Chapter Twelve — Science, Public Policy, And Functional Programs For Early Childhood Development Are All Making Progress — And We Now Need To Accelerate The Pace And Expand The Process To Save Every Child

We are at the cusp of a golden age for research into the development and functioning of our children.

Great research has been done and more is underway. Talented and dedicated researchers in a number of very important care settings and highly competent academic settings are learning more every day about how our brains develop, and about how our interactions with the world around us in those very first years of our life shape who we are and what we do in major ways for the rest of our lives.

As that body of research is building its scope and momentum, we are also seeing some changes in approaches to helping children in those first months and years of life in a number of settings that are moving in the right direction.

A number of innovative and badly needed efforts to help children in those key time frames are being put in place in a number of pilots and programs. Inspired and guided by that research and those insights, targeted

programs to help children in the first months and years of life are being built, tested, and implemented in a number of communities by people who very much want to close the learning gaps that exist in their settings.

The public policy focused and privately funded charitable foundations that support much of the innovation and public policy progress that we see as a nation are also increasingly adding support for early childhood development to their priorities and to their direct financial support programs and strategies.

After a long history as a country of not focusing at all in any systematic or structured ways on children in those golden months and years, we are beginning to see new awareness of those opportunities and we are seeing a range of new efforts that are intended to make a functional difference in the lives of those children.

The tide is swinging toward awareness and toward enlightenment on those early child development opportunities, problems, and issues in a number of settings. That is an extremely positive development that we need to encourage and support.

It makes sense to briefly recap both that learning process and that progress, and to describe some of the programs and approaches that are now helping with these highly important efforts in this final chapter of this book.

The science is increasingly visible.

Go to the Internet and pull up the growing body of information about the science of brain development in those first years of life. That body of science is growing at a lovely rate. There are multiple pieces on the Internet on that topic that are worth reading and watching today. The number of available resources available on the Internet to both teach us and support us relative to those programs is growing at an accelerating pace.

The new TED talk by Dr. Nadine Burke Harris on the lifelong impact on children of damaging events that happen in their first years of life, for example, is worth watching by everyone in policy positions and caregiver settings who cares about young children and who wants to understand the impact of early stress on children that continues to affect children in important ways for their entire lives. More than a million people have watched that Ted Talk by Dr. Harris.

Some of the most significant research has been done by Professor Patricia Kuhl and her team at the University of Washington, into the brain

functioning of very small children. Dr. Kuhl also has a TED talk on those issues that people should see.

Dr. Kuhl and her team have amazingly sensitive, powerful and capable electronic scanning devices that can actually track activity levels in infant brains at a very early age. She has used those devices to do some extremely meaningful and capable research about the early childhood brain development processes that the world should know about.

Dr. Kuhl has a couple of lectures available on the Internet that are worth watching by anyone who is interested in the first years of life for each child.

National Geographic magazine just wrote a very powerful and clear report on brain development in the first years of life that uses examples from Dr. Kuhl's work.

Several major magazines are beginning to look at those issues. *The Economist* has done several articles on early childhood brain stimulation and *Newsweek* magazine just released a special issue dealing exclusively with childhood development into the first years of life that also focuses on the importance of those first months and years for each child.

Another very important set of powerful research into the impact of stress situations on children and on the damage that happens to children facing stressful situations who develop toxic stress syndrome problems has been done by Dr. Ross Thompson and his team at U.C. Davis in California.

Anyone wanting to get a sense of that set of problems for children and a wide range of other related child development issues would be well served by reading the papers written by Dr. Thompson and his team.[1]

Jack Schonkoff and his team at the Harvard Center for the Developing Child has done some similar work that deserves our respect and review.

Dr. Beatrice Beebe at Columbia University and her research team of analytical psychologists have done some technology-assisted research on "The Origins of Twelve Month Attachment" that offers us incredible insight into the impact of very specific parent/child interactions at the very beginning of life.

The Journal of the American Academy of Pediatrics has joined the effort and they are now focused as well on helping children in those first years of life. The Academy has done some very powerful work on Early Childhood Adversity, Toxic Stress, and the Role of the Pediatrician that are

also helping pediatricians across the country understand some of those key issues.[2]

The work of the Academy will encourage many American pediatric caregivers to encourage reading and support targeted early development for their patients. They deserve our recognition and our gratitude for taking those issues on as a public health agenda and initiative.

The Institute of Medicine did a seminal piece on early brain development in children that has shaped thinking in medical science circles on those topics ever since that report was written.[3] Their piece — "From Neurons To Neighborhoods: The Science of Early Childhood Development," laid the groundwork for both the science and the context for those issues with the skill and the clarity that we expect from the Institute of Medicine.

