



# A holistic framework to address child development

**Betty Hutchon discusses the development of a best practice approach for early intervention for infants at high risk of developmental difficulties.**

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**T**he first 1,001 days of life are a period of extraordinary brain development, a window of opportunity that can shape a child's lifelong health and potential. Yet for many of the families we work with in early intervention, those whose infants are at high risk of developmental difficulties, this critical period is marked by fragmented and inconsistent care.

Ei SMART was founded to close that gap by transforming what research already tells us into practical, context-sensitive interventions. Using the best available evidence, we turn knowledge into meaningful, measurable impact for children and families.

The idea first emerged in 2016, when I became concerned by parents' experiences of early intervention and by research suggesting that the benefits were not always clearly demonstrated.

At that time, therapists mainly focused on motor development, while other aspects of development were often overlooked, despite the increasing number of children with social-emotional and social communication difficulties.

As an occupational therapist, drawing on my experience in infant mental health and my work with Dr Brazelton, I brought together a small group of like-minded clinicians, academics and parents. Following intensive collaboration, Ei SMART was born (Hutchon et al 2019).

Over the past 10 years, it has grown significantly and is now a UK-registered charity run by parents with lived experience and clinicians from frontline practice, supported by a team of academics and researchers.

Our aim is to address the lack of a unified early intervention strategy for infants at high risk of developmental difficulties following preterm birth or neonatal complexity.

Our team includes parents with lived experience, occupational therapists, physiotherapists and speech and language therapists, alongside a paediatric neurologist, neonatologists, paediatricians, a parent-infant psychotherapist and neonatal nurses.

Occupational therapy plays a central role within Ei SMART, reflecting our professional grounding in psychology, psychiatry and neurology.

It's a unique and pioneering approach and there is emerging evidence of its effectiveness and how it is influencing practice. It is one of the first truly holistic frameworks addressing all aspects of a child's development: sensory, motor, attention and regulation, and relationships.

From birth, healthcare professionals and parents work together in co-production to create the early-intervention plan for premature and medically complex infants.

## Listening to parents' experiences

The framework was founded on the principle of co-production and underpinned by listening carefully to parents' experiences. Parents told us they felt that they were not always listened to by healthcare professionals and about attending appointments with different specialists who were not communicating with each other.

They also told us that interventions were infrequent or inconsistent, not always the right kind, or they had limited long-term benefit, and that they were being told to 'wait and see'.

Alongside this, I witnessed first-hand the limited understanding of the occupational therapy role and the significant contribution we could make to early intervention.

Often occupational therapy is not considered until a child requires specialist seating or equipment. As a result, valuable time is lost and occupational therapists are too often viewed primarily as equipment providers rather than specialists in early development.

Currently, the lack of specialised services and limited understanding of the importance of early intervention often leads to long waiting times. As a result, intervention may not occur during the most crucial months of life when the brain has

abundant plasticity and the greatest potential for developmental change.

Ei SMART addresses this sensitive period of development in order to optimise neurodevelopmental outcomes for this population.

## The framework

Ei SMART integrates key areas of development to maximise infant outcomes. It is particularly suited to occupational therapy practice because the framework focuses on sensory, motor, attention and regulation needs, while promoting strong parent-infant relationships and collaboration between parents and professionals in developing the intervention plan.

The framework places the infant and family at the centre of care. Interventions that promote cognitive and motor development are embedded in everyday activities, such as nappy changing, lifting and carrying, playing and reaching, while supporting the parent-infant relationship.

Integrating the framework requires changes within neonatal units and community early-intervention settings, including adjustments to care practices, professional collaboration and attitudes within the multidisciplinary team.

Ei SMART requires a mindset change as well as learning new skills to change traditional practice. Several core components of effective early intervention and care include:

- Actively involving, educating and supporting parents in the biopsychosocial aspects of care.
- Supporting a consistent and responsive relationship between parents and infants.
- Recognising and promoting self-regulatory behaviour in infants.
- Supporting progress in cognition, motor skills, sensory skills and communication.
- Modifying the infant's environment to provide the 'just right challenge' for exploration and learning.
- Supporting parental wellbeing.

These principles informed the development of, and are now embedded in, the Ei SMART framework.



**Above circle:** A mother and her baby taking part in the intervention

**Bottom circle:** (left to right) OT Lucy and physiotherapist Sarah, getting ready for their Ei SMART clinic in Cornwall

**Opposite page:** Ei SMART demonstrating our thread 'attention and regulation'





## It has helped us shift our focus toward supporting regulation in babies, parents and staff, and encouraging children to problem-solve.”

