

# Offsetting Toxic Stress by Training Parents of Infants and Young Children in Foster Care: The ABC Program Operating in 11 States

by Mary Dozier

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**M**any children experience abuse and neglect, but infants and young children are at greatest risk for being maltreated. The effects of maltreatment are especially problematic for these youngest children. This chapter describes Attachment and Biobehavioral Catch-Up (ABC), a scalable and powerful parenting program that offsets the damaging effects of early toxic stress by training foster and birth parents to be more nurturing, less frightening, and more responsive to their child's cues. ABC increases parents' sensitivity and improves parents' attachment relationships with their children. Children in ABC were more likely to have secure attachments and less likely to have disorganized attachments than children in a comparison intervention. Also, in contrast to comparison children, ABC children showed better self-regulation and, remarkably, more normal production of a stress hormone, an effect that persisted three years after the program ended. When parents are trained to be sensitive and responsive, children demonstrate an impressive ability to catch-up physically, intellectually, and socially.

The annual price tag of child maltreatment is \$80 billion when estimates include the costs of crime, lost productivity, and medical and mental health services.<sup>1</sup> The financial costs of child maltreatment, mostly shouldered by taxpayers, and the human suffering it causes have prompted calls for more effective prevention and intervention. The children at greatest risk of being neglected and abused are infants and young children under 3 years of age. These early years of life are a critical window for identifying families at risk of abuse and/or neglect and providing a rapid, research-based response.<sup>2</sup>

Effective interventions for young children typically target parents or caregivers, rather than the children themselves.<sup>3</sup> In humans, the prospects that the young will survive and develop depend on close and caring relationships with parents and adult members of the species.<sup>4</sup> As famously put by Urie Bronfenbrenner, "It is families that are the most powerful, the most humane, and by far the most economical system known for building competence and character."<sup>5, p. 4</sup>

Because infants and children are so dependent on adult relationships, children placed in foster care are at high risk of impaired development, given early experiences of maltreatment and changes in their primary caregivers.<sup>6</sup> These experiences expose the child to toxic stress—stress that is strong, frequent, and prolonged. Toxic stress, when experienced without a caring adult, can physically

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Mary Dozier

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damage the architecture of the brain in ways that alter the body's response to stress, and impair learning and problem solving.<sup>7</sup>

This chapter reviews our experience over the last two decades developing and evaluating an intervention that focuses on improving children's self-regulation and caregivers' attachment relationship with their children. When caregivers are available and responsive, children demonstrate an impressive ability to catch-up physically, intellectually, and socially.<sup>8</sup> The chapter describes Attachment and Biobehavioral Catch-Up (ABC), a parenting program that changes children's biology and behavior.<sup>9</sup> To date, ABC is operating in Delaware, Hawaii, Idaho, Kansas, Louisiana, Maryland, Minnesota, New York, North Carolina, Oklahoma, and Pennsylvania.

### **Why is it Important to Focus on Children's Relationships With Their Maltreating and Foster Parents?**

The ABC intervention focuses on three parenting behaviors: (1) nurturance when children are distressed, (2) following children's lead when children are not distressed, and (3) behaving in non-frightening ways all of the time.

First, when children have experienced toxic stress, it is especially important that their parents are nurturing. Without nurturing care, such children have trouble organizing their attachment system. Attachment is a key, biologically based task that has been instrumental to survival over many generations. As an example, attachment serves to protect babies; even when babies learn to crawl or walk away from the parent, they return quickly when they feel threatened. When faced with threats such as illness, nighttime, or strangers, a baby is not likely to stray too far from a parent.<sup>10</sup>

Remarkably, the behaviors that babies show when they are distressed reflect the quality of their attachment to parents. Researchers can reliably assess attachment relationships by children's behavior during reunion with the caregiver. Children's attachment to a caregiver is considered *secure* if, upon reunion, children seek contact with the parent and are soothed by him or her. The attachment relationship is considered *avoidant* if the child turns away from or fails to look at the parent for reassurance. Examples of how *avoidant* attachments develop include a child falling off a chair and the parent not hugging the child, but saying "Look at the bird in the tree" or "You're a big boy. You don't need to cry." These responses send the message that the parent will not be available when the child is distressed. The attachment relationship is considered *resistant* if a child moves toward the parent, but acts fussy and cannot be soothed. In *resistant* relationships, children appear to want the contact yet, at the same time, resist it.<sup>11</sup>