Their well reasoned and well researched work on that extremely important subject has been inexplicably overlooked as an influential policy guidance document for our country for many years, and that report is now beginning to re-emerge as a high value piece of research and policy thinking that we can all use to help build some basic grounding of our thoughts about children in those first years.

The long-term impact of early childhood stress on people has also been studied over a very long period of time by Dr. Vince Feliti and other innovative and dedicated researchers for Kaiser Permanente of San Diego. The amazing and powerful research done in their "Adverse Childhood Experiences (ACE)" study clearly shows the lifelong impact of early year negative experiences at levels that give us great insight into the need to help our children minimize early levels of adverse experiences.[55]

Dr. Feliti's ACE study should be required reading for anyone doing public policy work or health care planning work relative to children. The ACE study has data so powerful that it changes paradigms about public health issues for both adults and children for many readers.

The Telegraph of London recently featured an article on a related set of issues in Great Britain, and they accompanied their article with brain scans showing significant differences in physical brain size for a normal 3-year-old brain and for the brain of a neglected 3-year-old. That visual statement made by those scans was clear enough to be painful to see.[46]

Work done by researchers at UCLA about stimulation for children in the first months of life have recently echoed those findings.

So there is a growing body of science that supports and has inspired the recommendations in this Three Key Years book. It has not been widely shared information but that entire array of learning clearly points in the directions that are outlined in this book.

We are beginning to share that information that is being developed by all of those research programs about early brain development more effectively, but that sharing has been a very recent effort. We are doing a weak job of getting that information to educators and caregivers, and we have done an even weaker job of getting that information to parents, families or communities in this country.

We need to do that work of sharing that vital and life changing information well and we need to do that information sharing now. The quality of the available information about the science and the processes involved in early childhood brain development is improving rapidly and we need to learn better ways of sharing that knowledge with all members of our community — from parents, to caregivers, to educators, and to policy makers and government officials who are relevant to these efforts and issues.

As a very useful example of the kinds of things that we need to do with consistency and volume, The American Academy of Pediatrics and the "Zero To Three National Center For Infants, Toddlers, and Families" jointly

produced a wonderful and very readable publication in September of 2013 called, "Early Brain and Child Development."[1]

That piece should be read by everyone interested in those issues for both care delivery and policy development perspectives. It is clear, persuasive, comprehensive, and that extremely useful document has been read by far too few relevant people.

Multiple Academic Centers Are Studying Those Issues

We are approaching the point where our policy makers should have no excuse for not including that new learning and new wisdom about early child development into basic policy level and functional program level decision-making and leadership priorities.

We are now in a world where multiple highly regarded and highly competent academic centers are very directly and very explicitly studying those issues, and creating a growing body of clear and persuasive science about the extreme importance of early childhood development and early childhood support that we need to use to guide what we actually do with and for the children of our country.

The institutions doing that work are in the front rank of our academic centers. Both Stanford University and Harvard University have done

remarkable work on early brain development issues. The University of Minnesota has done some very good work on those issues as well.

Columbia, Yale, Berkley, The University of Washington, The University of Chicago, and several University of California sites are all doing important research on those issues.

The academic centers that are doing that work are generally not doing a very good job of explaining the significance of their findings to either caregivers or policy makers in relevant settings. That failure to explain those key findings to the most relevant non-academic parties seems to be true in part because those centers tend to see their role as doing research, and they tend to leave dealing with the consequences of their learnings and their insights to other segments of our society.

As a leader at one of the sites doing some of that important research said very clearly — "We do the research. Someone else needs to figure out how to use what we learn in some useful way. That isn't our job. We are academic researchers, not research utilizers."

Some of the academic centers and their leaders — like Dr. James Heckman, Dr. Patricia Kuhl, Dr. Ross Thompson, and Dr. Beatrice Beebe — do make very clear and very accessible public presentations about their

findings, but even those presentations tend to be to smaller audiences, and they are too often not being heard by either our educators, our policy makers, or the current administrators for our various public programs who really need that information to do the very best job of running their programs.

The information about these opportunities and about these needs for our children is not secret, but that information is not effectively shared with the people who most need to know it a very high percentage of the time. We need to do a much better job in that regard.

We need legislative and congressional committees who are asking well-informed questions about these issues. We need the people who run education programs and welfare programs in all communities to know this information. We need mayors and governors to know what they can do to close the learning gaps in their communities that are dooming far too many of their citizens to lives in prison and to futures of economic deprivation and educational failure.

