"HOW ARE THE CHILDREN?"

REPORT OF
THE WHITE HOUSE CONFERENCE
ON EARLY CHILD DEVELOPMENT AND LEARNING

In many African cultures, when you meet someone you know on the road or at the market, you don't say: Hello, how are you? Instead you ask: Hello, how are the children?

I. The White House Conference

The marvels of nature are awesome—spacious skies, majestic mountains, fruited plains... We have all sung their praises. Today, tireless researchers and innovative technologies are giving us glimpses of smaller miracles that are just as inspiring. They have shed light, for example, on early brain development—a process of such elegance, complexity, and precision that it surely ranks as one of the world's great wonders. The children who emerge from this process are certainly a great part of what makes this nation "America the beautiful."

Across the nation, this miracle occurs nearly four million times a year. A newborn arrives, entering in the world with billions of brain cells—nearly enough to last a lifetime. But for the most part, these cells are not yet connected into the networks that make it possible to think and speak, to reason and learn. But the process begins right away. More than enough connections are formed in the first three years of life, and then streamlined and fine-tuned as children move toward adulthood. Nature planned it that way, so that newborns' capacities—their unique ways of thinking, knowing, and acting—could develop in the world, under the sway of the adults who love them and nurture them.

To be sure, newborns arrive with different temperaments, strengths, and needs. They are born into widely different circumstances and cultures, joining families that have different structures and sizes, hold different beliefs, and bring to parenthood different assumptions and preferences. They may be raised by mothers and fathers, by adoptive or foster parents, by single mothers, or by a grandparent or other relative. All of these parents pass on to children their knowledge, their heritage, their language, and their values.

Some children are born with disabilities that may or may not improve over time, given today's knowledge and methods. Some girls and boys grow into healthy children and able learners despite circumstances that prove devastating for other children in their communities. Heredity certainly plays a role in determining how early development unfolds, and geneticists are learning more each day about how this happens. But as each child grows and matures, early experience exerts a powerful force, sculpting the genetic "clay." Indeed, early experience and early care play a far more crucial role than scientists' previously realized.

That is why parents play such an immense part in shaping the future of their daughters and sons, and of our nation as a whole. That is why young children and their parents deserve the nation's sustained attention and support. And that is why President Clinton is leading a nationwide effort to focus attention on the importance of the early years. In taking this stand, the President is sustaining a longstanding commitment to children that has resulted in so many advances, notably the Family and Medical Leave Act that has allowed 12 million Americans to take time off from work to care for young children or to meet urgent family needs covered by that law; support and expansion of Head Start for disadvantaged preschoolers; establishment of Early Head Start serving children three and under, and offering prenatal care to more mothers; the largest funding increase for education in three decades; and extension of health coverage to five million uninsured children.

> "This unique conference is a part of our constant effort to give our children the opportunity to make the most of their God-given potential and to help their parents lead the way, and to remind everyone in America that this must always be part of the public's business because we all have a common interest in our children's future." *President Bill Clinton*

Any more letters for correspondence?

On April 17, 1997, President Clinton convened the White *House Conference on Early Development and Learning: What New Research on the Brain Tells Us About Our Youngest Children.*. **[SIDEBAR: CONFERENCE PROGRAM]** The Conference brought together brain scientists as well as specialists in child development, early care and education, and family support. Speakers included not only scientists, but also a former first-grade teacher who founded an organization that changed the lives of thousands of children in her community; a parent whose experiences in an early childhood PTA gave her new confidence and competence as she raised her young son; a police chief who has successfully shifted his officers' community policing, including a new approach to dealing with children and families; a Hollywood filmmaker and television producer who is using his craft to focus the nation's attention on the early years of life; and a CEO who is determined to provide households all over the nation with information about concrete steps that parents can take to enhance their children's development.

Guests at the Conference represented decades of research and experience, and much of the nation's best thinking on how to strengthen early childhood development and learning. At scores of satellite sites all over the nation, thousands of other participants listened to the panelists and held their own discussions. Many responded with ideas and questioned addressed to the President and First Lady **[SIDEBAR: LETTERS TO PRESIDENT & MRS. CLINTON].**

The Conference sought to tie research to action, and brought to public attention a number of resources that offer insight into the needs of young children and their families, including *Rethinking the Brain: New Insights into Early Development and Learning.*

"There is a wide gap between scientific research and public knowledge, between

what is known about early development and what we do about that knowledge. Today's meeting is a major step toward filling that dangerous gap." *Dr. David Hamburg*

In convening the Conference, the President sought to help Americans understand what recent findings mean for them and their children. In the process, he raised many questions: What kinds of policy initiatives or changes might emerge from the Conference? What kinds of information, ideas, and strategies might parents, service providers, community organizations, and business leaders take away from the meeting? He placed particular weight on the question: how might experts present research on the extent of parents' influence and responsibility without burdening them?

But in fact, the main lesson that emerged from the Conference is that parenthood is the art of the possible. Babies don't need "super parents" in order to thrive. Scientists stress that the people who care for children have a greater impact on early brain development than they previously thought. But they also say that ordinary, everyday interactions with infants and toddlers—the baby talk and songs and games that are so easy and enjoyable—are exactly what young children need.

"I hope this conference will get across the revolutionary idea that the activities that are the easiest, cheapest and most fun to do with your child are also the best for his or her development—singing, playing games, reading, storytelling, just talking and listening." *Hillary Rodham Clinton*

And while the early years offer special opportunities, parents, caregivers, and teachers have

countless chances, over many years, to influence children's development and learning. The brain is the last organ in the body to mature, and its development takes a lifetime. It is never too late to help a child—or an adult—learn.

By the same token, it is never too early to help—and that is why the President has fought for and won legislation to strengthen and expand pre-natal and post-partum care for mothers and their babies. These efforts—and many others aimed at supporting young children and their families—have won public and Congressional support because so many Americans are now concluding that as a nation, we are relying too much on remediation, and too little on prevention. If we want all of our children to reach their God-given potential, it makes good sense to begin at the beginning.

