Paper presented to the Institute of Medicine Roundtable on Racial and Ethnic Health Disparities Public Workshop: "Investing in Children's Health: A Community Approach to Addressing Health Disparities

Moorehouse School of Medicine, Atlanta, Georgia, January 24, 2008

Clinical Health Care Practice and Community Building: Addressing Racial Disparities in Healthy Child Development

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Introduction and Synopsis

Pronounced disparities exist by race and ethnicity in child and adolescent health, across a range of health conditions and access to health services. Addressing these child health disparities is particularly important, as childhood and adolescence establish health trajectories that extend throughout a person's lifespan.[1]

These disparities in child health conditions by race and ethnicity also co-occur with other disparities in child outcomes – from educational achievement to child welfare and justice system involvement. This high degree of co-occurrence warrants attention to identifying some common etiology for these disparities.[2]

Clearly, good child health involves:

- Timely and appropriate (and therefore culturally sensitive) medical care for illness and injury, and screening to detect and treat congenital abnormalities and chronic as well as acute health conditions
- Good hygiene, nutrition, and exercise
- Stable and nurturing families who provide constant and consistent supervision
- Safe environments that do not contain toxic elements[3]
- Social institutions that reinforce healthy lifestyles and behaviors and provide opportunities for growth and development
- Social and psychological supports that foster resiliency and positive identity.[4]

Healthy child development that results in educational and social success similarly involves the same set of points, particularly when social institutions are defined to include schools and their educational components. These points provide the basis for that common etiology to achieving both good child health and healthy child development.

In the United States, the first two points on this list generally are considered to be subject to influence by the health care system through the primary pediatric practitioner. The last four points generally are considered to be primarily influenced by the child's family and

community and their network of supports, with some role from public health on environmental health conditions, a role for schools for educational development, and a role for law enforcement for public safety.[5]

This paper argues that such distinctions and segmentations of responsibility can miss opportunities for addressing child health disparities by race and ethnicity. In fact, child health practitioners[6] and their institutions can play a contributing role in supporting child health and healthy child development across all these points. As an example, Figure One shows that when the pediatric practitioner's role is broadly defined and practiced, the set of healthy child development outcomes that should be at least partially addressed through well-child care for young children involves identifying potential concerns on all these points and at least beginning to address them.[7]

Figure One
Outcomes of Well-Child Care During the First Five Years of Life

Domain of Well-Child Care	Outcome to School Entry
Child Physical Health and Development	• All vision problems detected and corrected optimally • All hearing problems detected and managed • Management plans in place for all chronic health problems • Immunization complete for age • All congenital anomalies/birth defects detected • All lead poisoning detected • *All children free from exposure to tobacco smoke* • *Good nutritional habits and no obesity; attained appropriate growth and good health* • *All dental caries treated* • *Live and travel in physically safe environments*
Child Emotional, Social, and Cognitive Development	• All developmental delays recognized and treated (emotional, social, cognitive, communication) • *Child has good self-esteem* • *Child recognizes relationship between letters and sounds* • *Child has adaptive skills and positive social behaviors with peers and adults*
Family Capacity and Functioning	• Parents knowledgeable about child's physical health status and needs • Warning signs of child abuse and neglect detected • Parents feel valued and supported as their child's primary caregiver and function in partnership with the child health care provider • Maternal depression, family violence, and family substance abuse detected and referral initiated • Parents understand and are able to fully use well-child care services • *Parents read regularly to the child* • *Parents knowledgeable and skilled to anticipate and meet a child's developmental needs* • *Parents have access to consistent sources of emotional support* • *Parents linked to all appropriate community services.*

Note: Regular font bullets are those outcomes for which child health care providers should be held accountable for achieving. *Italicized bullets* are those outcomes to which child health care providers should contribute by educating parents, identifying potential strengths and problems and making appropriate referrals, but for which they are not independently responsible.

Defining child health and the responsibilities of the health care community broadly is particularly important in distressed or vulnerable neighborhoods, where child health outcomes are poorest and where children of color disproportionately live.[8] While there is a limited clinical research base regarding the effectiveness of more holistic pediatric approaches to healthy child development, there is also little within current research to indicate an inability to develop such pediatric practice.[9] Further, there are promising programs with evidence of success in improving health outcomes and reducing disparities that deserve attention and support, particularly as they connect children and families to other community-building activities. Two such programs – Help Me Grow in Connecticut and the Eastside Partnership for Families in Richmond, Virginia – are described as examples of exemplary efforts to combine clinical practices with community-building ones. Linking clinical practice with community building efforts offers promise in both improving child health and children's healthy development, but requires explicit attention to the role that child health practitioners should play in supporting other organizations in leading community building efforts. Expanding the knowledge and practice base on effective strategies that combine clinical and community building strategies also requires evaluation approaches that extend beyond traditional clinical trials as ways to attribute causality and measure impact.

Disparities in Healthy Child Development by Race and Ethnicity

There is a large, although fragmented, array of data that shows profound disparities in child health outcomes, as well as access to health services, by race and ethnicity. These disparities start even before birth and extend through adolescence and into adulthood. That disparities differ among different racial and ethnic groups depending upon the child outcome is also an important point in understanding the origins and determinants of disparity. Table One provides prevalence data on several child and adolescent health measures, broken out for the three largest racial and ethnic groupings in America – White non-Hispanic, African American, and Hispanic (see the Appendix for a more extensive list of child health and other outcomes by these population groups). Disparities also exist for Native American children and, on some measures, for Asian and Pacific Islander children, but these are not shown in this table. Table One further provides prevalence data on measures of educational and social development and on family factors and characteristics.

As Table One indicates, there are consistent and marked disparities in child health outcomes and access to child health services, with African American children faring far worse than White, non-Hispanic children on almost every measure. With the exception of birth outcomes and child and adolescent mortality, Hispanic children also fare much worse on most measures than White, non-Hispanic children.[10] As has been frequently noted, the African American infant mortality rate is equivalent to the rates in many third world countries. Most other child health indicators among African American and Hispanic children show similar degrees of disparity when compared with White, non-Hispanic children.

Table One

Selected Disparities

	White NH	Black NH	Hispanic
Health Outcomes			
Low Birth Weight	7.2%	13.4%	6.8%
Elevated Blood Lead Levels (0-5)	2.6%	4.3%	3.1%
6-11 Overweight	11.8%	19.2%	23.7%
Health Service Access			
Lack of Regular Source of Care	3.3%	5.8%	24.1%
Incomplete Immunizations (19-35 mo)	16.7%	25.5%	21.3%
Education Outcomes			
Below Basic 4th Grade Reading	22%	54%	50%
Below Basic 8th Grade Math	18%	53%	45%
Non-completion of High School	21.4%	48.8%	46.8%
Other Outcomes			
Foster Care / 1,000	4.9	15.8	6.5
(20-24 year-olds) Male Prison / 1,000	9.5	63.4	24.9
Conditions			
Children in Poverty	11%	36%	29%
Children in Single-Parent Families	23%	65%	36%
Pop. In High Vulnerability Tracts	1.7%	20.3%	25.3%

See appendix for more extensive list and references.

