Early development, health, and learning among at-risk children: A global perspective.

Haskins Laboratories, and its partner affiliated Universities; Yale University and the University of Connecticut, will convene December 1-3, 2015 with leading international scientists, representatives from key governmental agencies, non-governmental organizations, and health and education ministries in the developing world, to discuss ongoing activities and needs in the area of early childhood in disadvantaged populations. We will focus on children in rural and urban settings, those living in poverty and disadvantage, indigenous children, and those who must learn an additional language in order to obtain an education. Participants will share examples of programs being implemented around the world, addressing both successes and challenges, and the group will begin to establish new cross-national collaborations and develop plans for optimal approaches to coordinated, integrated efforts to improve the health, development, and learning of children from birth to age seven years. The meeting will take a holistic approach to child health, development, and learning, with a shared focus on research, practice, and policy, in the hope of making progress on four fronts in the developing world: Professional development for early childhood specialists, training for researchers and clinical scientists, use of technology, and new research and funding opportunities.

1. **Overview of existing programs and opportunities for professional development for early childhood specialists implementing these programs.**
   Speakers will address (a) what's being done, what's working well and what challenges are faced in implementing these programs, and (b) how professional development is being offered, delivered, and evaluated. Again, what approaches have been successful and what challenges are faced?
   Meeting participants will be asked to consider what the organizing principles of these program are, whether some of them might be universal (apply across programs, geographic regions, cultures), or whether some programs are culturally specific, and if so, what lessons might we glean from them that could be helpful to other programs?

2. **Research and clinical training for researchers and clinical scientists.**
   Speakers will address training needs and opportunities for local researchers, clinicians, and clinician scientists (e.g., psychologists, cognitive and child development scientists, neuroimagers, physicians – pediatricians, developmental pediatricians, psychiatrists) so that they can identify/diagnose, make recommendations for, and help teachers understand characteristics of children with developmental disorders (e.g., autism, language disorders, learning disabilities); and so that they can also use tools such as behavioral measures and EEGs to measure brain activity in infants.
   Meeting participants will be asked to address the needs for this training, how these needs can best be addressed both in the immediate and in the longer term, and what specific efforts might make such training sustainable.

300 George Street, New Haven, CT 06511 - Voice: 203.865.6163 - Fax: 203.865.8963 - www.haskins.yale.edu

3. **Technology as a tool for early childhood health, development, and education.**
   Speakers will address programs that currently exist and how they are being used in impoverished urban, rural, and indigenous communities. If they have been evaluated; what have their successes and challenges been, both in terms of child outcomes and professional development.
   Meeting participants will be asked to consider implementation, scale- up, evaluation, and challenges such as maintenance, training, and sustainability, as well as potential for new uses of technology and technology development to address unmet needs.

4. **New research and funding opportunities to improve early childhood outcomes in high-risk environments.**
   Speakers will address how we can best study children in poverty, to learn what factors affect brain development and overall healthy development and learning, such as what environmental risks must be addressed, for example; smoking exposure (both prenatal and secondary), water quality, food/nutrition, and disease. Also, how we can study and intervene with these, address additional factors such as language use in education (L2 use in education, language policies that disadvantage certain groups of children), and teacher preparation and awareness of child development, etc. Another topic will be how high tech tools can be used in areas where support and maintenance may be limited, and what cultural issues may make use of such technologies (e.g., EEG, NIRS) difficult to use effectively. Lastly, the feasibility and optimal design for studies – e.g., longitudinal studies, studies that examine child health and development in children in developing areas and in specific populations such as indigenous groups, with holistic approaches that address health, development and learning and that integrate research, education, and professional development for educators, researchers, and clinical scientists.
   Meeting participants will be asked to contemplate the suggestions, challenges, possible solutions, and to be thinking about optimal research programs integrated with on-the-ground implementation and evaluation, that potentially could be funded by governmental, non-governmental, and foundation funders to initiate what would ideally become a sustainable, multinational program of research and education (for children birth to seven and older, and for researchers and clinicians as well as teachers/care givers). They will also be asked to consider what would constitute an ideal first solicitation for research that might involve new partnerships across agencies and organizations, and how that might be initiated.