That means harnessing all of the knowledge and research available to us about how young children develop and learn. The President is committed to meeting this challenge for a very important reason: children are our future. Ensuring that their families and communities have the information and resources they need to give them the best possible start in life is simply the right thing to do. It is also clearly in the national interest. What could be more crucial to our nation's continued vitality than children's well-being? Assuring their healthy development and learning must always be part of the public's business.

"This is the most important issue facing the future of our country." *Governor Bob Miller*

Parents and child advocates have led the way. But today, decision makers in many arenas are beginning—at some political risk—to venture into realms that have long been viewed as the exclusive domain of women and therefore low on the national agenda. Thanks in part to a new

awareness of how children's brains develop, policy makers are turning their attention, for stretches of time, from the floors of the House and Senate to the floors of living rooms and child care centers all over America where babies and toddlers play and babble and learn. To a greater extent than has ever been acknowledged, those are the floors where our nation's future is being determined.

Sitting on those floors with the children are their parents and the caregivers to whom they are entrusted while their parents work. It is parents and other caregivers who have day-to-day responsibility for young children's upbringing. Government cannot and should not tell families how to rear their children—and in any case, there is no single "right" approach. There are many ways to raise happy, healthy, capable children. The White House Conference provided a map, suggesting many possible pathways toward that destination. It shared success stories. And it reassured parents that they need not make the journey alone. All sectors of our society can contribute to children's healthy development. In the final analysis, we are all accountable for their well-being. We must all answer to the children.

II. What We Know About Young Children

Children differ from adults

It is natural to think of babies as ourselves in miniature—adults on a smaller scale. But the more we discover about young brains, the more clear it becomes that young children differ from adults in important ways. They have unique ways of developing, learning, and responding to the world around them. By taking these differences fully into account, parents and professionals can do a better job meeting young children's needs.

> "The baby's brain is not just a miniature version of an adult brain. It is a dynamic evolving structure that requires its own function to wire itself...." *Dr. Carla Shatz*

At birth, children's brains are in a surprisingly unfinished state. Newborns have all of the genetic coding required to guide their brain development. What's more, they have nearly all of the billions of brain cells, or neurons, they will need for a lifetime of thinking, communicating, and learning. But these neurons are not yet linked up into the networks needed for complex functioning. It is like having billions of telephones installed around the nation, but not yet connected to each other. **[SIDEBAR: PHONING HOME]**

The extreme immaturity of the newborn's brain is uniquely human. We tend to take it for granted, but not every species gives birth to such undeveloped infants. At birth, the human brain

is only a quarter of its adult weight; the newborns of other primates are already 40 or 50 percent of their adult weight. The young of other species are rarely as helpless as newborn humans; nor do they take as long to move toward independence.

This may sound worrisome, but in fact, our initial immaturity gives humans a powerful evolutionary edge. Monkeys and minks and mice are quite limited in terms of the kinds of settings in which they can survive. We humans have found ways to adapt to almost any habitat on earth. Why? In large part, because so much of our brain development takes place in the world—in contact with our environment. That crucial fact means that experience plays a far greater role in the wiring of our brains. Our developing nervous systems can be significantly altered and fine-tuned by experience. This makes humans uniquely flexible and adaptable. It also allows us to have far greater individuality than other species.[1] Different people's brains—even those of identical twins—will be wired very differently, based on their responses to different input.

The key point is that the preponderance of human brain development takes place in the world, as babies respond to the people who protect and nurture them, the homes that are created for them, and the communities and conditions that surround them. If babies' brains were completely hard-wired—if all of the circuitry were pre-programmed—this wouldn't be possible.

PRENATAL CARE MUST BEGIN EARLY

A young child's brain is a work in progress, and scientists are now able to watch it unfold. Thanks to new, computer-based imaging technologies, such as ultrasound, MRI, and PET scans, they can now see the brain's structures in greater detail than ever before. They can get a glimpse of how the brain responds to different kinds of experience and how it uses energy. They can see how

the brain looks and functions at different stages of development—including in the months before birth.

The prenatal period is an important time of brain development. Crucial steps in early brain development take place very early in pregnancy, before many women know that they are expecting. For example, within weeks of conception, cells that are destined to become neurons have to find their way to the correct position in the part of the brain most responsible for reasoning and learning. For brain development to proceed normally, each cell has to makes its journey at the right time, in the right order. Nature has powerful mechanisms to guide the process—including a great deal of genetic coding, and expectant parents can rest assured that in the vast majority of cases, development proceeds just as it should. But even in the womb, the brain is vulnerable to environmental influences. When pregnant women have inadequate nourishment, when they smoke, drink, or take drugs, or when they are exposed to toxic substances, their babies' brain development may be jeopardized. Research also suggests that when they suffer abuse, or extreme stress, or severe depression, their babies may be affected.

For all of these reasons—and many others—it is very important for expectant mothers to seek care as early as possible in their pregnancies. In fact, the ideal situation is for prospective parents to receive information and support even before they conceive a child. This is sometimes called "preconception care" and it can boost the health of mothers and babies, as well as fathers' knowledge and confidence.

AFTER BIRTH, BRAIN DEVELOPMENT PROCEEDS AT A STARTLING RATE

"On the first day of life, a baby can search the room with her eyes, visually trace the edges of a triangle, and look intently at her mother's eyes during a feeding." *Dr. Donald Cohen*

Newborns are relatively helpless. They cannot walk or talk or reason. And so, adults have tended to think of them as mindless—empty vessels waiting to be filled. But because the brain has been "in training" before birth, newborns have more awareness of the world than most of us realized. On the first day of life, a newborn can look at her surroundings, study objects, and gaze in the eyes of her mother or father. Infants as young as two days of age will sometimes suck at the mere sight of a breast or bottle, suggesting that learning takes place from a child's earliest hours of life.[2] But the process of getting to know the world is just beginning. At birth, a newborn cannot yet make sense of the flood of sensation and information that comes his way.