As Table One also shows, these child health disparities are similar in size to those found for educational and social outcomes. In other words, disparities related to healthy child development and school success are equally profound to those related to specific health conditions. Finally, the family and community factors for African American and Hispanic children are very different from those for White, non-Hispanic children. In respect to wealth (and therefore the ability to invest in one's future) and geographic location, the differences are even more pronounced across race and ethnicity than for most of the health and healthy development outcomes experienced by children. In 2000, for instance, median household net worth for White non-Hispanic households was $79,400, compared with $7,500 for African American and $9,750 for Hispanic households – a tenfold difference, much greater than when annual income is compared.[11]

Overall, this collection of data points to the importance of looking for underlying causal underpinnings for disparities that, for child health outcomes, extend beyond health insurance coverage and clinical care. The size of the disparities on health and healthy development measures cannot be attributed to health coverage alone. This involves exploring family, social institution, and community factors. The specific issue of geography, or place, is discussed in a next section of this paper.

Place as an Important Element in Child Health Disparities

The bank robber Willie Sutton is quoted as saying that he robbed banks because that was where the money was. Similarly, improving child health and reducing health disparities by race and ethnicity involve strategies that are delivered at the community level, where families can go and get to for their children's health needs. When children are very young, family time spent together and associations are much more likely to be geographically bound to a physical neighborhood. Research findings on neighborhood effects on child and family outcomes independent of individual child and family characteristics are mixed.[12] However, it is clear that place matters in developing strategies to reduce health disparities, if only because children of color, and particularly children of color with other economic and social factors that can contribute to poor health outcomes, disproportionately reside in certain neighborhoods and communities.

This is very clear from an analysis of 2000 census data of all 65,000 census tracts in the United States on ten factors associated with their "child raising vulnerability."[13] The ten factors available from the census data were selected to provide indicators related to education, social structure, employment, and wealth. Each tract was categorized according to the number of factors upon which its data showed a high degree of vulnerability (one standard deviation or more from the mean). Table Two provides information that shows differences across census tracts with the presence of different numbers of vulnerability factors.

Table Two

The Importance/Prevalence of Place

Differences Across Census Tracts by Child Raising Vulnerabilities
(school, education, economic, wealth indicators)

	No Vulnerability Factors	**Six or More Vulnerability Factors**
% Single Parents	20%	53%
% Poor Families with Children	7%	41%
% 25+ No HS Completion	13%	48%
% 25+ BA or Higher	27%	7%
% HoH on Public Assistance	5%	25%
% HoH with Wage Income	81%	69%
% HoH with Savings, Dividend Income	42%	11%
% Owner-Occupied Housing	71%	29%
% 18+ Limited English	2%	18%
% 16-19 not School/Work	3%	15%

As Table Two shows, with the exception of wage employment, the difference between census tracts with no risk factors and those with six or more risk factors are profound, with rates from two-and-one-quarter to nine times greater in the high vulnerability tracts. The experience of children growing up in these high vulnerability tracts is almost certainly very different than the experience of children growing up in those with little or

no vulnerability. Except for the South, these high vulnerability tracts are concentrated in metropolitan, largely inner-city, neighborhoods, with the highest concentrations of these in the Northeast.

While pointing to the importance of place-based approaches to improving child health and healthy child development, particularly important for this report is the fact that these high vulnerability census tracts also are very disproportionately populated by persons of color. Table Three shows the racial and ethnic composition for census tracts with different numbers of vulnerability factors.

Table Three
The Racial Composition of Census Tracts by Child-Raising Vulnerability Status

	All Census Tracts	No Vulnerability Factors	1-2 Vulnerability Factors	3-5 Vulnerability Factors	6-10 Vulnerability Factors
RACIAL COMPOSITION					
% White Non-Hispanic	69.8	83.2	67.0	37.4	17.6
% Black	12.5	6.2	13.4	28.2	38.0
% Asian	4.1	3.7	5.1	4.4	3.4
% Hispanic	12.5	6.1	13.3	28.1	39.4
% Am. Indian/Native Alaskan	0.8	0.5	0.9	1.4	1.2
% Native Hawaiian & Other PI	0.2	0.2	0.2	0.2	0.2
% Other	0.2	0.1	0.2	0.2	0.2
Total	100	100	100	100	100
PROPORTION OF RACE IN TRACT					
% White Non-Hispanic	100	69.6	22.7	6.0	1.7
% Black	100	29.1	25.2	25.4	20.3
% Asian	100	52.6	29.7	12.3	5.5
% Hispanic	100	28.6	25.0	25.0	25.3
% Am. Indian/Native Alaskan	100	40.3	27.6	21.0	11.1
% Native Hawaiian & Other PI	100	50.6	29.9	13.4	6.1
% Other	100	47.6	26.6	15.4	10.4

Source: *Geolytics Census 2000 Data from Urban Institute, Washington, D.C.*

As Table Three indicates, while 83.2% of the persons residing in tracts with no vulnerability factors are White, non-Hispanic, only 17.0% of the persons residing in tracts with six or more vulnerability factors are White, non-Hispanic. As a percentage of their overall population in the United States, only 1.7% of White, non-Hispanics in the country live in the highest vulnerability census tracts (six or more vulnerability factors), while 20.3% of Blacks and 25.3% of Hispanics live in those tracts. Only 7.7% of White, non-Hispanics live in census tracts with three or more vulnerability factors, while 46.4% of Blacks and 50.3% of Hispanics live in those neighborhoods.

In short, successful efforts to reduce child health and other disparities by race and ethnicity will have to make substantial gains within these high vulnerability census tracts,

simply due to the very substantial percentage of the child population of color that resides in those tracts.

In addition, however, available evidence also shows that the health and healthy development child outcomes are the poorest for both African American and Hispanic children who live within these census tracts.[14] Developing successful efforts in these tracts and neighborhoods likely requires considerable attention to addressing environmental and neighborhood,[15] as well as individual and family, conditions that exist there, which also have been referred to as "toxic stress" that harms brain development in children.[16] Neighborhood conditions include physical indicators such as levels of safety and exposure to environmental toxins, but also role models and social ties and connections that look out for children. Individual and family conditions include economic and educational conditions, but also levels of stress and child nurturing patterns. Conceptually, these factors interact as well, as neighborhood conditions contribute to or mitigate against family stress and provide or fail to provide nurturing activities and modeling for parents.

Toward a Theory of Change in Addressing Child Health Disparities

The size and consistency of the disparities shown in Table One suggest that there are at least some common underlying elements that contribute to and will need to be addressed in order to reduce or eliminate child health and healthy development disparities. The information in Tables Two and Three suggests that neighborhood-based, as well as individual-based, strategies may need to be developed to address these disparities, at least in high child vulnerability neighborhoods.

Increasingly, initiatives designed to produce community-level changes in child and family outcomes have adopted a "theory of change" approach to evaluation.[17] The purpose of applying a theory of change is to identify assumptions that underlie the belief that the strategies developed will lead to producing community-level changes in the desired child and family outcomes. An evaluation design can then be developed to test the different assumptions upon which the strategies are based.

