



THE AGA KHAN UNIVERSITY

Institute for Human Development

**Investing in Early Childhood Development
for a Better World**

**CONFERENCE PROGRAMME AND
ABSTRACTS**

February 12-14, 2015 – Nairobi, Kenya

**An interdisciplinary conference for researchers, practitioners,
policy makers, programme designers, students, governmental and
non-governmental agencies, and civil society leaders.**

About AKU

Aga Khan University was established in 1983 as an international university with an objective to promote human welfare in general, and the welfare of the people in the countries in which it operates, by disseminating knowledge and providing instruction, training, research and service in the health sciences, education and such other branches of learning as the University may determine.

As an international institution, the University has 11 campuses and teaching sites spread over 8 countries in Asia, Africa and Europe.

AKU is a non-denominational institution open to all, irrespective of religion, ethnicity, gender or national origin. It has a diversified workforce of over 10,000 employees worldwide.

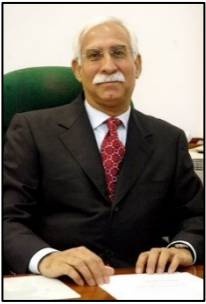
About IHD

The Institute for Human Development is a system-wide research and development entity encompassing AKU and the wider Aga Khan Development Network. Its vision is to build capacity and drive innovation in research and higher education, to produce and disseminate new knowledge of human development that advances the quality of individual lives and contributes to the building of successful pluralistic societies, with a particular focus on resource-poor regions of the world.

IHD's four-fold mission is to generate new knowledge through basic and applied research; apply knowledge from research to inform programmes, services, and practices; influence policy formulation and implementation in ways that reap the benefits of the systematic research produced at the institute and elsewhere; and deliver educational programmes at multiples levels of study to prepare a wide range of human development specialists and professionals.

Messages from the President and Provost of Aga Khan University

President Firoz Rasul



The Institute for Human Development (IHD) at Aga Khan University is the result of the vision of His Highness the Aga Khan that achieving a high quality of life is predicated on understanding and supporting early human development. The late Dr. Fraser Mustard, a former Aga Khan University trustee, was a pioneer in this field and also a leading force in the development of this Institute. Harnessing and advancing the knowledge of human development, particularly the earliest years of a child's development, are vital to improving the living standards in the developing world and, in doing so, helping to build successful civil and pluralistic societies - something that is much needed in today's world. I know this inaugural IHD conference, which brings together some of the leading scholars and professionals in this endeavour, will propel us towards fulfilling the vision of the Institute. I hope the ideas, the research findings, and the dialogue that you engage in will lead to tangible changes in societies everywhere. On behalf of Aga Khan University, I welcome you to this conference.

Provost Greg Moran



Human development lies at the heart of the mission and work of the Aga Khan Development Network. Based at Aga Khan University, the Institute for Human Development quite naturally includes individuals and draws its strength from agencies from across the AKDN. The inaugural conference and launch of the Institute for Human Development mark a much anticipated and celebrated event for all of us. The term "human development" in the context of the AKDN and IHD is far from neutral. Our aspiration is to support adaptive development so that individuals, families, communities and societies are more able to fulfill their desire to achieve a quality of life that is healthier, more prosperous and features all the marks of an open, pluralistic and tolerant civil society. To play its part in this task, the IHD must work to better understand the complex processes of human development and translate this knowledge in a manner that successfully addresses the many challenges facing the regions in which we work. It is my great pleasure to welcome all to this conference. I am sure that your time here will be amicable, stimulating, and productive.

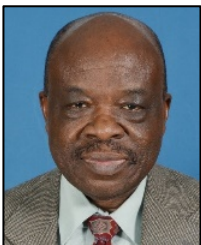
Messages from the Dean of Research and Graduate Studies and IHD Foundation Director

Dean of Research and Graduate Studies El-Nasir Lalani



I welcome you to the inaugural conference of the Aga Khan University - Institute for Human Development. One of the primary aims of the conference is to spark within you a passion to examine the complex and evolving nature of the genetic-sociological-ecological triumvirate that influences physical, social, emotional, and cognitive development of individuals, especially during the early years of life. Understanding the complex interactions within and between these networks, involving the individual, family, community, society and neural development, demands collaboration across academic disciplines (e.g., medicine, nursing, neurosciences, the basic sciences, and the social and behavioral sciences). In bringing together faculty, researchers, students, and our external constituencies to rethink approaches to research, this conference should facilitate our understanding of the various networks and the interconnectedness that contribute to disparities in health and development. I hope you will find the conference and its proceedings stimulating and refreshing.

Institute for Human Development Foundation Director Kofi Marfo



When we look back decades from now to take stock of the success of this new Institute, my desire is for that success to be manifested not just in the amount of knowledge generated and disseminated. That success must also be evident in the breadth and magnitude of our commitment to foster and sustain partnerships across sectors and stakeholder groups within our local contexts to ensure that the science we generate is put to practical use to inform policy, develop innovative professional programmes, and enhance the quality of services for children, families and communities. I hope we have begun to make that commitment by wrapping our strategic planning and inaugural events around an open conference through which we are able to present to you—our future partners in the service of young children and a better world—speakers invited from multiple fields and disciplines who will be sharing their work and perspectives on significant issues within the field of early human development. May your enthusiastic response to this conference be rewarded with continuing engagements beyond this single event!

Conference Schedule

DAY 1 - THURSDAY, FEBRUARY 12

07:30-08:30	REGISTRATION
08:30-09:15 Bougainville Room	GREETINGS AND WELCOME Provost Greg Moran and IHD Director Kofi Marfo
09:15-10:00 Bougainville Room	KEYNOTE ADDRESS <i>Chair:</i> Greg Moran, Aga Khan University The 1st 2000 days: Establishing trajectories to life-long health, learning and social functioning. Stephen Lye, Fraser Mustard Institute for Human Development, University of Toronto, Canada
10:00-11:00 Bougainville Room	PLENARY ADDRESSES <i>Chair:</i> Robert Armstrong, Aga Khan University Environmental influences on early brain development: Research to intervention. Stephen Matthews, Fraser Mustard Institute for Human Development, University of Toronto, Canada Effect of in-utero environment on brain and cardiac programming: Implications for early childhood development and long-term disease risk. Nuruddin Mohammed, Aga Khan University
11:00-11:15	COFFEE & TEA BREAK
11:15-12:15 Bougainville Room	PLENARY ADDRESSES <i>Chair:</i> Mary Adam, Kijabe Hospital, Kenya Promoting optimal childhood development: Understanding the in-utero environment. Alan Bocking, Fraser Mustard Institute for Human Development, University of Toronto, Canada Saving brains: Innovation is the path, impact is the destination. Karlee Silver, Grand Challenges Canada
12:15-13:15	LUNCH
13:20-13:50 Bougainville Room	PLENARY ADDRESS <i>Chair:</i> Tashmin Khamis, Aga Khan University Integration of care for child development in health and nutrition services: What we know and what we need to learn to move forward? Aisha Yousafzai, Aga Khan University
13:55-15:10 Bougainville Room	PLENARY SYMPOSIUM - Advances in Metrics for Child Development: Addressing Contextualization and Individual Variations <i>Chair:</i> Patricia Kitsao-Wekulo, Aga Khan University IHD; <i>Discussant:</i> Eva Nderu, RTI Measuring the contextualization of child assessment tools. Penny Holding, Aga Khan University - Institute for Human Development

iSakham: a technology platform for accelerating child development in disadvantaged communities.

Aarti Kumar, The Thrival Lab at Community Empowerment Lab, Shivgarh, India

Biopsychosocial measures of child development

Barak Morgan, University of Cape Town, South Africa

15:10-15:25	COFFEE & TEA BREAK
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15:30-16:45	CONCURRENT SESSIONS
15:30-16:45 Bougainville Room	DAY 1, SESSION ONE <i>Chair:</i> Janet Jamieson, Red River College, Canada <ol style="list-style-type: none">A bird's eye view: Identified gaps in the delivery of Early Child Development programmes and services in five East African countries. Alastair van Heerden (Human Sciences Research Council), with Linda Richter, Julia Louw, Chris Desmond, Tawanda Makusha, Celia Hsiao, Sara Naicker & Charlotte RampathyChild-to-Child: Renewing a practical, integrated rights based approach for participation in Early Childhood Development. Tashmin Kassam Khamis (Aga Khan University) with Sadia Muzaffar BhuttaA pilot home-visiting Early Childhood Development service for young children and their families in Bosnia-Herzegovina: Sharing lessons for programme evaluation. Muneera A. Rasheed (Aga Khan University), with Valentina Vujinic, Selena Bajraktarevic, Alma Herenda, Aisha K. Yousafzai

15:30-16:45 Mt. Kenya C Room	DAY 1, SESSION TWO <i>Chair:</i> Almina Pardhan, Aga Khan University <ol style="list-style-type: none">Development of online/blended learning course on "Inclusive education: Disability and gender issues." Kausar Waqar (Aga Khan University)Linking research, policy and practice: A case study from Rwanda. Huma Ahmar (Aga Khan University) with Talemwa Benon, Gladys Mutavu, Immaculee Kayitare, Hugh Delaney, Arpana Pandey, Oliver Petrovic, Aisha K YousafzaiDriving the use of data for decision-making to the community level - results of a field test of the Information for Action mobile phone application in Kenya. Debjeet Sen (Maternal & Child Health/Nutrition, PATH) with Alastair van Heerden
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15:30-16:45 Mt. Kenya D Room	DAY 1, SESSION THREE <i>Chair:</i> Amina Abubakar, Lancaster University & KEMRI, Kenya <ol style="list-style-type: none">Psychomotor development up to 24 months: Measurement issues and sources of variability in an HIV-exposed population. Patricia Kitsao-Wekulo (Aga Khan University) with Penny Holding & Christopher KingChallenges of developmental assessment in local African contexts: The case of assessment. Dabie Nabuzoka (University of Zambia)Developing valid measures of parent-child relationships in Uganda, combining emic and ethic constructs. Flavia Zalwango (Medical Research Council, Uganda) with Godfrey Siu, Jonathan Levin, Janet Seeley & Daniel Wight
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POSTER & MEDIA SESSIONS