Failure is not too harsh a word. The vast majority of high school dropouts from many of our communities end up in prison. If we do the right things in those first years for each child, most of those dropouts would be able to read and they would not drop out of their schools.

The new levels of research explain the opportunities we have to help our children, and they very clearly guide us to ways that can give us better futures for large percentages of our children.

Anyone who wants to get a good sense of what those various academic research programs are learning can go to each of their websites for more information on those issues.

Stanford Research Showed Differences At 18 Months

The implications of that research to the real world of children today are extremely powerful. They are also immediate. That immediacy surprises people who think of this as a long-term set of issues. In reality, the research teaches us that the direct implications of those processes for each child don't take decades to play themselves out.

The implications and the consequences of those learning processes for each child happen in time frames that can be measured for many children in months.

Research done at Stanford by Anne Fernald, for example, showed that there were significant differences at only 18 months of age between the children who had more reading and talking interactions from adults and the children who had very low adult linked interaction levels.[3]

The gap in learning for those children was already measurable and significant at that early age. Eighteen months is not a long time.

That information about those actual highly immediate time frames clearly should cause policy makers, caregivers, and program administrators to think about how they can help the children for whom they are accountable in some useful ways that will make a difference for those children in those first 18 months.

The helping process that changes the future for each child doesn't involve rocket science and it does not involve complex interactions. Very simple interactions add great value.

Speaking adds value.

Very good research that is described extensively earlier in this book has now shown that simply speaking to children in supportive ways at that point in their lives can make a major difference in the size of early vocabularies and in the reading ability and reading readiness levels for children.

One influential study that our caregivers and educators should all know showed a set of low-income children who had fewer than 200 words spoken to them by adults each day. That compared to more affluent families

in the same study who spoke thousands of words each day to their children — ranging up to 12,000 words per day, per child.[4]

Not surprisingly, the children who heard many more words spoken each day understood many more words by the time they got to kindergarten. That linkage between the words heard by each child and the vocabulary levels that were understood by a child was true for children of all races and all economic statuses. The children from all groups who heard more words knew more words.

Far too often, the learning gaps we see in too many of our schools are attributed in public policy settings and in our news media to race and ethnicity. That is a dangerously wrong and functionally misleading attribution. That linkage belief is entirely inaccurate.

We now know from all of that research that is being done that each child goes through the same biological brain building processes and the same brain building time frames, and that the differences we see between children and the intergroup learning gaps that we see now that are troubling to so many Americans, are based on the level of early brain exercise received in the first months and years of life by each child from each group.

Those learning differences that we see in so many settings today are not actually based on race or ethnicity. They are based on differences in brain exercise levels for individual children.

There are, unfortunately, clear patterns for those interaction levels with children that do reflect back to other economic issues and to some group linked behavior patterns and beliefs about parenting approaches that we can and should address — but those differences do not reflect back to biological issues that are linked to any group at an inherent or functional racial or ethnic level. That thinking was wrong. It is easy to see why people might look at some of the macro-data we see in some of those settings and reach that assumption, but that assumption is wrong.

We know that the key differentiation factor and the functional issue that creates the range of learning ability levels for our children is clearly neither race nor ethnicity. It also isn't any actual functional, direct, or inherent link to the specific economic status for any child.

The difference that exists between the groups of children is actually the very child specific brain exercise levels that happen for each child in those first key months and years when our brains develop.

The Key Differentiation Issues Are Early Year Brain Exercise Levels

The layers of new research that have been done by all of those programs about the brain development processes and the array of new programs that help children from all groups do well in those first months and years free us from believing that the learning difference issues that we see in far too many settings today are either ethnic or racial. The key and foundational differentiation issue between individual children that changes the life paths for each child is the actual brain exercise levels that are directly experienced by each child in those first key months and years of life, because that is the time frame for the biological development process that happens in the brain of each child.[1]

We probably did not need academic research to prove that point about race and ethnicity — but the good news is that we now do have very good research on those issues, and that research does prove those points about the functional biological impact of brain exercise on each child in those first key years to be true.

All children from all groups go through the same biological brain development process and all children go through that same biological process in the same time frames.

Each and every child goes through the same set of physiological brain development processes and each brain either benefits from the interactions that happen in that time frame, or is damaged and under developed by the lack of interactions that happen for each child in that specific and important time frame.

The current body of research into child development and the various pilot-programs that are being implemented in various sites to help children are also improving our understanding of the functional things we can do to exercise the brains of children in those biologically critical time frames. As a result of those programs and that research, we now understand more clearly and explicitly the value that is created for each child by various direct interactions with each child.