After birth, brain development proceeds at an astonishing rate. The first three years are particularly crucial. Children's brains are literally waiting for the experiences that will determine their complex circuitry. As new experiences arrive, young children's brains respond by forming and reinforcing trillions of connections, or synapses, among neurons. In the time that it takes for Mom to nurse the baby or for grandpa to read *Goodnight Moon* , thousands of new synapses are produced. At the same time, thousands of existing synapses are used or "fired" and in the process are reinforced.

Connections form so quickly that by the time children are three, their brains have twice as many synapses as they will need as adults. These trillions of synapses are competing for space in

a brain that is still far from its adult size. This makes children's brains extremely dense. Brain scans have shown that by the age of three, children's brains are also more than twice as active as those of adults.

If children have more synapses than they will have as adults, what happens to the trillions of excess connections? The answer is: they are shed as children grow. Scientists report that throughout the development process, the brain is both producing new synapses and getting rid of those that aren't used often enough. Before the age of three, synapse production is by far the dominant process; from three to ten, the processes are relatively balanced, so the number of synapses stays about the same. But as children near adolescence, the balance shifts, and the shedding of excess neurons moves into high gear.

Brains downsize for the same reason so many other "organizations" do: with streamlined networks, they can function more efficiently. But how does the brain "decide" which connections to shed and which to keep? Here again, early experience plays a decisive role. Each time synapses fire, beginning with the early months and years of life, they get sturdier and more resilient. Those that are used often enough tend to survive; those that are not used often enough are history. In this way, a child's experiences in the first years of life affect her brain's permanent circuitry.[3]

"SMALL TALK" HAS BIG CONSEQUENCES

"By six months of age, infants are well on their way to cracking the language code." *Dr. Patricia Kuhl*

Early experience has an especially strong impact on language development. Over the last quarter century, scientists have learned a great deal about how children acquire language. Parents have long suspected that babies' babbling is basic training for speech, and that their gestures and cries eventually evolve into more sophisticated forms of communication. But new research shows that infants make more rapid progress in cracking the language code than we previously thought. From their early months, they are paying close attention to the language they hear.[4] By the time they reach their first birthdays, they are well on their way to mapping the sound structure of their language—or, in multilingual homes, to the language they hear most consistently. **[SIDEBAR: CITIZENS OF THE WORLD]**

Adults have special ways of talking to children that help them analyze language. Young children also learn very quickly that relating to others is about taking turns. In this sense, many kinds of early interactions—even a game of peekaboo or mimicry of a baby's faces—can lay the groundwork for effective communication later in life.

Many kinds of experiences affect early brain development—all of the sounds and textures that surround them. But recently scientists have been homing in on linguistic experience as a key ingredient. More precisely, they are stressing the importance of "small talk"—the millions of ordinary greetings, exclamations, explanations, complaints, and wordless utterances exchanged between adults and children in the course of the early years.

"When mothers and fathers talk to children, they raise their pitch and slow down their communication. The slowed-down communication says, "God ahead and take your turn. I'm addressing you. It's your turn now." *Dr. Patricia Kuhl*

But some parents do not realize the importance of talking to their children in the first year, before their children are old enough to begin talking back. They may feel self-conscious when they talk to an infant who cannot respond; they may have grown up in cultures that value silence or non-verbal communication; or they may have few positive models of conversation between parents and young children. Some parents may be too tired or stressed to engage in lighthearted chitchat with their babies.

How can researchers gauge the impact of early interchanges? A common-sense approach is to observe numerous infants as they interact with their parents, and then to follow each child's progress over several years to see how he or she develops and fares in school. One recent study found that a child's earliest language experiences does indeed affect later achievement. For a period of two-and-a-half years, beginning with birth, the researchers spent an hour each month documenting every spoken word and every parent-child interaction in each of 42 homes. They found that the more parents talked to and interacted with their babies, the greater the children's chances for success when they reached elementary school. They concluded that both the number of words exchanged and the tone in which they were said made a difference. All of the children in the study learned to use language and construct complex sentences, but the children who were talked to at a younger age had a stronger grasp of the conceptual possibilities of language, and became better problem solvers.[5]

Once parents know about this research, most will want to make "small talk" with their infants more frequent , warm, and responsive, and they will want to be sure that child care providers are talking with their babies as well. The prospect of keeping up a steady flow of conversation may sound exhausting, but babies appear to benefit from exactly the kinds of commentary that run through parents' and caregivers' minds as they move through their day. In the study mentioned above, the patter that went on between the chatty parents and their infants was not about Buddhism or Beethoven—or, for that matter, brain science. You need not discuss complex ideas to help your infant learn. But a stream of statements like, "Your bottle is almost warm," or "Daddy is looking for his keys," appears to help babies become more conceptual thinkers later in life. Simple questions like, "How was your nap?" or "What did we do today?" seem to make a world of difference.

> "As researchers, we don't advise parents to try and accelerate the normal pattern of development. We don't recommend flash cards to try to teach words to three-monthers. Nature has provided a perfect fit between the parents' desire to communicate with the child and the child's ability to soak this information up." *Dr. Patricia Kuhl*

To be sure, children need many kinds of stimulation. They need chances to stretch not only their linguistic and conceptual powers, but also their powers of perception, their social prowess, their aesthetic and moral capacities, and their bodies. When children are deprived of experiences that would help them mature in any of these areas, their development may be delayed. For example, babies and toddlers who spend most of their waking hours in their cribs develop more slowly than other young children; some cannot sit up at 21 months, and most cannot walk by age three.[6] Children need opportunities for vigorous, safe physical activity. They need touch, sounds, and images. They need social and emotional contact. And they need thought-provoking

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activities. Most adults who care for children have some awareness of these needs. But despite parents' best intentions, many infants and toddlers do not get enough intellectual stimulation. Only half are read to on a regular basis by their parents, and many mothers and fathers do not engage in other activities that encourage their children's intellectual growth. This was a major finding of *Starting Points*, an influential Carnegie Corporation report on meeting the needs of young children that was cited at the White House Conference. [7]

> "An infant's cognitive growth occurs through emotional and social interactions." *Dr. Harriet Meyer.*

On the other hand, too much stimulation can be overwhelming. Children have different temperaments and different moods. They also have different daily cycles of wakefulness and sleepiness than adults. Aside from seeing to their children's basic health and safety, the most important thing parents can do is to learn to follow their children—to read their moods and preferences, so they can—whenever possible— adjust activities, schedules, and even the way they touch and talk to their young children.

