

BUILDING A COMMUNITY-WIDE SYSTEM OF SUPPORT FOR VULNERABLE CHILDREN AND THEIR FAMILIES

THE CUIDANDO MODEL



Prepared for CLNkids
by
Teaching Solutions NM



December 2012

CLNkids (www.clnkids.org) is a 501(c)(3) nonprofit organizations in Albuquerque, NM, committed to ending child homelessness in our community. CLNkids is a public/private partnership created out of a grass-roots volunteer effort to address the needs of homeless families in Albuquerque, New Mexico in 1988. More than twenty years later, CLNkids is proving that we can help families end homelessness through education. Our model focuses on providing homeless children with critical early childhood development and providing their parents with resources to put them on the path to self- sufficiency.

This report was prepared for CLNkids by LaWanda Albright, Molly Grady and Wendy Wintermute, from Teaching Solutions NM (www.teachingsolutionsnm.com), consultants providing support for research, education, training and advocacy in early childhood care and education.

For copies of this report, please contact:

CLNkids

P.O. Box 12786

Albuquerque, NM 87195

Phone: (505) 843- 6899

info@clnkids.org

Table of Contents

PART I: WHAT DO WE KNOW ABOUT EARLY CHILDHOOD DEVELOPMENT?

- Early Childhood Development: Nature AND Nurture 1
- Challenges to Healthy Development 4
 - Adverse Events: Trauma 4
 - The Stress Response 5
 - Adverse Environments: Poverty 7
 - Adverse Environments: Discrimination 7
 - Adverse Environments: Homelessness 8
- Summary 9

PART II: WHAT DO WE KNOW ABOUT EFFECTIVE EARLY CHILDHOOD INTERVENTION?

- Investing in Early Childhood Pays Dividends 11
- What Works in Early Childhood intervention? 12
- What Works to Support Children and Families Experiencing Homelessness? 13

PART III: AN EMERGING MODEL FOR SUPPORTING VULNERABLE CHILDREN AND FAMILIES

- Strengthening Families: A Brief History and Introduction 16

PART IV: THE CUIDANDO MODEL: STRENGTHENING FAMILIES AND CHILDREN EXPERIENCING HOMELESSNESS

- The Cuidando Model Today 18
- The Cuidando Model Tomorrow 20
- Cuidando Guiding Principles 22

- Notes 24

PART I: WHAT DO WE KNOW ABOUT EARLY CHILDHOOD DEVELOPMENT?

“Change the First Five Years and You Change Everything.” This short video¹ encapsulates the basic message of an emerging consensus around the critical importance of early childhood experiences on lifelong development. The growing body of evidence provided by neuropsychological theory and research² substantiates what developmentalists have argued for decades.

- Throughout our lives, our life experiences interact with our genetic endowment to shape our development;
- Experiences during the earliest years of a child’s life are critically important to the trajectory of lifelong development;
- Adverse experiences during these critical few years can have lifelong adverse consequences, while positive experiences can provide “protective factors” that encourage resiliency and success;
- “Investing” in early childhood and family development programs and support systems can help ensure positive outcomes, not only for our children and their families, but for our communities, our nation and our world.

Early Childhood Development: Nature AND Nurture

“Like a building set on a firm footing, the robustness of brain architecture throughout life depends on the quality of the foundation. A nurturing environment creates a strong foundation for later development.”

Alberta Family Wellness Initiative³

In the last decade or two, the emergence of an interdisciplinary field of neurosciences and new technology has allowed researchers to observe and map the development of the human brain and confirmed its role as “control central,” orchestrating and guiding human physical, emotional and social development. The findings from the ensuing flood of neuroscience research confirm that the old debate over the relative influence of “nature” (innate attributes) **versus** “nurture” (personal experience and environment) has given way to a growing understanding that nature **and** nurture interact to shape human development and human behavior.

Brains are built “from the bottom up,” starting with the simplest circuits and then moving up to more complex circuits, a process that begins early in life and continues into adulthood. At each stage of development, genes provide the basic blueprint, but experiences influence how or whether genes are expressed. Even in the womb, genes interact with hormones in the environment to signal the start of a new developmental phase.

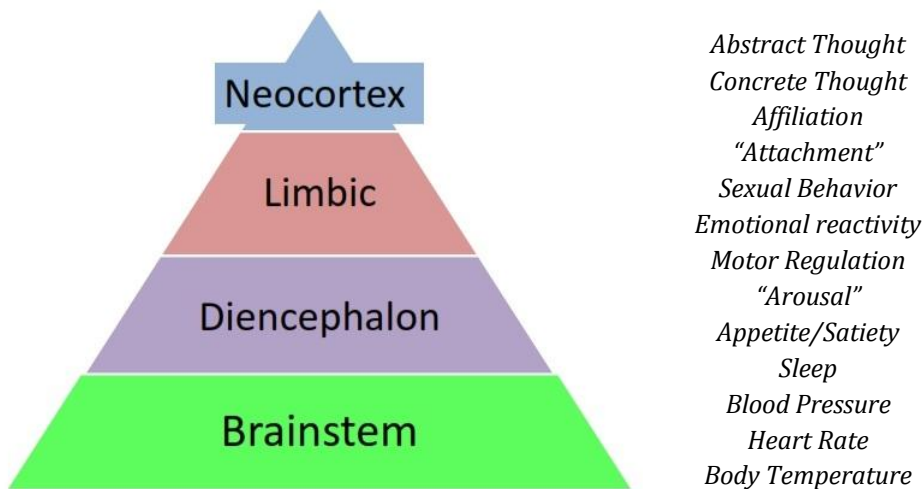
Throughout development, the genes and the environment must be in sync for normal development. Hence, nurturing environments, particularly from pre-natal to six years of age, when the foundational brain circuitry is being established, are essential for healthy development. Together, nature and nurture shape the developing brain and establish either a sturdy or a fragile foundation for all of the learning, health, and behavior that follow.

The Developing Brain

During the first few years of life, 700 new neural connections (synapses) are formed *every second*. After this period of rapid proliferation, connections that are not activated are reduced through a process called pruning, so that brain circuits can become more efficient. Some people refer to this as “use it or lose it.”

Connections proliferate and prune in a prescribed sequence. Sensory pathways like those for basic vision and hearing are the first to develop, followed by early language skills and lastly higher cognitive functions (Figure 1). The higher level circuits build on the lower level circuits; consequently, optimal higher level development is more problematic if lower level circuits are not wired properly.

Figure 1
Sequential Brain Development



Source: Perry, 2012

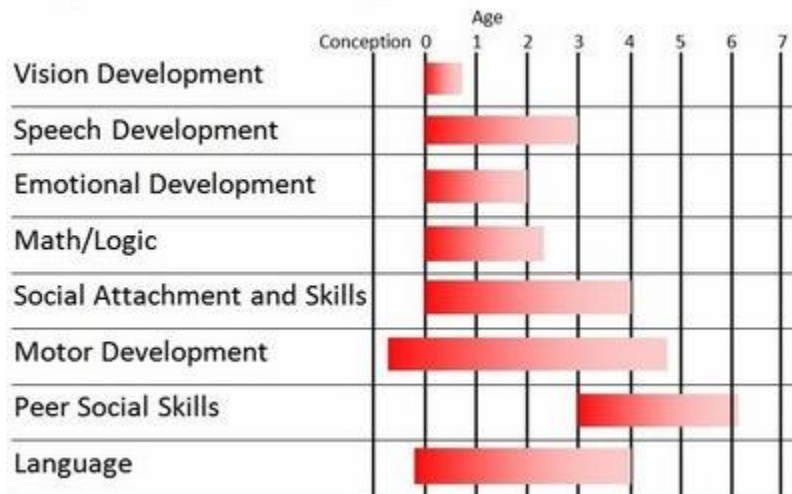
The timing for each phase of sequential development is determined genetically but, once again, early experiences during each phase can affect development. Since brain development underlies skill development, higher level skills build on the basic foundational skills that precede them. “Stated in simple terms, circuits build on circuits and skill begets skill”⁴

For many but not all skills, there are “windows of time” during which the young are especially sensitive to their environment. For example, babies require visual stimulation input or they may suffer permanent impairment. Language skills depend on hearing spoken words (or sign language, for babies with hearing impairments) in the first few years or certain skills, particularly grammar and pronunciation, may be permanently affected. The critical period for language-learning begins to close around five years of age and ends around puberty. While the early years may be “prime time” for developing many of these foundational skills, children and adults can learn later in life, although it may be more difficult. This is why individuals who learn a new language after puberty almost always speak it with a foreign accent.⁵

This process of skill development, orchestrated by brain development, affected by environmental influences, applies to the constellation of cognitive, social and emotional skills. In fact, these processes are highly interdependent, with each building on earlier competencies and providing a foundation for subsequent development (Figure 2).

