (Early childhood care and development), enabling environment for ECCD and establishing supporting mechanisms for special needs children. They train the WCD supervisors who in turn train, mentor and supervise the AWWs who provide the services to parents and children.

Dr. Gauri Divan from Sangath presented on the Sustainable program incorporating nutrition and games (SPRING) for maximizing child development growth and survival in Haryana. Through this project counseling on feeding, interaction and play, demonstrating/coaching, problem solving and family engagement were encouraged during the home visits by trained and dedicated project staff, ASHA alike. Stakeholders at sub-center, primary health center, panchayat raj, district health mission, and state health mission were included in the project. Assessment at the age of 12 months showed improved responsive care giving and opportunities for early learning and improved feeding practices; however there was no significant change in cognitive and psycho-social outcomes.

Ms. Anaga Ramachandran presented on Home-based holistic childcare and Community-based advocacy. She presented a case study which used mixed-methods to understand to what extent the early learning and responsive care content integrated into a state-wide community health worker (Mitanin) program through identification of pictures and making specific recommendations. She shared that integration of health, nutrition, early learning and responsive care into the home-visit manual had been the main aspect and mandating usage by the state and commitment by the state leadership emerged as fostering effect. She also shared that manual usage felt repetitive, lead to long home-visits and part messaging, there was a lack of focus for infants, large supervisory areas were over-burdening, illiterate mothers, and less time for on-field coaching, emerged as inhibiting aspects.

Dr. Sachin Ramesh presented the program on early nurturing care implemented by Ekjut in Jharkhand and Odisha. Various components of this project were implemented in center-based (creches), group-based (fairs) and home-based participatory approach, by dedicated project staff. During home visits, counseling for ANC and nutrition in pregnancy, plan for a safe delivery, optimal newborn care practices, Infant Young Child Feeding (IYCF), illness prevention and care during illness, support for referrals, WASH, immunization, and responsive caring for ECD were carried-out. On the other hand through Creches, they provided services for nutrition, health, clean drinking water & sanitation, safe, secure & smoke free environment, early childhood care & development, and growth monitoring. Both home-visits and centre-based approach resulted in reduction in underweight, stunting and wasting. Use of low-cost handmade toys and age appropriate stimulation activities were highlighted in the presentation.

Dr. Ashwini Godse from Gram Mangal, Maharashtra presented their work on strengthening government systems for delivering effective Early Childhood Education (ECE) in Anganwadis. The goal of the project was to integrate health and nutrition with the ECE. This was done by developing an experiential culture for front line workers to create learning environments for children and develop child centric process through AWW centric practices. One interesting strategy of monitoring this project was Anganwadi grading criteria. Based on the performance, Anganwadi's were graded as green (outstanding performance), yellow (good to excellent), Orange (making efforts, not satisfying) and Red (Not implementing).

Mr. Praskash Kamath shared Kalike's experience of implementing the project Strengthening Early Childhood Education in Yadgir district of Karnataka, with support from TATA trust. The intervention included Capacity building of Anganwadi workers, helpers and supervisors, capacity building of project team and capacity building of community/village level institutions. Some of the output of this intervention were that activity based learning became a part of preschool education. ECE was integrated in weekly time table of Anganwadi. There was an increase in attendance in Anganwadi and trained Anganwadi workers. There was also an increased response and support from Gram Panchayats for all Anganwadi requirements.

Day 2 started with Session 4 was on 'Early interventions for special needs and linkage with community-based support'.

Dr Smitha Sairam from MAMC, Delhi presented on managing development disorders in early life & follow-up care. She presented on various aspects of developmental delays and screening tools related to gross motor, fine motor, social and language. Neurodevelopmental screening tool (NDST), Modified checklist for Autism (M-CHAT R/F), General Movements (GM) for early diagnosis of Cerebral Palsy were the disability screening tools that could also be used by frontline workers. She mentioned that empowering patients to be able to provide care at home was the main stay of most of the management, and required a team of special educators, counsellors and therapists. As tertiary care was far, this required mid-level and community-based parent and child support for regular care.

Dr. Sunanda Reddy from Carenidhi presented their work on community-based inclusive development for children with disabilities. She spoke about how interventions for disabled children is delivered by multidisciplinary team of trained workers and professionals working together with families and community-based support services to help the child and family reach their goals. She spoke about the need for capacity building of key care providers, cascade modelling of training like subject workers, coordinators, CHW or teachers, CHW-parents dyads

and parent groups. She also spoke about the need to adopt a context specific multipronged approach that is adaptable to change over time. The program continues to evolve with a shared vision and collaborative effort in the community for the foundational skills of children.

Dr. Deepthi Shanbagh from St. John's Medical College presented on early intervention centres in schools and Anganwadis in Karnataka. The objective of their project was to have access to rehabilitation, learning and resources for children with disability according to their needs, with community support and network. Children with disability and their caregivers have equal opportunity to livelihood thereby empowering them to participate in community developmental activities.

Dr Sumathi Swaminathan from St John's Medical College presented her work from Raichur and Bangalore districts of Karnataka on community-based management of acute malnutrition during first 1000 days of life. Some innovations of the project were that mothers got registered with Aadhaar card (UID) in the health center to avail their first supply along with the device through which they can measure growth and development of child. The device was developed with the principles of gamification to make it user friendly. AWW/ASHA visits mothers periodically. For each data entry done by the ASHA worker, parents need to get an OTP (on phone) linked to their child. ASHA worker clicks a photograph of the child and records information using their current measuring instruments - through the hand held device. The photograph is clicked to ensure that the measurement is taken accurately.

Dr. M. Thomas Kishore presented on measuring development outcomes of ECD interventions. Dr. M. Thomas Kishore, from NIMHANS, Bangalore, presented review of evidence on measuring development outcomes of ECD interventions. The purpose of their review was to identify broad trends in child development, to demonstrate impacts of specific program or polices, to explore range of impacts on child development in line with theory and existing understanding of neural mechanisms. The review of evidence from LMIC context showed that few studies on ECD focused interventions have a long-term outcome. Lessons learnt from the review are empowerment of parent/ primary caregiver is necessary and home-based programmes are better for longer term child development. Also, NGOs play a very valuable role.

Session 5 was the break-out session in which scalable ECD intervention packages for three partner states were discussed. The participants were distributed in three groups – WCD group, HFW group and, Mixed group. In this, systems approach with objectives to plan the road map and mechanisms, to operationalize coordinating multi-sectoral participation and appropriate monitoring and review frameworks were discussed.

The WCD group and HFW group discussed the strategies / package for ECD interventions to be scaled up under WDCW / HFW department at the state. The discussions considered available evidence, advocacy needs of the states, availability or need of supportive infrastructures, workforce and technology, for sustainable and scalable recommendations. The mixed group discussed the ECD lifecycle approach and available evidence to identify the gaps in understanding of science and implementation, especially for the Indian context.

Following the discussions, groups presented their recommendations for the states, which were further discussed with the audience. The session was chaired by **Dr. Nanda Kishore and Mr. Pujari.** The consisted recommendations are mentioned in the main text.

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Early Childhood Development:
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Early Childhood
Early Childhood- Pre-natal period till 8 years of age
Most intensive period of brain development, 80% of brain growth occurs in the first 3 years
More vulnerable to damage due to environmental factors
Early diagnosis and intervention of developmental disorders- better outcomes
Maximum neuroplasticity in early childhood, decreases with age
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