To be sure, parents bear the greatest burden of responsibility for their children's development and learning. But mothers and fathers cannot and should not be held responsible for every hurdle their children encounter, or for every problem they may face. Many factors shape brain development, including social, economic and environmental conditions over which individual parents have little control, and including their child's genetic make-up.

From birth, children appear to have different temperamental characteristics. Research suggests that most infants and toddlers have traits that make them "easy" children; but a significant

number—about ten percent—have difficult temperaments. They tend to be moody, to express intense emotion, and to resist efforts to comfort them or cheer them up.[8]

Furthermore, some children are born with, or develop, disabilities or illnesses that may impede their ability to form strong relationships and to respond to different kinds of stimulation. Some children are born with severe retardation, or autism, or mental illness. Others may have learning disabilities that do not fully respond to current treatment methods. Research points to new ways to help every child reach his or her full capacities. Working with professionals, parents can gain the information and strategies they need to support their sons and daughters as they gain new skills and new confidence. New ways of approaching impairments like mental retardation or autism are helping to improve conditions that were once considered untreatable. But some children will continue to have difficulties no matter how much love, care, attention, and stimulation their mothers and fathers provide. Professionals and parents alike need to keep their focus on brain development, not blame development.

PREVENTION IS CRUCIAL

The brain does not develop all at once. Different parts of this complicated organ mature at different times and at different rates. Although development continues throughout life, there are periods of great opportunity (and risk) when a particular part of the brain is the site of intensive wiring and is therefore especially flexible. *Rethinking the Brain*, a report issued by the Families and Work Institute that was released at the White House Conference, calls these periods "prime times."

The classic example is vision. The visual part of the brain is wired early in life. If children

are born with cataracts, they may lose their sight permanently if surgery is not performed on time. That is because during the "prime time" for vision, input from the outside world is essential. The brain relies on this experience, and when it does not arrive on time, the part of the brain that controls vision cannot fully develop. Time is of the essence. In contrast, when adults develop cataracts, the consequences of delaying surgery are far less drastic.

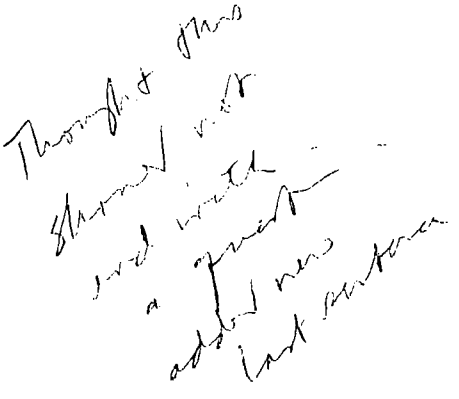
Research confirms that this holds true for other aspects of development as well. Untreated health problems, poor nutrition, exposure to tobacco, alcohol, drugs, or environmental toxins, and abuse and neglect are always risky, but may be especially perilous in the first years of life. Traumatic experiences and non-stop stress are also particularly harmful early in life; they affect production of a steroid hormone called cortisol that can have an adverse impact on brain development. And when mothers suffer from severe depression that persists beyond the baby's sixth month, children's brain development may be affected.

That is why prevention and early intervention are so crucial. When health problems are dealt with, when family stress is reduced, when mothers seek treatment for depression, young children tend to fare better. The earlier the intervention, the better. The more follow-up, the better. These are simple lessons. As they are applied more widely, results for young children are bound to improve.

FINALLY, WE KNOW THAT WE NEED TO KNOW MORE

> "Scientists have discovered much about the world that surrounds us, but the train inside our skulls remains a source of mystery and wonder, and is, in a sense, the next frontier of human understanding." *Vice President Al Gore*

Decades of research have led to breathtaking discoveries about early brain development, but much remains to be known. What kinds of stimulation do children need? How much? And when? How does stress affect young children, and how can its impact be blunted? How can the quality of child care be improved? What kinds of education and training can help parents and other caregivers enhance children's development? How can communities mobilize in order to contribute to children's healthy development? How can different kinds of developmental delays and impairments be overcome? Why do so many children appear to be at risk for Attention-Deficit and Hyperactivity Disorder, and how can they be helped? Researchers are hard at work, addressing these questions and many more.



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III. What Young Children Know About Us

The Child's Point of View

Much of what we know about children comes from watching them and listening to them. Long before brain scans were invented, pioneers in child development stressed the value of simply observing children very closely. Emphasizing that the world looks very different from a young child's point of view, they urged adults to imagine everyday events as a baby or toddler might experience them.

This effort informed many of the presentations made at the White House Conference. While much of the discussion focused on what we know about young children, some speakers, including the President, also considered what young children know about us.

> "No matter how young, a child does understand a gentle touch or a smile or a loving voice. Babies understand more than we have understood about them. Now we can begin to close the gap...." *President Bill Clinton*

Parents are the most important people in their world

Babies discover very quickly that they are not alone. From birth, they are capable of observing and interacting with other people. Babies grasp that the world we've brought them into is a fascinating place. When they are awake and alert, they lose no time exploring their surroundings with all of

their senses. But nothing is more interesting or important to them than their mothers and fathers. Very early in life, babies turn most eagerly toward the voices of the people they know best.

Babies respond to touch, sound, images, tastes, smells. They are at ease when they receive warm, responsive care geared to their needs, moods, and temperament. **[SIDEBAR: READING CHILDREN'S SIGNALS]** On the other hand, they experience tension when care is inadequate, or mechanical, or inconsistent—and research shows that this stress affects their heart rate, brain waves, and their brains' biochemistry.