Recent research has focused attention on a set of skills referred to as “executive functions” as important predictors of success in school, at work, in family life and in the larger community.⁶ Being able to focus, control impulse reactions, plan ahead and switch gears has been compared to having an effective air traffic control system at a busy airport (Figure 3).⁷ This set of skills relies on the development of three types of brain functioning: working memory, mental flexibility, and self-control. While the full range of these abilities continues to grow and mature through the teen years and into adulthood, the foundation is built in very early experiences and interactions with the child’s environment.

Figure 2
Critical Periods in Skill Development



Source: The Social Work Exam, <http://thesocialworkexam.com>

Figure 3
Executive Functions



Source: About Kids Health, <http://www.aboutkidshealth.ca/>

Nurturing Early Development

“Plasticity” refers to the ability of the brain to develop in response to environmental cues and constraints. Because the brain is most “plastic” during early childhood, children’s brain development is both more resilient *and* more vulnerable to the impact of negative and positive experiences during this time.⁸

For the infant and young child, the environment is experienced primarily through relationships. Infants are, in fact, “hard-wired” to reach out to and engage others as a basic survival mechanism. There is general agreement among developmental researchers and early childhood practitioners that the active ingredient in this interplay of genes and environment is the “serve and return” relationships that children have with caregivers in their family or community.⁹ The infant or young child engages the caregiver by vocalizing, making facial gestures or body movements, and the caregiver responds in kind. An appropriately responsive or “synchronized” response builds both neural pathways in the child and social bonds between child and caretaker that serve as the necessary foundations for healthy development. When a child’s caregiver is unable to provide these experiences or provides inappropriate responses, especially during the critical periods for development, some brain structures and skills may not emerge or develop as they should. These developmental deficiencies have large and lasting implications for later learning, the development of skills and abilities, behavior, and health.

Challenges to Healthy Development

A range of adverse childhood events and environments, including accidents, family crises, violence, poverty, emotional or physical abuse or neglect, and homelessness can “derail” development and result in lifelong adverse outcomes.

Adverse Events: Trauma

The *Adverse Childhood Experience (ACE)* study arose from an unusual finding among the participants in a Kaiser Permanente Health Plan program designed to help obese adults lose weight. The people most likely to drop out of the weight loss program were those who were successfully losing weight. The staff discovered that among these drop-outs, childhood sexual and/or physical abuse was remarkably common. The staff wondered if obesity was not the problem in these cases, but rather an adaptation to problems that had never been acknowledged, e.g., a shield against unwanted sexual attention, or a form of defense against physical attack, along with using tobacco, alcohol, and drugs as ways to alleviate stress and depression, all contributing to poor health outcomes.

Researchers at the Centers for Disease Control partnered with Kaiser Permanente to develop a large-scale study of the influence of stressful and traumatic childhood experiences on later drug and alcohol use and related health problems, including preventable deaths. More than 17,000 members of Kaiser Permanente Health plan agreed to participate in the study, which involved responding to detailed histories asking about exposure to “adverse childhood experiences,” including eight categories of abuse, neglect, domestic violence and serious household disruption or dysfunction.¹⁰ A simple ACE score awarded one point for each category reported.

Finding #1: Adverse childhood events are much more prevalent than commonly recognized, even among middle-class populations.

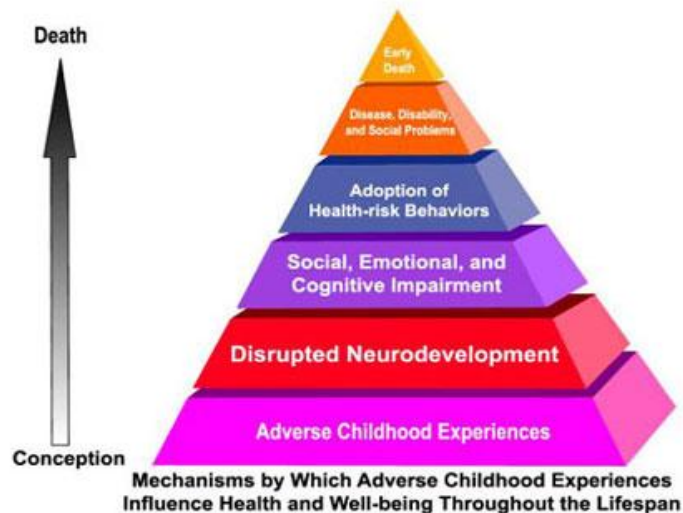
Among the 17,000 largely middle-class participants (75% had some higher education; 75% were white), nearly two-thirds (64%) reported at least one ACE. One in eight (12.5%) reported four or more (15% of women and 9% of men). The most common experiences reported were physical abuse (28%), household substance abuse (27%), absent parent (23%), sexual abuse (21%, including 25% among women and 16% among men), and household mental illness (19%, including 23% among women and 15% among men). Moreover, the adverse events did not occur in isolation. Given exposure to one type of adverse childhood event, there is an 80 percent likelihood of exposure to another.

Given that the average age of participants was 57 years old, researchers were able to correlate exposure to adverse child experiences with a broad range of health outcomes. As ACE scores increased, the chances of using street drugs, tobacco, or having problems with alcohol increased in a stepwise fashion. Compared to persons with an ACE score of 0, those with an ACE score of 4 or more were twice as likely to be smokers, 7 times more likely to be alcoholic, 10 times more likely to have injected street drugs, and 12 times more likely to have attempted suicide.

Finding #2: Adverse childhood events have a powerful relationship to adult health behaviors and outcomes, and the effects are cumulative.

A spate of additional analyses has confirmed as the number of ACE increase, the risk for a number of health and health-related social problems increases in a strong and cumulative fashion, including heart, lung and liver disease; depression; risky sexual behavior and its consequences; and perpetrating or being victimized by violent behaviors.¹¹

Figure 4
Impact of Adverse Childhood Experiences on Lifelong Development



Source: *The Permanente Journal* (Winter, 2004)

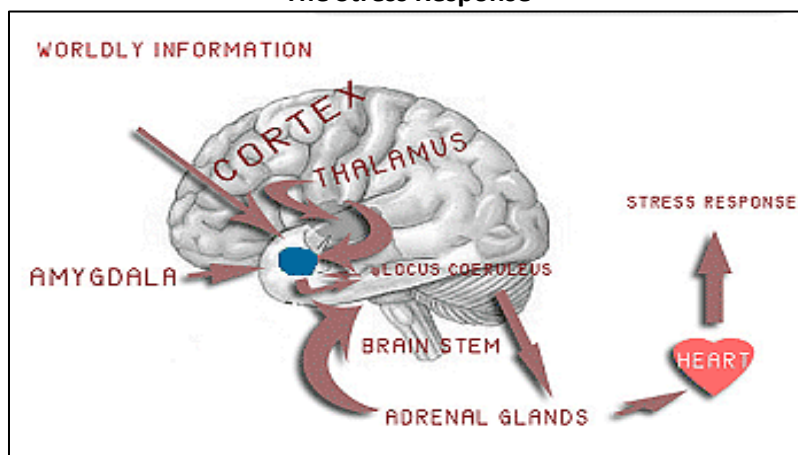
The Stress Response

How is it that adverse childhood effects result in such clear and damaging lifelong effects? Neuroscience is once again providing an answer by mapping the human response to stress. Stress is the body's response to perceived threats, activating numerous systems in order to assess and respond quickly to danger, all in the interests of survival. Once again, the brain is the key organ of the response to stress because it determines what is threatening and, therefore, potentially stressful, and orchestrates the physiological and behavioral responses.