As stated in the introduction, good child health and healthy child development involves:

- Timely and appropriate (and therefore culturally sensitive) medical care for illness and injury and screening to detect and treat congenital abnormalities and chronic as well as acute health conditions
- Good hygiene, nutrition, and exercise
- Stable and nurturing families who provide constant and consistent supervision
- Safe environments that do not contain toxic elements
- Social institutions that reinforce healthy lifestyles and behaviors and provide opportunities for growth and development
- Social and psychological supports that foster resiliency and positive identity.

These points can form the basis for a theory of change, as everything on this list is malleable to some degree.[18] Clearly, most children receive most of what they need most

of the time to produce good, if not optimal, health and healthy development outcomes. The issue is to identify where children are not receiving what they need and then develop strategies to ensure they receive it. Figure Two provides the assumptions for such a theory of change to address these disparities.

Figure Two
Theory of Change Set of Testable Assumptions for Strengthening Pediatric Practices to Reduce Disparities in Healthy Child Development

1. Pronounced, but malleable, disparities in child health exist by race/ethnicity, which correspond with similar pronounced disparities in educational achievement, justice system involvement, and income and wealth.
2. These disparities are not separate and distinct, but are interconnected, requiring strategies for addressing them that need to recognize and address some of their common underlying causes.
3. Because it is almost universally used by young children, child health care practice offers an important entry point that can be used to identify and begin to address these underlying causes.
4. This requires a more holistic and culturally congruent approach to primary, preventive, and developmental pediatric care than is currently in practice from a clinical perspective, coupled with effective referrals to other services and supports at the community level that contribute to community-building.
5. Developing such strategies is particularly important in distressed neighborhoods, where children of color disproportionately reside and where environmental factors most threaten child health and development, with actions taken also increasing the social capital and reducing the environmental risk within those neighborhoods.
6. The result of developing such strategies will be to significantly improve both specific measures of child health and to improve broader measures of healthy child development.

Clearly, there is a research, as well as a theoretical (and common sense) base, for each of the assumptions in this theory of change. There is substantial research on assumptions one and two that show there are a set of interrelated underlying factors beyond the child's own constitution and genetic make-up that contribute to good child health and healthy development. These extend from clinical research on the impact of medical interventions, to anthropological and sociological research on the role of the family in child development, to resiliency and risk and protective factor research on the importance of social institutions and social and psychological supports to healthy development.[19] Further, all these factors are malleable to some extent.

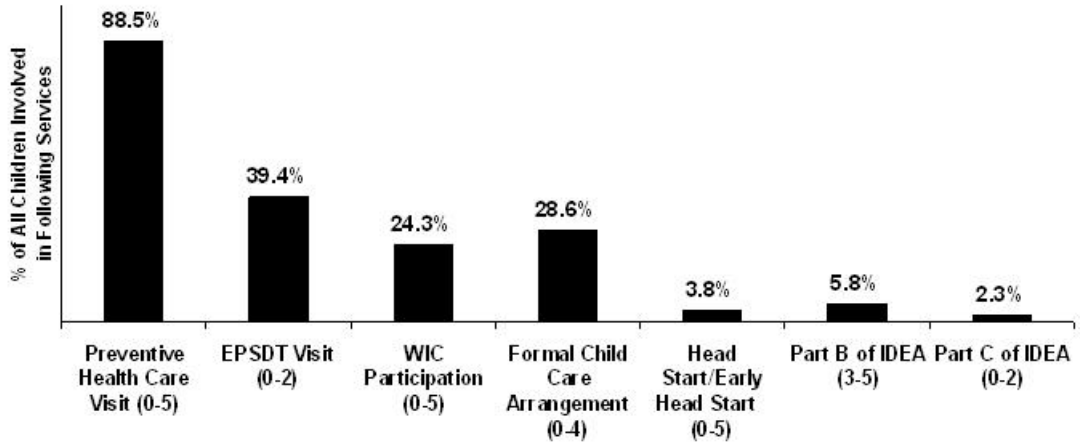
There also is substantial evidence that, while child health insurance coverage and the provision of clinical pediatric services play a role in improving child health and reducing health disparities, social and environmental factors weigh much more heavily in producing current disparities.[20] Further, although often not considered as an objective or goal (e.g. the dependent variable in a regression equation), there is at least case study

evidence that child health insurance coverage and clinical pediatric services can play a role in improving healthy child development and educational and social outcomes as well as specific health outcomes.[21]

On the third assumption, which is the lynchpin assumption to interventions that involve clinical practice changes, survey research shows that the pediatric practitioner is often the only professional who sees children and their families and is also in a position to assess health and development. As Figure Three shows, nearly 90% of all young children are seen by a primary care practitioner annually, but fewer than one-third are in any form of formal child care or preschool arrangement. Additionally, there is some research that families do listen to what pediatric practitioners recommend and that anticipatory guidance can affect family practices both on health-related and healthy development related activities. Survey research also provides evidence that current pediatric practice does not take full advantage of these opportunities and that most well-child care falls short of providing recommended screenings, let alone follow-up services, for children, based upon national child health care guidelines.[22]

Figure Three

Children's Healthy Development: Who Sees Young Children?



Sources:
Preventive Health Visit: National Survey of Children's Health
EPSDT 416 Forms, Centers for Medicare and Medicaid Services (CMS)
WIC - FDA, Food and Nutrition Services, Office of Analysis, Nutrition, and Evaluation
Formal Child Care: Census Bureau Special Report: Who's Minding the Kids?
Head Start: National Head Start Association, Program Fact Sheets
Part B: U.S. Department of Education, Office of Special Education Programs, Data Analysis System
Part C: IDEAdata.org Data Tables for Office of Special Education Programs State Reported Data

As the next section of this report shows, there are "exemplary" programs that provide evidence of the potential for such practice changes. Ultimately, as specific initiatives or interventions are developed, the fourth assumption about the value of linking child health care services to other community services needs to be further unpacked, based upon the specific features of that intervention. Ideally an evaluation design would be developed to help to answer three questions: (1) were the planned or desired changes actually feasible

and implemented; (2) did those that were implemented produce both short- and longer-term outcomes for children; and (3) are the changes replicable, scalable, and subject to diffusion to other child health care practice?[23]

Issues related to disparities that stem from language and cultural incongruities in clinical practice and community resources[24] and to racism (both institutional and individual[25]) must be addressed within the relationships and interactions of the child health care practice and the greater community.

Reducing child health, education, and other disparities by race and ethnicity will require increased efforts to develop such strategies and changed child health practices, coupled with evaluation designs that do not rely upon clinical trials as the sole methodology for attributing causality.