We need to have everyone who is relevant to those issues to understand those specific interactions and their impact on children. We need educators and caregivers to understand those issues and we need community leaders from all groups who understand those processes and those biological

realities, and who then use that understanding to help the people in their groups and their communities.

Group leaders who want to close learning gaps for their groups can use this information to reach out to all parents and to all families in their group to teach that basic biological science and to encourage the specific behaviors that transform lives for their children.

We need group leaders and trusted messengers in each group to encourage the direct interactions with each child that will help all children in each group build the brain strength that will support life long learning and close those gaps forever.

Groups who want to end learning gaps now have new tools that can keep those gaps from forming. That information needs to be communicated in multiple ways to the parents and the families of each group.

We also need to figure out various ways of helping all parents with the support for their children that will give their child the best set of resources and the right level of interactions that will create success for each child. As part of that process, we need all parents in all groups to know exactly what can be done to build the highest levels of learning ability for each child.

We need all parents to know the value and the benefit of talking, reading, singing, and playing directly and consistently with each child.

Interactions Build Brains — Talk, Read, Play, Sing Are Powerful Interactions

Again, we are being very well served by recent research and recent program development efforts in building that knowledge base and sets of insights. Very useful research and successful care and education support programs have shown us what kinds of interactions with a child in that key and high opportunity time frame directly provide functional benefit to each child.

This book has discussed those processes and those tools at length in several sections. They bear repeating here in this final chapter because they are so important and so useful and because they anchor our efforts to keep learning gaps from having the kinds of impacts in our future that they have had in our past.

The basic set of interactions that create functional brain exercise benefits for each child include talking to a child, interacting with a child, reading to a child, and singing to a child. Each of those interactions adds clear value to brain development in very young children.

Several important studies have looked at the impact, prevalence, and function of reading as a tool for interacting with our children.

The American Academy of Pediatrics has recently been sharing that information with the community and with their member physicians.

Reading to children has clearly been shown to have a very positive impact on children's vocabularies and thought processes.[5] Studies show that the children who have higher levels of personal reading time tend to have larger vocabularies and higher levels of learning skills when they arrive in school.

Children who have had fewer books read to them in those first key years tend to have lower vocabulary levels and the children who had few book hours and few direct interaction hours with adults tend to have more difficulty learning to read and more challenges in doing well in school.

Those linkages have been studied and the patterns are clear. The implications of those patterns are also increasingly clear.

One of the problems that we face as a country is that not all children are getting sufficient interactions with adults and not all children are having books read to them in those key biological windows of opportunity.

Low-Income Children Tend To Have Fewer Books Read To Them

There are clear patterns that tie the number of interaction hours with adults and the number of reading hours and books read to children to the income levels of the adults in their family.

It is important for us all to understand the science. Income levels, all by themselves, have no direct impact on any brain. There is no direct functional connection between cash levels in any situation or setting, and the actual neuron connection levels that exist for any child.

However, what is true is that low-income children tend to have fewer books read to them. And it is also true as a pattern that low-income children tend to have fewer words spoken to them.

Studies have shown both of those behavior patterns to exist in this country in ways that link indirectly to income levels in the homes.

Economic differences between families have been linked in a number of useful and credible studies to the average amount of reading time given to each child and to the extent of the direct adult interaction times that happen for each child.

One study showed that higher income children in a community were read to more than 1,000 hours on average between birth and kindergarten. A set of lower income children in that same study in that same time frame received fewer than 30 hours of reading time between their birth and kindergarten.[17]

The children who had more reading hours and who had more adult interaction time did better on their kindergarten vocabularies and the children who had more reading and talking hours before kindergarten also had better reading skills in the third grade.

Income Does Not Build Brain Cells

The differences in performance that we see for each child are not a functional and inherent link to the economic status of each child. High-income children who do not get significant brain exercise support in those first key years end up with reading problems. The low-income children who do have more books read to them and who do have more direct interactions with adults in those key years also have higher reading levels and better school performance.

The differences that are most relevant to each individual child are the differences in reading times given to the child and the differences in direct

adult interactions and in the number of words spoken to each child — and not the actual family income levels for any child.

Income does not build brain cells. Or erase them. Brain cells and neuron connections are built and reinforced separately in the brain of each child based on the impact and the level of adult interactions that happen in those key years of biological development for each child.

That fact completely explodes stereotypes and erroneous beliefs about learning ability levels for children that were anchored in race, ethnicity, or even economic status. Our new science has liberated us from that racist thinking and points us to the real issues, the real opportunities, and the real problems that exist at a child specific level for each child.

