

**Indian Academy of Pediatrics (IAP) Task Force Recommendations for Incorporating Nurturing Care for Early Childhood Development (NC-ECD) in Medical Education in India**

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TASK FORCE ON NC-ECD IN MEDICAL CURRICULUM**

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**ABSTRACT**

**BACKGROUND:** The World Health Organization (WHO) recommends promotion of nurturing care for early childhood development (NC-ECD) by focusing on five essential components *viz* good health, adequate nutrition, promotion of early childhood learning, responsive caregiving, and safety and security. Indian medical graduate and pediatricians are the keys to successful delivery and propagation of NC-ECD in the community. Their training therefore needs to include skills and knowledge needed to promote and practice ECD.

**OBJECTIVES:** To evaluate the existing undergraduate (UG) and postgraduate (PG) curricula of Pediatrics for components related to early childhood development, assess gaps in the training essential to practice and promote ECD, and suggest recommendations to incorporate NC-ECD in the UG-PG curricula.

**PROCESS:** Indian Academy of Pediatrics created a Task Force to review the UG/PG medical curricula, consisting of experts from Pediatrics and Medical education. The Task force deliberated on 20 March 2021 and identified the gaps in current curricula and provided suggestions to strengthen it. The recommendations of the Taskforce are presented here.

**RECOMMENDATIONS:** Taskforce identified that the UG/PG medical curricula are lacking training for propagating early childhood learning, responsive caregiving, caregiver support, and ensuring safety and security of children. The taskforce provided a list of competencies related to ECD that need to be included in both UG and PG curriculum. NC-ECD should also be included in topics for integrated teaching. Postgraduates also need to be exposed to hands-on-training at anganwadis, creches, and in domestic setting.

**Keywords:** *Competencies, Curriculum, Indian Medical Graduate, Postgraduate, Training.*

**BACKGROUND**

Nurturing a child during the period of early childhood development (ECD) has an impact on future mental and physical health of the child. The World Health Organization (WHO) recommends promotion of five essential components, *viz.* good health, adequate nutrition, promotion of early childhood learning, responsive care giving, and safety and security to achieve the optimal genetic potential of children into adulthood [1].

The Indian medical graduate (IMG) and pediatricians provide care before, during, and after birth, promote breastfeeding and good nutrition, monitor growth, and prevent and treat common childhood illnesses. Missing components of nurturing care most often are responsive caregiving, early learning, safety, security; and mental health of the caregivers. Updating the competency profile of the

workforce and upgrading pre-service and in-service training are essential to create doctors that support nurturing care over the coming years, both for practice and mentoring and supervision to the paraprofessionals and frontline workers. Defining the competencies required for this aspect of care can make medical training more relevant [2].

In India, the Integrated Child Development Scheme (ICDS) and National Health Mission (NHM) are the major government initiatives that promote nurturing care for early childhood development [3,4]. The medical officers under the National Health Mission provide the health care benefits, oversee the administrative aspects of service delivery as well as oversee and co-ordinate the training of the health care workers. IMGs and pediatricians who join private sector provide health promotion and care for a large proportion of children needing domiciliary care in India and hence can adopt interventions for nurturing care in their daily practice. It is thus crucial to train both the graduate students (undergraduates, UG) and the postgraduate (PG) trainees' in nurturing care for early childhood development (NC-ECD).

### **ECD in the Current UG Curriculum**

The current competency based medical education (CBME) curriculum enlists competencies that the future IMG is expected to have achieved at the end of his/her training. Competencies addressing the subject of ECD are distributed across the subjects of pediatrics, community medicine and obstetrics and gynecology. Competencies of normal growth and development and factors affecting them, nutrition and related disorders and immunization and national health programs are addressed in pediatrics. Those of normal pregnancy, antenatal care and lactation are addressed in obstetrics and gynecology and competencies for nutrition, immunization and national health programs related to them are addressed in community medicine. The curriculum also has a suggestion for integration with basic sciences (anatomy, biochemistry, physiology) for the concepts of nutrition, immunization, embryology/brain development, pregnancy and lactation for each of the three subjects [5].

Though major concepts of early childhood development are addressed in more than 200 competencies on the topic, the IMG is not really being introduced to the term ECD and its concept. There is considerable overlap of competencies amongst various subjects and it is left to the discretion of the teachers to decide how to teach, integrated or otherwise. The NMC suggests integration for up to 20% of the curriculum and suggests a list of broad conditions like anemia, jaundice, diabetes etc. that may be taught in an integrated manner. As of now, ECD is not part of this list.