On the fifth assumption relating to the geographic concentration of risk factors, there is strong evidence of the spatial concentration of children of color who experience health disparities (see previous section). There is further evidence of the disproportionate presence of environmental dangers (lead paint, ambient air quality, unsafe housing, and presence of violence) within those neighborhoods. The ability to make significant changes in these environments through policy or initiative, however, remains much more open to question.[26] Some research indicates that parents who are successful in raising their children in these neighborhoods do so by quarantining them from the social and economic connections found within the neighborhood itself and finding support systems elsewhere, rather than building from within.[27] While this may be rational and produce positive results at an individual level, it does not contribute to resolving the underlying community-based problems that must be addressed to produce overall community-wide improvements in child health and development.[28] While these are much larger issues than those related to linking clinical practice strategies to community-building ones, the context for making change within such neighborhoods needs to be recognized as potentially qualitatively as well as quantitatively different than within more advantaged and affluent ones.[29]

Also related to the fifth assumption is strong evidence that social environment matters in healthy child development. This is reflected in parallel research on social capital,[30] resiliency,[31] risk and protective factors,[32] and assets[33] – all of which show that healthy development has social as well as an individual determinants. Unless some effective strategies are developed to affect the social environment as well as focus upon individual-level interventions, it is unlikely that disparities in child health and healthy child development outcomes can be appreciably reduced.

On the sixth assumption, that significant improvements in child health and development respond to similar clinical and community-level strategies, the key word is "significantly." Like most theories of change, this theory and its set of assumptions, as generally stated, clearly has some measure of truth. Given sufficient resources, one would expect some impact on short or even long-term child health and healthy development outcomes from implementing initiatives based upon this theory. The more

important issues are efficiency and extent – how much impact can be produced with what amount of resources, compared with alternative approaches to addressing those disparities.

It is possible to justify even quite substantial investments, if they can be shown to reduce disparities through improving outcomes, as the costs of current disparities in both child health and healthy child development outcomes are enormous. Preventable costs related to asthma, obesity, lead poisoning, school dropout, homelessness and lack of employability, and justice system involvement (including costs to society in victimization and incarceration expenses) collectively amount to hundreds of billions, if not trillions of dollars, annually.[34] Developing strategies to reduce health disparities and disparities in healthy child development are warranted from a fiscal as well as a moral perspective. In terms of determining the impacts of an initiative relative to the investment of resources made (cost-benefit ratios), the value of looking beyond specific medical health impacts is clear. A child whose asthma has been effectively managed misses fewer days of school and maintains school progress, and is likely to have reduced medical costs related to morbidity, fewer compensatory education expenses related to school performance, and improved long-term educational and social outcomes that affect future earnings, tax contributions, and social welfare costs. Taken together, societal savings across these areas may more than justify substantially increased investments in primary and preventive care.[35]

The theory of change presented in this section for the role of child health care practice in contributing to addressing disparities in child health and healthy development helps to establish a framework for designing strategies that link health care to community development, assess their effectiveness and their potential, and learn from them to further improve disparity-reducing policies and practices.

This work does not need to start from scratch, but can build upon experiences and practices in the field. The next section highlights two such approaches.

The Role of Child Health Practice in Reducing Disparities in Child Health and Healthy Development – Two Strategic Approaches

Although research is limited on strategies that incorporate clinical and community-building practices, there is promising evidence that exists around specific programmatic approaches that, explicitly or implicitly, adopt a theory of change similar to that presented in the last section.[36] Two of these – *Help Me Grow* in Connecticut and the *East End Partnership with Families* in Richmond, Virginia – are described here. One takes pediatric well-child practice as its starting point, while the other takes clinical practice within a community health center as its starting point.

Help Me Grow is a statewide program in Connecticut to build into young child (birth to five) well child-care what pediatrician and program developer Paul Dworkin calls "developmental surveillance." Explicitly based upon the third and fourth assumptions in the Theory of Change, *Help Me Grow* itself has three core components:

1. Training and support of child health practitioners in broadening their pediatric office visits to incorporate developmental surveillance, starting with asking the question, "Do you have any concerns about how your child is learning, behaving, or developing?" and incorporating appropriate developmental screening tools within the visit. Asked in the practitioner's office, this simple inquiry often elicits a flood of questions from parents about their young child's development and reveals family factors and stressors as well. *Help Me Grow* has been successful at getting practitioners to ask this question and incorporate developmental surveillance into their routine practices. This has been achieved through short but structured office-based training sessions for practitioners, coupled with a variety of tools for practitioners to use in detecting developmental issues. With this publicly-supported training, *Help Me Grow* also provides practitioners with resources for use in the office, including posters and brochures describing the program and prescription pads for physicians to make referrals to *Help Me Grow* care coordinators, when warranted. Critically important, *Help Me Grow* provides an avenue for practitioners to do something when a potential need is identified.

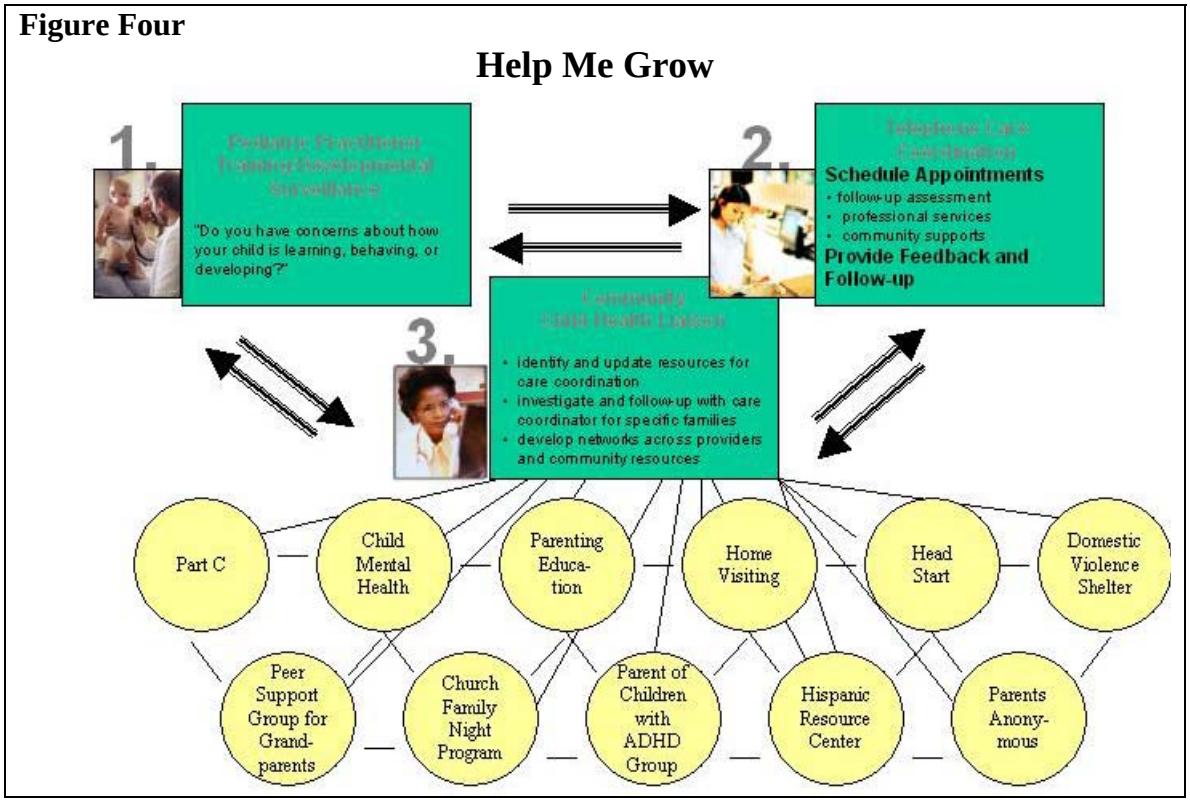
2. *Help Me Grow* Care Coordinators. The second core component of *Help Me Grow* is the care coordinator, who follows up on practitioner referrals or direct family contacts made upon the practitioner's recommendation. Care coordinators talk by phone with parents to further determine child and parental concerns and needs, and then draw upon a continuously developing database of community providers to match parents with services they may need. The federal Individuals with Disabilities Education Act (IDEA) and its early intervention (Part C) program represents one important referral and connection, but many children who may not be eligible for Part C because of age or identified concerns still benefit from developmental health services. On average, care coordinators make seven to eight calls following contact with the practitioner and the family in finding a service match and scheduling a visit or meeting (the amount of time in locating appropriate services is one reason that pediatric practitioners themselves do not generally do this follow-up work, outside their established connections with specialists within the medical community). While referrals may be made for additional professional services, many concerns relate to parenting education and support services, including peer support and help. *Help Me Grow* has found that, in most instances, there are services that parents can access that can provide real help, but finding them for an individual family takes initiative and time. The care coordinators also play the important role of providing information back to the pediatric practitioner on the services that have been matched (so practitioners can follow-up on the next pediatric visit), and conducting follow-up calls with families and programs to ensure they have actually made connections. The care coordinator's work extends beyond simply finding a referral source to scheduling a visit and following up on that visit.