> "The reason we talk to babies in a special way is that they know we're talking to them. If I hold up a newborn with his head away from me and say, *Hi, how are you doing? Come on, you can turn to my voice*, that newborn...turns to my voice and arches toward me as if to say, *There you are!*" *Dr. T. Berry Brazelton*

THEY KNOW THAT WE ARE UP TO THE JOB

Human children are dependent—to a greater extent and for a longer stretch of time than the young of other species. They are also trusting. They turn to parents and other caregivers for reassurance or help. They believe that we will nurture and protect them, unless repeated experience teaches them otherwise.

They know that interacting with parents and other important people—communicating, mimicking, playing, snuggling—is the best way to spend their most alert, wakeful hours. When they are allowed to form secure attachments, they know that they are loved even during quiet

or sleepy times, when they are left to rest, play by themselves, get to know themselves, and look around them.

This may be reassuring for parents, who are understandably unsettled by research showing that the way they relate to their young children, and the experiences they provide or arrange, help to determine how their brains will be wired. They may wonder: Did I say enough words to Jake and Daniel when they were babies? How many connections formed—or failed to form—during the ten minutes Emmy was left to cry so Robert's bee sting could be tended to? What about all the times the neighbor lost his temper and shouted at Rebecca? Has musical potential been wiped from Melissa's brain because we never played Mozart or Bach?

But when you look at life from a baby's viewpoint, you realize that you don't have to be a perfect parent. What matters to young children is your ability to understand their needs and to read their signals— most of the time; to respond with warmth and affection—most of the time; to model the pleasures of conversation and turn-taking—most of the time; to protect them from life's minor bumps and bruises—some of the time; that you are determined to shield them from neglect and abuse—all of the time.

To be sure, parents have considerable (but not total) control over the kinds of experiences their children are exposed to. But what kind of experiences do infants and toddlers need? Researchers have begun to address this question. They are finding that linguistic experience is important, but more than anything else, young children need secure attachments to the adults who care for them. Long-term studies show that children who have secure attachments early in life make better social adjustments as they grow up, and do better in school.[9] Young children want and need a wide variety of experiences that spark their curiosity and tap all of their senses. But

from a child's point of view, "enrichment" can mean not only a visit to the library or museum, but also a chance to help mom or dad unpack a big bag of fascinating groceries.

The key point is: relationships matter. Social experience has a greater impact on brain development—including children's emerging intellectual capacities—than many scientists had realized. Many parents have suspected that they play a role, from the first weeks of life, in fostering their babies' intelligence, but according to the Zero to Three survey, a quarter of parents do not believe this. The research is clear, however. Children learn in the context of important relationships: interactions with parents, grandparents, brothers and sisters, and other family members. Biology is not the chief factor in good parenthood: adoptive parents and foster parents can have a large, sustained impact on children's development. So can grandparents. So can child care providers who are steady presences in children's lives. And so can family friends and neighbors. Again, while opportunities are especially strong in the early years, important relationships make a difference for children at any age.

CHILDREN KNOW THAT OTHER CAREGIVERS CAN MEET THEIR NEEDS—BUT DON'T TAKE THE PLACE OF MOM AND DAD.

Research shows that children are capable of forming strong attachments to more than one adult, but not all attachments are equally strong or compelling. Babies tend to prefer their primary caregiver—usually mom. But they quickly learn that other people can meet their needs, and that different people—dad, or Uncle Mike, or grandma, or Ms.Clayton—have different ways of caring for them. In this way, they begin to get a sense of life's complexity and richness.

"Children with active fathers develop a richer set of emotions and a wider, more

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textured view of their world." *Vice President Al Gore*

Fathers have a great deal to offer their children. Addressing the Conference, Vice President Gore noted research showing that the attachment a child forms with his or her father is critical to that child's development. When fathers are active caregivers, their children tend to have higher IQs and are less prone to violence. Of course, these effects hinge on the quality of the relationship a father establishes with his young children, as well as the amount of time he devotes to caring for them. More fathers than ever before are taking primary responsibility for young children, but stay-at-home dads or "househusbands" are still likely to encounter social disapproval.

Traditional roles are changing slowly in most families. Research in the early eighties reported that fathers, on the average, spent less than half an hour per day directly interacting with their children—playing with and caring for them. More recent studies are showing that many men have somewhat increased the time they spend interacting with their children and taking care of them.[10] Many fathers say that they meet obstacles when they try to take more responsibility for their children. Some say that they would spend more time with their sons and daughters if they met less resistance from the children's mothers. Many say that if their employers adopted more family-friendly policies, they would willingly devote more time to caring for, playing with, and talking to their young children. President Clinton is encouraging such policies, and fighting for an expansion of the Family and Medical Leave Act that would enact a form of flex-time fathers and mothers the option of forgoing overtime pay in order to spend time with their children.

The role of fathers cannot be discussed without acknowledging that fathers are increasingly absent from the home. More than a quarter of all American children are born to unmarried mothers. At the same time, divorce rates are rising. Under the Clinton administration, teen

pregnancy rates have gone down, and the collection of child support payments have gone up. By focusing on fathers' needs and roles, not only employers, but also family support organizations, parent education programs, health care providers, and human service agencies can play an important part to support men who are having difficulty finding a place for themselves in the family setting.

Child care providers can be important people in young children's lives, but they do not take the place of parents. Recent studies show that high quality child care does not disrupt young children's attachments to their parents—so long as parents spend enough time with their infants and toddlers to know them well, care for them confidently, and read their signals and cues. **[SIDEBAR: CHILD CARE AND THE FAMILY.]**

> "If you can place your child in high quality child care, you can actually supplement what you're giving them as parents and that's why the value of making high quality child care affordable for more families is so great." *Dr. Deborah Phillips*

In fact, child care providers—with sufficient training and support—can enhance the development of the children in their care, supplementing the parents' input. Children benefit when parents and child care providers work together, exchanging information, insights, and problem-solving strategies on a regular basis.

CHILDREN KNOW THAT THEY HAVE TO BE PATIENT WITH US.