1. **Beyond PMTCT: Early Childhood Development activities for mothers with HIV.**
Adele Clark (Catholic Relief Services) with Josephine Ferla
2. **The design and initial testing of a parenting programme in Uganda for early prevention of gender-based violence.**
Daniel Wight (Medical Research Council Social and Public Health Sciences Unit) with Godfrey Siu, Flavia Zalwango, Janet Seeley & Sarah Kasule
3. **EFA promising practices in the Asia-Pacific region: A case study of initiatives to accelerate progress in Bangladesh.**
Mahmuda Akhter, Institute of Child and Human Development
4. **Station Days: bringing the clinic to the community and the community to the clinic.**
Fidelis Muthoni, Catholic Relief Services
5. **Antecedents and consequences of parental satisfaction with pre-primary education in Kenya: A case of Bondo district in Siaya county.**
Abiero Moses Omondi (St Paul University) with Begi Nyakwara
6. **Evaluation of national curriculum for Early Childhood Education for building national cohesion.**
Seema Zinulabdin Lasi (Aga Khan University)
7. **Assessment of depression and social support for mothers of young children: Contextual considerations for ECD programming.**
Tobias Opiyo (Catholic Relief Services) with Fidelis Muthoni
8. **PATH's approach to integrating ECD into health systems—results from the first phase of piloting and plans for the way forward.**
Immaculate Salaon (PATH)
9. **Mapping opportunities in the health system in Mozambique for integrating ECD services into health service delivery.**
Svetlana K. Drivdale (PATH, Mozambique)
10. **Parental and community involvement in children's literacy development: meeting the needs of vulnerable children.**
Mary Oluga (Aga Khan University)
11. **Case study: Complimentary Early Childhood Development (ECD) services for reaching the hardest-to-reach children and their families with quality services in Nairobi and Coast regions in Kenya.**
Damaris Wambua (Child Fund Kenya) with Regina Mwasambo
12. **Utilizing local funds of knowledge in early years care and education in Tanzania.**
Shelina Walli (Aga Khan University)
13. **The Promise of preschool access: A gendered mapping across counties in Kenya.**
Izel Kipruto (Twaweza East Africa) with Anil Khamis (University College London Institute of Education) and John Kabutha Mugo (Twaweza East Africa)
14. **Holistic preschool model – Madrasa Early Childhood Programme.**
Najma Rashid (AKF-East Africa) with Drisa Matovu
15. **Cost effective and quality child care centre.**
Asifa Nurani (AKF-East Africa) with Nafisa Shekhova

16. A sustainable and scalable new business model for holistic ECD.

Afzal Habib (Kidogo) with Sabrina Premji and Sheela Bowler

MEDIA PRESENTATION

17. Expanding access to a proven early stimulation program through a web-based package and technical support.

Joanne Smith (University of the West Indies) with Christine Powell, Susan Chang-Lopez, Sally McGregor & Susan Walker

17:50-18:30

COFFEE & TEA BREAK

18:30-20:00
Bougainville
Room

**OFFICIAL RECEPTION AND LAUNCH OF AGA KHAN UNIVERSITY -
INSTITUTE FOR HUMAN DEVELOPMENT**

Reception with appetizers and cash bar followed by the launch.

DAY 2 - FRIDAY, FEBRUARY 13

08:30-09:15 Bougainville Room	KEYNOTE ADDRESS <i>Chair:</i> Lynette Okengo, African Network on ECD Optimising child development in Africa: Challenges of marshaling evidence. Robert Serpell, University of Zambia
09:20-09:50 Bougainville Room	PLENARY ADDRESS <i>Chair:</i> Louise Gordon, Red River College, Canada The Jamaica early child development intervention: Efficacy to global impact. Susan Walker, Tropical Medicine Research Institute at The University of the West Indies, Jamaica
09:55-10:25 Bougainville Room	PLENARY ROUND TABLE <i>Chair:</i> Caroline Arnold, Aga Khan Foundation, Geneva International collaborations to advance understanding of the science of early child development: Past, present and future. Sheila Manji, Aga Khan Foundation, Switzerland & Aga Khan University - Institute for Human Development Janet Jamieson, Red River College, Canada
10:25-10:40	COFFEE & TEA BREAK
10:40-11:10 Bougainville Room	PLENARY ADDRESS <i>Chair:</i> Dana Basnight-Brown, US International University, Nairobi Understanding the context of child welfare services: Importance of an ecological approach. Barbara Fallon, Fraser Mustard Institute for Human Development, University of Toronto, Canada
11:15-12:15 Bougainville Room	PLENARY ADDRESSES - Developmental issues in the lives of children with/affected by HIV and AIDS <i>Chair:</i> Linda Richter, HSRC/University of Witwatersrand The role of cumulative psychosocial risk in shaping neurocognitive and mental health outcomes of HIV-affected adolescents in Kenya Amina Abubakar, Lancaster University, UK and KEMRI/WTRP, Kenya Modelling the impact of adult HIV and AIDS on children Chris Desmond, Human Sciences Research Council, South Africa
12:15– 13:15	LUNCH
13:20-13:50 Bougainville Room	PLENARY ADDRESS <i>Chair:</i> Penny Holding, Aga Khan University Parenting and the new science of child development. Linda Richter, DST-NRF Centre of Excellence in Human Development

13:55-15:10
Bougainville
Room

PLENARY SYMPOSIUM - Institutional Partnerships for Human Development (IPHD) field studies in early human development
Chair: Alex Awiti, Aga Khan University

Developmental health status and school readiness of children in Karachi, Pakistan.
Ghazala Rafique, Aga Khan University

Research to enhance Babycare enterprises through social franchising in Kenya.
Michaela Mantel, Aga Khan University

Designing and implementing an innovative home-school literacy research intervention in Pakistan: Possibilities and challenges.
Almina Pardhan, Aga Khan University

Beyond ABC: The complexities of early childhood education in Tanzania
Pauline Rea-Dickins, Aga Khan University

15:15-15:30

COFFEE & TEA BREAK

15:35-16:55
Bougainville
Room

PLENARY FOUNDATIONS ROUND TABLE - Private Foundations and early childhood development in low- and middle-income countries
Chair: Kofi Marfo, Aga Khan University

The Conrad N. Hilton Foundation and early childhood development.
Lisa Bohmer, International Programmes

The Open Society Foundation and early childhood development.
Tina Hyder, Early Childhood Programme

The Bernard van Leer Foundation and early childhood development.
Karisia Gichuke, East Africa Programme Office

The Aga Khan Foundation and early childhood development.
Shem Ochola, Regional Policy and Partnerships

Accordia Global Health Foundation and integrated approaches to promoting child wellbeing.
Alex G. Coutinho, Launch team member, The Institute for Child Wellness in Africa

17:00-18:15

CONCURRENT SESSIONS

17:00-18:15
Bougainville
Room

DAY 2, SESSION ONE
Chair: Anil Khamis, University College London Institute of Education

a. Pedagogical value of play in promoting African culture in early childhood education in pastoralist communities of Kenya.
John Teria Ng'asike (Mount Kenya University)

b. Development of guide manual for child centered community development in emergencies.
Kausar Waqar (Aga Khan University)

17:00-18:15
Mt. Kenya C
Room

DAY 2, SESSION TWO

Chair: Ghazala Rafique, Aga Khan University

- a. **Influence of professional development on early childhood teachers' beliefs and practices about literacy development in Balochistan, Pakistan.**
Almina Pardhan (Aga Khan University) with Cassandra Fernandes-Faria
 - b. **Literacy development baseline for the 3-8 year olds in Southern Tanzania: What parents and teachers know about their children's literacy development.**
Marriote Ngwaru (Aga Khan University)
 - c. **Impact of preschool education on school readiness and first grade achievement in Afghanistan.**
Shekufeh Zonji (Afghanistan) with Frances Aboud (McGill University, Canada)
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17:00-18:15
Mt. Kenya D
Room

DAY 2, SESSION THREE

Chair: Patricia Kitsao-Wekulo, Aga Khan University

- a. **Research partnership for building capacity of assessors to conduct quality adaptation of early child development assessments: A case study from Haydom, Tanzania.**
Muneera A. Rasheed(Aga Khan University) with Saima Siyal, Ladislaus Blacy, Eliwaza Bayo, John Paschal, Aisha K. Yousafzai & Erling Svensen
- b. **'Care for Development' Appraisal Tool (CDA) for assessing and monitoring child development during first three years: Development, reliability and validity of an indigenous tool.**
Sanober Nadeem (Aga Khan University) with Ghazala Rafique
- c. **The Zambia Child Assessment Test (ZamCAT): Development and use in three African countries.**
Beatrice Matafwali (University of Zambia) with Zanele Sibanda & Sadaf Shallwani

DAY 3 - SATURDAY, FEBRUARY 14

08:30-09:15 Bougainville Room	PLENARY ADDRESS <i>Chair:</i> Pablo Stansberry, UNICEF, East Africa Connecting use of data, research and practice in the majority world: Are we doing it? Are we looking at what's important or what's easy to measure? Caroline Arnold, Aga Khan Foundation, Switzerland
09:20-09:50 Bougainville Room	PLENARY ADDRESS <i>Chair:</i> Kweku Bentil, Aga Khan University Promoting ECD Capacity in sub-Saharan Africa. Alan Pence, University of Victoria, Canada
09:55-10:25 Bougainville Room	PLENARY ADDRESS <i>Chair:</i> Alan Bocking, University of Toronto, Canada Global child health and development: Challenges and opportunities post-2015. Zulfiqar Bhutta, Aga Khan University & Hospital for Sick Children, Toronto, Canada
10:25-10:40	COFFEE & TEA BREAK
10:40-11:40 Bougainville Room	PLENARY ADDRESSES - Muslim preschool developmental and education programs, Azim Nanji, Aga Khan University, Anil Khamis, University College London-Institute of Education <i>Chair:</i> Aisha Yousafzai, Aga Khan University Azim Nanji, Aga Khan University Anil Khamis, University College London - Institute of Education
11:45-12:30 Bougainville Room	CLOSING KEYNOTE ADDRESS <i>Chair:</i> Azim Nanji, Aga Khan University Child development and disability: Opportunity and responsibility. Robert Armstrong, Aga Khan University
12:30-12:45 Bougainville Room	REMARKS BY HIS EXCELLENCY DAVID ANGELL, HIGH COMMISSIONER FOR CANADA Introduction by Provost Greg Moran CLOSING REMARKS & VOTE OF THANKS Kofi Marfo, Foundation Director, Institute for Human Development
12:45-13:30	LUNCH

Plenary Session Biographical Sketches

Alphabetical by last name

Dr. A. Amina Abubakar
Lancaster University, UK and
KEMRI/WTRP, Kenya



Dr. Amina Abubakar is a psychologist with training in cross-cultural, educational, and paediatric psychology. In 2008 she received her doctorate from Tilburg University in the

Netherlands. Her research focuses on three broad areas. First is the study of children who are at risk of experiencing developmental delays and impairments, specifically due to exposure to HIV, malnutrition and malaria. Her main interests are in: a) quantifying the neurocognitive burden of early childhood diseases; b) developing culturally appropriate psychological measures for use in Africa; and c) identifying culturally appropriate intervention strategies for at-risk children in SSA. Second, she is interested in examining the prevalence of, and risk factors for, neurodevelopmental disorders (specifically autism) within the African context. Third, alongside collaborators working in diverse cultural contexts, she is developing a line of research to investigate the impact of contextual factors on wellbeing (mental health, life satisfaction and identity formation) among adolescents. She has received support for her work through various funding agencies, including the National Institutes of Health (USA), the Netherlands Research Organization, the European Research Agency, the Thrasher Foundation (USA) and the Jacobs Foundation (Switzerland). She has been an invited guest lecturer and participated in workshops in various countries such as Cameroon, Netherlands, Germany, Spain, France, Indonesia, South Africa, China, USA and New Zealand. Dr. Abubakar has been a consultant on technical workshops and committees for various agencies, including Save the Children, WHO, and the Pan African Network on Parenting. She currently serves on the executive committee for the Institute of Medicine/National Academy of Science Forum on Investing in Young Children Globally. She has (co)-authored more than 50 academic articles and book chapters.

