

2nd Annual

**State of Global Health
Symposium**



**Surviving and Thriving:
A new era in global child health and development**

Wednesday, April 1 2015

2:00-5:00 p.m.

Rotunda, Joseph B. Martin Conference Center
77 Ave Louis Pasteur, Boston

Welcome and Introduction

Dean James Ryan, Dean of the Faculty, Harvard Graduate School of Education
Professor Wafaie Fawzi, Chair, Department of Global Health and Population, Harvard T.H. Chan School of Public Health

Featured Remarks

Professor Maureen Black, University of Maryland School of Medicine / Johns Hopkins Bloomberg School of Public Health
Professor Jack Shonkoff, Director, Center on the Developing Child at Harvard University

Panel Discussion

Dr. Pia Britto, UNICEF
Dr. Jena Hamadani, International Centre for Diarrhoeal Disease Research, Bangladesh (icddr,b)
Professor Sylvia Kaaya, Muhimbili University of Health and Allied Sciences, Tanzania
Professor Günther Fink, Harvard T.H. Chan School of Public Health

Featured Remarks

Professor Jack Shonkoff, Director, Center on the Developing Child at Harvard University

Closing Remarks

Professor Jack Shonkoff, Director, Center on the Developing Child at Harvard University
Professor Wafaie Fawzi, Chair, Department of Global Health and Population, Harvard T.H. Chan School of Public Health

Reception and Poster Session

BACKGROUND

“Surviving and Thriving: A new era in global child health and development”

Over the past few decades, there have been two remarkable advances that now make it possible to envision a new era in child health and development around the globe. First, child survival has improved dramatically, with the global annual number of child deaths declining from 16 million in 1970 to less than six million in 2015. Second, a tremendous explosion of new knowledge about the developing brain, linked to advances in the biological, behavioral and social sciences, tells us that early experiences (beginning pre-natally) are built into our bodies with lasting impacts on learning, behavior, and both physical and mental health.

However, progress in reducing early life risk factors that affect the subsequent health, growth, and development of surviving young children has been less impressive. A growing literature has highlighted the effects of early childhood adversity on physical and cognitive development. Many newborn infants survive perinatal insults and prematurity, but are at risk of long-term deficits. Low maternal education, postnatal depression, and other maternal mental health issues affect mother-infant interactions, and delay and impair cognitive development. Infections and nutritional deficiencies can form a “vicious cycle,” reinforcing each other, and undermining the physical and cognitive development of children, with subsequent effects on education, health outcomes, and economic productivity of individuals and their families. Moreover, these types of significant adversity can disrupt the developing brain and other maturing biological systems through the physiological disruptions caused by excessive activation of stress response systems, or what we call toxic stress. With an estimated 200 million children not reaching their developmental potential, there is an urgent need to focus on quality of life, not just survival.

At this **Second Annual State of Global Health Symposium**, we aim to highlight the pursuit to realize the universal rights of children through reducing inequalities rooted in early childhood and the economic impact of suboptimal development, as well as promoting new policies and interventions that support the world’s young people from infancy through to adulthood. Speakers will also address the need for objective and validated measures of child development that are critically needed to more adequately quantify the burden of suboptimal development and to evaluate the impact of interventions that are put in place to address it.

Millions of children are plagued with poverty and disadvantage, in low and middle-income, as well as high-income countries, making this a truly global problem. For all children to have an equal chance to make the most of their potential, there is a great need for innovative strategies that can achieve much greater impacts for those who face the greatest adversity. A balanced approach to physical, emotional, social, cognitive, and language development will better prepare all children to be healthy, empowered and active citizens of their own countries as well as the global community.

SPEAKER PROFILES

Dean James Ryan is the 11th dean of the Harvard Graduate School of Education. A leading expert on law and education, Dean Ryan has written extensively about the ways in which law structures educational opportunity. His articles and essays address such topics as school desegregation, school finance, school choice, standards and testing, pre-k, and the intersection of special education and neuroscience. Dean Ryan is also the co-author of the textbook *Educational Policy and the Law*, and the author of *Five Miles Away, A World Apart*, which was published in 2010 by Oxford University Press. In addition, Ryan has authored articles on constitutional law and theory and has argued before the United States Supreme Court. Before coming to Harvard, Dean Ryan was the Matheson & Morgenthau Distinguished Professor at the University of Virginia School of Law. He also served as academic associate dean from 2005-09 and founded and directed the school's Program in Law and Public Service. He received his A.B., summa cum laude, from Yale University and his J.D. from the University of Virginia.

