**Human Capital Interventions Targeting Poor Children in Early Life**  
Conference at Cornell University, Ithaca, New York  
May 12-13, 2010  
Carrier Ballroom, Statler Hotel

**May 12th Agenda**  
Revised 5/11/10

**Wednesday, May 12**

8:45 a.m.  Coffees & Pastries

9:15 a.m.  Welcoming Remarks  
Ken Roberts, Robert S. Harrison Director, Inst. for the Social Sciences, Cornell University (Ithaca, NY)  
Christine Olson, ISS Persistent Poverty Team & Nutritional Sciences, Cornell University (Ithaca, NY)

**Session I: Introduction to Nutrition/Health Issues and Interventions**  
Moderator: Christine Olson, ISS Persistent Poverty Team & Nutritional Sciences, Cornell University (Ithaca, NY)

9:30 a.m.  **Nutrition in Early Life: What is Optimal?**  
Zulfiqar A. Bhutta, Pediatrics and Child Health, Aga Kahn University Medical Center (Karachi, Pakistan)

The close relationship between maternal health and nutrition in the pre-pregnancy period, fetal growth, early childhood nutrition and long term outcomes is well established. Also well recognized is the important contribution of feeding practices in early infancy to health and nutrition outcomes, including survival. The early onset of stunting in many children in low and middle income countries suggests that intrauterine growth retardation and early nutrition, especially micronutrient deficiencies may play an important role in such deviations from optimal growth, which if unaddressed in the first 24 months of life, can lead to permanent growth impairment. This presentation will focus on a summation of known risk factors for early childhood undernutrition and also summarize current knowledge on the effectiveness of interventions that can make a difference. These include intervention strategies to address maternal undernutrition and micronutrient deficiencies, early initiation of and exclusive breastfeeding promotion strategies, appropriate complementary feeding and micronutrient supplementation strategies. Data from recent reviews of long term outcomes of Gaps in current knowledge and areas for future research will be highlighted as well as issues relating fetal and early childhood nutrition to long term outcomes.

Dr. Zulfiqar A. Bhutta is Husein Laljee Dewraj Professor and Head of the Division of Maternal and Child Health, Aga Khan University, Karachi, Pakistan. He also holds adjunct professorships in International Health & Family and Community Medicine at Boston University and Tufts University. Professor Bhutta was educated at the University of Peshawar (MBBS) and Karolinska Institute, Sweden (Ph.D.). Dr. Bhutta has served as a member of the Global Advisory Committee for Health Research for the World Health Organization, the Board of Child & Health and Nutrition Initiative of Global Forum for Health Research. Dr. Bhutta has published four books, 55 book chapters, and over 320 indexed publications to date. Dr. Bhutta heads a large research team working on issues of maternal, newborn and child survival and nutrition globally and regionally.

10:15 a.m.  Discussants:  
Chris Barrett, ISS Persistent Poverty Team Leader, Applied Economics & Management, Cornell University (Ithaca, NY)  
Rebecca Stoltzfus, Nutritional Sciences, Cornell University (Ithaca, NY)

10:30 a.m.  General discussion

10:45 a.m.  Refreshments & Speakers’ Photo Shoot
Interventions in Early Life to Promote Child Development

Maureen Black, Pediatrics, University of Maryland School of Medicine (Baltimore, MD)

Children’s early development is determined by both genetic and environmental factors. This talk will review the evidence on interventions that enhance low-income children’s cognitive, psychosocial, and physical development during early life – the time of rapid physical growth and brain development. Parents provide proximal protection and nurturance, but parenting behaviors vary and are often influenced by: 1) the family’s physical resources and social context; 2) the parents’ beliefs about their child, partially influenced by the child’s temperament; and 3) culture-specific childrearing practices. For example, a low-income household may rely on low-cost, low-nutrient dense food for children; a caregiver who views the child as temperamentally difficult may resort to controlling methods; and in some cultures children are encouraged to join in family interactions; whereas, in others, they are expected to entertain themselves. Responsive caregiver behavior (contingent on the child’s behavior and developmentally appropriate) has been associated with more optimal child development than non-responsive caregiver behavior (forceful, indulgent, or uninvolved). Using validated theories of child development (developmental-ecological theory and transactional theory), evidence on effective intervention strategies, and video-taped observations, the speaker will provide the scientific basis for environmental interventions that can be implemented in communities, schools, and homes to promote early cognitive, psychosocial, and physical development.