Ei SMART is comprised of threads that represent the essential components of the framework. We refer to them as threads, because threads can be woven together in many ways to create strength, cohesion and complexity, while highlighting the importance of interconnectedness:

- **Sensory:** supports how babies experience and make sense of the world, helping them engage, learn, and feel secure.
- **Motor:** goes beyond movement alone, encouraging active participation and learning through meaningful, child-led activity.
- **Attention and regulation:** helps babies develop focus, emotional regulation, and self-soothing through sensitive, responsive caregiving.
- **Relationships:** strengthens the parent-infant relationship, building confidence, resilience and secure attachment.
- **Together:** brings parents and professionals together in a shared framework, ensuring consistent, co-ordinated care that supports babies and families to thrive.

### Resources and ongoing work

The framework provides open-access developmental videos, play leaflets and posters designed to support families and healthcare practitioners from the earliest days. Many of these resources are available in more than 10 languages and are widely used in neonatal units and developmental clinics across the UK.

Parents frequently report that the resources help them support their child's development in everyday life. One parent described the leaflets as 'a lifeline'.

Co-production remains central to Ei SMART. Our resources are developed jointly with parents with lived experience, helping ensure they are practical, accessible and relevant to families' needs.

This collaborative approach has brought together healthcare professionals across the UK who have adopted Ei SMART as a shared framework. Nurses, doctors, occupational therapists, physiotherapists and speech and language therapists are now working together within this model both in hospitals and community services.

Our parent and healthcare professional team are all volunteers who have worked together for a decade to develop this innovative framework.

### Benefits and impact

Feedback from healthcare professionals suggests the framework is having a meaningful impact on practice. A speech and language therapist recently told us that our training 'has made me a different and better therapist' and that they use learning from the framework every day.

While a physiotherapist said: 'It has helped us shift our focus toward supporting regulation in babies, parents and staff, and encouraging children to problem-solve. By addressing these areas early and building parents' confidence, we are seeing improved outcomes. Many children have surpassed their neonatologists' expectations, which has strengthened communication with hospital teams and led to earlier, more appropriate referrals.'

Therapists have identified a number of benefits from using the framework, including:

- Increased confidence in assessing neurodevelopmental needs in high-risk infants.
- Shared, relationship-centred language around early development.
- A stronger holistic understanding of infant development.
- Improved collaboration with families through co-production.
- Better multidisciplinary teamwork.
- Improved outcomes for babies and families.

### Recognition and next steps

In 2025, the Ei SMART framework was referenced twice by NHS England in its *Commissioning framework for children and young people with cerebral palsy* (NHSE 2025). This guidance supports integrated care boards in commissioning high-quality services and highlights examples of effective practice.

During the same year, it also received endorsement from Bliss, the Institute of Health Visiting and the Neonatal Nurses Association, and joined the Global Foundation for the Care of Newborn Infants network. We are also proud of our long-standing partnership with The British Association for Neonatal Neurodevelopmental Follow-up (BANNFU).

Our future aims for the framework include:

- Building on our free resources for families and professionals.
- Expanding the number of Ei SMART clinics within the NHS.
- Training more healthcare professionals in the Ei SMART framework.
- Developing a dedicated e-learning platform.

- Strengthening academic and research collaborations.
- Ensuring occupational therapists are consistently included in early intervention teams.

Occupational therapists play a vital role in Ei SMART and their support over the past decade has been phenomenal; thank you all so much and as a profession in early intervention we just have to keep on going. ●

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Hutchon B, Gibbs D, Harniess P et al (2019) Early intervention programmes for infants at high risk of atypical neurodevelopmental outcome. *Dev Med Child Neurol* 61:1362-7.

NHS England (2025) *Commissioning framework for children and young people with cerebral palsy*. Available at <https://bit.ly/41oyLnT> [accessed 24 March 2026].

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## A family perspective

The impact of early intervention can be illustrated by Lauren, mother of Evan, who was born at 26 weeks and experienced complications affecting the blood supply to his brain, resulting in weakness on the left side of his body.

His family accessed early intervention support through both the NHS and specialist charity Ei SMART. After attending a course, Lauren noticed significant changes, saying: 'Evan couldn't put his left leg up on the bar by himself before the course, but now he has done it several times. He can also reach out and feel our faces with his left hand.'

Lauren explained that learning practical early intervention techniques helped the family integrate developmental activities into everyday life. 'There was a time when we couldn't think too much about his future, but now we are optimistic. That is a wonderful feeling.'

Read the full story at <https://mailchi.mp/1eccdde36edfe/11405037-13561200>.

**Below:**  
Ei SMART in action, coproducing a play activity with the baby's mother