### **ECD in the Current PG Curriculum**

The competency document for the post graduate pediatric course builds upon the competencies achieved in the undergraduate course. The current PG curriculum outlines the competencies in the cognitive, psychomotor, affective domains for pediatric training [6]. In the cognitive domain the PG

curriculum emphasizes on knowledge of the social, economic, biological and emotional determinants of child health. Besides, it also includes knowledge of normal and abnormal growth and development, nutrition, promotive-preventive care and rehabilitation and national health programs. In the psychomotor domain, PG training emphasizes on the skills of history taking, assessment of normal and abnormal growth and development, the ability to counsel regarding nutrition, breastfeeding and immunization. It also emphasizes on the need for a pediatric trainee to liaison with allied fields such as psychiatry and rehabilitation.

Like the UG curriculum, the PG curriculum also does not introduce the trainee to the concept of NC-ECD. Whereas it focuses on early detection and management of problems related to growth and development, it does not include concepts on nurturing normal growth and development. The current PG curriculum also does not prepare the future pediatrician to educate parents about responsive feeding practices, responsive parenting and early learning. While it includes detection and management of abuse, it does not cover the larger domain of child safety and security. Inter-departmental or inter-professional clinical exposure also does not get a mention in the PG curriculum.

## **OBJECTIVES**

The taskforce was constituted to evaluate the existing UG/PG curricula for components related to early childhood development, assess gaps in the training essential to practice and promote ECD, and suggest recommendations to incorporate NC-ECD in the UG/PG curricula.

## **PROCESS**

A task force was created by the Indian Academy of Pediatrics to review the UG/PG medical curricula and make recommendations on how the concepts and practice of NC-ECD can be incorporated in the current medical education. Experts from the fields of pediatrics and medical education were part of the task force. In a daylong meeting held on the 20<sup>th</sup> of March 2021, the members of the task force deliberated upon the gaps in the current UG/PG Medical curricula and framed recommendations to strengthen this component.

## **RECOMMENDATIONS**

The task force suggested a list of competencies related to ECD included in both UG and PG curriculum. NC-ECD should also be included in topics for integrated teaching. Emphasis needs to be on training for propagating early childhood learning responsive caregiving, caregiver support, and ensuring safety and security of children. Postgraduates also need to be exposed to hands-on-training at anganwadis, creches, and in domiciliary settings.

### **Incorporating ECD in UG Curriculum**

The task force observed that while NC-ECD related competencies are included in the current curriculum, certain crucial components are missing. **Table I** enlists the competencies needed to be included in UG curriculum to address the five domains of NC-ECD. The task force also recommends that NC-ECD be included in the list of topics suggested for alignment and integration. It is also

suggested that integration for the concepts of NC-ECD may be done using the correlation framework and linker cases be used for the same. The task force advocated formation of sub teams at institutional level for developing modules for integration for case scenarios that include more than one department to cover different aspects of a competency.

### **Incorporating ECD in PG Curriculum**

The task force observed that the current PG curriculum does not train the future pediatricians about the holistic concept of ECD and NC-ECD. Specially the components of early childhood learning, responsive caregiving, caregiver support and nurturance and safety and security, are not adequately covered. The task force recommends that the PG curriculum document, in addition to current components, must include the various components of NC-ECD under the various domains of postgraduate pediatric training as listed in **Table II**.

The task force also recommends that the pediatric training should include an exposure to antenatal clinics and antenatal counselling, home visits and anganwadi center, and visits to crèches, social welfare to understand the implementation of national health programs; visits or posting at the District Early Intervention Centers (DEIC) and posting in psychiatry department for experience with caregiver anxiety and depression are also recommended.

Indian Academy of Pediatrics, in collaboration with National Neonatology Forum (NNF) and the Federation of Obstetric and Gynaecological Societies of India (FOGSI); supported by the World Health Organization (WHO) and United Nations Children's Fund (UNICEF), has committed to adopt all the components of the WHO/UNICEF Framework for Nurturing Care for Early Child Development (NC-ECD) in pediatric practice, as per Mumbai Call to Action [7]. This is in continuity and conformity with the IAP Consensus Statement on Early Childhood Development 2020 [8]. Action point 4a of Mumbai Call to Action calls for efforts to change perceptions and practices of medical students and allied professionals by pre-service capacity building by proposing modification in undergraduate and postgraduate training curriculum. The present recommendations mark a beginning in this direction.

The task force recommendations have kick started the process by outlining the topics to be included in preservice education. A lot of work needs to be done such as defining the competencies for inclusion in the formal curriculum, converting competencies into learning objectives incorporating various levels of Miller's Pyramid, identifying teaching learning methods, and finally deciding the assessment tools. This will have to be conducted as a separate exercise. Guidelines also need to be prepared to integrate the ECD competencies with pre-clinical and para-clinical subjects.

### **THE WAY FORWARD**

As of now, the recommendations of the task force need to be propagated and implemented at all levels in pre-service education. This would need a strong networking and advocacy, especially among the

policymakers. It is heartening to note that NC-ECD is at the top of the global agenda of child health. Indian Academy of Pediatrics is committed to take all these steps as outlined above.