Maureen Black, Ph.D. is the John A. Scholl MD Professor of Pediatrics at the University of Maryland School of Medicine and director of the Growth and Nutrition Clinic, an interdisciplinary clinic for children with poor growth and feeding problems. She is an adjunct professor in the Center for Human Nutrition, Johns Hopkins Bloomberg School of Public Health. Dr. Black is a pediatric psychologist who specializes in intervention research related to children’s nutrition, health, and development.

11:45 a.m. Discussants:
Marianella Casasola, Human Development, Cornell University (Ithaca, NY)
Rachel Dunifon, Policy Analysis & Management, Cornell University (Ithaca, NY)

12:00 a.m. General discussion

12:15 p.m. Lunch (Taylor Room, A & B)

Session II: Interventions in Early Life with Long-Term Effects on Children

Moderator: Matt Freedman, ISS Persistent Poverty Team & Labor Economics, Cornell University

1:30 p.m. Long-Term Effects of the Nurse Family Partnership on Children
John Eckenrode, Human Development, Cornell University (Ithaca, NY)

The Nurse Family Partnership is a program of perinatal home visiting to low income, first-time mothers. It has been often cited as a evidenced-based program for the promotion of maternal and child health and the prevention of child maltreatment and criminal behaviors. It has inspired proposed legislation in the Patient Protection and Affordable Care Act of 2010 for a national implementation of evidence-based home visiting programs. This presentation will review the results of the long-term evaluation of the program, focused primarily on data from the Elmira randomized controlled trial. It will also discuss current efforts to conduct research on the dissemination and implementation of the program.

John Eckenrode is Professor of Human Development and Director of the Family Life Development Center. He is also Director of the National Data Archive of Child Abuse and Neglect. His research concerns child abuse and neglect, the effects of preventive interventions, and stress and coping processes. He is a social/developmental psychologist (Tufts, 1979), has authored numerous journal articles and chapters, and has edited three books. He is a fellow of the American Psychological Association (Div. 7).
2:15 p.m.  Discussants:  
Daniel Lichter, ISS Poverty Team; Policy, Analysis, & Management; and Sociology Cornell University (Ithaca, NY)
Kosali Simon, Policy, Analysis, & Management, Cornell University (Ithaca, NY)

2:30 p.m.  General discussion

2:45 pm.  Refreshments

3:00 p.m.  **Long-Term Effects of an Early Life Intervention in Guatemala**  
Reynaldo Martorell, Hubert Department of Global Health, Rollins School of Public Health, Emory University (Atlanta, GA)

Key findings about the long term impact of a nutrition intervention carried out by the Institute of Nutrition of Central America and Panama (INCAP) from 1969 to 1977 will be presented. Substantial impact on adult human capital and on economic productivity was found in follow up studies in 1988-89 and 2002-04. The 1988-89 study showed that adult body size and work capacity were increased for those provided improved nutrition through age 3 y, while the 2002-04 follow-up showed that schooling was increased in women and that reading comprehension and intelligence were increased in both men and women. Participants were 26 to 42 y of age at the time of the 2002-04 follow-up, facilitating the assessment of economic productivity. Wages of men were increased by 46% in those provided with improved nutrition through age 2 y. Findings for cardiovascular disease risk factors were heterogeneous; however, they suggest that improved nutrition in early life is unlikely to increase cardiovascular disease risk later in life and may indeed lower risk. In conclusion, the substantial improvement in adult human capital and economic productivity resulting from the nutrition intervention provides a powerful argument for promoting improvements in nutrition in pregnant women and young children.

Reynaldo Martorell, a native of Honduras, is the Robert W. Woodruff professor of International Nutrition at Emory University. He is a Director of the Nevin Scrinshaw International Nutrition Foundation and serves on the Standing Committee on Childhood Obesity Prevention of the Institute of Medicine, of which he is an elected member. Previously, Dr. Martorell held positions at Cornell and Stanford universities and at the Institute of Nutrition of Central America and Panama (INCAP) in Guatemala.

3:45 p.m.  Discussants:  
James Berry, Economics, Cornell University (Ithaca, NY)
Jere Haas, Nutritional Sciences, Cornell University (Ithaca, NY)

4:00 p.m.  General discussion

4:15 p.m.  End of program for the day

6:30 pm.  Dinner for Speakers, Discussants, & ISS Team Members (Castello Banfi Room, Taverna Banfi, Statler Hotel)