Figure 5 presents a simplified version of the stress response. Scanning the environment, the sensory organs perceive information that may possibly signal a threat. This sensory data is sent simultaneously to the amygdala (the "reactive" brain) and to the frontal cortex (the "thinking" brain). However, the neural net provides a faster route to the amygdala, which performs a very quick threat ("gut") assessment of the available data. If the amygdala determines an immediate threat is present, it overrides the slower response from the cortex and instructs the locus coeruleus to release stress hormones, such as adrenaline and cortisol, which activate immediate bodily responses: increased heart rate, blood pressure, respiration, and muscle tone, a sense of hypervigilance and tuning out all noncritical information. All these actions prepare the body for defense – for "fight, flight, or freeze." If the amygdala determines that a threat is not imminent, the cortex takes over the processing of sensory data to determine a more "thoughtful" response to the situation, and the body chemistry and physiology returns to normal. This is the basic pattern for a normal stress response.

In reference to early childhood development, it is important to note that those brain structures such as the amygdala, which prompt a quick and emotional response, develop very early, while the cortex, which enables a more "thoughtful," controlled response, does not fully development until early adulthood, if then.

Figure 5
The Stress Response



Source: CLNKids (2010)

It is important to distinguish among three kinds of responses to stress: *positive*, *tolerable*, and *toxic*.

Positive stress response is a normal and essential part of healthy development, associated with moderate, short-lived physiological responses, such as brief increases in heart rate and mild elevations in hormone levels that return to normal once the threat is passed.

Tolerable stress response activates the body's alert systems to a greater degree as a result of more severe, longer-lasting difficulties, such as the loss of a loved one, a natural disaster, or a frightening injury. If the stressful situation is time-limited and/or buffered by supportive relationships with adults who help the child cope with the threat, the brain and body can recover from what might otherwise be damaging effects.

Toxic stress response can occur when a child experiences strong, frequent, and/or prolonged adversity—such as the adverse childhood experiences described above -- without adequate adult support. In these circumstances, persistent elevations of stress hormones and altered levels of other brain chemicals produce changes in physiology that can disrupt the development of brain architecture and other organ systems, and increase the risk for stress-related disease and cognitive impairment well into the adult years.

Trauma during these early years can affect both the structure (“wiring”) of the brain and the functioning of the hormonal response system. The stress response system can become “stuck” on “on,” with chronically high levels of blood pressure and abnormal amounts of stress hormones (e.g., cortisol) coursing through the body. The child may become hyper-vigilant, seeing and responding to perceived “threat” even in objectively “safe” situations.¹²

Early exposure to extremely fearful events affects those parts of the brain involved in emotions and learning, including the development of the prefrontal cortex, which is critical for the emergence of executive functions. There is evidence that a young child can retain physical body-based memories of traumatic event even when he or she has not yet developed the ability to develop or express explicit memories.

Younger children are also at particular risk from trauma because they are dependent on parents or caregivers for protection and, indeed, survival. When trauma also involves the parent/caregiver, the child may be deprived of the very person who could otherwise help shield or provide a buffer to help the child cope with and recover from the trauma.¹³

Adverse Environments: Poverty

In addition to the deleterious effects of interpersonal trauma, documented in the ACE and a host of similar studies, exposure to adverse environments can also take a toll on development. An extensive body of research documents the negative impact of family poverty and the stresses and strains associated with such events as job loss, housing and food insecurity on the family's ability to protect and nurture family members. Family poverty is associated with increased parental depression, spousal and parent-child conflict, ineffective parenting, and multiple adverse outcomes for children in the areas of health, cognitive development, academic achievement, and socio-emotional or mental health. Conversely, better child outcomes are associated with families with more assets and higher incomes,

parents with more years of education and steady professions, and neighborhoods rich with services and supportive networks.¹⁴

It is not simply the amount of income that matters for children. The instability and unpredictability of low-wage work can lead to fluctuating family incomes. Children whose families are in volatile or deteriorating financial circumstances are more likely to experience negative effects than children whose families are in stable economic situations.¹⁵

Once again, researchers are finding that the stress response is activated by income instability and poverty. Gary Evans and his colleagues propose that childhood poverty is harmful, in part, because it exposes children to stressful environments.

Low-income children face a bewildering array of psychosocial and physical demands that place much pressure on their adaptive capacities and appear to be toxic to the brain. [These demands], in turn, build upon one another to elevate levels of chronic (and toxic) stress within the body. And this toxic stress directly hinders poor children's academic performance by compromising their ability to develop the kinds of skills necessary to perform well in school.¹⁶

Evidence suggests that the impact of income on child outcomes begins at birth and is cumulative, extending throughout life. The children at greatest risk are those who experience economic hardship when they are young¹⁷ and children who experience severe and chronic hardship.¹⁸

Adverse Environments: Discrimination

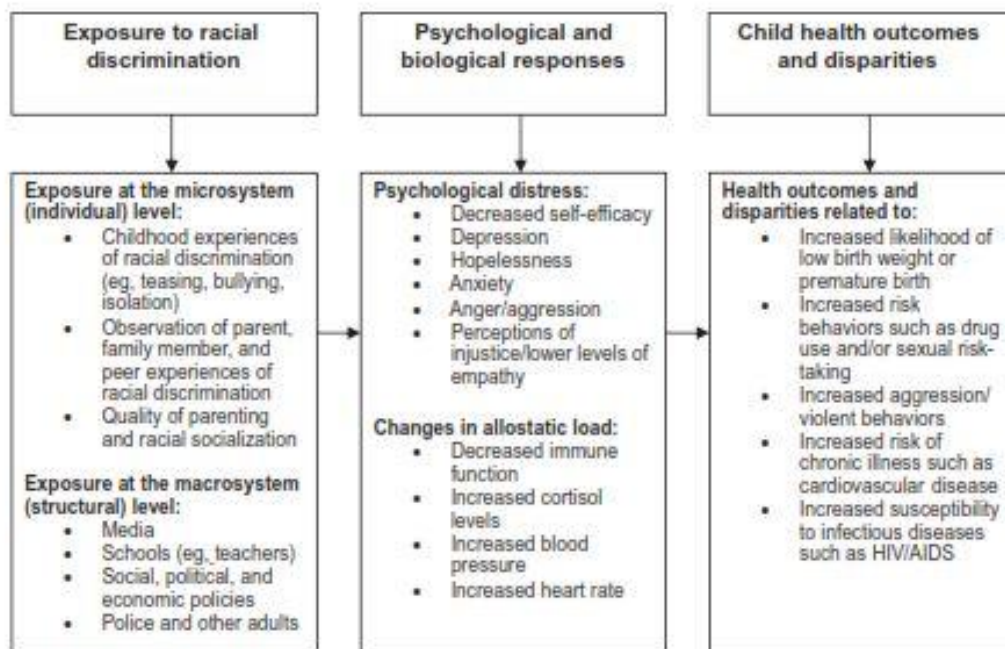
Poverty brings risks for children of all races. However, children who are members of a non-dominant racial or ethnic group are more likely to be poor. In New Mexico in 2010, 30% of all children under the age of six were poor: 14% of young white children; 36% of young Hispanic children, and 40% of young American Indian children.¹⁹ In addition, racial and ethnic discrimination presents an independent, additional risk factor for children and parents. A systemic legacy of blocked and unequal opportunities has contributed to stubborn disparities in outcomes for education, health, and income. In addition to systemic discrimination, recent research has documented the impact of "microaggressions," defined by one researcher as, "brief and commonplace daily verbal, behavioral, or environmental indignities, whether intentional or unintentional, that communicate hostile, derogatory, or negative racial slights and insults toward people of color."²⁰ Not only do minority children experience discrimination, but they experience it in multiple contexts: in schools, in the community, with adults and with peers.