Unconditional love goes to the heart of what it means to be a parent. But love is not enough. From a child's viewpoint, good care is responsive care. It requires getting to know a

particular child very well, and that is not simply a matter of instinct or affection. Parents and caregivers don't always get it right the first time, or even the second, but if they are willing to follow the children, if they are willing to learn from their mistakes, they eventually come to understand their needs and temperaments.

Mistakes are inevitable. As the lullaby promises, the cradle will rock. A baby who is full will be coaxed to eat. A toddler will be tossed into the air by an enthusiastic dad when what he really needs is a cuddle and a nap. And parents will frequently realize, after the fact, that they could have found a better way to handle a problem. No parent gets it right every time. One expert on child development has said that when she makes a mistake with her own children, she vows not to repeat that particular mistake...for at least two weeks.

Of course, some mistakes cannot be tolerated. There is never an excuse for abuse or neglect, or for household dangers that imperil children's lives. But young children will inevitably miss a meal, scrape their knees, or overhear their parents argue. They can easily survive the ordinary ups and downs of daily life, as long as the care they receive day by day is usually warm, responsive and consistent. In fact, these ups and downs are among the experiences that help their brains to mature. What's more, when children have a secure attachment to the adults who care for they, they are indulgent. They know that we deserve many more chances.

IV. We Know What Works

Researchers and policy makers still have a great deal to learn about how children grow and learn, but we know enough to begin now to promote their healthy development. Research and practice in many fields—including not only brain science but also medicine, psychology, education, cognitive science, and organizational development—have produced an immense body of knowledge, leading to better, more informed, approaches to helping young children and their families. This knowledge rests on thousands of studies and evaluations of hundreds of programs—far too many to summarize in a single report. But we can distill from them fundamental lessons about effective strategies.

Preventive, family-oriented health care works

We Americans take pride in having created a truly advanced society. In the realm of science and technology, we have few rivals. People from around the globe seek information and treatment from our health professionals. Given our resources and the value we place on life, liberty, and the pursuit of happiness, we should have the world's lowest rate of infant mortality. And we do—but only in our more affluent communities. When the nation is considered as a whole, we lag behind more than a dozen other countries in ensuring infant survival. Among African American women, infant mortality is twice as high as it is for white women. The United States also ranks below many other countries in immunization rates and health coverage for pregnant women and children. Compared to other countries, we have a high proportion of low birthweight babies.

We can do better—if we take a preventive approach to health care and make adequate prenatal care available to more expectant mothers. The facts are clear: good prenatal care dramatically boosts women's chances of giving birth to a healthy babies. It is also a sound investment. For example, prenatal care reduces the number of low-birthweight infants; every time it does, the nation's health care system saves up to $30,000.[11]

> "Too many women in this country still do not get adequate prenatal care because of lack of knowledge, motivation, resources, or insurance, and we must work to reduce these barriers." *Dr. Ezra Davidson*

Prenatal care also lead to better nutrition for expectant mothers and infants—a critical factor in children's healthy development. The government provides critical nutritional support by means of the WIC program, which provides nutrition to pregnant women and infants, and food stamps for low-income families. But expectant parents need information and guidance about the kinds of foods and food supplements needed for good health.

Ideally, maternal health care and parent education begin before conception. It is unquestionably important in the early months of pregnancy. And yet, many women still do not get adequate prenatal care. About one in five expectant mothers in our country receives no care during the crucial first trimester. For Black, Hispanic, and American Indian women, the figure is one in three. Some lack health care coverage that would pay for early visits. Others don't know where to go, or how to get there, or why a doctor would want to see them when they are not even "showing." Efforts are needed to ensure that the public is better informed, that prenatal care is accessible and affordable, and that care is not delayed while eligibility is established. Aggressive

outreach is needed to encourage more prospective parents to seek early care. And preconception and prenatal care should encompass not only health care and risk assessments, but also solid information and services such as screening and treatment for depression, smoking cessation, and treatment for alcohol abuse. While maternal health is the main focus of prenatal care, children benefit when fathers are brought into the process from the outset.

Prenatal care is a good start—but only a start—for a lifetime of good health. Infants and toddlers need regular well-child care, the full set of recommended immunizations, and swift attention when they show signs of illness or developmental delays. That is why health coverage is so important, but today, ten million children (including 1.7 million children under the age of three) are without coverage. Most of these children have parents who hold down jobs but have no employer coverage and earn too little to purchase their own policies. Health care is especially important for the nearly 3 million infants and toddlers living in a family with an income below the federal poverty level. children living in low-income families, since these children are at significantly higher risk for infant mortality, low birthweight, physical or mental disabilities, fatal accidents, and common health problems such as asthma, frequent diarrhea, pneumonia, or dental problems.

Once parents have access to health care for their children, it must be family-centered. Many parents want more information, reassurance, and resources during well-baby visits than traditional pediatric practices can provide. When health care providers (and insurers) restructure their policies and practices to provide services that meet parents' needs and emphasize prevention, children benefit.

As Americans intensify efforts to improve health care for young children and their families,

we can learn from the experiences of other countries, including both industrialized and developing nations. Immunization is a good example. Recently, American leaders travelled to Africa as part of President Clinton's initiative, Lessons Without Borders. They brought back ideas about how campaigns to improve health care and promote immunization rates have been planned and implemented. The Mayor of Baltimore was among the visitors, and the ideas he brought back, including mobile van services, have begun to make a difference for his city's young children.[12]

FAMILY SUPPORT AND PARENT EDUCATION WORK—ESPECIALLY WHEN THERE IS FOLLOW-UP.

Writing about the importance of parent education, an American physician asserted that parents too often undertake their new roles "without previous instruction, or without forethought; they undertake it as though it could be learned either by intuition, by instinct, or by affection. The consequence is, that frequently they are in a sea of trouble and uncertainty, tossing about without experience or compass."[13]

This statement was written nearly a century ago by one of our nation's first women physicians, and despite the fact that we have advanced light years in terms of the medical and scientific knowledge, the need for family support and parent education remains as strong as ever. Perhaps stronger—since today Americans are far more mobile, and are less able to count on advice and help from extended family living in their households or around the block.