Half An Hour Of Reading Time Has A Positive Impact

The new science is clearly pointing us in wonderful and timely ways to functional paths we can follow to help each child improve their brain connectivity levels.

One very encouraging aspect that we are learning from the collective set of research is that children don't need the most extreme support levels from adults and parents to do well. Basic levels of reading and interacting with children can have a major positive impact on each child.

The difference between a child having no reading time and no interacting time at all, and a child having at least a moderate amount of reading time and interacting time with adults is large and can change lives.

It can be life damaging for each child who is deprived of those interactions with adults in that key period of time and it can be life enhancing for a child to have those interactions. We need all parents and all communities to understand that risk and those consequences.

Having absolutely no reading time and no interacting time with adults can create very negative outcomes for a child. By contrast, even moderate reading times with a child can create very positive results.[3]

There is a growing sense that half an hour of reading time per day for a child combined with direct interaction with an adult for another half hour or more each day can literally be life changing for children — in comparison to the children who experience only a very low level of interactions each day in those key development months and years.

Parenting approaches as basic as having 20 questions a day asked to each child combined with half an hour of direct parental interaction time for each child — time without texting or similar distractions — with regular

adult interactions happening for each child each day — can clearly change children's lives significantly.

Thirty, Thirty, And Twenty Can Make A Difference

We now know that we can do positive things for children in relative moderation that can make a major difference in the life trajectories of our children.

Thirty minutes of direct time, 30 minutes of reading time, and 20 questions asked and answered can be a powerful support strategy for a child. Those activity levels lend themselves to target setting by parents.

Basic research and applied learning both support parents and families setting up daily interaction goals for each child. A number of functional programs that have been set up to help children are showing us that children can benefit significantly when help in those key areas is given to the child daily.

All of that research is coming up with the same sets of functional conclusions and insights that tell us all how critically important it is for us to help support each of our babies, infants, and very young children in the basic levels of brain development support from birth on.

Even though income levels do not have a direct link to brain development, it is obviously very true that low-income mothers and fathers often have a much more difficult time getting access to both resources and time to do that reading to their children.

If a mother is working two low income jobs to put food on the table, pay the rent, and buy clothing for her child — and if the mother has difficult transportation issues getting to and from either the work place, or the day care resource that is being used for the child, then it can be extremely difficult to find the time or the energy to read and interact every day with the child.

Life can be harder at many easily understandable levels for low-income families.

Higher income families have more resources. Higher income families average a dozen books per child. Many low-income homes do not have a single book.

So the point being made here in explaining the learning gap from the perspective of individual brain development is not that income levels are irrelevant. They are extremely relevant. The point being made here is that

the income levels alone, and income levels by themselves, do not have a direct and functional impact on any brain.

The consequences of having low income create a number of problems and challenges, and those problems can have clear impacts on learning skills. We need to understand the real problem and the actual situation for each child, so we can fix the real problem for each child.

We need to figure out how to help each child from each income level have the support needed in those key months and years.

We now need creative people in every setting — creative and innovative people from every family and every community — to figure out what can be done to help every child.

That should be a challenge for America that we collectively take on. We have not put our collective creativity and our focused and directed energy to the task of figuring that set of functional issues out, and it is time now to do that thinking because we now actually know and understand the real issues and we now clearly need those solutions.

Learning Does Not Begin At Kindergarten

All of that extensive body of research being done in all of those settings also completely, thoroughly, and irrevocably dispels the old beliefs

that learning, education, and intellectual development in children start for each child at kindergarten or at some equivalent age.

Many people still believe that learning begins at kindergarten. Some people believe that learning begins at pre-kindergarten programs that happen for 4-year-olds.

Those people with those very well intentioned, very good hearted, and very traditional beliefs about when learning begins are dangerously wrong. Learning does not start at kindergarten and learning also does not begin with the prekindergarten efforts.

We do want our children to have great kindergarten and great pre-kindergarten support and settings, but the real learning for each child starts well before that time and it starts well before those programs.

All of the new science tells us that learning at very important and life-altering levels begins at birth. The very first months of life literally give us some great opportunities to be teachers for our children.

The technology assisted research done by Dr. Beebe and her team at Columbia and the equally innovative technology supported work done by Dr. Kuhl and her team at the University of Washington, both teach us that learning for each child literally begins at birth.

The first years of life are critically important as teaching and learning years. The children who only have a few hundred words in their vocabulary by age three generally have a very hard time learning to read and it is very difficult to close that gap for those children after that age.

We need to help the children who are behind at that point in their lives in every way we can, and we need to know and remember that it is not hopeless for each of those children after that point. Real progress can be made.

