


Addressing early childhood development in healthcare: putting theory into practice

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During early childhood, when the developing brain needs optimal support, only healthcare providers systematically access children. Addressing early childhood development (ECD), however, has lagged behind other efforts in child healthcare. Most children around the world do not receive developmental support and developmental difficulties are neither systematically identified nor addressed. As highlighted in the Lancet series on child development,¹ neuroscience and economics have emphasised ECD as crucial to the ‘foundation of human potential’ and the ‘wealth of nations’, but addressing development has not been viewed as a powerful strategy that augments other efforts for children to survive and thrive. Healthcare systems, in general, focus on treatment rather than prevention and short-term medical rather than long-term biopsychosocial interventions. In parallel, the focus on ECD has been on the detection of developmental problems rather than addressing ECD in its entirety. Furthermore, it has not been clear how ECD could be addressed in healthcare. Theory is crucial to practice. Quoting Leonardo da Vinci: ‘He who loves practice without theory is like the sailor who boards a ship without a rudder and compass and never knows where he may cast.’ To guide healthcare providers, trainers, academicians, researchers and policymakers, we propose a theory-based ‘ownership plan’ to make ECD a child healthcare success story.

Bioecological theory states that humans develop through relationships between the child, family, community, programmes, policies, systems and the world at large.² Despite its longstanding robustness, this theory is not applied widely in child healthcare where often ECD is equated with developmental milestones and efforts to address ECD with ‘screening’ for delayed milestones. It is true that the early identification of developmental difficulties is possible with research-based standardised, reliable, valid, accurate

and culturally appropriate tools. However, decades have been lost, because of this focus and the belief that children from different cultures attain developmental milestones at different ages. Thus, even countries with scarce resources have repeatedly standardised and validated developmental screening tools. Research has refuted this belief,³ but alarmingly, there is a resurgence of focus on milestones. For example, the American Academy of Pediatrics and the Center for Disease Control have been calling for healthcare providers to ‘Learn the Signs. Act Early.’⁴ A mere glance at developmental theory tells us, however, that focusing on ‘signs’ and milestones alone is futile, because it is looking at children only. Seminal articles have articulated the limitations of ‘screening’ even in resource-rich countries.⁵ Reviving Dworkin’s words, for too long, we have expected ‘the impossible’ from ‘screening’ and milestones.⁶ Having first-hand worked with the distress caused by ‘screening’ to children and families in resource-limited countries, we underline that this approach needs to stop. Training healthcare workers on ‘screening’ or ‘milestone tracking’ but not on theory-based approaches for preventing and addressing developmental difficulties is wrong, unethical and unacceptable.

In the past two decades, there have been important advances to interventions that support the development of young children in healthcare. Evidence exists in diverse contexts on the applicability and effectiveness of interventions that promote nurturing, responsive parenting and early learning opportunities such as the WHO/UNICEF Care for Child Development, Reach Up, and Reach Out and Read.⁷ These interventions, however, apply identical recommendations for children of similar ages. Healthcare providers are not trained with these interventions to consider individual differences in children and their contexts and are not able

to identify or address children with developmental risks or delays. Relying on training healthcare providers on such interventions alone will cost us more time to meet the unmet individual needs of children and families and actualise ECD success stories.

If screening children for developmental delays alone and using non-individualised interventions are not the answer to meet the needs of children and families, how then can we apply theory into practice? Key theory-based frameworks and concepts specifically developed to be used in healthcare can guide us. *Family-centred care*, a framework for all child healthcare delivery, highlights working in partnership with families.⁸ The *WHO International Classification of Functioning Disability and Health* framework draws attention to functioning, activities and participation in life rather than milestones.⁹ The *WHO/UNICEF Nurturing Care Framework* clarifies that addressing ECD must be holistic and inseparable from addressing children with developmental difficulties.¹⁰ The framework also highlights that early child development is dependent on optimal caregiver physical and mental health. Risk factors related to caregivers such as poor health, mental health problems including depression, substance misuse or domestic violence all impede child development.¹¹ The child-friendly healthcare approach aims to incorporate the *Convention on the Rights of the Child* into healthcare systems.¹² Contrary to the misnomer in English 'disability', the neurodiversity approach embraces the uniqueness of each brain, guides us to move away from pathologising and categorising differences, to partner with children with different 'abilities' and their families throughout our services and to prevent and address stigma.¹³

Research on healthcare interventions applying theory is underway.¹⁴ Putting sound theory into practice is good practice, however, and does not need to await more evidence. Neither can young children wait for health systems to act. Although they should, will health systems ever provide us adequate time with our patients? We are trusted resources for families, a word from our mouths goes a long way. While continuing to invest in research and strengthening healthcare systems to address ECD, can we each take ownership and responsibility and apply theory to our encounters with children and their families? To assist us in checking our position in owning this task, we provide 10 theory-embedded action questions. These questions pertain to four layers outlined in the Nurturing Care Framework: empowering families (questions 1–7), empowering communities, supportive services (questions 8–10), and enabling policies (5 questions for trainers and policymakers). The examples of questions to caregivers that we have provided in italic are open-ended questions, tested and used cross-culturally.^{3 14 15} Unlike structured yes/no questions, they catalyse communication between caregivers and healthcare providers around child development, psychosocial risk factors and help build a partnership on how to proceed in supporting ECD.