An emerging area of research posits racial discrimination as a chronic source of trauma in the lives of many children of color that negatively influences mental and physical outcomes as well as parent and community support and functioning. Findings suggest that exposure to institutional and interpersonal racial discrimination results in increased biological stress and psychological distress, which in turn predicts negative developmental outcomes (Figure 6).²¹

The same authors argue that racial discrimination should be considered as a form of violence that can significantly impact child outcomes and limit the ability of parents and communities to provide support that promotes resiliency and optimal child development. Concurrent exposure to other forms of violence, including domestic, interpersonal and/or community violence, may exacerbate these effects.²²

Maria Yellow Horse Brave Heart, a leader in trauma research among American Indians, defines historical trauma as “...cumulative emotional and psychological wounding, over the lifespan and across generations, emanating from massive group trauma experiences” including a history of genocide. Brave Heart links historical trauma with the disproportionate incidence among American Indians of depression (twice the national rate), alcohol abuse (5.5 times the national rate) and heart disease (twice the national rate).²³

Figure 6
Conceptual Model of the Impact of Racial Discrimination
on Child Health Outcomes and Disparities



Source: Sanders-Phillips, K. et al (2009)

Adverse Environments: Homelessness

The experience of homelessness, also correlated with poverty and minority status, contributes yet another additional and independent risk factor for healthy child development. Homelessness can be differentiated from other adverse environments by its heightened risk for traumatic experiences, occurring in the context of extreme poverty and high mobility and instability.

Current estimates are that families with children now comprise 40 percent of the homeless population²⁴, and 40 percent of the children experiencing homelessness are under the age of six.²⁵ Homelessness is an extremely stressful, traumatic and potentially dangerous experience, especially for young children.

- By age 12, 83% of homeless children have been exposed to at least one serious violent event.²⁶

- Homeless children are four times more likely to have health problems; twice as likely to go hungry; three times more likely to have emotional and behavioral problems; nearly half have problems with anxiety, depression and withdrawal.²⁷
- Moving about in search of shelter disrupts the education of children: fewer than 25% of homeless children graduate from high school.²⁸
- Homelessness breaks up families; 30% of foster care children could return home – if they had a home; 30% of homeless adults in the U.S. were foster children; these adults are twice as likely to have their own children placed in foster homes.²⁹

Studies comparing homeless preschoolers to equally poor children who had housing found significant differences in development. In a study in the Boston area, half (51%) of the homeless preschoolers had at least one major developmental lag as measured by the Denver Developmental Screening Test, compared to only 16% of similarly poor but housed children.³⁰ Examining the competencies, achievements, and adjustment capabilities of a cohort of homeless children ages 3 to 12 years, another study found that the most severely affected homeless preschoolers exhibited slower development in receptive language and visual-motor capabilities.³¹

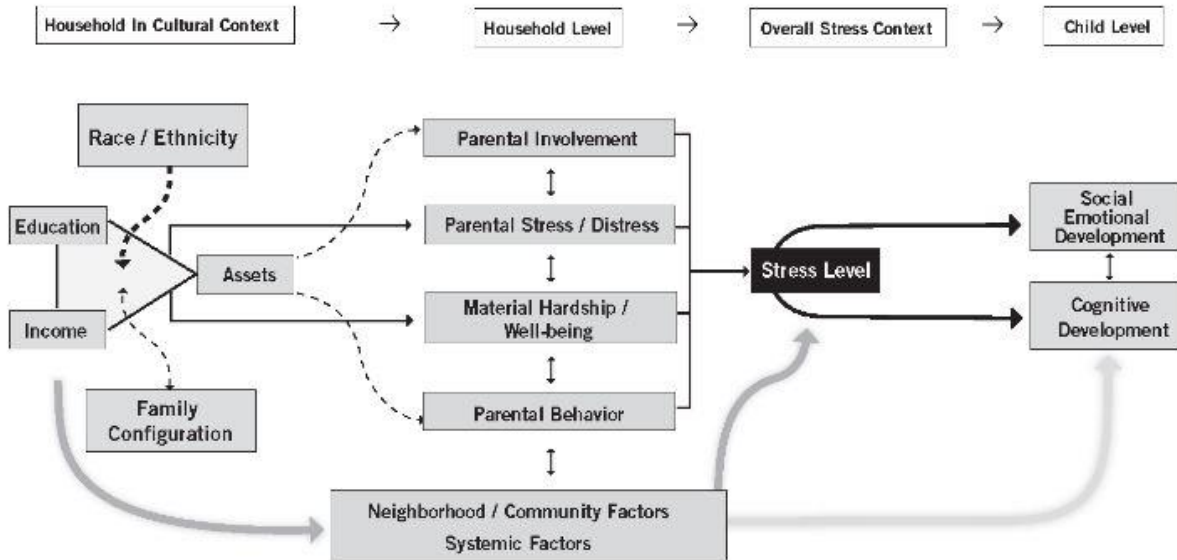
A very recent study compared outcomes for low-income students who experienced homelessness or high mobility (HHM) with their low-income peers who had more stable housing. The homeless/high mobility students had chronically lower levels of reading and math achievement - gaps that either stayed the same or worsened as students approached high school. While student who were homeless or highly mobile at any time during the six-year study fared less well than their non-homeless peers, indicating a cumulative effect, students also exhibited additional dips in achievement during specific years in which they experienced acute homelessness and high mobility.³²

Summary:

The burgeoning research on child development and its attendant risks paints a complex picture of the interplay of personal, familial, and societal factors. The explanatory model proposed by the Annie E. Casey Foundation (Figure 7) emphasizes the fundamental importance of the inter-related factors of household income, education, race/ethnicity, and family composition. All of these factors help determine the assets available to the family in performing its functioning of nurturing family members, especially its children.

Much of the attention in the child development literature has picked up this model at mid-point, focusing on intervening variables of parental involvement and behaviors, influenced by parental stress/distress and material hardship or well-being. Very little attention has been accorded important environmental factors relating to neighborhood/community or systemic patterns of disadvantage and discrimination.

Figure 6
A General Framework for Understanding Stress and Child Development



Source: Annie E. Casey Foundation³³

Several of these factors are particularly relevant to the situation of homeless children. The trauma, extreme poverty and insecurity characterizing homelessness often leads to parental depression or harsh or inconsistent parenting, which are then associated with socio-emotional problems in children. Cognitive stimulation in the home environment, such as the presence of books and of toys that teach color, size, or shape, is often difficult, if not impossible to accomplish when families are forced to leave their homes or frequently move from one living situation to another. Poor nutrition or exposure to lead in poorly maintained older housing can lead to poor health or impairment of neurological functioning. Children experiencing homelessness are exposed to more chronic and acute stressors — from family conflict to overcrowding — than are their non-homeless, low-income peers. Their sense of self-efficacy and confidence may be eroded by circumstances such as living in poor housing or bad neighborhoods or their membership in a stigmatized group. Teachers may perceive students who are poor and of low socio-economic status less positively and thus expect less of them, give them less positive attention, offer fewer learning opportunities, and provide them with less positive reinforcement when they do well.

PART II: WHAT DO WE KNOW ABOUT EFFECTIVE EARLY CHILDHOOD INTERVENTION?

Child development is a critical foundation for community development and economic development, as capable children become the foundation of a prosperous and sustainable society. When we invest wisely in children and families, the next generation will pay that back through a lifetime of productivity and responsible citizenship. When we fail to provide children with what they need to build a strong foundation for healthy and productive lives, we put our future prosperity and security at risk.

Harvard Center for the Developing Child³⁴

Investing in Early Childhood Pays Dividends

The good news is that environments can be enhanced to promote positive development for children and families. A half-century of innovation and research on the impact of developmental interventions for young children, in particular for disadvantaged children, appears to be coalescing around a multivariate theory of change and a comprehensive intervention model.

When early childhood intervention programs were developed in the sixties, many as part of the arsenal of the War on Poverty, their primary objective was to raise the intellectual achievement of disadvantaged children, generally measured by increases in IQ or achievement tests. At first these programs appeared successful in increasing test scores in the near term. Unfortunately, these gains tended to fade over time after children left the programs and took up the normal course of their lives.³⁵

More recently, however, more rigorous and/or longitudinal studies have offered positive results for both academic achievement and for positive social outcomes. The successful programs all substantially enrich the early environments of children living in disadvantaged families. These include the Chicago Child-Parent Center Program,³⁶ the Infant Health and Development Program,³⁷ the Perry Preschool Program,³⁸ and the Abecedarian Program.³⁹ Children in these programs, followed over 30-40 years, show substantial positive effects on a range of outcomes, including school achievement, social behaviors, and job performance.