Dr. Robert Armstrong
Aga Khan University - Medical College, East
Africa



Professor Robert Armstrong joined the Aga Khan University in June 2010 as the Abdul Sultan Jamal Professor of Paediatrics and the Foundation Dean of the Medical College in the Faculty of

Health Sciences at the Aga Khan University in East Africa. Professor Armstrong completed a BSc degree from Simon Fraser University, an MD from McMaster University and MSc and PhD in Human Growth and Development from McMaster University. He did specialty training in Paediatrics and sub-speciality training in Developmental Paediatrics at McMaster University and the University of British Columbia. Prior to joining AKU, Professor Armstrong was Professor and Head, Department of Paediatrics at the University of British Columbia and Chief, Paediatric Medicine at BC Children's & Women's Hospital. His other appointments included Associate Faculty, School of Population and Public Health and Senior Associate Clinical Scientist at the Child and Family Research Institute. He is an Emeritus Professor of Paediatrics at the University of British Columbia. Professor Armstrong's clinical and research interests are in the area of childhood disability, development of population-based strategies for prevention of developmental disorders and clinical and health services strategies for improving outcomes of children with disabilities. He is a Fellow of the Society for Paediatric Research, is past President of the American Academy of Cerebral Palsy and Developmental Medicine. He is on the Steering Committee to establish an International Academy of Child Disability. He is on the Standing Committee of the International Paediatric Society as President of the International Paediatric Academic Leaders Association (IPALA) and is a member of the Steering Committee of the Association for Academic Health Centres International. In 2010 he was appointed a Fellow of the Canadian College of Health Sciences.

Dr. Caroline Arnold
Aga Khan Foundation, Switzerland



Caroline Arnold is the Director of Education at the Aga Khan Foundation (AKF), based in Geneva overseeing the education and early childhood portfolio across 17 countries in South and Central Asia, Eastern and West Africa, the Middle East and Europe. She has been with the Aga Khan Development Network for 10 years and has worked in Early Childhood Development and Education for over three decades, spending two-thirds of that time living and working in South Asia and East Africa. She has held a variety of senior positions, both technical and managerial, with UNICEF, Save the Children and Action Aid in East Africa, Asia and the Pacific. Caroline also worked at the Institute of Child Health in London and at the University of the South Pacific, and established a school for children with disabilities in Nairobi. Committed to bridging research and practice she contributes to multiple policy fora – national and international, and is the author of numerous publications (research studies (including both child-rearing and ECD programme impact studies), policy articles, handbooks (both research and programme training manuals) in the areas of Early Childhood Development, Transitions, Children’s Learning, Community-Based Rehabilitation, Inclusive Education, and State/ Non-state partnerships. Most recently she and colleagues were commissioned by the Education for All Global Monitoring Report to contribute a paper reviewing trends in public and private early childhood provision in low and middle income countries and the implications for policy.

Dr. Zulfiqar A. Bhutta
Aga Khan University and the Hospital for Sick Children / University of Toronto



Professor Zulfiqar A. Bhutta is the Robert Harding Inaugural Chair in Global Child Health at the Hospital for Sick Children, Toronto, co-Director of the SickKids center for Global Child Health, and Founding Director of the Center of Excellence in Women and Child Health at Aga Khan University, Pakistan. He holds adjunct professorships at Schools of Public Health at Johns Hopkins University, Tufts University, University of Alberta and the London School of Hygiene & Tropical Medicine. He is a designated Distinguished National Professor of the Government of Pakistan and was the Founding Chair of the National Research Ethics Committee of the

Government of Pakistan from 2003-2014. He is a member of the independent Expert Review Group of seven scholars appointed by the UN Secretary-General to monitor global progress in maternal and child health MDGs. He represents global academic and research organizations on the Global Alliance for Vaccines and Immunizations (GAVI) Board, is co-Chair of the Maternal and Child Health oversight committee of WHO EMRO as well as the Global Countdown for 2015 Steering Group. Professor Bhutta was educated at the University of Peshawar (MBBS) and obtained his PhD from the Karolinska Institute, Sweden. He is a Fellow of the Royal College of Physicians (Edinburgh & London), the Royal College of Paediatrics and Child Health (London), American Academy of Pediatrics, and the Pakistan Academy of Sciences. Dr. Bhutta is on several international editorial boards, including the Lancet, BMJ, PLoS Medicine, PLoS ONE, BMC Public Health, and the Cochrane ARI group. He has published six books, 65 book chapters, and over 500 indexed publications to date. A leading scholar for Lancet series on Child Survival (2003), Newborn Survival (2005), Undernutrition (2008), Primary Care (2008), and others, Dr. Bhutta leads a large Pakistan-based research group with special interest in research synthesis, scale-up of evidence based interventions, and health-systems implementation research.

Dr. Alan Bocking
University of Toronto, Canada



Dr. Bocking is Professor and former Gordon C. Leitch Chair of Obstetrics and Gynaecology and Physiology at the University of Toronto and Associate Scientist at the Lunenfeld-Tanenbaum Research Institute, Mount Sinai Hospital. A Fellow of the Royal College of Physicians and Surgeons of Canada, the Society of Obstetrics and Gynaecology of Canada and the American Gynecological and Obstetrical Society, he is a Past President of the Canadian Association of Academic Professionals in Obstetrics and Gynaecology. Dr. Bocking’s main areas of study are the mechanisms underlying infection-mediated preterm labour including the role of the vaginal microbiome. His other research interests include developing new diagnostic tests for preterm labour, understanding the mechanisms underlying Fetal Alcohol Spectrum Disorder as well as creating research infrastructures to study the developmental origins of health and disease. He currently chairs the Steering Committee for the Ontario Birth Study based at Mount Sinai Hospital, Toronto. He has published over 100 peer-reviewed articles on his research findings. He was the Founding

Director of the Academic Model for Provision of Access to Health Care – Reproductive Health Program, (AMPATH-RH) from 2008 – 2014 and has contributed significantly to the enhancement of Clinical Care, Research and Teaching in the Department of Reproductive Health at Moi University School of Medicine in Eldoret, Kenya. Dr. Bocking is a member of the Board of Directors of the Maternal Infant, Child and Youth Research Network, Vice-President of the Molly Towell Perinatal Research Foundation and is a member of the Advisory Board of the CIHR Institute of Human Development, Child and Youth Health. He has recently taken on the role of Scientific Advisor for the Canada Fetal Alcohol Spectrum Disorder Research Network (CanFASD).

Lisa Bohmer

Conrad N. Hilton Foundation



Lisa Bohmer is Senior Program Officer at the Conrad N. Hilton Foundation, where she leads the Foundation's Children Affected by HIV and AIDS Strategic Initiative to integrate early childhood development as part of a holistic

package of services for young children and families in East and Southern Africa. Bohmer holds a Master of Public Health from UCLA.

Dr. Alex Coutinho

The Accordia Global Health Foundation



Dr Alex Coutinho is a public health physician who for the past 32 years has been engaged with HIV/AIDS in Swaziland and Uganda and in the past 14 years has been the executive director of TASO and then the IDI at Makerere University. He was also

part of the founding board of the global fund. Alex received the Hideyo Noguchi Africa prize for medical services in 2013 from the Japanese government. He is currently the chair of the board of the International AIDS vaccine initiative - IAVI. Since October 2014 Alex has been supporting Ebola preparedness in Nigeria. He is also working with Accordia to launch the integrated child wellness center in Malawi. In addition he is working with UCSF to launch their pre-term birth initiative - PTBi - in Uganda Kenya and Rwanda.

Dr. Chris Desmond

Human Sciences Research Council, South Africa



Dr. Chris Desmond is a Research Director at the Human and Social Development Research Programme at the Human Sciences Research Council, South Africa. His work has focused on children affected by HIV and AIDS, early childhood development and economic evaluation. More recently, Dr. Desmond has started to examine the possibility of modelling child development and the potential uses of behavioral economics in primary health care. Dr. Desmond holds a PhD from the London School of Economics. Prior to working at the HSRC, he was a research associate at the FXB Center for Health and Human Rights, Harvard University, and the Department of Social Medicine at Harvard Medical School, and a Senior Researcher at both the Development Pathways to Health Research Unit at Wits University and the Health Economics and HIV/AIDS Research Division at the University of KwaZulu-Natal.

Dr. Barbara Fallon

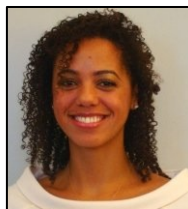
University of Toronto, Canada



Dr. Barbara Fallon is Associate Professor and Director of the PhD Program at the Factor-Inwentash Faculty of Social Work, University of Toronto. Dr. Fallon is also the Factor-Inwentash Chair in Child Welfare and the Director of Knowledge Mobilization for the Fraser Mustard Institute for Human Development. Dr. Fallon's research interests include international comparisons of child protection systems and the contribution of worker and organizational characteristics to child welfare decision-making. Her research focuses on alleviating the burden of suffering for children and families identified and served by the child welfare system. Dr. Fallon is currently the Principal Investigator of the Ontario Incidence Study of Reported Child Abuse and Neglect (OIS) 2013 and the Ontario Child Abuse and Neglect Data System. She was the Director of the Canadian Incidence Study of Reported Child Abuse and Neglect 2008 (CIS-2008) and managed two previous cycles of the study. Dr. Fallon has contributed to key policy implementations through her research. In particular, Dr. Fallon's findings have led to the introduction of differential response models and specialized intimate partner violence teams. Her research has also informed both front-line child welfare workers and policymakers in understanding the use of risk assessments in child protection

investigations and opportunities for early intervention and prevention for children at risk of maltreatment. In 2009 she was awarded the Child Welfare League of Canada's Outstanding Research and Evaluation Award.

Karisia Gichuke
Bernard van Leer Foundation



Karisia is the East Africa Programme Officer at the Bernard van Leer Foundation, a grant maker working to improve opportunities for children under eight growing up in socially and economically difficult

circumstances. Prior to joining BvLF, Karisia worked for the Corporation of London's charitable foundation, and for The Diana, Princess of Wales Memorial Fund.

Dr. Penny Holding
Aga Khan University - Institute for Human Development



Dr. Holding's career as a developmental psychologist has focused on the exploration of the sources of variability in outcome observed following exposure to environmental and health risks. All investigations have been centred in the majority world, exploring the impact upon child development and family wellbeing of HIV and other infectious diseases, as well as evaluating nutritional interventions. Given the complexity of the social and health context investigations have drawn upon the strength of multi-disciplinary teams, and have integrated training in assessment and research methods relevant to low and middle-income settings. Working in the context of limited resources has dictated the need to develop an appropriate methodology to measure and evaluate development and change. For over two decades Dr. Holding has been involved in adapting, developing and evaluating evaluation techniques which can be applied to both rural and urban settings in sub-Saharan African and Asia, populations for whom a suitable methodology is limited. The battery of assessment tools that have been developed, beginning with the early years assessment, have been used in many different settings, and include tasks measuring information processing, memory, reasoning, motor-co-ordination, as well as checklists and questionnaires addressing the development of psychomotor skills, social emotional development, behaviour problems, social and family status. Recent initiatives have seen the development of the use of e-technology in assessment and home-based interventions, with the

intention of bringing novel approaches to implementation of family wellbeing centres, with an M&E framework that has an integral part in stimulating improved quality of delivery.