The need of the hour is to bring about a paradigm shift in our approach to pediatric practice that is focused on improving survival and decreasing morbidity, to 'Survive, Thrive and Transform' in alignment with the Global Strategy for Women's, Children's and Adolescents' Health, 2016-30 [9]. And this is doable only when we start early from inculcating these practices in the preservice training years. Only then the health force can empower the parents for nurturing care to achieve the optimal developmental potential in their children.

## ANNEXURE

### List of members of IAP-WHO Task Force

Dr Piyush Gupta, *IAP President*; Dr R Remesh Kumar, *President-elect*; Dr GV Basavaraja, *IAP Secretary*; Dr Tejinder Singh, *Chairperson*; Dr Monika Sharma, *Convener*.

**Members:** A Yashowanth Rao, *Hyderabad, Telangana*; Anurag Agarwal, *Delhi*; Arpita Gupta, *Delhi*; Asok Kumar Datta, *West Bengal*; Bakul Parekh, *Mumbai, Maharashtra*; Devendra Mishra, *Delhi*; Dheeraj Shah, *Delhi*; Dipti Kapoor, *Delhi*; Geeta Karambelkar, *Pune*; Harish Pemde, *Delhi*; Shivananda, *Bengaluru, Karnataka*; Jayakumar C Panicker, *Kochi, Kerala*; KS Multani, *Ludhiana, Punjab*; CH Laxman Kumar, *Kareemnagar, Andhra Pradesh*; M Surendranath, *Hyderabad, Telangana*; Monica Juneja, *Delhi*; Nandita D'souza, *Goa*; Pawan Kalyan, *Vijaywada, Andhra Pradesh*; Pratibha Singhi, *Gurgaon, Haryana*; N Ravi Kumar, *Hyderabad, Telangana*; R Somasekar, *Chennai, Tamil Nadu*; Roosy Aulakh, *Chandigarh*; S Sitaraman, *Jaipur, Rajasthan*; Sangeeta Yadav, *Delhi*; Santosh T Soans, *Mangalore, Karnataka*; Sharmila Banerjee Mukherjee, *Delhi*; Sheffali Gulati, *Delhi*; Suchit Tamboli, *Ahmednagar, Maharashtra*; Sudip Dutta, *Gangtok, Sikkim*; Sujata Kanhere, *Mumbai, Maharashtra*; Swapan Kumar Ray, *Kolkata, West Bengal*; Vishal Sondhi, *Pune, Maharashtra*; Yogesh Parikh, *Surat, Gujarat*.

*Invited but could not attend:* Anju Aggarwal, Devendra Sareen, HB Mallikarjuna, Jaya Shankar Kaushik, Manmeet Kaur, Om Shankar Chaurasia, Sanjay KS, Satinder Aneja, Veena Kalra.

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**Table I ECD-Related Competencies Needed to be included in Undergraduate Medical Curriculum**

<i>Knowledge</i>	<i>Skills</i>	<i>Affective domain</i>
<i>Nurturing good health</i>		
<ul style="list-style-type: none"> <li>• Normal growth, development monitoring</li> <li>• Immunization</li> <li>• Early signs of developmental delay</li> <li>• The concept of the 'mother and child health/protection card' for age appropriate development milestones tracking, positive parenting practices and early identification of warning signs.</li> <li>• Early detection of hearing and vision problems</li> <li>• Good quality preventive, promotive and curative care</li> </ul>	<ul style="list-style-type: none"> <li>• Assessment of normal growth parameters (anthropometry)</li> <li>• Use of growth charts</li> </ul>	Counselling regarding general health care of infant and child
<i>Nurturing adequate nutrition</i>		
<ul style="list-style-type: none"> <li>• Importance of breastfeeding</li> <li>• Age-appropriate diet and healthy food choices</li> </ul>	<ul style="list-style-type: none"> <li>• Growth monitoring and detection of growth faltering and malnutrition (WFA, HFA, Anemia)</li> </ul>	<ul style="list-style-type: none"> <li>• Counselling regarding breastfeeding promotion in antenatal clinics and community setting</li> <li>• Nutritional education for adolescents and women of reproductive age group</li> <li>• Nutritional education for infancy and early childhood</li> </ul>
<i>Nurturing early childhood learning opportunities</i>		
<ul style="list-style-type: none"> <li>• Introduction to the concept of age-appropriate play activities and use of age-appropriate toys to stimulate the brain</li> </ul>		<ul style="list-style-type: none"> <li>• Counselling about age appropriate activities (play and communication)</li> </ul>
<i>Nurturing responsive care giving</i>		
<ul style="list-style-type: none"> <li>• The concept of responsive care in early childhood</li> <li>• Caregiving practices to promote attachment and responsive care</li> <li>• Caregiving practices to promote positive behaviors</li> <li>• Factors affecting mental health of caregivers especially mothers</li> </ul>		<ul style="list-style-type: none"> <li>• Counselling to promote maternal mental health</li> <li>• Recognition of psychological and mental health problems in caregivers</li> </ul>
<i>Nurturing safety and security</i>		
<ul style="list-style-type: none"> <li>• Definitions of safety and security</li> <li>• Safe home environment-prevention of injuries, ingestion of harmful substances, exposure and drowning. Impact of environmental pollution.</li> </ul>	<ul style="list-style-type: none"> <li>• Recognition of signs of physical, emotional, sexual abuse and neglect</li> <li>• Arranging referral to child protection services for at risk and affected children and families</li> </ul>	<ul style="list-style-type: none"> <li>• Counselling about safe home environment, prevention of injuries, ingestions, exposure and drowning</li> </ul>

