The positive economic effect of front-end early intervention services has been clearly demonstrated. Short-term and longitudinal data (even into young adulthood) demonstrate the value of the early childhood intervention focusing on family-centered, coordinated services that support parent-child relationships as the core element of intervention.[1]

Richard C. Adams, MD
Texas Scottish Rite Hospital for Children, Medical Director of Pediatric Developmental Disabilities

Carl D. Tapia, MD, MPH, FAAP
Baylor College of Medicine/ Texas Children's Hospital

The Council on Children with Disabilities

The VALUE of ECI

For over 30 years, Early Childhood Intervention (ECI) has helped over 800,000 Texas families learn how to be the best teachers for their children with developmental delays or disabilities.

ECI's evidence-based practice of helping families incorporate intervention strategies into daily routines:

- increases children's rate of growth in key developmental areas;
- multiplies the opportunities and effects of intervention; and
- increases the return on every dollar spent.

Discover how ECI can help the children and families in your community and healthcare practice.

TEXAS Department of Assistive and Rehabilitative Services

eci early childhood intervention

Division for Early Childhood Intervention Services
Department of Assistive and Rehabilitative Services

ECI uses evidence-based practices to help families

7 Key Principles of ECI[2]

The 7 Key Principles for providing early intervention services in natural environments were developed by the national Principles and Practices in Natural Environments Workgroup. This workgroup of subject matter experts and researchers in early intervention agreed that the 7 key principles are the foundations that support the mission of early intervention, which is to build upon and provide supports and resources to assist family members and caregivers to enhance children's learning and development through everyday learning opportunities.

Principle 1
Infants and toddlers learn best through everyday experiences and interactions with familiar people in familiar contexts.

Principle 2
All families, with the necessary supports and resources, can enhance their children's learning and development.

Principle 3
The primary role of a service provider in early intervention is to work with and support family members and caregivers in children's lives.

Principle 4
The early intervention process, from initial contacts through transition, must be dynamic and individualized to reflect the child's and family members' preferences, learning styles and cultural beliefs.

Principle 5
Individualized Family Service Plan (IFSP) outcomes must be functional and based on children's and families' needs and family-identified priorities.

Principle 6
The family's priorities, needs and interests are addressed most appropriately by a primary provider who represents and receives team and community support.

Principle 7
Interventions with young children and family members must be based on explicit principles, validated practices, best available research, and relevant laws and regulations.

Meet Luke Rehurek

Rebecca and Jay Rehurek of Cedar Park, Texas had been to doctor after doctor trying to figure out why their one-year-old son Luke was experiencing speech delays, exhibiting unusual eating habits, and avoiding interacting or socializing with other kids. "I knew something was wrong, but I didn't have a clue what it could be," said Rebecca. Rebecca became Luke's strongest advocate, and as she persisted in her efforts to find help for her son, she was referred to Texas Early Childhood Intervention Services (ECI).

Luke's evaluation and assessment revealed that speech and occupational therapy from specialists in early childhood development could help. ECI professionals and family members identified goals for Luke and developed an Individualized Family Service Plan (IFSP) that would support Luke's family as they helped him develop. The IFSP also serves as the **authorization for services**. **[Principles 3 and 5]**

One of Luke's goals was to improve his speech and language. Luke's parents and ECI staff recognized that Luke loved trains. Together they developed strategies that incorporated trains in his everyday family routines to encourage him to become more vocal. Luke began creating stories with his train cars and identifying them by their letter and colors. He really enjoyed building his train set with the assistance of his older sister Kate. "We had a game plan, and it was exciting to see him progressing," said his dad Jay. **[Principles 1, 3 and 7]**

Jay and Rebecca were also very concerned about Luke's unusual eating habits and behaviors at mealtime. The family reported that visits to restaurants became unbearable, and the family began to feel confined, unable to do things together. Rebecca, unsure of what to do, shared her concerns with the ECI staff. "This is what was great about ECI. It was so easy to change our plan and add new goals. It was always about what was best for Luke," Rebecca recalled. **[Principles 3 and 4]**

Activities were developed and revised through joint planning, observation, action/practice, feedback and reflection at every visit. "They taught us to use things from around the home to help my child progress better," said Rebecca. **[Principles 3 and 6]**

Luke is a happy and rambunctious little boy who enjoys playing with his dog Lucy. He enjoys going to school and is academically ahead of his classmates. "Early intervention is absolutely everything. We are so grateful to ECI. I hate to think of where Luke would be if it hadn't been for ECI," said Rebecca. **[Principles 2 and 3]**

To hear more about Luke, please visit **www.dars.state.tx.us/ecis/videos/index.shtml** and view the video *About Texas ECI*.