Dr. Wafaie Fawzi is Professor of Nutrition, Epidemiology and Global Health and Chair of the Department of Global Health and Population at Harvard T.H. Chan School of Public Health. He completed his medical training at the University of Khartoum, Sudan and his Doctorate of Public Health in 1992 in the Departments of Epidemiology and Nutrition at Harvard T.H. Chan School of Public Health. He has experience in the design and implementation of randomized controlled trials and observational epidemiologic studies of perinatal health and infectious diseases, with emphasis on nutritional factors. These include examining the epidemiology of adverse pregnancy outcomes, childhood infections, and HIV/AIDS, TB and malaria among populations in Tanzania, India and other developing countries. Dr. Fawzi is also a Principal Investigator of the MDH HIV/AIDS Care and Treatment Program in Tanzania, which provides for scaling up quality care and treatment services and building operational research capacity. He is a founding member of the Africa Academy of Public Health, a Harvard affiliated organization that aims to train future public health leaders and build strong research collaborations with partners in Africa.

Dr. Maureen Black is the John A. Scholl MD and Mary Louise Scholl MD Endowed Professor in the Department of Pediatrics and the Department of Epidemiology and Public Health at the University of Maryland School of Medicine as well as an adjunct professor in the Center for Human Nutrition, Johns Hopkins Bloomberg School of Public Health and the Department of Psychology at the University of Maryland Baltimore County. Dr. Black holds a Ph.D. in psychology from Emory University in Atlanta, as well as an M.A. in occupational therapy from the University of Southern California. She is the founder/director of the Growth and Nutrition Clinic at the University of Maryland School of Medicine, a multidisciplinary clinic that provides services to children with poor growth and feeding problems throughout the state. Dr. Black has conducted research and interventions relating to children's nutrition, health and development in low-income communities around the world. She has successfully attracted federal funding from NIH, USDA and several national foundations to conduct intervention trials to promote growth and development among undernourished children. Her research has led to over 250 publications.

Dr. Jack P. Shonkoff is the Julius B. Richmond FAMRI Professor of Child Health and Development at the Harvard T.H. Chan School of Public Health and the Harvard Graduate School of Education; Professor of Pediatrics at Harvard Medical School and Boston Children's Hospital; and Director of the university-wide Center on the Developing Child at Harvard University. Under the auspices of the National Academy of Sciences, he served as Chair of the Board on Children, Youth, and Families and chaired a blue-ribbon committee that produced the landmark report, *From Neurons to Neighborhoods: The Science of Early Childhood Development*. Dr. Shonkoff has received multiple honors, including elected membership to the Institute of Medicine of the National Academy of Sciences, the C. Anderson Aldrich Award in Child Development from the American Academy of Pediatrics, and the Award for Distinguished Contributions to Public Policy for Children from the Society for Research in Child Development. In 2011, he launched Frontiers of Innovation, a multi-dimensional learning community of researchers, practitioners, policymakers, investors, experts in systems change, and creative change agents who are committed to driving science-based innovation that achieves breakthrough impacts on the development and health of young children facing adversity.

Dr. Pia Rebello Britto, Global Chief and Senior Advisor, Early Childhood Development, UNICEF, obtained her doctoral degree in developmental psychology from Columbia University and prior to joining UNICEF she was an Assistant Professor at Yale University's Child Study Center. Dr. Britto has worked in low, middle and high income countries developing integrated systems and policies for early childhood. In particular, she has investigated the role of governance and finance of national systems in achieving equity, access and quality, conceptualized models for implementation and evaluation of quality early childhood services and parenting. Most recently, Dr. Britto is involved in work examining the relationship between early childhood and peace building. Within the United

States, Dr. Britto is known for her scientific work on young children's early literacy development, early intervention program evaluations, and identity development of Muslim and Arab children. Dr. Britto is the recipient of several national and international grants and awards in recognition for her work and has published numerous books, articles, chapters and reports, and has presented extensively at conferences, meetings and workshops (academic and non-academic) globally.

Dr. Jena Hamadani is currently a scientist at the International Centre for Diarrheal Disease Research in Bangladesh (ICDDR,B) and is Head of its Child Development Unit. She graduated from Rajshahi Medical College in 1983 and completed her Diploma in Child Health with distinction in 1996. In 2004 she received her Ph.D. in child development from the Institute of Child Health at the University College London. Dr Hamadani has been a pioneer in child development research in Bangladesh and has adapted, modified and developed tools to assess children's development in the country. Her adaptations of tools are also used in the neighboring countries e.g. India and Nepal. She has received several awards for her research in Bangladesh and abroad. She has conducted several projects on effects of food, micronutrients, psychosocial stimulation, infection, toxicants and maternal conditions on child development in Bangladesh and has over 50 publications in peer-reviewed journals. Dr. Hamadani recently published a study that looked at how poverty influences cognitive deficit among Bangladeshi children in the first five years of life.