Raising children is challenging for all parents; it is certainly stressful for the nation's large number of very young parents. Recently, the birthrate for adolescents has decreased slightly, although the problem remains serious. Each year teenage mothers give birth to nearly half a

million babies. Today, 3.3 million children live with adolescent mothers. These young mothers have a particular need for parent education and support. They are much less likely than other mothers to take advantage of prenatal care, and those who are 16 or younger are more likely to have low-birthweight children—with all of the health and developmental problems associated with that condition. In general, children born to teenage parents, especially those living with their mothers alone, appear to be more likely than other children to have continuing health problems.[14]

But all parents can benefit from family support and parent education. Parents want more information. Most say they have a pretty good idea what to look for in terms of their babies' physical development, but need more help recognizing social and emotional milestones. They are perplexed by recent findings about the importance of the early years. They know they need to stimulate their children, but how? and how much? And how can they be sure that the other adults who care for their children will give them what they need?

Parents want to do a good job. But many go to bed at night convinced that they haven't spent enough quality time with their children. More than half of today's parents believe they are not doing as good a job at childrearing as their own parents did.[15] A recent survey conducted by Zero to Three and released at the White House Conference confirms that few first-time parents feel fully prepared for their new role; those who are the youngest and have the lowest income, and those who are going it alone as single parents, feel particularly unprepared.

They also want more information—including the findings about early brain development that were presented at the White House Conference. The Zero to Three survey found that 60 percent of parents are "extremely" or "very" interested in this subject, and another 21 are "fairly" interested.

But surveys are not the only indications that people who have responsibility for young children want help. Existing family support and parent education services are at full capacity, books and magazines on child care are widely read, and on-line parent resources are expanding. Pediatricians say they are frustrated that they have so little time to respond to parents' long lists of questions and concerns, and some are restructuring their practices to meet this need. Executives at one corporation that set up an 800 number for parents report that the help lines has been flooded with calls, and say that they have been amazed that so many people are eager for information and support that they would turn to unseen, anonymous advisers.

Family support and parent education programs are often aimed at new mothers, but can also help fathers adapt successfully to their new roles. The best programs address not only childrearing issues, but the challenges parents are meeting as they raise their families, such as getting and keeping jobs, resolving conflict, and managing their time.

A number of well established family support programs have been subjected to rigorous evaluation. For example, an evaluation of Avance, a family support program that has served low-income, predominantly Hispanic families over more than two decades, has demonstrated clear, long-lasting benefits for participants and their children. In general, research evidence on comprehensive family support programs is promising but not conclusive. Comprehensive, multifaceted programs are difficult to evaluate because they encompass so many activities, and tailor services to the needs of different families. Different programs serve children of different ages and target different kinds of families, so it is hard to make comparisons of their impact or cost-effectiveness.

Programs that stress home visitation can produce impressive results, particularly when they begin with prenatal care and include follow-up into the elementary school years. Programs that include regular home visits appear to be particularly effective in meeting new parents' informational needs and allaying their anxieties. **[SEE SIDEBAR: THERE'S NO PLACE LIKE HOME.]** Twenty-five years ago, when hospital stays for new mothers were twice as long, there was more time for advice and instruction—and new parents have a lot to learn. Nursing an infant is certainly a natural process, but the know-how to begin successfully does not come naturally. The same is true for diapering or bathing a newborn, or dealing with cradle cap, or establishing daily (and nightly) routines. Even a minimum hospital stay of 48 hours—which the President fought for and won—is not always enough time for parents to adjust to their new responsibilities before they bring their newborns home. Follow-up is helpful, but today, only one in five families receive follow-up visits by nurses. As the months pass, most parents gain confidence and competence, but they can still benefit from advice about how to keep track of a baby's development, how to recognize and deal with illnesses and emergencies, how to baby-proof their homes, choose toys for their children, and play and chat with children at different ages. Some home visitors make videotapes. These tapes help parents learn what to look for as they watch their children grow, and can spur important discussions of children's development in the context of family dynamics.

> "The most important assessment tool that we have is our power of observation....Dr. Sally Provence, the great pioneer of infant development, said: *Don't just do something, stand there.* She meant that observing how a parent and child interact is critical to understanding how to reach out and to help them. Sometimes, we need to leave the parent and the child alone." *Dr. Harriet Meyer*

HIGH QUALITY CHILD CARE AND EDUCATION WORK

Today, 80 percent of mothers go back to work before their babies' first birthdays. Many choose to continue their careers while raising a family; others might prefer to stay home, but have no choice. Today, 55 percent of working women are indispensable providers, contributing half or more of family income.[16] Other women must work or attend training to meet new welfare requirements.

As a result, the great majority of infants and toddlers are in non-maternal care for some stretch of time. This is a potential opportunity. Studies that have followed children's progress over decades, such as the Perry/High Scope Preschool Study, have shown that high quality early care and education programs produce long-term benefits, especially for children from low-income families. Programs with well trained staffs and strong curricula (geared to children's needs at each stage of development) have been shown to promote cognitive, social, and emotional development in young children. Children who attend such programs fare better in elementary school, especially if there receive ongoing support as they move through the grades. They are less likely to be held back and less likely to be referred for special education. Some effects have been shown to persist into adulthood.[17]

The trouble is—high-quality, affordable child care is hard to come by. Researchers who have observed and rated child care programs (including both child care centers and family day care settings) say that many are poor to barely adequate. Programs for infants and toddlers appear to be the worst of all.[18] Moreover, child care schedules often do not mesh with parents' work schedules. Many parents resort to makeshift arrangements; their children may be in several locations or programs during the course of a single day.

Researchers and practitioners have come up with many proposals to address the quality crisis in early care and education. Some take a broad view, arguing that changes must be made not only in programs, but also in the policies, financing strategies, and accreditation practices that underlie the nation's child care services.[19] There efforts provide a broad framework for improving child care so that children can thrive and parents can work and learn with peace of mind.