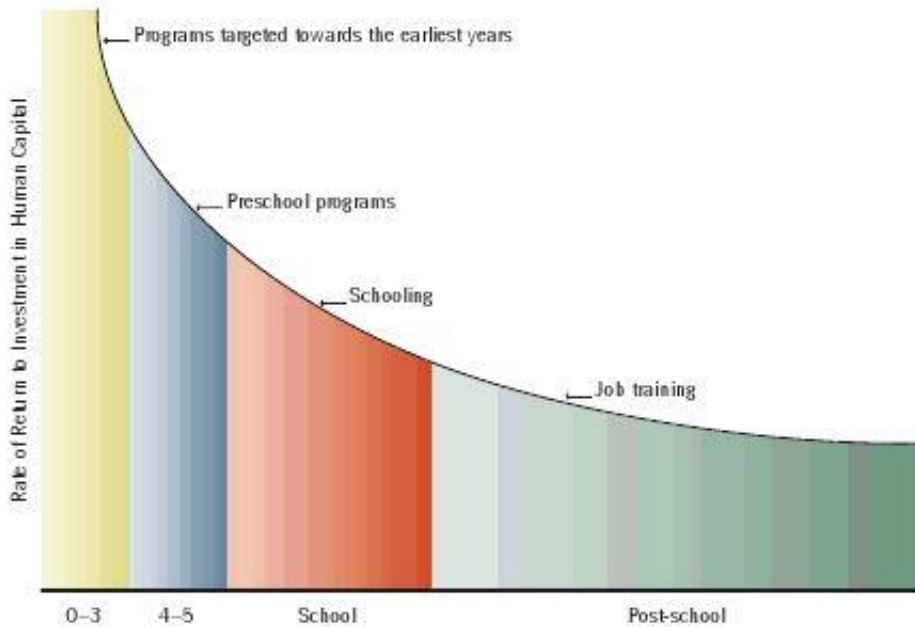
Moreover, recent research has shifted the focus from cognitive skills to include what are commonly referred to as “soft skills,” including such skills as curiosity, focus, persistence, motivation, self-control, sociability, optimism, and self-efficacy. Paul Tough, who appropriately adds “grit” to the list, argues that these characteristics are the key to understanding “How Children Succeed.”⁴⁰

In a contribution to an increasingly multi-disciplinary field, James Heckman, Nobel Prize winning economist at the University of Chicago, has applied cost-benefit analyses to these successful programs and has formulated the “Heckman Equation”:

- + **Invest:** Invest in educational and development resources for disadvantaged families to provide equal access to successful early human development.
- + **Develop:** Nurture early development of cognitive and social skills in children from birth to age five.
- + **Sustain:** Sustain early development with effective education through to adulthood.
- = **Gain:** Gain a more capable, productive and valuable workforce that pays dividends to America for generations to come.⁴¹

And the gain can be substantial. Heckman calculates “return on investment” of early intervention to be as high as 7:1; every dollar invested in early childhood development can save us \$7 by avoiding costlier interventions later in life.

Figure 8
Return on Investment



Source: Presenting the Heckman Equation⁴²

What Works in Early Childhood intervention?

Summarizing the vast field of early childhood intervention programming, “From Neurons to Neighborhoods,” Jack Shonkoff and Deborah Phillips present the seminal outline of the emerging shape of theory and practice in early childhood intervention.⁴³ The authors note that “taken together, the substance of these models converges to a remarkable degree.”⁴⁴ This shared theory of change has several central features:

- The general principles of development apply to all children.
- All domains of development unfold under the interactive influences of genetic predisposition and individual experience (nature *and* nurture).
- Young children’s relationships with their primary caregivers have a major impact on development and are most growth promoting when they are warm, nurturing, individualized, and responsive.
- The ability of caregivers to attend to the needs of their young children is influenced by both their internal resources and the external circumstances of their lives; caregivers who are themselves burdened by multiple risk factors and sources of stress may challenge this ability. The buffering function of protective factors and sources of support enhances it.

- Early intervention programs promote the development of the child directly, through the provision of structured experiences, and indirectly, through their impact on the family environment.
- The success of an intervention is determined by the soundness of the strategy, its acceptability to the intended recipients, and the quality of its implementation.⁴⁵

What Works to Support Children and Families Experiencing Homelessness?

With the growing realization that members of families with young children comprise 30-40 per cent of all homeless persons and represent the fastest growing sector of the homeless population, attention is also shifting to promising models for supporting children and families who are the most vulnerable to developmental derailment through trauma, income insecurity, discrimination, and high mobility (see above).

Recent literature tracking the heightened interest in the development of “soft skills” and attention to the “buffering function of protective factors,” offers new theories of change, implementation models and research on effectiveness. One early leader in this field, Ann Masten, has articulated such a model, focusing on resilience. As she explains:

For many years, researchers studied the problems of children whose lives were threatened by the accumulation of risk factors. Then, about 25 years ago, a group of pioneering investigators realized that some children managed to succeed in spite of adversity and disadvantage, and the systematic study of resilience was born. Resilience research was aimed at understanding how some children grow up competent in spite of many risk factors in their lives. What makes a difference? What can we learn that will guide our efforts to facilitate better development in children at risk?⁴⁶

Based on several decades of research on an intervention model, Project Competence, Masten and her colleagues report that children who succeeded in the face of adversity had both internal and external resources. Key among these were good “executive functioning” – including the ability to problem solve, pay attention, and learn -- and effective parenting. They were close to adults in their life and developed close friendships among their peers. Not surprisingly, they had high self-esteem and felt effective.

Following these children into adulthood, they found that the resilient children became resilient adults, succeeding in the new roles they assumed in their families, worklife and communities. They also found that there are “second chances in life,” as children who seemed headed for trouble took dramatic turns to become happy, competent and contributing members of their communities

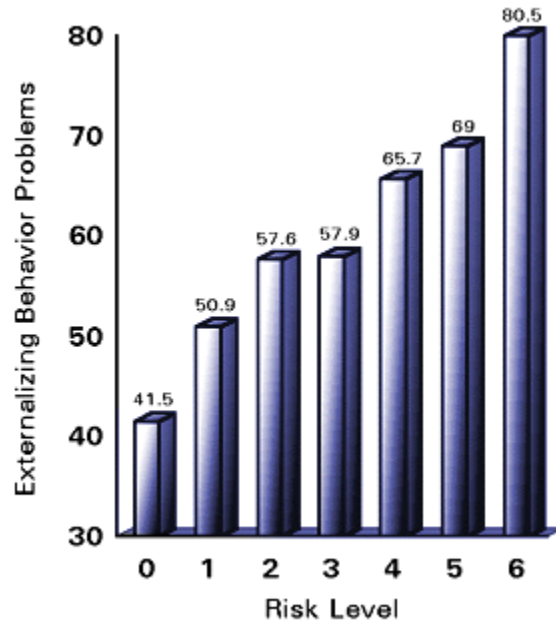
Focusing in specifically on homeless children, Masten and her colleagues confirm that homelessness does indeed constitute high risk for children and families. Moreover, as the number of risk factors in the lives of homeless children increased, the number of problem behaviors also increased, another example of the cumulative effect of risks (Figure 9).

Yet even in the high-risk situation of homelessness, there were children who were holding their own, both at school and at home. Once again, the resilient children living in a shelter environment had competent, caring adults looking out for them and supporting the child’s competence. For example,

homeless children whose parents were involved in their education, communicated high expectations and monitored school attendance and homework, had far better academic achievement than children without the advantages of an effective parent (Figure 10).