Some children show no consistent strategy at all or a breakdown in strategy, known as *disorganized attachment*. Disorganized attachment is more prevalent among foster and maltreated children, perhaps because they have experienced early toxic stress and it is harder for them to organize their attachment systems. Parents can seem frightening if they harm or threaten the child, or if they play in a way that

is threatening or that treats the child as frightening. In response, children may act confused, freeze, enter a trance-like state, be apprehensive of the parent, or display contradictory behaviors. Disorganized attachment places kids at greatest risk because it contributes to a number of later problems such as acting out, anxiety, depression, fighting, and substance use.<sup>12,13</sup>

Just as important, a baby's behavior reliably influences the behavior of the caregiver. For example, when children seek out their parents when distressed and are readily soothed, parents are likely to provide nurturing care and continue to do so. When children turn away from parents and act as if they don't need them, parents are likely to assume that children don't need them. When children are resistant to parents, parents act fussy and irritable in response. Surprisingly, even very young children's behaviors elicit complementary behaviors from their parents. For parents to provide nurturing care, they must learn to respond to the real needs of children that underlie their behavior.<sup>14</sup>

Second, ABC focuses on another important aspect of the relationship between children and their maltreating and foster parents—how responsive parents are to children's behavior. When children have experienced toxic stress, they especially need parents who follow their lead by sensitively responding to their cues. When parents are able to follow their child's lead, children become better able to control their own behavior, emotions, and physiology.<sup>15</sup>

Third, ABC encourages paying attention to the emotions parents convey when they talk to their children. When parents come across as frightening, children are less able to organize their attachments and regulate their behavior and physiology.<sup>16</sup>

***ABC is a manualized intervention for foster and high-risk birth parents of children 6 to 24 months of age.***

### **How is ABC Designed to Work?**

My colleagues and I developed, tested, and evaluated the ABC intervention for promoting organized and secure attachment relationships between high-risk infants and their parents, and for helping children develop the ability to self-regulate their physiology and behavior. ABC is a manualized intervention for both foster and high-risk birth parents of children 6 to 24 months of age.

Ten sessions are conducted in the parents' home so that parents can practice the new skills with the child, while being observed and gently guided by a parent coach. Sessions are videotaped for the purpose of providing feedback to parents and for ensuring that the program is implemented with fidelity.<sup>17,18</sup>

### **What Core Concepts Does ABC Teach?**

ABC is designed to address three important ways that children cope with disruptions in care. Parents are trained to:<sup>19</sup>

- (1) **Provide nurturing care**—Children who experience toxic stress at an early age sometimes fail to signal their needs clearly. In fact, children

may behave in ways that push parents away. It is difficult for parents to respond sensitively when children turn away or are difficult to soothe. In ABC, parents view videotapes of other parents and their own children to demonstrate how difficult it is to respond sensitively when a child's behavior suggests that they do not need reassurance.

- (2) **Follow the child's lead with delight**—When children are not distressed, it is important for parents to sensitively respond to children's behaviors. This is referred to as following the child's lead.<sup>20,21</sup> In ABC, parents are videotaped during structured activities to help them learn to respond without being directive or controlling. Parents are given positive feedback to help improve their skills and to support feelings of competence.
- (3) **Not behave in frightening ways**—When parents' behavior is frightening, children are less able to organize their attachments and self-regulate. In ABC, parents are trained to avoid engaging in behaviors that might be threatening or intrusive. Frightening behaviors such as harsh discipline, threatening looks, and verbal threats are discussed. Also, videos show parents behaving in intrusive ways such as tickling or repeatedly putting a puppet in the child's face. Using video and "in the moment" feedback, parents are coached on recognizing and refraining from frightening and intrusive behaviors.