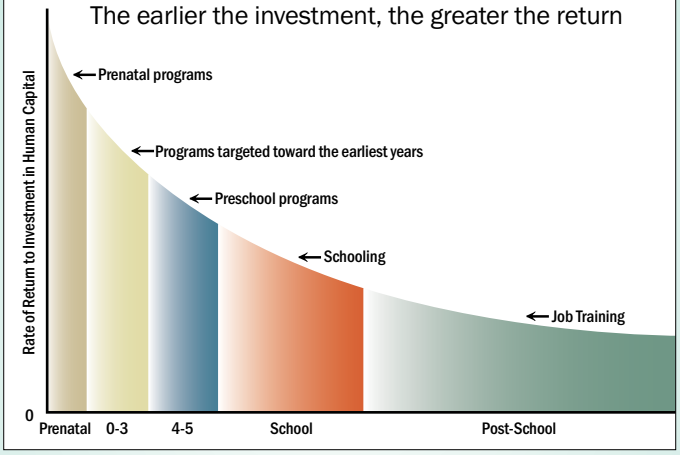
ECI services increase the return on every dollar spent

Do The Math[3] — ECI plans services for infants and toddlers based on research which demonstrates that learning occurs between intervention sessions. During a session, the provider utilizes his/her professional knowledge, skills and expertise to share information with the child's regular caregiver. The caregiver then provides the intervention within the child's daily routines. Consider the following comparison for two children who have similar delays in speech and language development.

	Michael		Luke	
Day	**Activity**	**Mins**	**Activity**	**Mins**
M	Names pictures and reads book during speech therapy session	45	• Luke and parents work on speech strategies. Luke plays with trains. Discussion of last week's daily activities and progress/needs. ECI staff observes difficulties and provides feedback. Jointly plan to use trains for labeling, prompting, imitation, etc., to promote speech in daily activities. Mom demonstrates understanding by looking at train book with Luke and labeling objects around the train. Parents and ECI staff discuss other daily activities to incorporate these strategies. • Mom labels foods and objects in grocery store with Luke • Dad names colors of train toys and Luke's body parts during bath	60 30 10
T			• Mom names foods at breakfast and Luke repeats • Mom and Luke sing songs in car to child care • Class colors trains and teacher names colors with class repeating • Older sister shares picture book, naming pictures together • Dad names and gives pajama choices to Luke; Luke points to choice	10 15 15 15 5
W			• Mom stops for train and they count the cars as train goes by • Teacher reads *Things That Go* and class repeats the sound each object makes, including trains • Plays "card" game with sister and mom — cards are train-shaped • Dad and Luke name food at dinner; Luke requests more	10 15 15 5
T	Sings songs and labels toys and actions during speech therapy session	45	• Mom and Luke play "find the bus, find a truck" while in car • Teacher and class sing alphabet song and point to letters while singing • Luke names foods at dinner and Dad names new foods with Luke repeating • Luke and sister play with trains saying "ready, set, go" before passing it back and forth	10 15 10 15
F			• Mom and Luke name food at breakfast • Mom and Luke sing songs in car to child care • Luke names clothes with Dad while undressing • Luke "reads" train book to Dad and names pictures	10 15 5 15
Total time		**90**		**300**

EARLY CHILDHOOD DEVELOPMENT IS A SMART INVESTMENT

The earlier the investment, the greater the return



"The highest rate of return in early childhood development comes from investing as early as possible, from birth through age five, in disadvantaged families. Starting at age three or four is too little too late, as it fails to recognize that skills beget skills in a complementary and dynamic way. Efforts should focus on the first years for the greatest efficiency and effectiveness." James J. Heckman, Ph.D., Henry Schultz Distinguished Service Professor of Economics at the University of Chicago and Nobel Laureate in Economics

Studies found that children who participate in high-quality early intervention/early childhood development programs tend to have:

- less need for special education and other remedial work;
- greater language abilities;
- improved nutrition and health; and
- experienced less child abuse and neglect.[4]