3. Child Development Community Liaisons. The third core component of *Help Me Grow* is the child development community liaison, who works closely with the

care coordinators in identifying and matching community services. Liaisons work to continuously build the comprehensive community resources database that care coordinators use in their work; they also serve as consultants to the care coordinators on specific cases, in researching for resources that can address specific needs. In addition, the liaisons are on-the-ground networkers across the service-providing community, hosting regular breakfasts or other meetings for community providers to receive guidance and information on selected developmental issues, broaden the overall referral system, and strengthen the networking and relationships across the service community.

Schematically, the *Help Me Grow* model is shown in Figure Four. *Help Me Grow* also has an evaluation and continuous learning component, one that is considered fundamental to its success.

Figure Four



Initial findings from *Help Me Grow* have been the subject of a special supplement of the *Journal of Developmental & Behavioral Pediatrics,* and these results tend to confirm the validity of assumptions three and four.[37] *Help Me Grow* has increased both the identification of young children with developmental problems and their connections to community resources and supports. It has increased child health care providers' understanding and use of other professional services such as Part C and diagnoses and follow-up clinical services for specific mental and developmental health conditions, with at least one follow-up visit achieved for over ninety percent of all children, according to the most recent report.[38] In addition, it has created a bridge for addressing a variety of more general parental issues and concerns that can affect children's healthy development.

Approximately one-quarter of the referrals to care coordinators relate to issues of parenting stress, isolation, or lack of parenting knowledge, or to issues of child discipline and behavior. Approximately the same percentage of follow-up services young children and their families secure through *Help Me Grow* involve parenting education, parent support groups, and other community programs for parents and their children. Many of the connections *Help Me Grow* makes are with programs that do not charge fees and involve nonprofessional resources that represent social institutional contacts, reinforcing healthy lifestyles and fostering both child and parental resiliency. *Help Me Grow* also makes cultural and language connections when locating community resources with which families and their young children will feel comfortable and validated. It is publicly funded through the state of Connecticut.

The *East End Partnership with Families* in Richmond, Virginia, is a second approach to improving children's healthy development, with the Vernon J. Harris Community Center serving as an anchor partner. The Vernon J. Harris Community Center serves as a safety net provider in offering quality medical services to children and families who otherwise could not afford such care. At the same time, the Center takes a "whole child and whole family" approach to supporting health, recognizing that ensuring good health involves meeting a range of family needs – including such varied needs as securing housing or rent assistance, supporting relatives providing child care, and providing summer day camp opportunities for youth.

The *East End Partnership* includes ten community partner organizations that have come to see their role as creating resources and opportunities that children and their families need for their health and development. The Parent Resource Network is a critical partner, a parent-led organization committed to ensuring that family voices in design and family involvement in implementation is a core aspect of program development.

Central to the *East End Partnership with Families* is a comprehensive assessment and client tracking system that involves common intake and referral at the Vernon J. Harris Community Center, coupled with care coordination for the most vulnerable families that helps them to navigate the array of community agencies with whom they deal and are designed to provide them with needed services.

The comprehensive assessment not only identifies needs but also helps ensure that families know about and can become involved in a wide range of services, including:

- Medical care, dental services, and community outreach and assessment services through the Vernon J. Harris Health Center
- A parent resource network, including advocacy training and support, peer networking, and a variety of support groups, including a kinship care support group, a single parents support group, and a teen "girl talk" group
- Child guidance services, involving community-based mental health, school-based mental health, and preventive mental health services
- A variety of community programs developed through the *Partnership's* work and partner leadership, based upon needs identified by parents and youth and specific opportunities for securing needed resources identified by the partnership and its

members, including such activities as youth drug abuse counseling, teen grief counseling, raising a reader programming, obesity prevention programming, and male mentoring and fatherhood programming.

The starting point for the connection with families is the Vernon J. Harris Health Center and its reputation and standing in the community as a high quality and culturally responsive center for providing needed health services. There are many Community Health Centers with such reputations in their communities, and many also have developed additional services and community connections like those created in Richmond through the *East End Partnership*. They have done so because their close connections to the children and families they serve have brought such needs and opportunities to their attention, and they have supported resident leaders to advocate for needed services.

The Vernon J. Harris Health Center and the *East End Partnership* is highlighted as an exemplary but by no means unique effort among community health centers. It is mature and sophisticated, continuously opportunistic in expanding the services opportunities available to members of its community, often through forging ties and partnerships – and doing so within a predominantly minority community within a larger political jurisdiction.

As a case in point, the *East End partnership* provides substantial evidence for the validity of the fifth assumption — the importance of working within distressed communities — as it has been successful in building social capital, fostering resiliency, and creating a more favorable overall environment for healthy child development within the community.

The growth of the *East End Partnership* has not been by detailed blueprint; its evolution has been both organic and entrepreneurial. The *Partnership's* successes can be seen in its ability to identify needs and secure resources, but that success truly rests on the infrastructure, support and leadership it provides. Creating a critical mass of programs, activities, and opportunities that are sufficiently diverse to attract and engage different constituencies may be more important than the provision of specific, discrete professional services (however much they can be tied to clinical need) to improving healthy child development in these neighborhoods.[39]

This ability to activate and motivate its community relates to assumptions, or testable propositions, under the theory of change. While the Vernon J. Harris Community Center and *East End Partnership* exist in various degrees throughout the country, using this as a model for reducing disparities assumes that there are intentional activities and efforts that can replicate the evolution of the *East End Partnership* and its level of activity and community engagement. At a minimum, this may involve investing in champions rather than programs. It also assumes that a critical mass of activity will, in fact, change community social capital and community resiliency to produce community impacts related to healthy child development that are more than the sum of individual program parts. At a minimum, testing this assumption will require research methodologies that extend beyond randomized controlled trials, particularly as assignment to a treatment or

control group would violate the fundamental, inclusive approach being taken to producing changes in healthy child development.