But it is much more difficult to get the best results for each child after those first three years for the biological reasons that are outlined in the research cited above in this book.

Going back to the importance and impact of the time frames that happen for each child far before kindergarten, some very interesting and very recent, unexpected research that was done in Brazil showed a positive link between breastfeeding infants and the intelligence level and economic success levels of the people who were breastfed. That particular study of the lifetime impact of breastfeeding was done in Brazil over a three decade long time period.

The children in that particular study who were breastfed longest had higher IQs at age 30, and also had income levels that were significantly higher than the children who were breastfed less than a month or not at all.[96]

That income difference for the people in the study at age 30 was not affected by the income levels of the families for each child.

Spending individual and personal time as adults interacting very directly, several times a day, with infants who were in nursing situations seemed to help both the overall brain capability levels, and the interpersonal skill sets for the children in that particular Brazilian study.

It is entirely possible that the children who developed higher levels of personal security in those early months of being nursed then had personality traits that led them to be paid more money in their jobs three decades later.

Those different outcomes for those children might have been anticipated or predicted by people who understood the brain exercise value that results from direct and trusted adult interaction with each child in those early time frames, and who also understood the emotional security that results from having direct child/mother physical interactions in those first weeks and months of life.

James P. Grant, former Executive Director of UNICEF had a quote at the 1994 International Conference on Development that fits the findings from that particular research — "Breastfeeding is a natural safety net against the worst effects of poverty. If the child survives the first month of life (the most dangerous period of childhood) then for the next four months or so, exclusive breastfeeding goes a long way toward canceling out the health difference between being born into poverty and being born into affluence," Grant said. "It is almost as if breastfeeding takes the infant out of poverty for those first few months in order to give the child a fairer start in life and compensate for the injustice of the world into which it was born."

That is a powerful set of thoughts and concepts.

All of the new brain development research tells us that we need to help each child immediately if we want to achieve the highest benefit level for each child — and that learning for each child begins at birth — maybe even a little before birth.

All of that research tells us that we need major learning to happen for each child well before kindergarten if we want our children to do really well in kindergarten and in the school years that follow kindergarten.[1,2,3,4]

That growing set of insights is guiding a number of people in creating various ways of helping children.

A Growing Number Of Programs Are Providing Significant Benefit To Children In Those Key Years

Partly due to the growing body of research that is being done into the pure science of brain development for children in these age categories, a growing number of operational programs are doing good and useful things to support the process of development and early learning for actual children in actual settings.

A number of programs in a number of settings are helping children in those key time frames and some of those approaches are having significant success with children that we also need to understand.

The famous Abecedarian study done back in the 1970s in Chapel Hill, NC was a brilliant piece of work that pointed the way to child-focused interactions that changed life trajectories for children. That truly wonderful study is still bearing fruit in its follow-up versions decades later. The positive consequences for the children in that study have clearly continued through their adult years.[13,19,20,73,74]

A number of other early childhood interaction programs have also had significant successes that deserve celebration. In-home counseling — often nurse-based programs — have done very useful in-home coaching for parents in a number of settings. The Nurse-Family Partnership program, for example, has provided real value for a very large number of families.

Early Head Start has had a positive life long impact for some children.

The Center for Youth Wellness program in San Francisco ran by Dr. Nadine Burke Harris works directly with disadvantaged children with toxic stress problems in that city. That program has had significant success with the children they serve and some aspects of that work are described in Dr. Harris's TED talk.

The Thirty Million Words program in Chicago run by Dr. Dana Suskind has worked very directly with disadvantaged children under the age of three in that city, and her program has had remarkable successes with the children she is helping there. She writes well and persuasively about her findings and her work.

Her website is also worth viewing. The videos are very powerful. The pride shown by the mothers in her program whose children have larger

vocabularies and who are good learners makes the point about parental support and parental love for each child obvious and clear.

The Harlem Children's Zone program run by Dr. Geoffrey Canada was set up to begin in the earliest part in each child's life. They have also extended their impact target for children's education and development back to the first months of life for the children who are admitted into that program.

Each of those programs has had great success in their communities and each of those programs deserves to be understood and emulated in other settings.

Cities Can Be Catalysts For Improving Learning Affiliates

Other programs that have also achieved levels of success and deserve attention include The Providence Talks project in Providence, Rhode Island. That program is coaching low-income families about the value of verbal interactions with the very young children and making electronic tools available to help parents with those efforts.

Cities can be excellent catalysts and anchor organizations for those kinds of effects, because all children are local and each city can benefit by

having learning gaps disappear. Leadership at the National League of Municipalities is looking at those issues for those reasons.