Figure 9

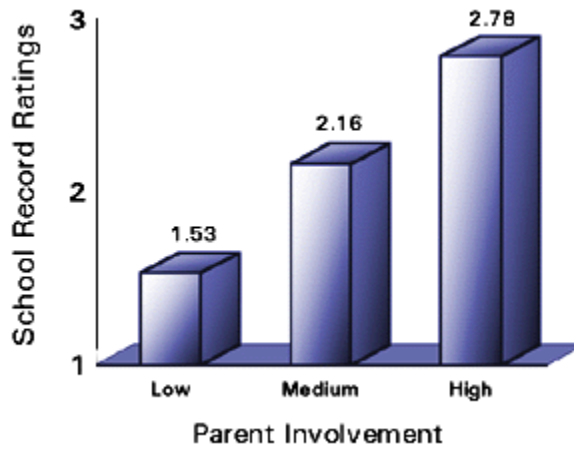
Behavior problems reported by parents in homeless children ages 8 to 10, plotted by risk level. A score of 50 is average in the general population and scores above 60 suggest a need for mental health services



Source: Masten (2000)

Figure 9

Academic achievement (on a 1 to 5 scale, where 1 is well below average and 3 is average) of homeless children ages 6 to 11, plotted by level of parental involvement in education



Source: Masten (2000)

Masten and her colleagues have continued to follow the life paths of children and families who are homeless or highly mobile, and her results have been confirmed in more recent studies.⁴⁷ Backed by this research, Masten suggests that “we need to move positive goals front and center. Promoting healthy development and competence is as important, if not more important, than preventing problems, and will serve the same end.” She identifies three basic strategies in combination for successful interventions with children and families experiencing homelessness:

- Risk-focused strategies — to reduce the exposure of children to hazardous experiences;
- Asset-focused strategies — to increase the amount of, access to, or quality of resources children and caregivers need for the development of resilience and competence;
- Process-focused strategies —to mobilize the fundamental protective factors that support resilience and positive development.⁴⁸

PART III: AN EMERGING MODEL FOR SUPPORTING VULNERABLE CHILDREN AND FAMILIES

Building on and bolstered by the new wave of interdisciplinary research, a consensus is emerging around the basic framework for interventions to support the development of young children and their families who are at risk by virtue of adverse events and environments.

Strengthening Families: A Brief History and Introduction⁴⁹

In 2001 the Doris Duke Charitable Foundation funded the Center for the Study of Social Policy (CSSP) to develop a broad new strategy for child abuse and neglect prevention. Based on their research and board discussion, the foundation decided to focus on young children ages 0 to 5. CSSP proposed engaging early care and education (ECE) providers in child abuse and neglect prevention as a strategy to reach the largest number of families with young children, on a daily basis, in a non-stigmatizing environment, and to whom families already turn to for assistance in raising their children.

The effort was endorsed by the federal Administration for Children and Families (ACF), Office on Child Abuse and Neglect (OCAN), who supported the launch of a national Network for Action with four goals:

- Conceptualizing a broader definition of well-being;
- Promoting protective factors as key strategies to enhance well-being;
- Supporting evidence-informed and evidence-based practices;
- Strengthening critical partnerships and networks.

Well-being was broadly conceptualized as healthy social and emotional functioning that ensures families can create safe, secure, healthy and responsive environments that enable children to be successful during childhood and into adulthood.

Protective factors serve as buffers to challenges or adversity, helping parents find resources, supports, or coping strategies that allow them to parent effectively, even under stress. Echoing Masten (above), the approach posits that successful interventions must both reduce risk factors and promote protective factors to ensure the well-being of children and families.

Six protective factors were identified as key elements in supporting and enhancing child and family well-being:

- Nurturing and attachment;
- Knowledge of parenting and child development;
- Parental resilience;
- Social connections;
- Concrete supports for families in time of need;
- Social and emotional competence of children.

Using **evidence-informed and evidence-based practices** ensures that programs are guided by integrating the best available research with program expertise and helps to foster a culture of continuous quality improvement by promoting ongoing reflection and evaluation.⁵⁰

Strengthening critical partnerships and networks helps families build and draw on both informal and formal support networks within their family and community. These partnerships among parents,

communities, and service systems are critical to families' long-term success and also for sustaining a vibrant, safe, and healthy community.

Levers for Change. Successfully implementing and taking a protective-factors approach to scale involves more than individual practice and program changes. The *Strengthening Families* initiative has identified three levers for change that help to create the incentives, capacity, and impetus for programs to take on a protective factors approach.

- **Parent partnerships:** Engaging parents as active partners and decision-makers in their child's development ensures that program and practice strategies are responsive and relevant to the family's needs, resources, values and choices, and hence more likely to be successful.
- **Professional development:** Infusing the Protective Factors Framework into training for all people who work with children and families helps build a workforce across disciplines with common knowledge, goals and language. Professionals at every level, from frontline workers to supervisors and administrators, should get training tailored to their roles with a consistent message focused on Strengthening Families.
- **Policy and systems:** The Protective Factors Framework provides a bridge for aligning community sectors and systems for promoting optimal child development AND preventing adverse events and environments that derail development. Build broad system collaboration by engaging multidisciplinary partners responsible for improving child outcomes and by using the Protective Factors Framework to define a shared language and set of desired outcomes for families across systems and disciplines;

PART IV: THE CUIDANDO MODEL: STRENGTHENING FAMILIES AND CHILDREN EXPERIENCING HOMELESSNESS

For almost three decades, CLN Kids has been providing high-quality, early childhood education and family support for young children experiencing homelessness. With the support of a grant from W.K. Kellogg Foundation, CLN Kids has assumed the task of advancing its model for a comprehensive, coordinated community support system to address and prevent child and family homelessness in our New Mexican communities.

The Cuidando Model Today

Identifying families: Referral and Intake

Families learn of Cuidando Los Niños in a variety of ways, very often by word of mouth. About one-quarter of the families have experienced domestic violence and are referred by the local domestic violence shelter. Other referrals come from the various homeless services providers. There is no system for finding families experiencing homelessness and helping them find services. Some agencies, such as food banks or law enforcement, may not be aware of CLN and the services it provides. Child care may not seem to them to be the most pressing need for a family in crisis. The situation is complicated by the fact that parents may be reluctant to make their situation known. They may fear their children will be removed if the family's living situation is deemed too precarious by authorities.

Potential clients make an initial contact by phone or in person. Their information is taken by the receptionist or a member of the Family Support Team, noting the date and time of the first inquiry. If the family is determined to qualify as “homeless” (using the McKinney-Vento definition for infants and toddlers and the HUD definition for preschoolers), the intake process moves forward.

Classroom openings are reviewed and if an appropriate classroom space is available, there is a more formal interview and orientation process, during which the program is explained and documents, such as shot records and income verification, are obtained. This process can be time-consuming and cover several days, as records are often missing, lost or never obtained. The program is legally obligated to safeguard all of the children by making sure each child has received proper immunizations, but a child may be enrolled while immunizations are completed. Staff work with the clients and other agencies to complete the documentation process as soon as possible, ideally within two weeks.

Assessment

When there is a new child, health and developmental screenings are scheduled with appropriate agencies, including agencies that specialize in Native American and non-English language clients. Early intervention programs screen infants and toddlers. Child Find agencies screen children ages 3 to 5. Healthcare for the Homeless provides medical screenings for children and adults. Classroom teachers complete “Ages and Stages Questionnaires” (ASQs) on each new child and periodically throughout their year in the program. Parents are also asked to complete ASQ's.

Development Plans

There is a three-day transition period into the program. Parents spend three hours in the classroom with the child and one hour with a Family Resource Specialist to complete an initial family assessment, history and plan for the year. The Family Support team works with the parent to set goals that are specific, relevant and attainable, without imposing their own vision.

Teachers use observation, ASQs, and conversations with the family to develop goals for the children. Families move through the program in a year, but parents are entering and exiting the program throughout the year. This means that there are always new clients, children and adults, coming in, and there are always children and parent peers who are familiar with the program and can help orient and integrate newcomers.

Interventions

CLNkids, embracing a Housing First model, addresses the most immediate and pressing needs of a family first. They identify housing possibilities, provide bus passes and emergency food and clothing. Referrals may be needed to other programs and services for children and/or adults. Medical referrals are made through Healthcare for the Homeless. Early Intervention programs and Child Find initiate the process for developing Individual Family Service Plans and Individualized Education Programs, so that children who qualify may receive special education services. Support staff work with families to apply for and obtain benefits, including income support, childcare assistance, nutrition programs, and others. As the families develop trust in the staff, more information about the family's history and current situation often emerges. When other needs are identified, support staff help the families obtain appropriate services, such as substance abuse programs.

The therapist on staff works with children regularly and can also provide support for adults. Referrals for behavioral and mental health for adults and children can be difficult to obtain. Existing programs may have backlogs and waiting lists. Family support staff serve as case managers and also provide some direct assistance when referrals are simply not enough support.