As President Clinton often says, there isn't a problem that isn't being solved somewhere in this country. We can base tomorrow's early care and education programs on the experience of today's successful programs. For example, much can be learned from the experience of the military, which has instituted excellent child care programs by requiring substantial basic training for caregivers, offering them a career ladder, and providing sufficient wages and benefits to reduce staff turnover. **[SIDEBAR: ON THE LAND, IN THE AIR, ON THE SEA...AND IN THE SANDBOX.]**

A COMPREHENSIVE APPROACH WORKS

Finally, to meet the many needs of our youngest children, we need a comprehensive approach. This is the toughest challenge of all. It is difficult, in part, because Americans tend to resist "systems." When it comes to young children, however, we pay systematically when we provide piecemeal services that let so much promise slip through the cracks.

At satellite downlink sites around the nation, the local residents who gathered to view and discuss the Conference responded to speakers' viewpoints, related research findings to the

All
new material
OK to cite
for Dean

concerns of their own communities, and sent feedback to the White House. Some emphasized the need for better preparation for child care providers. Others called for a special focus on teen parents. Many expressed a deep concern for the fate of abused and neglected children. But one themes was sounded most emphatically: the needs of young children and their families are so diverse and complex that no single institution can fully meet them. There is an urgent need to mobilize whole communities, and to ensure greater coordination of efforts.

Across the nation, a promising movement to mobilize communities is now underway. Community leaders, policy makers, and business groups—and many others—are working together to shape broad-based action strategies aimed at improving results for young children and their families. As a foundation program officer recently observed, "leadership for change is bubbling up from the local level, as it must because one-size-fits-all solutions will not work in diverse communities...."[20] Howard Dean, the pediatrician who won election as Governor of Vermont, reports that community mobilization efforts in his state point to the importance of a clear focus on results; inclusiveness in asking people to help; timely sharing of decisions and plans; good humor; creative use of resources; and a timely celebration of every accomplishment. He adds that community mobilization efforts are most successful when parents of young children are seen as contributing to the community, not just asking for help.[21]

Coordination of efforts requires strenuous effort, and efficient, frequent communication among a wide range of service providers. It challenges professionals who may have only superficial knowledge of each other's roles to work together, negotiating difficult crossings into different organizational cultures. Police officers need to be talking to mental health specialists; welfare caseworkers need to be in frequent contact with the staffs of family support organizations; health care professionals need to link up with child care providers. All of these professionals—and

many more---need to be sharing information in ways that benefit children and families without violating their rights to privacy.

When coordination is strong, fewer children fall through the cracks. Most communities have a long way to go, because services for children and families are spread among so many agencies and organizations, and are so fragmented. The challenges are immense—both in terms of logistics, record keeping, and communication, and will require a great deal of time and effort. It requires every community institution to make active, sustained efforts to link up with other institutions, agencies, or programs that affect children development and learning, or have potential for doing so. This kind of collaboration might include monitoring and documenting children's health, safety, and progress toward developmental milestones, analyzing the factors that promote or hinder healthy development and learning, and make the changes needed to improve results for all children.

Community-based agencies and organizations can take a long stride toward a comprehensive approach by working together to articulate a set of common principles, and aligning their policies and practices with those principles. They might include the following:[22]

- Ensure that every expectant mother receives timely care.
- Give every child access to the health care and support they need to get a good start in life, physically and emotionally.
- Help children build stable, trusting relationships with the adults who care for them.
- Support the adults who influence development and learning, and include both mothers and fathers in all parent involvement efforts.
- Focus on prevention, and respond quickly when problems arise.

- Set high expectations for every child.
- Offer varied, engaging appropriate activities that foster development, including opportunities for conversation and turn-taking that begin in the early weeks of life.
- Make efficient, equitable use of resources, expanding successful efforts and eliminating those that are not effective.
- Collaborate with other institutions.
- Take responsibility for results.

If all of the core institutions discussed in the following chapter were to apply these principles across the board, and take concrete steps to coordinate their approaches, our communities could begin to move toward better results for children. But this effort challenges many people and many institutions to examine their policies and practices, and to begin to make necessary changes. It means reordering priorities. This is not easy, nor can it be quickly accomplished. It will take sustained attention and work.

VI. How Are the Children?

"A civilization flourishes when people plant trees under whose shade they will never sit."[23] This Greek proverb—thousands of years old—poses the challenge that faces us today. Are we willing, as a society, to invest in our children, even if those investments may not pay off fully for a decade or more? Are we willing, moreover, to invest in other people's children?

It has often been said that to gauge a nation's well-being, the first question one should ask is: "How are the children?" Today, we must respond to this question with a mixed report. But if we act now—if we look at the research, if we build on success, if we root out programs and practices that do not work, if we consider the impact on young children before making any new policy or program—we can make a difference. And if we do, imagine the answer today's infants and toddlers will be able to give when they are asked, in coming decades, "How are the children?"

Many things we need can wait. the child cannot.
Now is the time his bones are being formed;
his blood is being made; his mind is being developed.
To him we cannot say tomorrow. his name is today.

Gabriela Mistral

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June 5, 1997

Ms. Jennifer Klein
Special Assistant to the President
for Domestic Policy
Office of the First Lady
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The White House
Washington, DC 20502

Dear Ms. Klein,

Thank you very much for your letter of May 30 and the draft of Report of the White House Conference on Early Childhood Development and Learning. You have done a fine job in capturing the theme of the meeting and conveying the information in a manner that should be broadly understandable.

It was a privilege to be part of this process, and I hope that I will have the chance of participating in the next stages, as we move from a shared perspective on the first years towards renewed action to help improve children's earliest experiences in childcare and other settings.

Again, thanks so much for the opportunity to participate and to see the draft.

Sincerely,

Donald J. Cohen, M.D.
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DJC:tlb

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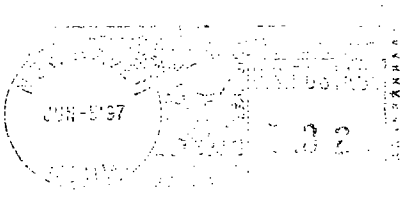

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