Tina Hyder
Open Society Foundations



Tina Hyder is Deputy Director of the Early Childhood Program of the Open Society Foundations (OSF), based in London, and leads OSF's early childhood development projects and grants in Africa and Asia. Prior to joining OSF in 2009 Tina was a Global Adviser for Save the Children, supporting work in more than 50 country offices around the world.

Janet Jamieson
Red River College, Winnipeg, Canada



Janet Jamieson is Research Chair at the School of Health Sciences and Community Services at Red River College in Winnipeg, Manitoba, Canada. She has had a longstanding interest in community partnerships and educational media. Janet is currently responsible for a number of projects including the Science of Early Child Development (www.scienceofecd.com) project, a knowledge mobilization initiative aimed at making current research accessible to anyone interested in learning more about the profound impact of the early years on lifelong health and well-being. Red River College has had a long collaboration with the Aga Khan Foundation in this project, including developing an international version with video of ECD programs around the world, creating and supporting delivery of an online course that has drawn participants and instructors from across the network, and more recently developing offline resources for different audiences. Other projects include a recently completed preprimary teacher intervention in Bangladesh in partnership with AKF (B), the implementation of the Abecedarian approach in child care programs with high numbers of vulnerable children in Winnipeg, the production of public messaging videos for parents and the Canadian implementation of the International Survey of Children's Well-being, a rights-based study with self-reporting by school-age children. Janet completed her undergraduate education at Queen's University and her MA in Child Study and Education at the University of Toronto.

Dr. Anil Khamis
University College London - Institute for Education



Dr. Khamis was educated in Canada and England. He has researched on education and development in East Africa and South and Central Asia for over two decades with expertise in access and alternatives to formal

education. His research interests and publications cover school improvement, teacher education, and educational change with respect to developing countries; research methods; and education for disadvantaged/at-risk communities, with special reference to Muslim communities. He served as a member of faculty at the founding of The Aga Khan University-Institute for Educational Development in Pakistan for six years before joining the Department of Education and International Development (University College London-Institute of Education) in 2002 to serve as the MA Course Leader (Education and International Development). He was the International Coordinator for the Faculty of Policy and Society, supervises higher degree research candidates, and is active in collaborations and partnership initiatives to promote the Millennium Development Goals including Education for All. Dr. Khamis has worked in over 30 countries. Currently based in Nairobi and London, he is engaged with research and development having contributed to the work of MoEST Kenya, UNICEF Somalia, UNICEF WCARO, DFID, British Council, Swiss Development Corporation, Norwegian Refugee Council, the Kenya National Examinations Council, Uwezo and Twaweza, the Adam Smith Institute, and the Aga Khan Foundation. He serves as Chair of the Women's Education Researchers of Kenya WASICHANA WOTE WASOME (WWW 'Let All Girls Learn') programme Advisory Board.

Aarti Kumar
Community Empowerment Lab, India



Aarti Kumar leads the Thrival Lab at Community Empowerment Lab, Shivgarh, India. Aarti has been working on advancing the science on newborn survival and behavior change in community settings, and has been at the forefront of leveraging technology for

neurodevelopmental assessment and early child development through lay workers in community settings. At the Thrival Lab, Aarti is currently focused on integrating the science of early child development with technology, community behaviors

and social business to develop a sustainable model for enabling children in disadvantaged communities to thrive. Prior to committing herself to global health in 2007, Aarti has worked in the corporate sector in the areas of e-business consulting and business process management. Aarti has a master's degree in Bioinformatics, specializing in fuzzy neural networks, machine learning and genomics. She has several publications in international peer-reviewed journals, including IEEE Transactions and The Lancet.

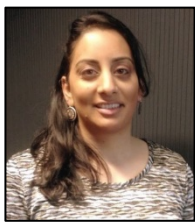
Dr. Stephen Lye
University of Toronto, Canada



Professor Stephen Lye is the Executive Director of the Fraser Mustard Institute for Human Development and Vice-Chair, Research of the Department of Obstetrics and Gynaecology at the University of Toronto. He is also

Associate Director of the Samuel Lunenfeld Research Institute of Mount Sinai Hospital and Professor within the Departments of Physiology, of Medicine and of Applied Psychology and Human Development at the University of Toronto. Dr. Lye is an expert in women's and infants' health and pioneered investigations into the mechanisms underlying preterm birth and gene-environment interactions that impact early human development. Dr. Lye has led numerous large-scale, peer-review funded, research programs at the local, national and international levels. His research has integrated discovery, clinical and translational studies, including the commercialization of discoveries in partnership with industry. He has published over 220 research papers on pregnancy and maternal-child health and holds a Canada Research Chair in Improved Health and Function. He has received numerous awards and honours, including the President's Scientific Achievement Award from the Society for Gynecologic Investigation, Fellowship of the Canadian Academy of Health Sciences and Fellowship (Ad Eundem) of the Royal College of Obstetrics and Gynaecology.

Sheila Manji
Aga Khan Foundation, Switzerland



Sheila Manji is a Senior Programme Officer for Aga Khan Foundation Switzerland. Over the last 5 years, she has been providing technical and strategic support for the Aga Khan Foundation's early childhood programmes (birth to 8 years) in over 15 countries, including implementation and evaluation of the WHO/UNICEF Care for Child Development intervention. Additionally, she spearheads the Aga Khan Development Network Science of Early Child Development (AKDN SECD) initiatives in close collaboration with the Aga Khan University Institute for Human Development, Red River College and the Fraser Mustard Institute for Human Development at the University of Toronto. These initiatives aim to build a common understanding of early child development across multiple sectors and geographies through online and face to face settings furthering the Network's commitment to ensuring young children reach their full potential. Ms. Manji holds a Master of Arts in Curriculum, Teaching, and Learning and Comparative, International and Development Education from the Ontario Institute for Studies in Education, University of Toronto and a Bachelor of Education in Primary/Junior Education from Queen's University.

Dr. Michaela Mantel
Aga Khan University



Dr. Michaela Mantel is Advisor and Senior Health Programme Office at Aga Khan University. She joined the Aga Khan Development Network (AKDN) in 2006 working as the Senior Health Programme Officer at the Aga Khan Foundation in Geneva. Her tasks included strategic health programme development assistance, resource mobilization and overall monitoring support to specific country health programmes of the AKDN in East Africa, Mozambique and India. Since 2010, Dr. Mantel also holds a part-time advisory position at the Faculty of Health Science, Aga Khan University in Nairobi, Kenya, and joined the University full-time in January 2014. She began her professional career in the early 1980s as a civil engineer in architecture and town planning. Simultaneously, she studied medicine and graduated as a medical doctor in 1985 from the Ludwig Maximilian University in Munich. After several clinical fellowships at German hospitals in gynaecology/obstetrics, anaesthesia, and paediatrics,

Dr. Mantel worked as a medical officer for five years in a 120-bed church hospital in rural Tanzania/East Africa. After her return from Tanzania, she completed a Master Degree in Public Health at Harvard University. Before joining the Aga Khan Development Network, Dr. Mantel worked as an adviser to national governments in Sub-Saharan Africa, India, South-East Asia and Eastern Europe in international and national health programmes and in projects funded by key development partners such as the European Commission, the World Bank, DANIDA, the German Development Cooperation (KfW and GIZ), and the German Protestant Development Services (EZE). Dr. Mantel's commitment to people most in need is rooted in the experiences of earlier years when she worked as a medical doctor in Tanzania and Germany.

Dr. Stephen G. Matthews
University of Toronto, Canada



Dr. Stephen G. Matthews is Professor of Physiology, Obstetrics and Gynecology and Medicine at the University of Toronto. He is also the Director of Research at the Fraser Mustard Institute for Human Development. Professor Matthews received his undergraduate education at the University of Nottingham, and his PhD from the University of Cambridge, UK. He was appointed to the University of Toronto in 1996, and served as Chair of the Department of Physiology 2007-2014. His research is focused towards understanding how alterations in the fetal environment can affect developmental trajectories leading to permanent modification of neurologic and endocrine function. His recent research has established that the effects of such environmental manipulation can extend across multiple generations. With a focus on epigenetics, his research team is determining the molecular mechanisms by which such 'programming' can occur. In a parallel program of study, his group is investigating drug and hormone transport mechanisms in the placenta and fetal brain, with a focus on developing novel treatments that modulate drug transport at these two sites. Professor Matthews is committed to translating fundamental research to a human context. He was founding co-director of the MAVAN program, which follows the neurocognitive development of infants and children following adverse early experience. He was also one of the founding investigators on the MACS program that followed pregnancy outcomes and neurocognitive development in children exposed to glucocorticoids in pregnancy. He has published over 175 scientific papers, is regularly invited to present his work

around the world and is involved in a number of international research initiatives.

Dr. Nuruddin Mohammed
Aga Khan University - Medical College,
Pakistan



Dr. Nuruddin Mohammed is an Assistant Professor and Consultant in Fetal Medicine at the Department of Obstetrics and Gynaecology, Aga Khan University. He is also an Adjunct Fellow at the Fetal Medicine

Research Center, Fetal Medicine Foundation, University of Barcelona, Spain. He received his undergraduate medical education from the Aga Khan University, Pakistan. He did his Clinical Fellowship in Fetal and Maternal Medicine and obtained MSc and PhD in Fetal Medicine from National University Hospital, Singapore and National University of Singapore, respectively. He has diplomas in Advanced Obstetrics Ultrasound from the Royal College of Obstetricians and Gynaecologists and the Royal College of Radiologists, UK. He did Postdoctoral Clinical and Research Fellowship in Advanced Fetal Medicine with majors in Functional Fetal Cardiology and Neurology from the Fetal Medicine Research Center, Fetal Medicine Foundation, University of Barcelona, Spain. His current research focuses on the assessment of fetal brain and cardiovascular programming in at-risk pregnancies (e.g., malaria in pregnancy, gestational diabetes, and fetal growth restriction) through neuro and cardiac imaging biomarkers for the prediction of adverse neurodevelopmental and cardiovascular outcomes post-natally. He leads a multi-disciplinary Maternal, Fetal and Perinatal Research Group and a functional fetal cardiology service he has initiated at the Aga Khan University, Karachi, is the first of its kind in Pakistan.

Dr. Barak Morgan
University of Cape Town, South Africa



Barak Morgan is a biologist and medical doctor with clinical experience mostly in psychiatry. He also has a PhD in engineering. Based in Cape Town, he works as a researcher in human social – cognitive – affective neuroscience.