Classroom teaching staff develop plans for children, work with outside services, such as speech or occupational therapists, and serve as a go-between with parents. Preschoolers receiving services through Child Find and the public schools may be picked up by buses and taken to therapy sessions. Infants and toddlers usually receive services on-site. Teaching staff identify goals for children and work to incorporate them into the daily curriculum. Using observations and conversations with parents, staff may work on everything from helping children develop focus and self control to trying new foods.

The early childhood classrooms are therapeutic in and of themselves. Children are safe, clean, well-fed and monitored for health issues. Staff are warm, well-trained and responsive to children. They speak to children in their home languages, while extending their vocabulary and providing the beginnings of literacy. Children find stability and routines at CLN, as well as rich experiences and appropriate challenges. Being at CLN daily is good for them.

The parent education program helps families with life skills, parenting education and health/nutrition/safety. There is also time and opportunity for peer support. This is a critical piece of

the program and works for families who can access it. Unfortunately, work and school schedules, transportation and other issues may prevent some parents from participating fully.

Coordinating services and goals can be challenging within the program. Sharing information in a way that is timely, respectful and reaches all appropriate participants is very difficult. The layout of the building, the demands of the classroom, and relationships between clients and staff can all impede the easy flow of information.

Monitoring Progress

Families meet regularly with Family Support Staff to review goals. Progress is celebrated, challenges are addressed, and new goals may be developed. Because families must recertify every three months, their income is closely monitored. This is a challenging part of the system. Even small increases in income can make a family ineligible for some supports. Some employers are reluctant to provide the necessary paperwork, because it is too difficult or because parents are working without documents.

Teaching staff monitor children daily with reports that go home with the child. These provide a record of the child's routines, participation, behavior and health. The focused portfolios and ASQs provide a record of the children's social, emotional, and cognitive progress.

If the parent brings the child to the school and picks him/her up, the teaching staff has the opportunity to interact with the parent every day. The child or the teacher can share highlights and accomplishments with the family. If the child takes the bus, the bus driver and monitor provide an important link between parent and program.

Record-keeping is a very important piece of the program and complicated by the reporting needs of different agencies and funding streams. The Data Systems Coordinator is responsible for developing an integrated, web-based data system that can capture and report all information necessary to track and monitor information about the family, the children in and out of the classroom, referrals, critical events, and family and child outcomes.

Transitions Into the Community

Children transition out of the program at the end of the year, unless it is during the summer and they will go to kindergarten in the fall. In that case they are allowed to stay until they are enrolled in public school, so there is only one major transition in a few months time. Other children are transitioned into Early Head Start/Head Start or other early childhood programs. The Early Head Start programs would prefer that CLN keep the infants and toddlers until they are three years old, no matter when they enter. Unfortunately, CLN funding dictates that children transition out of the program after one year. There is not always space in the community classrooms that are most appropriate for CLN children. Placing preschoolers in Head Start and early childhood programs is usually easier than placing infants and toddlers because there are more programs available.

CLN staff prepare the child and the parent for the transition as much as possible. A teacher and/or family support team member may accompany the child and the parent visiting the new program. Ideally, there are opportunities for the new teacher to observe the child at CLN. Unfortunately, most programs

serving young children, especially vulnerable ones, are not able to free up staff to go to all of these visits and meetings.

At transition, adults will ideally have completed the CLN parent education program and made progress toward their goals. The housing situation should have stabilized and the family connected with a medical home and necessary supports.

Although the program tries to follow families after they leave, this is problematic for many reasons. Families may remain highly mobile after they leave and CLN does not have an efficient method to maintain contact.

The Cuidando Model Tomorrow

In order to develop the Cuidando model of tomorrow, the CLN staff joined together in a series of visioning exercises. The goal was to engage staff from the beginning in both describing the best of what CLN is and the best that CLN can become as it works to create a community system of support for children and families experiencing homelessness.

The approach used, Appreciative Inquiry, asks staff to focus on what's best in the current setting. It is a strengths-based approach, in line with the approach CLN uses with its own children and families. Using Appreciative Inquiry in visioning and planning involves four phases.

1. **Inquire Phase**, “appreciating the best of what is,” identifies the organization’s best practices, examples of success, and what is valued by the participants.
2. **Imagine Phase**, “envisioning what might be,” asks staff to describe their hopes for and vision of the ideal organization.
3. **Innovate Phase**, “charting the pathway to change,” has staff identify what practices and competencies are needed to achieve the ideal.
4. **Implement Phase**, “navigate the change,” engages staff in identifying resources recommendations and action plans.

The “Wordle”⁵¹ in Figure 11 highlights the major themes that emerged from staff reports on peak experiences and values. “Families” emerged as a major theme, more often mentioned than “children,” suggesting that staff embrace the concept of supporting families in supporting their children through these difficult times. A cluster of terms suggest that staff also value working together, through “teamwork,” “collaboration” and “support,” “learning” and “working” “together.”

Cuidando Guiding Principles

In addition to the visioning work of the staff, individual interviews and observations led to an initial identification of a set of principles that might guide the further development of the Cuidando model.

Principle 1: Homeless families can't wait.

- Safety first: Probe to make sure that families are in a safe, if temporary, place
- Streamline the intake process so children and families can get into the program/classroom as soon as possible

Principle 2: Tell the story once.

- Develop standardized core referral form to share information with referral agencies (to and from).
 - Note: Release of information required
- Record critical child and family information once, making it available (via a shared and secured web platform) to staff who need to know.
- Have one of the child's teachers participate in the initial visits with a client family.

Principle 3: The right information is available to the right person(s) at the right time

- Track information input: Who contributes what information when?
- Track information output: Who needs what information when?
- Electronic programs, such as Child Care Manager, could ease record-keeping by signing a child in and out each day, thereby keeping attendance records. These records could generate reports to funding agencies, such as the Child and Adult Care Food Program.
- Maximize use of technology, minimize paper documentation.
- Ensure confidentiality.

Principle 4: Adequate staff, properly trained.

- The organization needs adequate staff to complete all of the pieces of the process smoothly. Staff need training to do their jobs, which are difficult and require a level of knowledge and maturity that does not just happen. It has to be purposefully nurtured.

Principle 5: Everyone is Cuidando

- Everyone understands the “big picture” and how everyone contributes to successful outcomes.
- All staff need a common core of knowledge and skills, enhanced through all-staff in-service training, reflective practice, etc.
- All staff are clear on organizational policies and procedures.
 - Note: Staff and Family Handbook must be consistent.
- Allow opportunities for staff cross-training and job-shadowing.

Principle 6: Parents are Partners

- Child and family developmental plans must mesh and support each other.
- Parents learn to be skillful partners in fostering child development.
- Parents become confident advocates for their children and families.
- Parents develop a network of peer support.

Principle 7: Families live in Community

- Develop a strong community network of support
 - Names **and** faces
 - Tap formal and informal networks
 - Develop a community-wide referral and tracking system
- Build community awareness and support
 - The community needs to support these vulnerable families in a systematic way. The community needs to be aware of how many children are living on the edge and what that means for the future of the entire community.

Adelante: Moving Forward

Building on the substantial base of scientific research and practice wisdom, reviewed here, CLNkids intends to move forward with critical community partnerships to design and implement a comprehensive, coordinated and effective network of support for children and families experiencing or at risk of experiencing the trauma of homeless and its attendant challenges.

The next phase of this work involves identifying the specific knowledge, skills, attitudes and practices, organizational capacities and community connections that will be required to implement this system of support. Once identified, the content and methods for a community-wide education and training system can be developed, and critical community partners can be engaged in its implementation.

It will require collective will and action from not only from a wide array of service organizations, but also advocacy coalitions, funders, and public and private decision-makers to create and sustain these systems of support. But our collective investment in healthy environments for children and families experiencing homelessness will reap high returns for our community.

Notes

¹ Available on Ounce of Prevention YouTube Channel:

<http://www.youtube.com/user/theounceofprevention/videos?view=1>

² Summarized in Shonkoff, J. P. & Phillips, D. A. (Eds.). (2000). *From neurons to neighborhoods: The science of early childhood development*. Washington, DC: National Academy Press.

