

## **Research Support for ABA-Based Intensive Early Intervention for Children with Autism**

### **Applied Behavior Analysis is the only treatment shown to improve the functioning of individuals with autism**

- Therapy programs based on principles of ABA are the only scientifically established treatment for children diagnosed with autism [6] and are the most well researched [5,18]
- Children who receive EIBI show larger increases in IQ and adaptive functioning and fewer aberrant behaviors and social problems than group receiving eclectic treatment (not ABA) [7]
- Unfortunately, most early childhood service providers use very few true ABA techniques; overall, their services vary greatly in quality, intensity, and level of empirical support [21]
- Treatment based on ABA is capable of producing significant improvements in multiple areas especially when duration of intervention was long and total hours of therapy was high [17]
- EIBI, based on behavioral theory and ABA principles, is the most commonly cited and best-researched intervention for young children diagnosed with autism [1]
- EIBI remains unavailable for the majority of young children diagnosed with ASD [1]

### **ABA based treatment should begin as early as possible (as soon as a diagnosis is suspected) to achieve the greatest results**

- Early initiation of ABA-based treatment is associated with greater response to treatment [16]
- Treatment should begin as soon as an autism spectrum diagnosis is seriously considered [16]
- Significant improvements for children with autism are most possible when they are very young [14]
- Developmental and cognitive gains are most easily accomplished when developmental differences between children with and without autism are the smallest (i.e. the toddler years) [15]
- Brains of young children are not yet formed completely and are uniquely responsive to intensive treatment; exploiting the developing brain creates a powerful treatment window for delivering accentuating treatment effects [9]
- Younger children are more likely to generalize and maintain gains made during treatment because they are less likely to discriminate between environments [11]
- Effective treatment for severe behavioral disorders requires early intervention to be carried out during all or most of the child's waking hours, address all significant behaviors in all of the child's environments, by all significant persons, for many years [12]

### **ABA based treatment should be as intense as possible to achieve significant progress**

- Research supports a range between 20 and up to 40 hours of intervention per week lasting at least two years or more [4,8]
- Services for children with autism should include a minimum of 25 hours a week and be delivered across 12 months a year [16]
- Children younger in age at intake and receiving intensive treatment were more likely to be placed in a regular education classroom [8]
- Intensive, long lasting ABA- based treatment produces significant improvements [17]

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### **Early Intensive ABA treatment produces significant cost savings across the lifespan**

- Significant cost-aversion or cost-avoidance is possible with EIBI [10]
- Using representative costs from Pennsylvania, cost savings per child are estimated to range from \$187,000-\$203,000 with inflation from age 3-22 years, and from \$656,000-\$1,082,000 with inflation from age 3-55 years [10]
- When comparing the cost of 18 years of special education and years of EIBI, the state of Texas would save \$208,500 per child across 18 years of education [3]
- Secondary benefits include savings on specialized daycare, medical bills, and adult care services and a better likelihood that most of these children will return a profit long after maturation by being productive citizens [3]

### **Research supports the systematic and structured use of inclusive settings and non-disabled peers**

The use of inclusive settings contribute to promoting social integration and general developmental outcomes for children diagnosed with ASD including gains in cognitive and language development, as well as functional communication skills and social and play behaviors. Research does not equate the mere presence of disabled children with non-disabled children as an effective component of treatment but in fact, children with autism must exhibit discrete skills at levels enabling them to access and benefit from interactions with typically developing peers [15].

- Developmental and cognitive gains are most easily accomplished when developmental differences between children diagnosed with ASD and typically developing children are the smallest (which is in the toddler years) [15]
- Developmental integration appears to be an effective means for the education of both handicapped and non-handicapped preschool children [2]
- Enrollment in inclusion programs indicates excellent gains in cognitive and language development and no detrimental behavioral effects of inclusion for typically developing children [19]
- There is little differentiation between inclusion programs and regular childcare programs in providing a quality experience for all children, but there may be additional benefits to enrolling children without disabilities into inclusion programs [20]
- The systematic and structured use of inclusive practices for children under age 3 can result in significant increases in standard scores, significant improvements in performance on functional measures, and social and play behaviors increased substantially [13, 22]

### **Several empirically validated model programs provide intensive ABA-based treatment to young children and produce significant results, including graduating children from requiring extraneous support or treatment**

- The Walden Program, Emory Autism Center, Department of Psychiatry and Behavioral Sciences at Emory University School of Medicine, Atlanta, Georgia
- Children's Center for Developmental Enrichment (CCDE), Columbus, Ohio
- Alexa's Playful Learning Academy for Young Children (PLAYC), Rady Children's Hospital San Diego, San Diego, California
- The Early Start Denver Model, UC Davis MIND Institute, Sacramento, California

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