His varied background allows him to apply a wide range of interests, ideas and techniques to complex brain, mind and behaviour questions. Most of his research is in the field of early childhood development, focused on the enduring impact of early social experience on brain structure and function in

later life, a field often referred to as ‘biological embedding of early social adversity’. This research entails designing, piloting and implementing sets of context-appropriate biological and neurobehavioral measures of social / cognitive / affective brain function in children of different ages. Another aspect of his research involves translating the neuroscience of childhood development into the social domain in scientifically accurate socially positive ways. This includes working with early childhood development NPO’s (e.g., REPSSI, Ilifa Labantwana), serving on expert panels (e.g. for UNICEF) and working with an early childhood development funding agency to mount a broad ongoing multimedia campaign to translate the neuroscience of childhood development into social policy and practice in African settings. He also investigates the influence of maternal-neonate skin-to-skin contact versus maternal-neonate separation in humans as well as the social, cognitive and affective consequences of bilateral amygdala calcification in humans.

Dr. Azim Nanji
Aga Khan University

Dr. Azim Nanji currently serves as Special Advisor to



the Provost at Aga Khan University. From 1998-2008, he served as Director of the Institute of Ismaili Studies in London. In 2008, he took up an appointment in the Abbasi Programme in Islamic Studies at Stanford University. He was also Professor and Chair of the Department of Religion at the University of Florida from 1989-1998 and Killam Fellow at Dalhousie University. He obtained his M.A. and Ph.D. in Islamic Studies from McGill University. He has authored, co-authored and edited several books, including the Nizari Ismaili Tradition (1978); Building for Tomorrow (1994); The Muslim Almanac (1996); Mapping Islamic Studies (1997); Historical Atlas of Islam (with M. Ruthven, 2004); Penguin Historical Dictionary of Islam (with Razia Jinha Nanji, 2008); and Living in Historic Cairo (with F. Daftary and E. Fernea, 2010). He was Associate Editor for the revised Second Edition of The Encyclopaedia of Religion. He has been a Margaret Gest Visiting Professor at Haverford College and a Visiting Professor at Stanford University, where he has also given the Baccalaureate Address. Dr. Nanji has served as co-chair of the Islam section at the American Academy of Religion and on the Editorial Board of the Academy’s Journal. He has been the recipient of awards from the Rockefeller Foundation, Canada Council, and the National Endowment for Humanities. In 2004 he gave the Birks Lecture at McGill University. Within the Aga Khan Development Network, Dr. Nanji has served as

a member of the Steering Committee and Master Jury of the Aga Khan Award for Architecture; member of the Oversight Committee for the ISMC and vice chair of the Madrasa-based Early Childhood Education Programme in East-Africa. In 2010, he was appointed to the Founding Board of Directors of the Global Centre for Pluralism in Ottawa, Canada.

Shem Ochola

Aga Khan Foundation, East Africa



Shem Ochola, Regional Policy and Partnerships Director for Aga Khan Foundation, East Africa, has over 16 years of experience in academia, civil society and government. He previously served as Director of Programme Development and

Grants Acquisition at World Vision and as technical team member of the cabinet sub-committee on the National Accord in 2008. He also served as head of governance at ActionAid Kenya and lecturer at the Kenya School of Monetary Studies. Shem holds a master's degree in economics and is a doctoral student in governance and leadership.

Dr. Almina Pardhan

Aga Khan University - Institute for Educational Development, Pakistan



Dr. Almina Pardhan is Assistant Professor at the Institute for Educational Development at Aga Khan University, Karachi, Pakistan. Her doctorate in early childhood education is from the Ontario Institute for Studies in Education, University of Toronto,

Canada. Almina has wide experience in teaching and supervision at graduate levels in the areas of early childhood education and development, research methods, and gender and education. Her teaching experiences are through face-to-face, online and blended learning approaches. Almina has led major research and development projects in Pakistan in the areas of early childhood education, early child development and teacher education. Her specific research interests include literacy development, gender issues, family engagement and child assessments. She has taken a lead role in conceptualizing, designing and implementing innovative, contextually relevant, community-based early years programmes for young children 5 years old and under and their families in Pakistan and internationally. Almina serves on a number of national and international early childhood groups involved in strategic thinking of policies and programmes.

Dr. Alan Pence

University of Victoria, Canada



Alan Pence, Ph.D., is UNESCO Chair for Early Childhood Education, Care and Development (ECD) and Professor, School of Child and Youth Care, University of Victoria. He has worked in the field of ECD since 1971, in

academia since 1980, and with a primary focus on cross-cultural and international ECD since the late 1980s. In 1989 he established the First Nations Partnerships Program (FNPP), a community-based Indigenous ECD undergraduate education program, and in 2000 he developed the Early Childhood Development Virtual University (ECDVU), a leadership and capacity promotion program active in Africa. Dr. Pence has authored over 130 journal articles, chapters and monographs and edited or authored twelve books on a variety of child care and development topics. Of particular interest for this presentation is a volume he edited with Garcia and Evans: *Africa's Future, Africa's Challenge* (2008). He is the recipient of the University of Victoria's inaugural Craigdarroch Research Award for Societal Contributions, the Canadian Bureau for International Education's Award for Educational Leadership, and a finalist for the international WISE Awards for innovation in education.

Pauline Rea-Dickins

Aga Khan University - Institute for Educational Development, East Africa

Professor Pauline Rea-Dickins, Co-PI on the Tuwaendelee Watoto Wetu project, is Director of



the Institute for Educational Development, East Africa. Prior to this, she held the Chair of Applied Linguistics and was Director of Research in the Graduate School of Education, University of Bristol. She is widely published in areas of language testing and assessment and language programme evaluation and has extensive language education research experience in Sub-Saharan Africa. She is joined on the TWW project by Nipael Mrutu, who has her LLB from the University of Iringa, Tanzania and who worked as a Magistrate before doing an MSc in Medical Anthropology from the University of Amsterdam, where she is also in the very final stages of her PhD in the area of Children's Rights and HIV Aids. Dr Fortidas Bakuza has extensive experience in ECE, having worked as Coordinator of the Tanzanian Early Childhood Development Network for several years and his PhD from the State University of New York, in the area of

EC, focused on issues of EC policy implementation. Shelina Walli is currently doing her doctorate at the University of Arizona and has extensive experience as an EC practitioner in Tanzania. Nipa, Fortidas and Shelina are all faculty members at the Aga Khan University Institute for Education in Tanzania. Professor Alan Pence, Co-PI TWW, is the UNESCO Chair of ECECD, and Emily Ashton, our other research team member, is also from the University of Victoria, Canada.

Dr. Ghazala Rafique
Human Development Programme, Aga Khan University



Dr. Ghazala Rafique is a Public Health professional with a background in medical sciences. She has been the Interim Director of the Human Development Programme of Aga Khan University since January 2007 and an Associate

Professor in the Department of Community Health Sciences since 1999. Her particular interest is in developing and implementing early child development (ECD) programmes, primarily focusing on pregnant mothers and children aged 0-3 years in low resource settings in Pakistan to help promote comprehensive, integrated child development models that combine health, nutrition and early childhood stimulation to enhance developmental outcomes. Her research and teaching interests include developmental screening, children with disability, maternal mental health, and social determinants of health. Dr. Rafique is also involved in providing technical assistance and capacity building in ECD to meet the needs of professionals, NGO's and communities. She has developed educational, programmatic and research linkages with various national and international institutions. Dr. Rafique has several research publications to her credit. She is the editor of an indigenous tool 'Care for Development - Appraisal tool for Assessing and Monitoring Child Development: First three years' that was developed in the Pakistan local context and has the capacity to identify vulnerable children or those at risk of growth faltering and developmental delays in community-based setting. She co-edited another contextual manual 'ECD, Parenting Education Manual' developed in the Urdu language for fieldworkers. Dr. Rafique is a member of the Steering Committee and Chair of the Executive Committee of the Asia-Pacific Regional Network for Early Childhood (ARNEC).

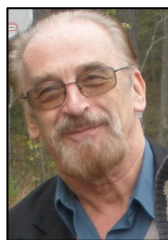
Dr. Linda Richter
DST-NRF Centre of Excellence in Human Development



Dr. Richter is the Director of the Department of Science and Technology (DST)-National Research Foundation (NRF) Centre of Excellence in Human Development at the University of the Witwatersrand, a

Distinguished Research Fellow at the Human Sciences Research Council (HSRC), and an Honorary Professor in Psychology at the University of KwaZulu-Natal. She has held visiting fellowships at the University of Melbourne (2003-2006), Harvard University (2007-2010), and the University of Oxford (2007-2010). She was seconded from the HSRC to the Global Fund to Fight AIDS, Tuberculosis and Malaria in Geneva, as Advisor on Vulnerable Children (2010-2012), and is currently an advisor on ECD to the WHO in Geneva. Dr. Richter has conducted both basic and policy research in the fields of child, youth and family development as applied to health, education and social development, and has published more than 400 papers and chapters in the fields of child, adolescent and family development, infant and child assessment, protein-energy malnutrition, street and working children, and the effects of HIV and AIDS on children and families. She is the author of several books and monographs, and is on the Editorial Boards of eight professional and disciplinary journals. Dr. Richter is the Principal Investigator of several large-scale, long-term collaborative projects, including Birth to Twenty, a Wellcome Trust-funded birth cohort study of 3273 children with follow up to age 24 years, and the Consortium of Health Oriented Research in Transitioning Societies (COHORTS), a network of birth cohort studies in low and middle income countries. She is currently leading a Monitoring, Evaluation and Learning initiative funded by the Conrad N. Hilton Foundation for 16 international organizations working to improve early childhood development in countries in southern and eastern Africa that are heavily impacted by AIDS. She is the lead author of South Africa's National Early Child Development Policy and Programme.

Dr. Robert Serpell
University of Zambia



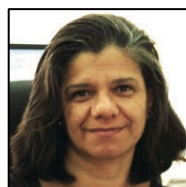
Robert Serpell is Professor of Applied Developmental Psychology at the University of Zambia (UNZA), and Coordinator, Centre for Promotion of Literacy in Sub-Saharan Africa (CAPOLSA). Born and raised in England, he graduated from Oxford and joined the founding staff of UNZA in 1965, where he served as Research Fellow, Lecturer, Professor, Head of Psychology Department, and Director of the Institute for African Studies. In 1989 he moved to the USA, serving for 12 years as Director of Applied Developmental Psychology at the University of Maryland Baltimore County (UMBC). From 2003 to 2006 he served as Vice-Chancellor of UNZA and then returned to the Psychology Department where he now coordinates graduate studies. His research has focused on cultural aspects of human development, intelligence, multilingualism, literacy, assessment and intervention for children with disabilities and their families, and curriculum development. He has published widely in journals including *International Journal of Psychology*, *African Social Research*, *Journal of Cross-Cultural Psychology*, *British Journal of Psychology*, *Annals of New York Academy of Sciences*, *International Journal of Behavioral Development*, *Mind Culture and Activity*, *Journal of Literacy Research*, *Journal of School Psychology*, *Journal of Family Psychology*, *Child Development Perspectives*, *Psychology and Developing Societies*. He is author of the following books: *Culture's influence on behaviour* (1976), *Mobilizing local resources in Africa for persons with learning difficulties or mental handicap* (1984), *The significance of schooling: life-journeys in an African society* (1993), and *Becoming literate in the city, the Baltimore Early Childhood Project* (2005). In 2014, he co-authored with Bame Nsamenang number 3 of UNESCO's Early Childhood Care and Education Working Papers, entitled "Locally relevant and quality ECCE programmes: Implications of research on indigenous African child development and socialization," and co-edited with Kofi Marfo the latest volume of *New Directions for Child and Adolescent Development*, entitled "Child development in Africa: Views from inside."