Prof. Sylvia Kaaya serves as the dean, School of Medicine, Muhimbili University of Health and Allied Sciences in Dar es Salaam, Tanzania. She holds a doctor of medicine, Master of Science in medicine and a diploma in psychiatry. Supported by Carnegie Foundation grants, she has completed two fellowship programs in health and behavior through Harvard Medical School. Areas of expertise include mental health and adolescent sexuality, and approaches to integrating these into primary maternal and child health care. She is a member of the Advisory Committee of the National Mental Health Programme (Tanzania), secretary of the Social Science and Medicine Programme of the University of Dar es Salaam, and serves as a representative of the Academic Board in the Academic Appointments Committee. Prof. Kaaya is a member of the Medical Association of Tanzania as well as a founding member of the Mental Health Association of Tanzania.

Prof. Günther Fink is Associate Professor of International Health Economics in the Department of Global Health and Population at the Harvard T.H. Chan School of Public Health and an affiliated faculty member of the Center on the Developing Child. He holds a Ph.D. in economics from Bocconi University in Milan, Italy, as well as a Master's in applied economics from the University of Michigan. Dr. Fink's work focuses on developing and evaluating new and innovative approaches to improving child health and child development. He has worked on evaluations of national and community-based health insurance initiatives in Ghana and Burkina Faso, community-based health workers programs in Nigeria, and large-scale private and public sector initiatives to reduce the burden of malaria in Angola, Namibia, Uganda and Zambia. He is currently the PI of the Zambia Early Childhood Development Project as well as the Sao Paulo Western Region Project, two longitudinal studies exploring the long-term effects of early life adversity. He is currently also working on two cluster-randomized trials aiming at improving nutritional and early learning outcomes among children under 5 in Zambia, as well as an mHealth program designed to increase vaccination coverage in Mozambique. Dr. Fink is the recipient of grants from the Bill and Melinda Gates Foundation, the Clinton Foundation, Grant Challenges Canada and the Milton Foundation.

POSTER SESSION

Abstracts Presented at Poster Session

5:00 – 6:00 p.m. Rotunda, Joseph B. Martin Center

Are We There Yet? Assessing the Effect of Distance to Health Facilities on Maternal Health Care Utilization and Child Mortality in Developing Countries

**Mahesh Karra, Günther Fink, David Canning*

The Long Run Impact of Early Childhood Deworming: Evidence from Uganda

**Kevin Croke*

Aerobic fitness, micronutrient status, and academic achievement in Indian school-aged children

**Ishaan Desai, Virginia Chomitz, Anura Kurpad, Tinku Thomas*

A New Model for Preventing Interpersonal Violence and Supporting Early Childhood Development

**Yvette Efevbera, Dana McCoy, Theresa Betancourt*

Effectiveness of Helping Babies Breathe Training among a mixed group of healthcare providers in Rwanda

**Danielle Ehret, Cynthia F. Mann, Marietta Vazquez, Natalie McCall, Linda D. Arnold*

Makers of Environmental Etheric Dysfunction are Associated with Neurodevelopment in Tanzanian Children

**Analee Etheredge, Karim Manji, Christine McDonald, Mark Kellogg, Hao Tran, Kerri Gosselin, Andrew Gewirtz, Rodrick Kisenge, Said Aboud, David Bellinger, Enju Liu, Wafaie Fawzi, Christopher Duggan*

The Long Run Returns to Being Breastfed: Effects on Economic and Cognitive Outcomes

**Mark McGovern and Slawa Rokicki*

Global pediatric education through serious gaming: The development of virtual peritoneal dialysis simulator

**Aleksandra Olszewski, Traci Wolbrink, Daniel Hames, Mignon McCulloch, Deborah Stein, Sharon Su, Jeffery Burns*

Identifying a critical window of exposure for the effect of early life lead exposure on stunting in rural Bangladesh

**Kelsey Gleason, Anuraj Shankar, David Bellinger, Omar Sharif Ibne Hasan, Quazi Quamruzzaman, David Christiani, Maitreyi Mazumdar*

**Submitting authors*