ROI and ECI

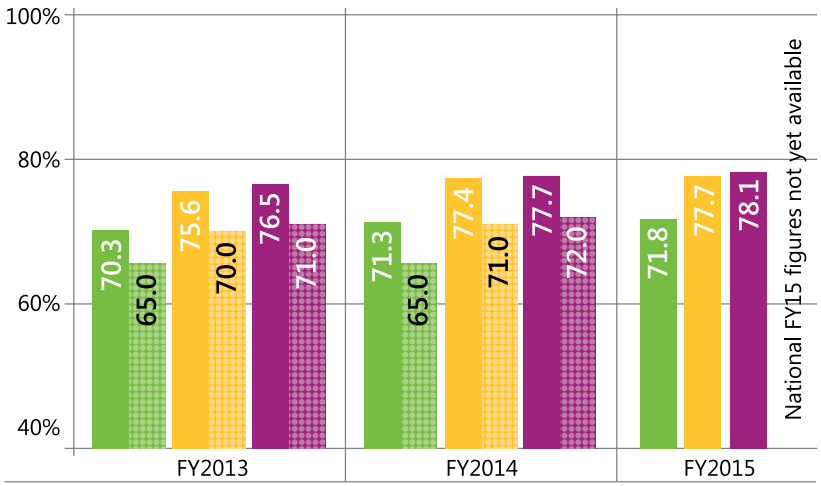
Economic analysis demonstrates programs that intervene early to improve child outcomes have returns on investment (ROI) from $2.50 to $17.07 for every dollar spent on early intervention services.[5]

Results show that early intervention works

Texas Child Outcomes from ECI Services

The Individuals with Disabilities Education Act (IDEA) Part C programs are required to collect data on child outcomes. This data is compiled and reported to the federal Office of Special Education Programs (OSEP). Children entering and exiting early intervention services are assigned a rating for functional skills on the three Global Child Outcomes that are listed below. These results show Texas children significantly increased their rate of growth in these key areas through their participation in ECI, and that Texas' child outcomes consistently exceed the national average.

Significant Increase in Growth Rate



Texas National	Positive social-emotional skills includes getting along with other children & the way they relate to adults.
Texas National	Acquisition & use of knowledge & skills includes reasoning, problem solving, & early literacy & math skills.
Texas National	Use of appropriate behaviors to meet their needs includes feeding, dressing, self-care & following rules related to health & safety.

"Our Health plan, as well as others across the State, enthusiastically endorses the ECI model as the only evidence-based and successful approach to assist children with disabilities or at risk for developmental delays. The richness and variety of services available, the coordination of care, targeted case management, training of family and caregivers to provide therapies, family support with social and behavioral counseling, and skills training is unique to ECI. It is the only model that teams with the family to develop and implement a customized program that promises the fastest and best response in the child's natural environments. We are forming strong coalitions with our ECI providers to promote and increase referrals so that these vulnerable children can be afforded the wealth of proven ECI services."

William B. Brendel, MD, FAAP, CHCQM
Driscoll Health Plan, Medical Director

Making a referral to ECI

Who can make a referral to ECI?

A parent, grandparent, family member, doctor, day care provider, anyone in the child's life.

How do you make a referral to ECI?

- Call the DARS Inquiries Line at 1-800-628-5115 **or**
- Visit **www.dars.state.tx.us/ecis/searchprogram.asp** to find an ECI program in your area.

National Early Intervention Longitudinal Study (NEILS) Special Education and Part C Programs

National longitudinal research on Part C programs tracked children at risk of needing special education and found 46% did not need special education by the time they reached kindergarten as a result of early intervention services. Texas was part of the sample in the NEILS. Results of the NEILS indicate[6]:

- 35% had no disability, were not receiving special education services
- 11% were reported to have a disability but were not receiving special education
- 54% were receiving special education services

Brain development from birth to 3

- Neural circuits create the foundation for learning, behavior and health. These circuits are **most flexible** from birth to 3.
- High-quality early intervention services can change a child's developmental trajectory and **improve outcomes** for children, families, and communities.
- Intervention is likely to be more effective and **less costly** when it is provided earlier in life rather than later.
- Early social/emotional development provides **the foundation** upon which cognitive and language skills develop.[7]

Citations

1 *Early Intervention, IDEA Part C Services, and the Medical Home: Collaboration for Best Practice and Best Outcomes*, Richard C. Adams, Carl Tapia, and The Council on Children with Disabilities, Pediatrics, September 30, 2013
2 Workgroup on Principles and Practices in Natural Environments, OSEP TA Community of Practice: Part C Settings. (2008, March)
3 Adapted from Juliann Woods, PhD, Florida State University and Robin McWilliam, PhD, Vanderbilt University
4 *Paying Later – the High Cost of Failing to Invest in Young Children* – PEW Center on the States Issue Brief, January 2011
4 *Policy Perspectives: Early Childhood Investment Yields Big Payoff* by Robert Lynch, Department of Economics, Washington College
4 *Early Childhood Interventions: Benefits, Costs and Savings* – Rand Corporation Research Brief
5 *Advocating for Early Intervention in Tight Times* – DC Action for Children, Alison Whyte, Policy specialist at The Arc of DC
5 *Why Business Should Support Early Childhood Education*, US Chamber of Commerce - Institute for A Competitive Workforce, Washington DC
6 NEILS full report: www.sri.com/sites/default/files/publications/neils_finalreport_200702.pdf
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