Dr. Karlee Silver
Grand Challenges Canada



Karlee Silver is the Vice President of Targeted Challenges for Grand Challenges Canada. Dr. Silver leads the Saving Lives at Birth, Saving Brains, and Global Mental Health programs. Prior to joining Grand Challenges Canada, Dr. Silver trained in the laboratory of Dr. Kevin Kain at the Sandra Rotman Centre in Toronto, first as a Canadian Institutes of Health Research postdoctoral fellow, then as a MITACS Elevate postdoctoral fellow, where she helped to identify host responses of malaria infection in pregnant women to harness for diagnostic and therapeutic purposes. Dr. Silver received her doctorate in 2006 from the University of Oxford, where she attended as a Rhodes Scholar and trained in genetics and immunology under the supervision of Professor Richard Cornall and Professor Sir John Bell. An accumulation of inspirations, including traveling through southern Africa after Oxford, led to a refocus towards global health. Witnessing both the strength of women to sustain their families and communities, and the vulnerability of these same women to the consequences of poverty inspired Karlee to apply herself to health issues of women in developing countries.

Dr. Susan Walker
University of the West Indies, Jamaica



Dr. Susan Walker is Professor of Nutrition and Director of the Tropical Medicine Research Institute at The University of the West Indies (UWI), Jamaica. Her main research interests are the effects of early life experiences, including nutrition, health and psychosocial factors, on children's development and behaviour and the design and evaluation of sustainable interventions to improve children's cognitive and behavioural outcomes. She has headed the Child Development Research Group at UWI since 1995. The work of this group in developing low cost approaches to promote children's development and the rigorous evaluations demonstrating long term benefits have been critical in driving global attention to the importance of early stimulation for children under 3 years and has influenced the expansion of work and commitment in this area by the Inter-American Development Bank and the World Bank among others. With the support of the Inter-American Development Bank, she and her team recently evaluated two approaches to delivery of parenting programs feasible at scale in three Caribbean countries. The research group is now

developing a web-based training package to increase access to the evidence-based Jamaica home-visit program. Susan is an internationally recognised expert in global child development and was lead author in papers in the highly influential Lancet series (2007, 2011) on child development and a coordinator of the 2013 series on Maternal and Child Nutrition. She is a founding member of the Global Child Development Group, which promotes research on child development in developing countries and translation of research to policy, and is engaged in international efforts to inform scale up of integrated interventions for young children. She is a member of the Institute of Medicine's Forum on Investing in Young Children Globally.

Dr. Aisha K. Yousafzai
Aga Khan University - Medical College,
Pakistan



Aisha K Yousafzai, Ph.D., is an Associate Professor in Early Childhood Development and Disability in the Department of Paediatrics and Child Health, Aga Khan University, Karachi, Pakistan. Dr. Yousafzai earned a

Ph.D. in International Child Health from the Institute of Child Health, University College London. Her main research interests are the strengthening of early child development programming in health and nutrition services, and the inclusion of children with disabilities in health programmes in low- and middle-income countries. She has more than 10 years of experience in community based programmes in both South Asia and East Africa. She was the Principal Investigator of the Pakistan Early Child Development Scale Up (PEDS) trial, which investigates the integration of stimulation, care for development and nutrition in a government community health programme in Sindh, Pakistan. She has also served as an ECD Advisor to UNICEF and the WHO. She is currently funded by the Saving Brains Programme, Grand Challenges Canada, and UNICEF.

Plenary Session Abstracts

Alphabetical by primary author's last name

Cumulative psychosocial risk and neurocognitive and mental health outcomes for HIV-affected adolescents in Africa.

Amina Abubakar, *Lancaster University, UK and KEMRI/WTRP, Kenya*

With the increased availability of anti-retrovirals (ARVs) in Africa, a significant number of children vertically infected with HIV are surviving into adolescence and beyond. There is growing concern over neurodevelopmental outcomes for HIV positive adolescents. However, it not just HIV-infected adolescents who are at risk. Children born to HIV positive mothers who remain uninfected (hereafter referred to as “HIV-exposed-uninfected”) are also potentially at risk for poor outcomes in adolescence. The number of such children is growing, as anti-retroviral treatment to prevent mother-to-child transmission is becoming more widespread. In this talk I will highlight the evidence base on the impact of HIV infection or exposure on adolescent development and present results from a recent study. Based on an exploratory grant we have carried out a preliminary study among HIV-infected and HIV exposed-uninfected adolescents at the Kenyan coast. Qualitative approaches were used in the first phase of the study. We observed that some of the key challenges experienced by HIV positive adolescents were poverty, stigma, handling of disclosure, poor educational outcomes, and poor adherence to the medical regimen. From our second phase of the study where quantitative approaches were utilized, we observed the differential impact of HIV infections and exposure across various functional domains. For instance, both HIV-infected and HIV exposed-uninfected adolescents presented with high scores on depressive scales. On a measure of working memory (backward digit span) HIV-infected adolescents had worse scores than exposed-uninfected adolescents who in turn performed worse than community controls. We also observed that both HIV-infected and HIV-exposed-uninfected experienced various psychosocial risk factors (e.g. poor nutritional status, lower educational achievement and higher caregiver mental health problems). These psychosocial risks contributed to their poor performance on mental health and cognitive tasks. The talk will conclude by discussing some key practical, policy and research implications of our findings, with a special focus on cumulative psychosocial risk.

Child development and disability: Opportunity and responsibility.

Robert Armstrong, *Aga Khan University Medical College, Nairobi, Kenya*

The world over, children with disabilities face an uphill battle to achieve the potential they are born with. Parents are often left with limited options in finding the support that their child needs. If the child is disadvantaged by being born in a low- or middle- income country the challenges can appear overwhelming. Cultural beliefs and norms and the presence of limited resources drive a level of neglect and sense of helplessness that leave families struggling to simply cope. By any measure there is a long and challenging road ahead for people with disabilities if they are to achieve a valued and respected position in the societies within which they live. However, there are important new opportunities and resources that with concerted effort can lead to advances. The two Conventions, that virtually all governments have signed onto (Rights of the Child and Rights of Persons with Disabilities), are powerful advocacy tools in the hands of parent and professional groups that can impact national policies and community practices. Strategies for working with parents and building community engagement can reduce cultural biases and taboos. At the same time evidence-based, community-adapted interventions offer therapeutic options that can be implemented in low-income settings. Investment in research that builds the knowledge base on atypical pathways of development and the application of this knowledge to services and interventions is of critical importance. There is opportunity to have impact and we have a responsibility, individually and as a society, to include the child with a disability in the evolving focus on early human development.

Connecting research and practice in support of young children's development in the majority world.

Caroline Arnold, *Aga Foundation, Geneva, Switzerland*

Children's earliest years are critical for both individual and national development. Evidence of this is available from multiple disciplines and increasingly from the majority, and not just the minority, world. Evidence from advanced neuroscience and epigenetics research, nutrition, child development and education studies and programme evaluation data (including from AKDN) is compelling. This presentation asks a number of

questions regarding connecting research and practice. What are we as professionals doing in terms of ensuring that what is learnt from studies informs policy and practice? How do we acknowledge the complexity of factors affecting child development while keeping key messages clear? How do we make sure that what we look at is important and not only easy to measure, as often demanded by donors and decision-makers? I will also reflect on the importance of incorporating the insights and understandings of field staff into wider research and programme agendas. In order to allow for a more granular analysis the presentation will focus on two key areas in which data and research should be helping to improve practice. The first part examines access to early childhood education services and issues of exclusion (mostly related to poverty). The second part is concerned with young children's transition into school: the factors which either support or undermine this and recent international trends. Throughout this presentation I will draw on AKDN programming and research, as well as wider international experience. I will end by commenting on levels of attention to young children in the post 2015 agenda.

**Global child health & development:
Challenges & opportunities post-2015.**

Zulfiqar A. Bhutta, *Aga Khan University, Karachi, Pakistan & Hospital for Sick Children, Toronto, Canada*

The end of the period of the Millennium Development Goals (MDGs) is fast approaching; with only a few months to go, the world will take stock of what has been achieved, and a new global framework to reduce extreme poverty will be introduced building on the lessons learned from the past 15 years. The current MDGs will be replaced by a set of sustainable development goals (SDGs) with a more limited focus on health. Although substantial progress has been achieved in reducing maternal and child mortality, the world is off track for reaching MDGs 4 and 5. It is imperative for the global community to maintain the momentum for women's and children's health moving forward to 2015 and beyond and address underlying determinants. There are promising innovations that suggest that accelerating progress is possible. The key elements in the action and accountability agenda for the SDG framework include: 1) keeping women and children prominently at the center of the development agenda, ensuring service integration and effective synergies across sectors; 2) ensuring that feasible targets for ending preventable maternal, child, newborn mortality and stillbirths are linked with associated indicators that promote increased coverage of essential interventions across all population groups; 3) promoting good nutrition and

environmental health across the life course, and particularly during pregnancy and the first two years of life, must be a priority aspiration, and 4) strengthening of global and national accountability mechanism for women's and children's health with the use of evidence for decision making. The global agenda for women and children is far from complete and we have a unique opportunity to achieve reductions in preventable maternal and child mortality within a lifetime.

**Promoting optimal childhood development:
Understanding the in-utero environment.**

Alan D. Bocking, *Fraser Mustard Institute for Human Development, University of Toronto, Toronto, Canada*

The foundations for health, school achievement and life success are laid in pregnancy and early childhood. These are also two times in life when mothers and young children regularly interact with healthcare systems through scheduled health supervision visits. In Ontario, Canada, nearly all expectant mothers visit a prenatal healthcare provider before delivery - an average of 14 times. After birth, over 90% of Ontario children receive primary healthcare from a primary care physician at least 7 times. Strengths of leveraging primary healthcare systems for optimizing human potential include: a) using existing publically funded systems to systematically measure important early life exposures thus dramatically decreasing the cost of data collection, b) leveraging multiple routinely scheduled longitudinal encounters to link early life exposures to important physical and mental health outcomes. The Ontario Birth Study (OBS) is a unique open longitudinal pregnancy cohort which collects comprehensive information regarding women's medical history, physical activity, nutrition, and substance use. Using validated tools, information is obtained on parental psychosocial experiences including, anxiety, depression, attachment, intimate partner violence as well as work and home environmental exposures. Maternal blood is collected at three time points during pregnancy as well as at the time of delivery. Complications of pregnancy are important intermediary outcomes which in turn have a major impact on childhood development. We have collaborated with Moi University College of Health Sciences, Moi Teaching and Referral Hospital and the Kenyan Government to establish a clinical research site in Western Kenya. Through improving drug supply chains, on the job training for rural providers, equipping Community Health Volunteers to deliver home-based care, and establishing peer-support mechanisms for women in the clinic and the community, we have documented a decrease in the maternal mortality ratio of 53% and infant mortality rate of 9.3% over 3 years within this catchment area.