1. Do I inform families about the importance of early brain development? *Just as supporting health is important, so is supporting development. Your child's brain grows most rapidly now, feed it loving care and early learning opportunities.*
2. Do I ask families about their concerns regarding their child's development? *By development I mean, learning, communicating, understanding, relating to people, moving body, using hands/fingers, also hearing and vision. Do you have concerns about your child's development in any of these areas?*
3. Do I learn about the nurturing care environment, how families are already supporting their child's development? *Tell me what you and your family are doing to support your child's development, her learning?*
4. Do I learn about risk factors that impede development and how families cope? Can I learn about and link families to adult or family services based on their needs? *Sometimes caregivers have a lot going on. They may feel overwhelmed, stressed, depressed, there may be financial problems or illness in the family. Supporting their child's development may be difficult. Are there such difficulties in your family? Can I follow with a question on their strengths and resources? Who and what helps? At this early age when development is so important, what could you, your family, friends and community do to help her develop despite these difficulties?*
5. Do I use standardised, validated, culturally appropriate tools that are theory based to monitor development, identify delays and the need for extra support? Is early identification not 'screening' but a component of the broader developmental service I provide? Is my assessment meaningful, not merely resulting in a score or category of delayed/not delayed?
6. Do I provide information to families about their child's development and how to support developmental domains? Can I equip myself to seamlessly provide families with ideas for supporting children's individual development using daily activities, participation in life and in nature?¹¹ If the child needs extra support, can I formulate reasons, provide individualised support and close monitoring?
7. Do I learn about the specific strengths of children and families? Can I empower families by acknowledging and mirroring their strengths?
8. Do I know about appropriate, accessible, evidence-based services in my community? Can I guide families to enable seamless transitions to resources? If there are no such services, can I advocate for change?
9. Do I educate families about neurodiversity? Can I help them address stigma?
10. If my healthcare system does not allow me time and funds to address ECD, can I advocate for change?

Below are additional questions for ECD trainers, researchers, advocates and policymakers, which foster reflection on whether stakeholders are equipped to address the above questions.

1. Does my curriculum equip my trainees with knowledge, skills and attitudes to address these questions?
2. Is my research theory based and relevant to the above concepts? If it covers only components of theory, can I report this limitation? Can I communicate my research findings to enable evidence-based advocacy?
3. Is my ECD advocacy theory based and holistic? Do I listen to the voices of children, families and service providers as I plan my advocacy? Can I seamlessly link services for children, caregivers and families?
4. Does my healthcare policy value ECD and provide training, time, funds, reimbursement and mandates to address the above questions? If not, what changes are needed?
5. Does global policy enable learning from healthcare providers, trainers, researchers, advocates, families and children from low/middle-income countries where most children reside?

Likely our training in child healthcare would not have included child development nor would it have trained us with skills to answer 'yes' to these questions. Addressing child development, however, is not more difficult than most challenges we have mastered during service delivery. Concurrent to implementation research and advocacy to strengthen healthcare systems in addressing ECD, we can educate ourselves further with the knowledge, skills and attitudes needed. In doing so, we will move to success stories in addressing ECD in our encounters with children and families. Being a partner in and a witness to the magic of early human development will reward us above and beyond any incentive and will help shape the demand for change needed in our healthcare systems.

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REFERENCES

- 1 Daelmans B, Darmstadt GL, Lombardi J, *et al*. Early childhood development: the foundation of sustainable development. *Lancet* 2017;389:9–11.
- 2 Bronfenbrenner U. Developmental research, public policy, and the ecology of childhood. *Child Dev* 1974;45:1–5.
- 3 Ertem IO, Krishnamurthy V, Mulaudzi MC, *et al*. Similarities and differences in child development from birth to age 3 years by sex and across four countries: a cross-sectional, observational study. *Lancet Glob Health* 2018;6:e279–91.
- 4 Zubler JM, Wiggins LD, Macias MM, *et al*. Evidence-informed milestones for developmental surveillance tools. *Pediatrics* 2022;149:e2021052138.
- 5 Urkin J, Bar-David Y, Porter B. Should we consider alternatives to universal well-child behavioral-developmental screening? *Front Pediatr* 2015;3:21.
- 6 Dworkin PH. Developmental screening: (still) expecting the impossible? *Pediatrics* 1992;89:1253–5.
- 7 Jeong J, Franchett EE, Ramos de Oliveira CV, *et al*. Parenting interventions to promote early child development in the first three years of life: a global systematic review and meta-analysis. *PLoS Med* 2021;18:e1003602.
- 8 Committee on Hospital Care and Institute For Patient- And Family-Centered Care. Patient- and family-centered care and the pediatrician's role. *Pediatrics* 2012;129:394–404.
- 9 Imms C, Granlund M, Wilson PH, *et al*. Participation, both a means and an end: a conceptual analysis of processes and outcomes in childhood disability. *Dev Med Child Neurol* 2017;59:16–25.
- 10 World Health Organization, United Nations Children's Fund, World Bank Group. *Nurturing care for early childhood development: a framework for helping children survive and thrive to transform health and human potential*. Geneva: World Health Organization, 2018. <https://apps.who.int/iris/handle/10665/272603>
- 11 Jeong J, Adhia A, Bhatia A, *et al*. Intimate partner violence, maternal and paternal parenting, and early child development. *Pediatrics* 2020;145:e20192955.
- 12 Lenton S, Ehrich J. Approach to child-friendly health care--the council of Europe. *J Pediatr* 2015;167:216–8.
- 13 Sonuga-Barke E, Thapar A. The neurodiversity concept: is it helpful for clinicians and scientists? *Lancet Psychiatry* 2021;8:559–61.
- 14 Raut A, Mustafayev R, Srinivasan R, *et al*. Hybrid type 1 effectiveness/implementation trial of the international guide for monitoring child development: protocol for a cluster-randomised controlled trial. *BMJ Paediatr Open* 2021;5:e001254.
- 15 World Health Organization. *Pocket book of primary health care for children and adolescents: guidelines for health promotion, disease prevention and management from the newborn period to adolescence*. pg. Copenhagen: WHO Regional Office for Europe, 2022: 60–7. <https://www.who.int/europe/publications/i/item/9789289057622>