To develop these parenting skills, parents practice during the session and are given homework that includes practicing and taking notes of their own and their children's behavior. Videotapes are used to highlight parents' strengths and gently challenge their weaknesses. Parents' hard work in learning these skills is celebrated with video clips that show improvements in parenting behavior over time.<sup>22,23</sup>

### How Effective is ABC?

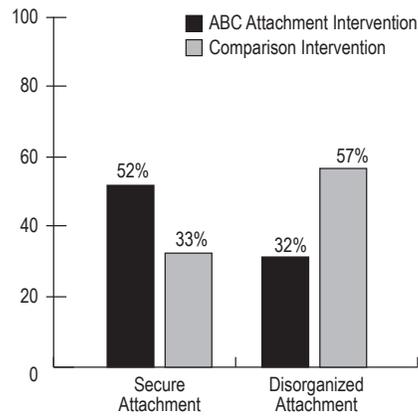
ABC has been evaluated for its effectiveness in training the parents of infants facing early, toxic stress. For example, one study included 113 parents who were referred by agencies working with Child Protective Services. Parents were referred because of high risk of maltreating their young children (e.g., child neglect, domestic violence, homelessness, substance use). All the parents were female, aged 16 to 47 years of age, and over two thirds had not completed high school (68%). The children ranged in age from 2 to 21 months old and were African American (61%), Biracial (20%), White/Hispanic (11%), and White/Non-Hispanic (8%).<sup>24</sup>

This evaluation used a rigorous design that randomly assigned parents to either ABC or a comparison group. The comparison was an intervention for teaching language and learning, which was the same duration and frequency as ABC.

As shown in Figure 1, children in ABC were significantly more likely to have secure attachments (52%) than children in the comparison intervention (33%). Also, children in ABC were significantly less likely to exhibit disorganized attachments (32%) than those in the comparison intervention (57%).

***Children in ABC were more likely to have secure attachments and less likely to exhibit disorganized attachments than comparison children.***

**Figure 1.** The Effects of ABC Parent Training on Attachment Security and Organization



Source: "Enhancing Attachment Organization Among Maltreated Children: Results of a Randomized Clinical Trial," by K. Bernard, M. Dozier, J. Bick, E. Lewis-Morrarty, O. Lindhiem, and E. Carlson, 2012, *Child Development*, 83, 623-636. doi: 10.1111/j.1467-8624.2011.01712.x.

Another study focused on foster mothers, who were randomly assigned to ABC or a comparison intervention. ABC produced greater improvements in foster mothers' sensitivity—their ability to correctly interpret infant signals, select an appropriate response, and respond effectively. What this means is that ABC is able to improve sensitive caregiving, even among foster mothers, whose relationship with their infant is often temporary.<sup>25</sup>

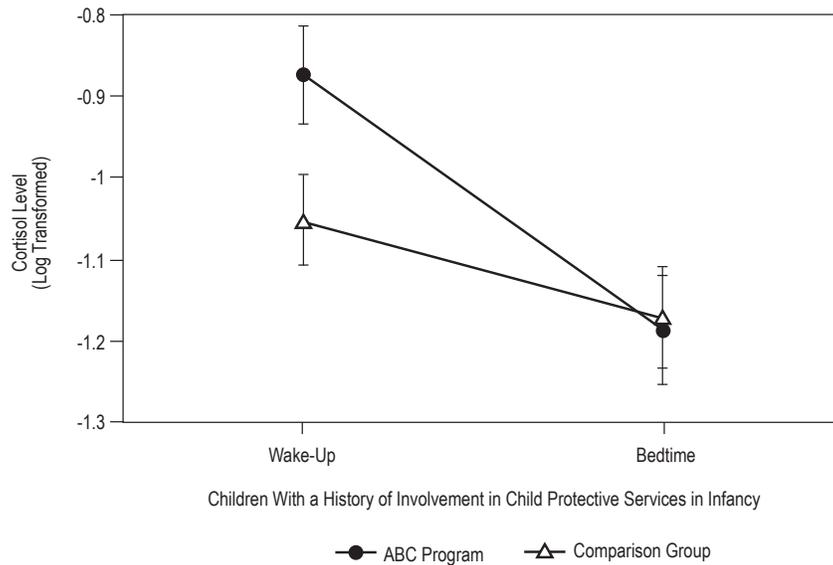
Children who are abused or neglected experience toxic stress, which changes the production of the steroid hormone, cortisol. In the study of attachment described above, we examined the effects of ABC on cortisol levels among infants involved with Child Protective Services. Parents of infants under age 2 were randomly assigned to ABC or a comparison intervention. Cortisol levels were assessed later during preschool when children were 3.8 to 5.8 years of age.