Filling gaps in current global initiatives.

At present a fairly large number of initiatives are underway, aimed at improving outcomes for at-risk children in the developing world. Some examples include a workshop organized by the National Research Council in the U.S. (REF), a World Bank/ Oxford University global literacy initiative focused on India and Africa (REF), technology-based programs sponsored by the MIT

300 George Street, New Haven, CT 06511 - Voice: 203.865.6163 - Fax: 203.865.8963 - www.haskins.yale.edu

Media Lab (REF), and a variety of programs and projects funded by Foundations and NGO's, e.g., the Van Leer Foundation projects in the Americas to provide evidence-based approaches to early health, nutrition, and cognitive development in diverse cultures and complex political environments (REF). Indeed the number of these programs is on the increase. However, we believe that there are important areas where the current summit can contribute meaningfully to this global effort: Coordination and synergy, intensive training, program evaluation, and new research. With a focused collaboration in these areas, we believe that current and future health and education projects and programs have a greater possibility of success and sustainability that will benefit children and each country's future prosperity.

1. **Coordination and collaboration; a missed opportunity to build synergy.** One concern voiced by funders, implementers, and others, and part of the motivation for the Haskins Summit, is that most of these initiatives, while sharing core ideas and goals, are operating without any meaningful interactions with the others. This is a lost opportunity for synergy, and there is an acute need at this stage to gather together leaders in this arena to promote communication and cooperation across these well-meaning but disconnected projects.

2. **The need to identify better ways to support intensive training opportunities for researchers, clinicians, educators, and political leaders from the targeted countries**. With solid training on the latest tools and techniques for clinical assessment for early identification of disorders that can negatively impact educational outcomes in high-risk children, assessment of program efficacy (what works for whom and why), and improvement of pre-school and school based cognitive and language training programs, we believe that existing programs can better fulfill their missions. Without a genuine and culturally respectful focus on helping to foster a new generation of scientific, educational, and policy leaders, from targeted cultures armed with the latest tools needed to create state of the art programs locally, we cannot anticipate long term sustainability of even the best intentioned of programs.

3. **Most current initiatives lack a specific mechanism for formal and ongoing program evaluation.** This summit will include individuals with expertise in program evaluation to ensure that good intentions are producing tangible gains over time (and if not, how new research can promote better organization and outcomes). We need the best methodologies from biomedical educational and clinical domains to address this critical gap, which is a unique focus of our meeting.

4. **New approaches to research.** Another unique feature of the Haskins Summit will be the focus on the development of new research models. We will take advantage of the latest developments in gene-brain-behavior research to support the development of a better understanding of both universal and culture-specific elements needed for optimal programs. To that end, we will bring leading researchers from a number of fields that focus on language and cognitive

300 George Street, New Haven, CT 06511 - Voice: 203.865.6163 - Fax: 203.865.8963 - www.haskins.yale.edu

development, together with stakeholders from targeted countries. Together, these individuals will establish collaborations that can generate feasible research projects of an unprecedented scale and scope in the study of how early risk manifests in diverse environments. We can then use this research to both improve existing programs and develop new models that are well grounded in both universals and cultural specifics.

Because no meeting can possibly be as inclusive or complete as one would wish, given the global scope of the need to better understand and address early childhood health, education and development, this summit will be documented in a white paper or series of white papers, so that its results can be broadly shared. And the conveners, Haskins Laboratories, the University of Connecticut, and Yale University, are committed to continuing to participate in collaborative research efforts to pursue the goal of better health, education, and development for all children.

300 George Street, New Haven, CT 06511 - Voice: 203.865.6163 - Fax: 203.865.8963 - www.haskins.yale.edu