In each of those settings, people have focused on very young children in ways that have helped change the neuron strengthening process in those very youngest children. The consequences in each setting have been uniformly positive — as we might expect once we recognize that those early years are, in fact, the most intense biological activity opportunity time frame for each child.

We are beginning to see a number of public policy related programs that are focused on those issues and we see a growing number of people who are working to both create coalitions to support children and to enhance governmental approaches that are aimed at helping our youngest children.

Several Focused Programs Are Now Supporting Early Childhood Issues

A growing number of advocacy programs are now helping people in communities and policy environments better understand those issues and those opportunities for our youngest children. The Zero To Three Institute has been a well-respected national leader for those efforts and has published some materials that set a gold standard for work in those areas.

The national Too Small to Fail Campaign and the very local San Francisco Bay centered Bay Area Council Talk, Read, Sing Campaign have both created positive momentum toward early childhood learning support and community education. Those campaigns are currently working with each other in Oakland, CA, in coordination with the KR Foundation and First 5 California, to help infants and toddlers in that city get a better start in life.

Too Small To Fail is also doing good work to bring people together on those issues at a national level. That specific initiative is working to create both awareness of the key opportunities in multiple settings and is helping to set up and manage programs that can make a difference for groups of children in several focused communities.

Reading Support Programs Add Real Value

There are a number of programs — like "Reading Is Fundamental" — that help children by making books available to children. One study showed that more than half of the low-income homes had no books and that low-income mothers were literally eight times more likely to read to their children if someone makes books available. Programs like "First Book" can help correct that problem.

The Billion eBook free eBook program is just launching and promises to make some of the most popular children's books available as free books for all connectivity approaches with the goal of getting books to families with young children.

Far too many low-income homes have no children's books today. A glaring need that will be increasingly met by some local programs is the fact that up to 80 percent of the pre-school and after school programs for low-income children also have absolutely no books.

We clearly need better programs and better processes to get good and useful real books and accessible and low cost eBooks for children into those situations and settings.

The First 5 Commission Is Teaching Parents About The Early Year Opportunities

The First 5 Commission for Children and Families that was created by the State of California has focused in the last few years on helping children get needed support for brain development in those first key years of life. The Commission has done several targeted television and radio campaigns, and has implemented related educational efforts to educate new parents and

other people in California communities about their opportunities to support their children in those first months and years of life.

The results of those first communication efforts and the initial media campaigns about early interactions with children will be studied again this year to see if the awareness levels have changed for those issues with both policy makers and parents. Initial studies done by the University of Chicago indicated that more than 70 percent of the California mothers who heard and remembered the First 5 ads that taught the value of those interactions consciously and deliberately changed behavior to read and talk more to their children after hearing those messages.

All mothers and fathers love their children and all parents and families want their children to do well. When parents and families learn basic and achievable ways of helping their children to do well, then the natural tendency is to do what can be done to help their child.

The author of this book is the current chair of that Commission.

The First 5 Commission uses tobacco tax money to help children and families from birth through year five for children. First 5 has been running both television and radio ads to inform new parents of those brain

development opportunities for their children, and to make that information part of the public health agenda for all Californians.

Those issues will also be explained clearly in both printed materials and video pieces that will be given to all new mothers in California by the end of 2015.

The website for First 5 currently gives parents support at multiple levels with Internet-based tools to help with their early childhood interaction approaches and activities. The work of that website will be continuously improved and enhanced to be a direct tool for parents and caregivers.

A major part of the messaging efforts for the next campaign will rely on using "trusted messengers" to take that information in multiple ways and through multiple communication channels and approaches to parents and families.

The Superintendent of Schools for the State of California and the head of the California Health and Human Services Agency have both pledged in a joint public setting to work with First 5 to make sure every new mother in California a year from now understands the opportunity to exercise her baby's brain.

County level First 5 programs in a number of California counties are also working directly with caregivers who go into homes to support parents directly in those efforts in the places where the children actually live.

WIC Offers A Great Interaction Opportunity

The First 5 Commission of Los Angeles County currently has a very innovative $20 million pilot program that was set up to work with the California WIC program for Los Angeles City and County. That WIC program was described in Chapter Eight of this book.

WIC is a national program that was set up decades ago by the Federal Government that provides coaching and support about nutrition and health issues to mothers across the country who are on Medicaid. First 5 of Los Angeles is working with WIC in that very large county to bring needed information about early childhood brain nutrition on a direct contact basis to more than 100,000 WIC beneficiaries who are currently served in Los Angeles County.