Conclusion, Next Steps, and Appropriate Methodologies

This paper has sought to make the case for changed pediatric clinical practices – particularly around well-child care – to help address disparities in child health and healthy child development by race and ethnicity. The profound disparities in both child health and healthy child development by race and ethnicity cannot be expected to simply disappear without concerted and intentional efforts to address them. They have proved to be persistent in American society and will require significant changes in order to address them effectively.

This paper also has asserted that the clinical health community can play an essential, but by no means total or independent, role in reducing these disparities. This clinical role requires both changing clinical health practices (to be more holistic and developmental) and changing ways that clinical practices connect to community (particularly to make effective referrals of patients to community resources and supports).

As case illustrations, the *Help Me Grow* and *East End Partnership* examples provide illustrations of organic and holistic approaches to improving healthy child development that start with clinical practice but extend into their communities to produce impacts upon healthy child development.

Clearly, there is not a current research base that provides definitive results for efforts that combine individually-focused health strategies with community building efforts that strengthen healthy outcomes on a population level. There is not an established set of protocols and procedures to achieve such ends that can guide practitioners. There is not a research base that has begun to establish the relative size of the impacts in reducing disparities that such combined or coordinated efforts might be expected to produce. Compared with the amount of funding expended on research on clinical procedures and drug therapies, the research funding for evaluating such approaches has been miniscule at best. Yet, achieving good outcomes for children requires that current clinical care be improved, and that part of that improvement involves assuring that children and families have ready accesses to a variety of community support services.

More emphasis needs to be provided for this work, which also involves developing evaluation approaches that are rigorous, but that involve different methodologies than randomized controlled trials for attributing causality for at least some aspects of the work.[40] It requires investing in champions who are developing such approaches, involving different approaches when awarding research grants,[41] and giving credence to such efforts and their practitioners within the clinical community. In the end, particularly in the diffusion of such practices, it involves fiscal and regulatory incentives that support them, moving toward broader rather than narrower definitions of what constitutes child health services.[42]

APPENDIX

Child Health Disparities in Context: Selected Indicators of Child Health, Healthy Development, and Family and Community				
	White N	**Black NH**	**Hispanic**	**Source**
Child Health Indicators				
Infant Mortality (1,000 live births)	5.7	13.8	5.6	A
Low Birthweight	7.2%	13.4%	6.8%	A
Elevated Blood-Lead Levels	2.6%	4.3%	3.1%	B
Current Asthma Prevalence (under 18)	8.0%	13.0%	8.6%	C
New AIDS Cases 13-17/100,000	.1	4.0	.5	D
Child (1-14) Death Rate/100,000	19	29	18	A
Teen Death (15-19) Rate/100,000	63	81	64	A
6-11 Overweight	11.8%	19.5%	23.7%	E
19-29 Overweight	12.7%	23.6%	23.4%	E
Child Health Service Indicators				
No Health Insurance Cover 0-17	6.4%	6.9%	19.5%	D
No Reported Specific Source of Care 0-17	3.3%	5.8%	24.1%	D
Late/No Entry Into Prenatal Care	11.0%	24.1%	23.5%	D
No Dental Visit (2-17 year-olds)	41.4%	63.2%	63.3%	D
Immunizations Not Complete (19-35 mos)	16.7%	25.5%	21.3%	D
Asthma Hospital Admissions (0-4) /100,000	15.3	120.0	54.0	D
Hospital Admin Ped. Gastrointes. (0-17)/100,000	81.7	84.1	108.9	D
2-5 Year-old untreated dental caries	14.5%	24.2%	29.2%	F
Healthy Child Development Indicators/Education				
Below Basic 4th Grade Reading Proficiency	22%	54%	50%	G
Below Basic 8th Grade Math Proficiency	18%	53%	45%	G
15-24 Drop-Out Rates	6.0%	10.4%	22.4%	H
Non-Completion of High School	24.1%	48.8%	46.8%	I
Healthy Child Development – Other				
16-19 Year-Old Youth not in School or Working	6%	12%	12%	A
Foster Care Placement (0-17)/1,000	4.9	15.8	6.5	J
20-24 Males in State/Federal Prison /1,000	9.5	63.4	24.9	K
Family and Community Indicators				
Children in Poverty	11%	35%	29%	A
No Parent Employed Year-Round	27%	51%	39%	A
Children in Single-Parent Families	23%	65%	36%	A
Teen (15-19) Birth Rate /1,000 females	2.6%	6.3%	8.3%	A
Living in High Risk Neighborhood	1.7%	20.3%	25.3%	L
Median Household Net Worth	$74,900	$7,500	$9,750	M
Child Population				
2000 Population	44.0 M	10.9 M	12.3 M	
% of Total Child Population	60.9%	15.1%	17.1%	
Projected 2020 Population	42.5 M	12.4 M	18.9 M	
% of Total	52.9%	15.4%	23.6%	

Sources of Data:

A – Annie E. Casey Foundation (2007). *2007 Kids count data book: State profiles of child well-being.* Baltimore, MD.
B – Centers for Disease Control (2005). *Blood lead levels – United States, 1999-2002.* MMWR Weekly 54(20): 513-516. Retrieved at: http://www.cdc.gov/mmwr/preview/mmwrhtml/mm5420a.htm
C – Centers for Disease Control (2006). National Health Interview Survey Data – 2005 Data. Table 4-1. Retrieved at: http://www.cdc.gov/asthma/nhis/default.htm
D – Agency for Healthcare Research and Quality. 2006 National Health Care Disparities Report. Appendix D. Data Tables. Retrieved at: http://www.ahrq.gov/qual/nhdr06/index.html#MCH
E – Weight Awareness (2007). Ethnicities and childhood overweight and obesity problems. Retrieved at: http:/www.weightawareness.com/topics/doc.xml?doc_id=1179&am
F – *Health, United States, 2007*. Table 76 (Untreated Dental Caries 2001-2004). Retrieved at: http://www.cdc.gov/nchs/data/hus/hus07.pdf#076
G – National Center for Education Statistics (2007). National Assessment of Educational Progress Scores – 2007. Retrieved at: http://nationsreportcard.gov
H – National Center for Education Statistics (2005). Status dropout rates for 15-24 year-olds, October 2005. Retrieved at: http://nces.ed.gov/pubs2007/dropout05/table__08.asp
I – Urban Institute (2004) Who graduates: Who doesn't. Retrieved at: http://www.urban.org/Uploaded PDF/410934__WhoGraduates.pdf
J – Adoption and Foster Care Analysis and Reporting System (2004-5). Prevalence data by race retrieved at: http://www.acf.gov/programs/cb/stats__research/afcars/tar/report13.htm
This prevalence data was divided by census data on the number of children of different ethnicities to come up with percentages.
K – Bureau of Justice Statistics (2005). Prisoners in 2005. Retrieved at: http://ojp.usdoj.gov/bjs/pub/pdf/p05.pdf
L – Bruner, C., et. al. (2007). Village building and school readiness: Closing opportunity gaps in a diverse society. State Early Childhood Policy Technical Assistance Network: Des Moines, IA.
M – Orzechowski, S & Sepielli, P (2003). Net worth and asset ownership of households: 1998 and 2000. *Current population reports.* P70-88. Washington, DC: U.S. Census.