These strategies hold the promise of improved primary care outcomes at a cost that can be borne by county health budgets. By improving pregnancy outcomes a foundation for enhanced trajectories of optimal childhood development is established.

Modelling the impact of adult HIV and AIDS on children.

Chris Desmond, *Human Sciences Research Council, South Africa*

The immediate and short-term consequences of adult HIV for affected children are well documented. Little research has examined the long-term implications of childhood adversity stemming from caregiver HIV infection. In this paper we examine the possibility of using existing evidence on the impact of adult HIV on affected children and evidence from elsewhere in the child development literature on long-term outcomes, to estimate long-term consequences for HIV affected children. We discuss the challenges associated with such an exercise, preliminary results and opportunities for further work.

Understanding the context of child welfare services: The importance of an ecological approach.

Barbara Fallon, *Fraser Mustard Institute for Human Development, University of Toronto, Canada*

Reforming both the objectives and the structure of the North American child welfare system is a subject of increasingly impassioned debate. In the last forty years, various solutions have been viewed as the ultimate resolution to the poor outcomes experienced by the children and families served by the child welfare system and to capping the spiraling costs of service provision. Studying the issue of maltreatment with respect to several important characteristics (e.g., age, nature of the harm, severity of harm) provides important context for the development of effective responses. Using 20 years of data from the *Canadian Incidence Study of Reported Child Abuse and Neglect (CIS)*, this presentation provides insight into the impact of clinical, worker, and organizational characteristics on key child welfare service decisions. Specifically, it employs an ecological theoretical model to study the relationship between child functioning concerns, caregiver functioning concerns, household factors and worker and organizational characteristics to formal and informal service provision. Knowledge derived from this series of CIS studies has been mobilized into several policy and practice child welfare initiatives in Canada. Understanding the profile of families at risk of maltreatment is important in preventing harm and supporting their long-term well-being. The

opportunities to target interventions for the specific concerns for this vulnerable population are reviewed. A better future for our children requires better services for mental health, substance use, and intimate partner violence in addition to more universal support services.

Measuring the contextualisation of child assessment tools.

Penny Holding, *Aga Khan University, Nairobi, Kenya*

In selecting and applying tools to measure impact on child development in the majority world, methodologies focuses on how to best achieve standardisation, reliability and validity. This presentation uses the evidence base, provided by programmes in the Grand Challenges Canada - Saving Brains Programme, to explore the achievement these test qualities. Implications for future directions are drawn that introduce into test evaluation consideration of the “social space” in assessment.

Integrated early years education: challenges and promises of traditional institutions of Muslim learning in areas of marginalisation and disenfranchisement.

Anil Khamis, *University College London-Institute of Education, United Kingdom*

Azim Nanji, *Aga Khan University*

Traditional institutions of Muslim learning have existed for centuries in areas, including some of the most poor in East and West Africa. Recently, with a focus on the Education for All and Millennium Development Goals, interest has been revived on the value and utility of these institutions. Particular attention has been paid to their resilience and ability to respond flexibly to changes in society, to emerging educational needs, knowledge requirements, and external environments. Based on empirical studies in East Africa, including Somalia, as well as in West Africa, this panel illuminates madrasa education responsiveness to both demands for new knowledge to be interacted in schools as well as geo-political factors that have seen the entry of a variety of education stakeholders. Whilst such schools show that they have the potential to contribute to meeting basic education goals, fundamental questions of education arise. What provision is on offer in the different categories on such schools; can education in such institutions provide epistemological coherence based on different traditions of learning; how does the provision of such education prepare children to live and work in their societies; and how does it build on new knowledge on early child development and learning? The panel will highlight the challenges of the work of such schools and the development

challenges that remain to be overcome, through an illustration of concrete projects among Muslim communities in the East African region.

iSakham: A technology platform for accelerating child development in disadvantaged communities.

Aarti Kumar, *Community Empowerment Lab, India*

Timely assessment of children is critical to early intervention, but several million children across poor communities in LMIC countries have no access to such services due to limitations in the availability of skilled personnel in conducting the assessment as well as appropriate tools contextualized to their setting. Technology can help bridge this gap – with the widespread availability of inexpensive mobile devices, intuitive applications can be designed to address access, meaning and comparability in measuring the early stages of human capital formation. This presentation explores the application of this methodology in a rural site in Uttar Pradesh, India.

The 1st 2000 days: Establishing trajectories to life-long health, learning and social functioning.

Steven J. Lye, Fraser Mustard Institute for Human Development, University of Toronto, Canada

My presentation will review the importance of early life experiences on the establishment of trajectories that impact a child's future health, learning and social functioning. We will consider how the environment interacts with a child's genetic make-up to establish these trajectories. The presentation will review the nature of environmental exposures that are important; the concept of critical windows of sensitivity; and examples of the broad scope of biologic systems within the child that are impacted by adverse environments. Using some of our work on longitudinal cohorts, I will provide new data that suggest early interventions can mitigate the adverse effects of environmental exposures or even of genetic adversity. I will discuss some exciting global initiatives that are being developed to focus on the importance of investments in early-life for improved child and adult health and well-being. Finally, I will introduce the vision of the Fraser Mustard Institute for Human Development and some of the programs we are beginning to develop

International collaborations to advance understanding of the science of early child development: Past, present and future.*

Sheila Manji, Janet Jamieson, and SECD Instructional Team, *Aga Khan Foundation, Switzerland; Red River College, Canada*

The Science of Early Child Development (SECD) is a knowledge mobilization initiative designed to make current research accessible to frontline workers through to policy makers seeking a deeper understanding of the profound impact of the early years on lifelong health and well-being. Developed in Canada by Red River College (RRC) with the Atkinson Centre for Society and Child Development at the University of Toronto, SECD is an online interactive core curriculum resource or “living textbook” comprised of readings, videos, links, reflect questions, and interactive activities which bring to life the emerging science about early brain development and its implications for practice across sectors (www.scienceofecd.com). An international partnership between the Aga Khan Development Network (AKDN) and RRC began with the aim of creating wider understanding of the science of early child development within AKDN. Specific activities included contextualizing SECD for an international audience, developing an accompanying online course, and mentoring individuals to become effective online instructors. The partnership has evolved to include the development of new educational materials for use offline and in multiple languages, an institutional partnership with the University of Toronto where faculty and students from four countries (Canada, Tanzania, Uganda, Pakistan) use SECD in a joint course, and a package of tailored SECD courses for individuals implementing projects funded by the Conrad N. Hilton Foundation. The session will demonstrate how SECD supports individuals to develop a greater understanding of early human development and facilitates dialogue and collaboration among individuals from different sectors, geographies and institutions globally.

* This is part of a group of projects within the Institute for Human Development at Aga Khan University funded by Canada's Department of Foreign Affairs, Trade and Development through Aga Khan Foundation Canada under the Institutional Partnerships for Human Development (IPHD) programme within a larger Partnership for Advancing Human Development in Africa and Asia (PAHDAA) initiative.

Research to enhance Babycare enterprises through social franchising in Kenya.*

Michaela Mantel, *Aga Khan University, Nairobi, Kenya*

In Mlolongo, an informal urban settlement in the outskirts of Nairobi, many parents need help in caring for their young children while working. The children are often brought to “Babycare” run by local community members (mostly women) caring for between 4 up to 20 young children on a day-to-day basis. Most of the centres are located in the congested homes of the caretakers who have never been trained on child care and development. This paper presents an implementation research project that aims to pilot an innovative model for children ages 0-3 in Mlolongo. The project enhances 20 existing babycare enterprises through testing of a social franchising model. The concept builds upon supporting and empowering babycare owners to develop babycare enterprises that provide quality day care for young children while simultaneously generating moderate income. The project also enhances community and local stakeholder engagement, including collaboration with the local government. The Kilifi Development Instrument (KDI) and the Infant/Toddler Environment Rating Scale (ITERS) are used to measure child health and development outcomes and monitor processes and improvements. The project has already stimulated the development of two similar babycare projects in Nairobi slums implemented independently by other non-governmental organizations. Knowledge and lessons learned are shared continuously. The pilot, if successful, will form the basis of a more extensive trial that will test the value and scalability of this approach with the expectation that this would lead to sustainable enhancements in the level of care and, ultimately, to improved developmental outcomes for children living in these environments.

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Environmental influences on early brain development: Research to intervention.

Stephen G. Matthews, *Fraser Mustard Institute for Human Development, University of Toronto, Canada*

The developing fetus and newborn infant is highly sensitive to the environment. It is now well established that adverse environments can lead to lifelong changes in metabolic, cardiovascular and

neurologic function leading to increased susceptibility to disease in childhood and in later life. Examples of fetal adversity include maternal undernutrition, maternal anxiety and placental insufficiency. These situations lead to decreased nutrient and oxygen availability for the fetus as well as increased fetal exposure to potent developmentally important hormones such as glucocorticoids and thyroid hormones. This talk will focus on fetal environmental changes and developmental origins of health and disease, with particular focus on the developing brain. An overview of the concept and consequences will be provided. Specific examples will be discussed in the context of the human and established animal models. The latter have provided the opportunity to probe the mechanisms by which the early environment can permanently modify metabolic, cardiovascular and neurologic function throughout life. The current state of the knowledge in this area will be discussed. Determination of the mechanisms involved will provide the opportunity to begin to develop interventions focused towards preventing or reversing the effects of early adversity.

Effect of *in-utero* environment on brain and cardiac programming: Implications on early childhood development and long term disease risk.

Nuruddin Mohammed, *Aga Khan University, Karachi, Pakistan*

In-utero environment plays a critical role in specific organ development. Particularly sensitive to changes in *in-utero* environment are the development of the brain and the heart. Fetal brain undergoes a systematic phase of structural development *in-utero* which continues many years later, defined as neurodevelopment. During intra-uterine life, the brain not only acquires its typical folded appearance, but its cells (neurons) grow, get organized and connected to provide a platform for brain function in postnatal life. On the other hand, development of the brain is responsible for perfusion and proper development of other fetal organs. From the very early stages of pregnancy, the heart must maintain adequate cardiac output in a continued manner and be able to adapt to changing circulatory demands. Both the fetal brain and the heart undergo a well-defined programming in the presence of an adequate *in-utero* environment. Any adverse condition that interferes with this ongoing highly programmed process of brain and cardiac development will lead to their altered configuration and function. This talk will highlight recent evidence showing adaptive reprogramming of human fetal brain and heart under adverse *in-utero* environment, such as placental insufficiency causing fetal growth restriction. Identification of such brain and heart reprogramming

through use of neuro and cardiac imaging biomarkers during fetal life will be presented. Possible relationships between at-risk fetuses identified and altered post-natal neuro-behavioral and cardiovascular development will be discussed. Through well-designed interventions in early postnatal life, the risk of long term adverse neurocognitive and cardiovascular disease can be reduced.

Translational developmental neuroscience: Untangling average, hidden and factitious impact to guide policy and practice.