**Table II ECD-Related Competencies Needed to be Included in Pediatrics Postgraduate Curriculum**

<i>Knowledge</i>	<i>Skills</i>	<i>Affective domain</i>
<i>Nurturing good health</i>		
<ul style="list-style-type: none"> <li>• Clinical features, evaluation and management of language disorders in collaboration with allied specialists</li> <li>• Principles of developmentally supportive care</li> <li>• Basic principles of age appropriate developmental stimulation</li> <li>• Components of nurturing care</li> <li>• Critical periods of development</li> <li>• Recommendations for screen time and physical activity</li> <li>• Referral pathways for children diagnosed with neurodevelopmental and/or behavioral disorders</li> </ul>	<ul style="list-style-type: none"> <li>• Developmental screening-milestones and assessment tools</li> <li>• Skills to provide developmentally supportive care, right from birth</li> <li>• Psychometry</li> <li>• Screening for hearing, vision and dental problems and neurodevelopmental disorders</li> </ul>	<ul style="list-style-type: none"> <li>• Communication skills to provide counselling and health education to patients, families and community</li> </ul>
<i>Nurturing adequate nutrition</i>		
<ul style="list-style-type: none"> <li>• Cultural beliefs and practices of breast feeding and complementary feeding</li> <li>• Age appropriate diet in health and illness</li> <li>• National health program</li> <li>• Principles and practice of IYCF</li> <li>• Feeding problems in children in general and in those with special needs and principles of its management</li> <li>• Antenatal breast care and preparation for lactation</li> <li>• Junk food and health food choices</li> </ul>	<ul style="list-style-type: none"> <li>• Positioning and handling infant during feeding</li> </ul>	<ul style="list-style-type: none"> <li>• Counselling of antenatal mothers regarding breast care, breastfeeding and age appropriate food choices, responsive feeding</li> </ul>
<i>Safety and security</i>		
<ul style="list-style-type: none"> <li>• Concepts of safety and security</li> <li>• Risk factors for child abuse and neglect</li> <li>• Identification and management of child abuse, maltreatment</li> <li>• POCSO Act</li> <li>• Timely referrals to concerned authorities/departments</li> <li>• Principles of maintaining safe home and community environment</li> <li>• Importance of birth registration</li> <li>• Noninstitutional family care and early intervention for vulnerable children</li> <li>• Social and educational services for at-risk and affected children and families</li> </ul>	<ul style="list-style-type: none"> <li>• History and examination of suspected physical, emotional and sexual abuse in young children</li> <li>• Examination and provision of first aid to an injured child</li> <li>• How to arrange referral with social and educational services for at-risk and affected children and families</li> </ul>	<ul style="list-style-type: none"> <li>• Skills to coordinate with various departments including law</li> <li>• Counselling for injury prevention, safe home environment and use of a first aid kit</li> </ul>

<i>Nurturing responsive caregiving</i>		
<ul style="list-style-type: none"> <li>• Importance of responsive caregiving and responsive feeding</li> <li>• Common caregiving practices in the community</li> <li>• Caregiving routines for early childhood learning, social and emotional well being</li> <li>• Risk factors for disruption in responsive caregiving and management</li> </ul>	<ul style="list-style-type: none"> <li>• Identify at risk babies and families</li> <li>• Assess caregiver psychological and mental problems</li> </ul>	<ul style="list-style-type: none"> <li>• Counselling regarding responsive caregiving and feeding</li> <li>• Communication skills for advocacy</li> </ul>
<i>Nurturing early learning</i>		
<ul style="list-style-type: none"> <li>• Importance of stimulating home environment</li> <li>• Importance of non-formal education and continuity to primary school education</li> <li>• Age appropriate play and communication activities</li> <li>• Age appropriate books</li> <li>• Risk factors disrupting early learning</li> </ul>		<ul style="list-style-type: none"> <li>• Counselling regarding early learning opportunities</li> </ul>