NOTES

[1] Halfon, N & Hochstein, M (2002). Life course health development: An integrated framework for developing health, policy, and research. *Milbank Quarterly* 80:3. 433-479. Forrest, C, & Riley, A (2004). Childhood origins of adult health: A basis for life-course health policy. *Health Affairs* 23:5. 155-164.

[2] Family income and socio-economic status also has strong correlations with a broad variety of child outcomes and with race and ethnicity. See: Haveman, R & Wolfe, B (1994). *Succeeding generations: On the effects of investments in children.* Russell Sage Foundation: New York, NY. There likely is no single etiology to explain all disparities, and there are substantial variations in different child outcomes by different races and ethnicities, independent from income and socio-economic status, that also need to be addressed.

[3] This refers to toxic elements in a broad sense, including environmental exposure to toxic elements (lead paint, chemicals, poor air quality, etc.), exposure to unsafe situations (violence and crime, poor housing, etc.), and presence of a socially toxic environment (social disorganization, absence of positive peer and adult activities, etc.). Garbarino, J. (1995) *Raising children in a socially toxic environment* (1995). Jossey-Bass Publishers: San Francisco, CA..

[4] In dominant culture, this positive identity often is based on a realistic belief that opportunity exists through personal achievement. The disconnect that minorities may face between that dominant culture belief and their own opportunity (because of institutional racism and/or cultural clashes in undergirding values and expectations) can be cause for alienation, anger, and anomie, all to the detriment of health and healthy development.

[5] Views in other parts of the world tend to be more holistic and ecological, particularly within developing countries. The World Health Organization places a very pronounced role on community-building as a tool for improving health. The United States itself has a very individualistic political culture, with strong underlying assumptions regarding both personal responsibility and availability of opportunity that tend to view adult outcomes as the result of adult decisions, and not external factors. This has led to both health and social interventions and policies that focus upon individual change as opposed to community condition change.

[6] The term "child health practitioners" refers to pediatricians, family practitioners, and pediatric nurse practitioners who provide primary care for children.

[7] Schor, E (2007). The future pediatrician: Promoting children's health and development. *The Journal of Pediatrics* Nov. S11-S16.

[8] This paper will largely use the term "vulnerable neighborhoods" to describe those places where challenges to successfully raising children are greatest. These neighborhoods also have been referred to as "distressed," "disinvested," "poor, tough," or "poor, immigrant, and minority" neighborhoods in the field. This paper also will use the term "children of color" to refer to all children who are not identified as White, non-Hispanic, although Hispanic is considered in the census as a descriptor of origin or ethnicity and not race – and many Hispanics select their race as "White."

[9] Horowitz, C, & Lawer (2007), *Community approaches to addressing health disparities.* Paper for the Institute of Medicine's Roundtable on Racial and Ethnic Health Disparities. See also: Best, A, Stokols, D, Green, L, Leischow, S, Holmes, B, & Buchholz, K (2003. An integrative framework for community partnering to translate theory into effective health promotion strategy. *American Journal of Health Promotion* 18:2. 168-176.

[10] Although entry into early prenatal care is substantially lower in pregnancies among Hispanic women, both low birthweight rates and infant mortality rates are also lower, compared even with pregnancies among White, non-Hispanic women. These data are even more pronounced when controlled for income. A landmark meta-analysis of over international 10,000 research studies on effective practices in child birth concluded that "social, psychological, and fiscal supports" were more important to healthy birth outcomes for women without specific medical complications than were clinical visits during pregnancy (and that doulas and nurse midwives produced better birth outcomes than obstetricians for these pregnancies, because they spent more time and provided more social support). Enkin, M, Keirse, J & Chalmers, I (1989). *A guide to effective care in*

pregnancy and childbirth. Oxford University Press: Oxford, UK. While pregnancy is not necessarily regarded as a medical condition requiring clinical care within Hispanic communities, it is more likely to be treated as a joyous event that involves intensification of attention and support for the woman experiencing pregnancy, e.g. social and psychological (and to some extent financial) supports. Research also suggests that these more positive birth outcomes among Hispanic women are generally for first generation immigrants and may not extend to second and third generation women whose families and support systems have been acculturated to other practices and roles regarding pregnancy and work.

[11] Orzechowski, S & Sepielli, P (2003). Net worth and asset ownership of households: 1998 and 2000. *Current population reports.* P70-88. Washington, DC: U.S. Census.

[12] Brooks-Gunn, J, Duncan, G, & Aber, L (eds) (1997). *Neighborhood poverty: Volume I.* Russell Sage Foundation: New York, NY. Xue, Y, Leventhal, T, Brooks-Bunn, J, & Earls, F (2005). Neighborhood residence and mental health problems of 5- to 11-year-olds. *Archives of General Psychiatry* 62:5. 554-563.

[13] Bruner, C *et.al* (2007). *Village building and school readiness: Closing opportunity gaps in a diverse society.* State Early Childhood Policy Technical Assistance Network: Des Moines, IA. See: Chapter One: Census tracts and child-raising: Place-based implications for child and family policy investments and reforms. Pp. 5-14.

[14] Geo-mapping of vital records statistics and birth outcomes is increasingly common and shows the spatial concentration of infant mortality, low birthweight, and entry into prenatal care. Elevated blood lead levels also have been geo-mapped and have extremely high correlations to low-income housing areas of pre-1950's housing. Childhood obesity has even been linked to neighborhoods with high poverty concentrations, lack of access to grocery stores, and absence of safe recreational spaces. The Annie E. Casey Foundation's Making Connections Initiative, working in ten inner-city neighborhoods across the country, has conducted extensive surveys of residents that have asked selected questions regarding child health, one of which identical to the questions from the national health survey regarding childhood asthma. In all Making Connections surveys analyzed (for Denver, Des Moines, Indianapolis, and Oakland), parent-reported asthma prevalence rates among young children were double those of the state as a whole. Bruner, C & Tirmizi, S (2007*). Making connections wave II survey and key findings on children healthy and prepared for success in school*. Child and Family Policy Center: Des Moines, IA.

[15] *ibid*.

[16] National Scientific Council on the Developing Child (2005). *Excessive stress disrupts the architecture of the developing brain.* The Center on the Developing Child at Harvard University: Cambridge, MA..

[17] The Aspen Institute has been a leader in promoting a "theory of change" approach to evaluating comprehensive, community-building initiatives and has produced three useful volumes on this subject. See: Weiss, C (1995). Nothing as practical as good theory: Exploring theory-based evaluation for comprehensive community initiatives. In: Connell, J, Kubisch, A, Schorr, L, & Weiss, C. *New approaches to evaluating community initiatives: Concepts, methods, and contexts.* Roundtable on Comprehensive Initiatives for Children and Families. Aspen Institute: New York, NY.

[18] Genetic factors and individual constitution also contribute to children's health and healthy development, but also represent givens, generally not subject to change except through one of the other items on the list.