WIC may turn out to be an almost perfect tool for helping parents initially understand those issues in useful ways. That pilot in Los Angeles may lead and inspire WIC programs in other parts of the country to set up similar approaches.

If the pediatric caregivers offer direct counseling to the parents of those children during their normal pediatric visits, and if that counseling is reinforced by WIC counselors who can also channel the low-income WIC supported mothers to various available support resources and to supplies of children's books, there is a high potential for making a positive change in the lives of many children.

Preliminary data about the impact of that coaching by the WIC team in that setting showed a 37 percent reduction in the learning gap for dual language children.

A Growing Number Of Important and Influential Foundations Are Also Now Supporting And Guiding This Work

Some of the most influential, most prestigious, and very well funded private foundations in this country are supporting this work at various levels. That is a very good thing and that role by those key foundations needs to be recognized and supported. We need very smart and highly influential people with a well-grounded public policy perspective to help tee up and lead various levels of early childhood education work across a wide range of communities.

Public policy foundations and charitable foundations that do that kind of work for multiple other issues are increasingly coming to take on the role of helping to figure out what to do for this set of children's issues in various settings. Some of our most influential and most effective foundations are now doing meaningful work in those areas.

Those foundations can help create overall community strategies and they can also help fund pilot programs, and fund and manage operational programs that are doing that work in various settings.

Some of the most important foundations in America are now providing both financial resources and intellectual guidance for both research into early childhood development, and to support operational pilots and programs that focus on those issues.

Those important foundations that are now helping with those efforts increasingly recognize that we can't eliminate the major performance gaps that exist today between groups of people in this country by simply focusing on retrospective remediation of the current problems, and by addressing the functional challenges that are faced now by the older children who already have major difficulties with their reading abilities and their learning levels.

We Need To Prevent The Gaps Rather Than Just Closing Them

There is a growing awareness in the foundation world of the indisputable biological reality that we need to eliminate those gaps between groups of children by keeping those gaps from occurring in the first place.

Foundations and their brain trusts can give us a great resource to support that thinking and to help guide that body of work so that we can make better first years experiences a reality for all of our children.

The Buffet Early Childhood Fund, The David and Lucille Packard Foundation, The Annie E. Casey Foundation, The Gates Foundation, The W.K. Kellogg Foundation, The California Foundation, and a number of other local foundations are all currently focusing energy and resources on those extremely important issues. The Minneapolis Foundation and The George Family Foundation, for example, are both working with the Mayor of Minneapolis and her team to help figure out ways of reducing the extremely high learning gaps that exist for the minority populations in that city.

Sesame Street Leadership is also now helping to create those early childhood support agendas, acknowledging that the primary answer for child development in those first years is parents, not programs.

Children who do get the right support in those first key years of life can benefit later from Sesame Street and from similar education programs and resources.

A growing number of Washington D.C. policy organizations are beginning to look at those issues as well. The New American Foundation and Families USA are both looking at those sets of issues. New America is making this issue a policy priority.

The American Enterprise Institute is beginning to look at those issues and is sharing some information about those problems and opportunities.

The National Governor's Association and The League of Municipalities are also both considering those issues as areas of focus, and those highly influential organizations will have great leverage points to make a difference in a wide range of settings as they get further involved in those processes.

There Is Growing Awareness And Support

So there is growing awareness in this country at multiple levels about those sets of issues and opportunities. A growing number of organizations and communities are beginning to recognize the fact that we need to do key work to help all of our children and we need to do it now.

Lives are being derailed and lives are being damaged and impaired every single day when that early development and brain strengthening work isn't done for a child. Lives are being enhanced, lives are being changed and lives are being directly improved in very significant and positive ways that change the trajectories of entire lives when that work actually is done for a given child.

The choice is clear. Each life we save is a life we save.

It's time to save the lives of all children in this country, beginning at birth. We need to make a collective and shared commitment to save our children, and we need to do the right things in each setting to make that commitment a reality and a success.

We need our school systems, our legislators, our Medicaid programs, our public safety programs, our pediatricians, our parent/child related caregivers, and our leaders for each of our ethnic, racial, cultural, religious, and community groups to all support our children in those key years.

We need parents and families who understand both the extremely important opportunities and the dire risks that are faced by each child in those key years.

We need parents and families to also know how to save each child. We also each need to take this knowledge, now that we have it, and figure out ways that we can each help change the future for at least one child.

Because the process happens one child at a time, we can each have a very real, meaningful, and positive impact by teaching this information to the parents of at least one child. Personal accountability requires each of us to share that information now that we have it.

We are failing far too many children today. It's time for that failure to end.

We know how to end it.

Three key years.

Let's use them well for each child.

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