³ Alberta Family Wellness Initiative, Brain Architecture and Development. [Online] Retrieved from

<http://www.albertafamilywellness.org/brain-development-addiction/brain-architecture-development>

⁴ Harvard Center on the Developing Child. Core Concepts in the Science of Early Childhood Development. [Online] Retrieved from

<http://developingchild.harvard.edu/search/?cx=001599101917928556767%3Acfzjkqwnev8&cof=FORID%3A9&ie=UTF-8&q=core+concepts&siteurl=developingchild.harvard.edu%2F&ref=&ss=1389j180625j13>

⁵ Zero to Three, Brain Development: Frequently Asked Questions . [Online] Retrieved from

http://main.zerotothree.org/site/PageServer?pagename=ter_key_brainFAQ#critical

⁶ See, for example, Tough, Paul (2012). *How children succeed: Grit, curiosity, and the hidden power of character*. New York: Houghton Mifflin Harcourt.

⁷ Harvard Center on the Developing Child, *Executive Function: Skills for Life and Learning*. [Online] Retrieved from

http://developingchild.harvard.edu/resources/multimedia/videos/inbrief_series/

⁸ Perry, Bruce D. et al. (1995). Childhood trauma, the neurobiology of adaptation, and “use-dependent” development of the brain: How “states” become “traits.” *Infant Mental Health Journal*, Vol. 16, No. 4, pp. 271-291.

⁹ National Scientific Council on the Developing Child (2004). *Young Children Develop in an Environment of Relationships: Working Paper No. 1*. [Online] Retrieved from www.developingchild.harvard.edu

¹⁰ The eight categories were: recurrent physical abuse; recurrent severe emotional abuse; contact sexual abuse; household member in prison; domestic violence against the mother; household member abusing alcohol or drugs; household member chronically depressed, mentally ill or suicidal; at least one biological parent absent from the household.

¹¹ Centers for Disease Control and Prevention, Adverse Childhood Experience (ACE) Study. [Online] Retrieved from <http://www.cdc.gov/ace/>

¹² National Scientific Council on the Developing Child (2005). Excessive Stress Disrupts the Architecture of the Developing Brain: Working Paper #3. [Online] Retrieved from <http://www.developingchild.net>

¹³ Zero to Six Collaborative Group, National Child Traumatic Stress Network. (2010). *Early childhood trauma*. [Online] Retrieved from http://nctsn.org/nccts/nav.do?pid_typ_early1

¹⁴ Shanks, Trina and Robinson, Christine (2011). Overstressed kids: The impact of economic insecurity on children and families (2011). Annie E. Casey Foundation. [Online] Retrieved from:

<http://www.aecf.org/~media/Pubs/Initiatives/Family%20Economic%20Success/O/OverStressedKids/OverStressedKids.pdf>

¹⁵ National Center for Children in Poverty. Ten Important Questions About Child Poverty and Family Economic Hardship [Online]. Retrieved from <http://www.nccp.org/faq.html>.

¹⁶ Evans, Gary W., Brooks-Gunn, Jeanne, and Klebanov, Pamela (2011). Stressing out the poor: Chronic physiological stress and the income-achievement gap. Federal Reserve Bank of San Francisco, *Community Investments*: Vol. 23 No. 2: Fall 2011

¹⁷ Duncan, G.J., et al. (1998). How much does childhood poverty affect the life chances of children? *American Sociological Review* Vol 63(3): 406-423.

¹⁸ Shanks and Robinson, op. cit.

¹⁹ National Center for Children in Poverty (2010). New Mexico Demographics of Young Poor Children [Online]. Retrieved from http://www.nccp.org/profiles/NM_profile_9.html

²⁰ Sue, Derald Wing, et al. (2007). *Racial Microaggressions in Everyday Life: Implications for Clinical Practice*. *American Psychologist*, v62 n4 p271-286.

²¹ Sanders-Phillips, K., et al. (2009) Social inequality and racial discrimination: Risk factors for health disparities in children of color. *Pediatrics*, vol.124, pp. S176-S186 [Online]. Retrieved from http://pediatrics.aappublications.org/content/124/Supplement_3/S176.full.html

²² Sanders-Phillips, K. (2009). Racial discrimination: A continuum of violence exposure for children of color. *Clin Child Fam Psychol Rev.*, Vol 12(2): 174-195.

-
- ²³ Brave Heart, Maria Yellow Horse (2003). The historical trauma response among natives and its relationship to substance abuse: A Lakota illustration. *J Psychoactive Drugs*, Vol. 35(1), pp. 7-13.
- ²⁴ National Alliance to End Homelessness. (2007). *Homelessness counts* [Online]. Retrieved from <http://www.endhomelessness.org/content/article/detail/1440>
- ²⁵ National Center on Family Homelessness.(2003). *America's homeless children* [Online]. Retrieved From http://www.familyhomelessness.org/pdf/fact_children.pdf
- ²⁶ National Center on Family Homelessness (1999). *Homeless children: America's new outcasts*. Newton, MA
- ²⁷ The National Center on Family Homelessness (2009). *America's Youngest Outcasts: state Report Card on Child Homelessness*. Newton, MA.
- ²⁸ National Center on Family Homelessness (1999). *Homeless children: America's new outcasts*. Newton, MA
- ²⁹ The National Center on Family Homelessness (2009). op. cit.
- ³⁰ Bassuk EL, Rosenberg L. (1990). Psychosocial characteristics of homeless children and children with homes. *Pediatrics*, Vol. 85(3):257-61.
- ³¹ Rescorla L, Parker R, Stolley P. (1991). Ability, achievement, and adjustment in homeless children. *Am J Orthopsychiatry*, Vol. 61(2):210-20
- ³² Cutuli, J.J., et al. (2012). Academic Achievement Trajectories of Homeless and Highly Mobile Students: Resilience in the Context of Chronic and Acute Risk, *Child Development* [Online} Retrieved from <http://onlinelibrary.wiley.com/doi/10.1111/cdev.12013/abstract>
- ³³ Shanks and Robinson, op. cit..
- ³⁴ Harvard Center on the Developing Child. Core Concepts in the Science of Early Childhood Development, op. cit.
- ³⁵ Lazar, I., et al. (1982) Lasting effects of early education: A report from the Consortium of Longitudinal Studies. *Monographs of the Society for Research in Child Development*, Vol. 47 (2-3, Serial No. 195)
- ³⁶ Reynolds, A. J. (2000). *Success in early intervention: The Chicago Child-Parent Centers*. Lincoln, NB: University of Nebraska Press.
- ³⁷ McCormick, M. C., et al. (2006). Early intervention in low birth weight premature infants: Results at 18 years of age for the Infant Health and Development Program. *Pediatrics*, 117, 771-780.
- ³⁸ Schweinhart, L. J., et al. (1993). Significant benefits: The High/Scope Perry Preschool study through age 27. *Monographs of the High Scope Educational Research Foundation*, Number 10. Ypsilanti, MI: High/Scope Press.
- ³⁹ Campbell, F.A., et al. (2002). Early Childhood Education: Young Adult Outcomes from the Abecedarian Project. *Applied Developmental Science*, 6, 42-57.
- ⁴⁰ Tough, Paul (2012). *How children succeed: Grit, curiosity, and the hidden power of character*. New York: Houghton Mifflin Harcourt Publishing Company.
- ⁴¹ Heckman, James. The Heckman Equation. [Online] Retrieved from <http://www.heckmanequation.org/heckman-equation>
- ⁴² Heckman, James. Presenting the Heckman Equation. [Online] Retrieved from <http://www.heckmanequation.org/content/resource/presenting-heckman-equation>
- ⁴³ Shonkoff, Jack and Phillips, Deborah, Eds. (2000). *From neurons to neighborhoods*. Washington, D.C. National Academy Press.
- ⁴⁴ Shonkoff and Phillips, op. cit.
- ⁴⁵ Shonkoff and Phillips, op. cit.
- ⁴⁶ Masten, Ann (2000). *Children who overcome adversity to succeed in life*. University of Minnesota Extension [Online]. Retrieved from http://www.extension.umn.edu/distribution/familydevelopment/components/7565_06.html
- ⁴⁷ Cutuli, JJ, et al. op. cit.
- ⁴⁸ Masten, op. cit.
- ⁴⁹ Information on the Strengthening Families framework is available at the Strengthening Families website: <http://www.cssp.org/reform/strengthening-families>
- ⁵⁰ The ACF Prevention web section identifies evidence-based programs: <http://www.childwelfare.gov/preventing>
- ⁵¹ <http://wordle.com>