[19] See endnotes 30-33.

[20] One such suggested breakout of the relative contribution to health is: constitution (10%), medical care (20%), environmental conditions (20%), personal factors (50%).

[21] Currie, J (2005). Health disparities and gaps in school readiness. In *The Future of Children* 15:1. Spring 2005. Volume on School Readiness: Closing Racial and Ethnic Gaps.

[22] Hagan, J, Shaw, J, & Duncan, P (2007). *Bright futures: Guidelines for health supervision of infants, children, and adolescents.* American Academy of Pediatrics: Elk Grove Village, IL.

[23] Answering these questions requires evaluation methodologies that are both rigorous and appropriate. A promising framework for evaluating comprehensive, systems change initiatives that takes into account their complexity and need for multiple evaluation methodologies while

involving rigor in seeking to attribute causality is found in Coffman, J. (2007) *A framework for evaluating systems initiatives*. Build Initiative.

[24] For a particular poignant example, see: Fadiman, A (1997). *The spirit catches you and you fall down: A Hmong child, her American doctors, and the collision of two cultures*. Farrar, Straus, and Giroux: New York, NY.

[25] Discussing the underlying impacts of racism on child health and healthy development is well beyond the scope of this paper, but the topic deserves a similar provocative discussion as that applied to achievement disparities in education set out in: Perry T, (2003). Up from the parched earth: Toward a theory of African American achievement. In Perry, T, Steele, C, & Hilliard III, A. *Young, gifted, and black: Promoting high achievement among African-American students.* Beacon Press: Boston, MA. 1-108. There also is some research that stress produced by contact with discrimination has adverse impacts upon healthy births. Collins, J, David, R, Handler, A, Wall, S & Andres, S (2004). Very low birthweight in African American infants: The role of maternal exposure to interpersonal racial discrimination. *American Journal of Public Health.* 94:12. 2132-2138.

[26] Lemann, N (1994). The myth of community development. *New York Times Sunday Magazine.* January.

[27] Jarrett. R. (1999). Successful parenting in high-risk neighborhoods. *The Future of Children* 9, no. 2., 45-50.

[28] See: Bruner C (2006). Social service systems reform and poor neighborhoods: What we know and what we need to find out,: in Fulbright-Anderson, K & Auspos, P. *Community change: Theories, practice, and evidence.* Aspen Institute Roundtable on Community Change: New York, NY.

[29] See; Bruner, C (2007) *Village building and school readiness, op. cit.* Chapter One: Census tracts and child-raising: Place-based implications for child and family policy investments and reforms. 5-14.

[30] Putnam, R (1993). The prosperous community: Social capital and public life. *The American Prospect.* Putnam, R (1993). *Making democracy work: Civic traditions in modern Italy.* Princeton University Press: Princeton, NJ.

[31] Bernard, B (1991). Fostering resiliency in kids: Protective factors in the family, school, and community. Far West Laboratories: Portland, OR. Henderson, N, Benard, B & Sharp-Light, N (1999) (eds.) *Resiliency in action: Practical ideas for overcoming risks and building strengths in youth, families, and communities.* Resiliency in Action Press: San Diego, CA.

[32] Catalano, R & Hawkins, D (1996). "The social development model: A theory of antisocial behavior." In *Delinquency and crime: Current theories*, ed. J. Hawkins. Cambridge University Press: New York, NY..

[33] Benson, P (2000). *All kids are our kids: What communities must do to raise caring and responsible children and adolescents.* Jossey-Bass, Inc.: San Francisco, CA.

[34] Guyer, B *et. al.* (2007). *Investments to promote children's health: A systematic literature review and economic analysis of interventions in the preschool period*. Partnership for America's Economic Success: Washington, DC. Bruner, C (2001). *A stitch in time.* Finance Project: Washington, DC.

[35] The widely cited research on the importance of investing in preschool because of its return on investment is based upon such multiple gains that cover far more than educational impacts. In fact, the educational gains alone would not warrant such investments – it is the social gains (reduced criminal activity, adolescent parenting, etc.) that produce the high rates of return on such investments. See: Bruner, C (2006). *Many happy returns*. State Early Childhood Policy Technical Assistance Network: Des Moines, IA.

[36] These are only two of many possible programs, selected for illustrative purposes. The American Academy of Pediatric's CATCH program has been working since 1989 to promote better linkages between practice and the community. See: http://www.jhsph.edu/wchpc/projects/catch.html.

[37] Dworkin, P & Bogin, J (eds) (2006). Help me grow roundtable: Promoting development through child health services. Supplement to *Journal of Developmental and Behavioral Pediatrics.* 27:1S.

[38] Hughes, M & Damboise, M (2007). *Help me grow: 2007 annual evaluation report.* Center for Social Research, University of Hartford for the Children's Trust Fund: Hartford, CT.

[39] This is one of five plausible "theories of change" for addressing the needs of children in poor neighborhoods presented more fully in Bruner, C (2005). "Social service systems reform and poor neighborhoods," *op.cit.*

[40] Coffman, J. (2007) *A framework for evaluating systems initiatives, op.cit*. Participatory or empowerment evaluation also has a role in this work, but only if it ultimately also meets some test of attributing causality. This includes the ability for disproof, including disproof of the role of participant-led change as sufficient or necessary for improving healthy child development outcomes.

[41] Polansky, N (nd). *Historical perspective in evaluative research.* Polanski relates the story of Fritz Redl, an imaginitive and innovative researcher on developing treatments for disturbed youth. Previously funded by the National Institute of Health, he sought to apply for additional funding, but "came up against a newly erected wall. The applicant was now asked not only whom he wanted to treat, but precisely what the treatment would be, and by what design it would be evaluated so that one could tell whether it differed for those not so treated. … [Redl needed] funding for a free-wheeling project in which he would try to find ways of approaching heretofore unreachable children. But, the grantors – who knew little about the substance of this work but found great security in the irrefutable logic of design – wanted him to state in advance what he would learn. Asked Redl, 'If I already know how to treat these kids, why would I be asking for support in order to find out?'" Redl's logic (similar to Einstein's statement, "If we knew what we were doing, it wouldn't be research") points to the need for muiltiple approaches to learning and evaluation. In some instances, and as Polanski points out in the case of Redl's work, it may also be that "the patient is his own control."

[42] There is an adage, "If you don't pay for it, it won't get done." This involves funding streams and reimbursement systems within clinical practice that cover the time and resources needed to provide for effective referrals to and collaborations with community service providers. Currently, at the federal level the Center for Medicare and Medicaid Services (CMS) is seeking to restrict the use of targeted case management under Medicaid, which has been used for precisely the purposes of linking children with medical and transmedical services to improve their health discussed in this report. Care coordination and targeted case management are essential for helping children and their families develop bridges between clinical services and other supports necessary for their healthy development and need to be part of a financing system. As another simple illustration, the Reach Out and Read program has demonstrated an impact upon early literacy and is a low-cost intervention that pediatricians generally value. If the purchase of Reach Out and Read books was a reimbursable item under Medicaid and private health insurance coverage, it is likely that Reach Out and Read would become a part of routine practice much more quickly than where book purchasing must rely upon grants or other contributions.