In humans, cortisol typically increases early in the morning, peaking about 30 minutes after waking, and declines during the day, reaching near-zero levels at night. As shown in Figure 2, at morning wake-up, cortisol levels of children in the ABC group were significantly higher and the slope (reduction) was significantly steeper than in the comparison group. Remarkably, these findings revealed that ABC produced improvements in how children's bodies deal with stress, an effect that persisted three years after the program ended. Thus, ABC may have long-lasting benefits for preventing problems in children's psychological and physical health.<sup>26</sup>

***ABC improved how children's bodies deal with stress, an effect that persisted three years after the program ended.***

Mary Dozier

**Figure 2.** Biological Impacts of the ABC Parent Training



Adapted from “Intervention Effects on Diurnal Cortisol Rhythms of Child Protective Services–Referred Infants in Early Childhood: Preschool Follow-up Results of a Randomized Clinical Trial” (p. E6), by K. Bernard, C. E. Hostinar, and M. Dozier, 2014, *JAMA Pediatrics*, E1-E8. doi:10.1001/jamapediatrics.2014.2369. Adapted with permission.

## Summary

Children who have experienced toxic stress have problems developing organized attachments, and self-regulating their behavior and physiology. It is critical that parents are nurturing (so children can develop organized attachments), and that parents follow children’s lead (so children can develop adequate regulatory abilities). Yet, without help, high-risk parents are unlikely to provide such “therapeutic” parenting. ABC is designed to help parents provide nurturing, sensitive, non-frightening care.

***ABC is a scalable and powerful parenting program that can offset the damaging effects of early toxic stress.***

ABC is a scalable and powerful parenting program that can offset the damaging effects of early toxic stress by increasing parents’ ability to be sensitive and nurturing. These benefits have been shown to last for at least three years and perhaps longer. When parents receive the intervention, their children are much more likely than they otherwise would be to develop secure, organized attachments. Children also develop better regulation of emotions, behaviors, and physiology that position them for later success in life.

The science on ABC’s effectiveness is strong. ABC is listed in SAMSHA’s National Child Traumatic Stress Network and the California Evidence-Based Clearinghouse for Child Welfare (with the highest rating for quality of evidence). Importantly, parents complete the program at high rates—73% of moms completing the full intervention in Philadelphia and 83% of families completing it in Hawaii. These are higher retention rates than is typical for programs that target parents at high risk of maltreating their children, such as substance-using mothers.

Specifically, the ABC intervention was effective in promoting organized and secure attachment relationships among a group of young children at risk of maltreatment, and in enhancing children's ability to regulate stress hormones, among other things. Given its effectiveness, ABC is now operating in 11 states. ABC includes a manual with training resources and supervision processes that allow it to be scaled up without being diluted. ABC is ready for "take up" in other states and municipalities. The beneficiaries will be some of society's youngest and most vulnerable members.

*Professor Mary Dozier is the Amy E. DuPont Chair of Child Development and Director of Research for the Early Learning Center at the University of Delaware. For over two decades, her career has been devoted to understanding how early adversity and toxic stress disrupt infants' and young children's relationships with their parents and caregivers. Also, she has developed and evaluated a response known as Attachment and Biobehavioral Catch-Up (ABC). ABC is a scalable and powerful parenting program that offsets the damaging effects of early chronic stress by increasing responsive and nurturing behavior among foster and birth parents. In rigorous evaluations, this 10-week parenting intervention promotes organized and secure attachments, and improves self-regulation and the way children's bodies deal with stress. ABC is listed in SAMSHA's National Child Traumatic Stress Network and in the California Evidence-Based Clearinghouse for Child Welfare. ABC is now operating in 11 states and is being disseminated internationally. Dr. Dozier has published 117 scientific papers on understanding and improving parenting of infants and young children, and has raised \$22 million of grant funding to support her research. She has received the National Institute of Mental Health Innovation Award and the Bowlby-Ainsworth Award for Translational Research.*

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