Barak Morgan, *University of Cape Town, South Africa*

It is no longer sufficient to view human development from purely psychosocial or biological perspectives. We now have the scientific tools to design interventions and measure impacts from a unified biopsychosocial perspective. *Differential susceptibility to context* refers to the fact that children with different biological (e.g., genetic), physiological (e.g., stress reactivity) and psychological (e.g., temperament) traits respond to their environment differently. More specifically, favourable environments (including interventions) are more beneficial for some children than for others and adverse environments are more detrimental for some children than for others. Unless biological, physiological and psychological factors associated with differential susceptibility to context are taken into account, conventional outcome metrics comprise an *average* of large impacts on sensitive children and small impacts on insensitive children. *Average impact* therefore underestimates real impact (*hidden impact*) and overestimates *factitious impact*. Differential susceptibility to context has challenging implications for intervention policy and practice.

Designing and implementing an innovative home-school literacy research intervention in Pakistan: Possibilities and challenges.*

Almina Pardhan, *Aga Khan University, Karachi, Pakistan*

This paper presents an innovative home-school literacy research intervention in the multilingual context of Pakistan. A key challenge in Pakistan is the dearth of evidence of the best strategies to support children's early literacy development at home and school. A bilingual intervention in English and Urdu, Pakistan's official and national languages, respectively, was carried out in two sites, the urban centre of Karachi and the rural, mountainous context of Gilgit. The intervention was adapted from a Canadian Family Literacy Programme model

(Pelletier, et al., 2010) and an early childhood teaching education programme model at a reputable university in Pakistan. A blended-learning teacher training complemented a family literacy intervention component for families to facilitate a seamless weave of learning through meaningful activities between home and school. Twelve teachers and 30 families participated in this intervention. Pre- and post-intervention data was collected to assess the effects of the intervention on the children's early literacy development as well as the beliefs and practices of families and teachers. This paper describes the bilingual home-school research intervention, and presents preliminary findings of how the intervention has influenced literacy beliefs and practices of parents and teachers. Both parents and teachers have reported gaining new knowledge and becoming more aware of literacy practices and how these might influence children's literacy development. Some change of practice is also evident. The paper discusses factors that appear to facilitate the intervention as well as some of the challenges encountered with regards to: contextual relevance and sensitivity of programme content; material development and translation; multilingual contexts; use of literacy assessment tools; organizing and implementing family workshops and teacher training.

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Promoting ECD Capacity in sub-Saharan Africa.

Alan Pence, *University of Victoria, Canada*

This presentation highlights a series of initiatives that have been undertaken over the past two decades to address capacity development for Early Childhood Education, Care and Development in sub-Saharan Africa (SSA). With an experience base provided through work with indigenous communities in Canada in the early 1990s, the initiatives include: seminars supported by UNICEF in the mid to late 1990s; an ECD International Conference series initiated in 1999; the development and delivery of the Early Childhood Development Virtual University commencing in 2000 and continuing to the present; and an African Scholars and Institutions (AS&I) initiative launched in 2008. Each initiative has sub-components, for example within the AS&I the following are included: scholars workshops; surveys of SSA post-secondary institutions; development of a News-Journal; and development of a Compendium of

ECD publications and resources focusing on ECD in SSA (over 700 entries to date). An overview of these initiatives and their guiding philosophy will be provided in the presentation.

Beyond ABC: the complexities of early childhood education in Tanzania.*

Pauline Rea-Dickins, Nipael Mrutu, Fortidas Bakuza, and Shelina Walli, *Aga Khan University - Institute for Educational Development, East Africa (Dar es Salaam, Tanzania)*; Alan Pence and Emily Ashton, *University of Victoria, Canada*

The importance of early childhood education (ECE) has gained recognition in Tanzania resulting in various transformations in the education landscape. Based on data collected from 10 regions in Tanzania under the International Partnership Programme, the *Tuwaendeleze Watoto Wetu (TWW, Let us Develop our Children)* study describes some of the complexities surrounding ECE in Tanzania, relating to purposes for ECE, gender and leadership, funding, monitoring and assessment, advocacy, and language. For example, in Tanzania, ECE is mainly provided by private institutions, including religious institutions and community owned pre-schools. The language of instruction in privately run ECE classes tends to be English while in the public sector it is Kiswahili, the national language. This divide between public and private education providers is also associated with the quality of education where English, on the one hand, is associated with a higher quality and better resources education and Kiswahili on the other is viewed as weak and therefore a poor medium of instruction when it is associated with the quality of education. Drawing on TWW findings, our presentation highlights a situation whereby the pursuit of ensuring the right to education for Tanzanian children may lead to the creation of injustice and inequalities for the majority of young children. While we acknowledge the importance of exposing young children to rich experiences and the right to choice in ECE, we argue for the need to examine the disparities and differences that exist in ECE provision in Tanzania and to establish a mechanism for regulation and harmonization.

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Developmental health status and school readiness of children in Karachi, Pakistan: Results from the EDI pilot project.*

Ghazala Rafique, Yusra Sajid, & Sanobar Nadeem, *Aga Khan University, Karachi, Pakistan*

A child develops in relation to its environment. There is evidence that differences in early child development are a function of social inequities and experiences in early life when the developmental genes are expressed and interact with the social-physical environments. Tracking the state of children's development at the level of the population is crucial for reducing social and health inequities and enhancing positive developmental trajectories at the community, provincial and national level. In Pakistan, there are no indicators to measure child development and school readiness making it more difficult to inform policy decisions regarding appropriate educational initiatives and designing suitable ECD programmes to help reduce social, economic and gender disparities. The Early Development Instrument (EDI) a population-based measure for assessing young children's 'developmental health' status and 'readiness to learn' helps identify at risk children. EDI is interpreted at group level and can identify population based vulnerability. This study aims to assess the school readiness and developmental health status of pre-primary and class I students of government-run schools in Karachi, Pakistan and will serve as a starting point for providing population based assessments of ECD. This presentation will discuss findings from the pilot phase. Data collected on 1558 children from 29 schools show slightly lower scores on EDI domains. There appears to be no impact of gender or family income on the school readiness of children. However, the child's age, residence in a relatively affluent area and parental education does appear to improve the readiness status of children at entry to school.

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Parenting and the new science of child development.

Linda M. Richter, *University of the Witwatersrand, South Africa*

Since the 1970's, advances in several scientific disciplines have underlined the importance of the earliest stages of children's development for both present and future health and wellbeing, including psychology, neuroscience, epigenetics, microbiology and epidemiology. These findings emphasize the critical significance of the proximal environment in which children's development takes place. In the main, this proximal environment is constituted by parents and parental care – parental biological characteristics, economic security, social support, and emotional states. Speaking in relation to my own work and experience, in this paper I will highlight key findings from the new sciences and indicate their significance for supporting parenting as the key intervention to improving early child development. I will also briefly review the evidence for parenting interventions globally and what research is needed for implementation in the context of southern Africa. The paper will close with recommendations incorporated into the draft South African Early Child Development Policy and Programme that are derived from the new science of child development and the available evidence for interventions to improve parenting environments, as well as anticipated challenges to its implementation.

Promoting optimal child development in Africa: Challenges of research evidence.

Robert Serpell, *University of Zambia*

Certain types of atypical child development are recognized almost universally across cultures as undesirable, and many nations have signed up to international conventions regarding the rights of children. Nevertheless, wide variations have been documented in the specifics of child-rearing practices regarded as optimal. Yet, in the African region, progressivist ideas about how societies should design public policy and monitor its implementation are often promulgated by governments, religious bodies, international and local civil society organisations, with little or no attention to existing research evidence on cultural diversity with respect to conditions and practices conducive to optimal child development. The goals of this presentation will be to: (1) highlight some important gaps in the current status of the science of child development, that deserve priority attention by researchers in Africa in order to lay more secure foundations for services that are genuinely attuned to the needs of African children and their families, (2) contribute to promotion of a mutually enriching relationship between systematic

research and professional practices in Africa, and (3) caution against uncritical adoption by policymakers, professionals and practitioners in Africa of ECDCE “best practices” advocated by influential sources on the grounds that they work well in Western societies. By way of illustration, I will discuss the need for basic and applied research in African societies on the role of music in children's cognitive and social development, social and cognitive parameters of multilingual development, social distribution of responsibilities for care and nurturance of young children, and relations between childhood and economic activity.

Saving brains: Innovation is the path, impact is the location.

Karlee Silver, *Grand Challenges Canada*

Innovation plays a critical role amongst the global efforts to ensure every child has the opportunity to thrive. Over the last four years, Grand Challenges Canada has catalyzed a community of innovators focused on Saving Brains. This community shares a common vision to increase human capital through innovations that target the first 1000 days and is unleashing a wide range of capacities, expertise and experiences to make measurable progress against the problem that 1/3 of the world's children are not reaching their developmental potential. Early results emerging from Saving Brains can help to ensure resources yield the best social returns for children and their communities. Lessons from the Saving Brains experience also shine light on what is limiting our collective efforts from ensuring the next generation will thrive.

The Jamaica early child development intervention: Efficacy to global impact.

Susan Walker, Christine Powell, Susan Chang, Sally Grantham-McGregor, *The University of the West Indies, Kingston, Jamaica*

The Jamaica early childhood intervention aims to help parents gain skills to interact and play with their children in ways to promote development. The finding of very poor development in malnourished children led to a small intervention trial in the 1970's with severely malnourished children, with substantial benefits for the children's development. A subsequent community study demonstrated intervention benefits for more generally disadvantaged children. We observed that stunting was the characteristic most strongly associated with poor development. In 1986, our next efficacy study focused on stunted children and was a two-year randomised trial of supplementation, with or without the stimulation intervention. This landmark study showed the additive benefits of the interventions. Follow-up

studies showed the benefits from supplementation faded but that stimulation led to sustained cognitive benefits and during adolescence benefits to psychological functioning emerged. In the most recent follow-up at age 22 years, there were gains to education and income and reduced violent behaviour. In a cluster-randomised trial we showed the feasibility of implementing the intervention through primary care services. These studies have greatly influenced international early childhood policy. \ The intervention is designed to be low cost and feasible for implementation in other low and middle income countries, using home-made toys and is delivered by community workers through home visits. To facilitate its use globally, we have now developed a training package with films and manuals which will be accessible online. This step has the potential to transform capacity to provide effective parenting interventions.

Integration of care for child development in health and nutrition services: What we know and what we need to learn to move forward?

Aisha K. Yousafzai, *Aga Khan University, Karachi, Pakistan*

Health, nutrition and inadequate care risks co-occur in the lives of young children living in low- and middle-income countries, which significantly impact early development outcomes. In this paper, the case for integrated services to promote early child development will be presented. Data from recent systematic reviews and meta-analysis of nutrition and stimulation interventions will be presented illustrating the effectiveness of current strategies. Using available data, the paper will also examine for which populations and contexts have integrated strategies been most effective. The implementation processes of these interventions will be discussed with their implications for health and nutrition services. The paper will conclude with an outline of opportunities and challenges for the scale-up of integrated early childhood health, nutrition and development services in an effort to guide directions for future research and programme investment.

Linking research, policy and practice: A case study from Rwanda.

Nadra Huma Ahmar¹, Talemwa Benon², Gladys Mutavu³, Immaculee Kayitare⁴, Hugh Delaney⁵, Arpana Pandey⁵, Oliver Petrovic⁵, Aisha K Yousafzai¹, *Aga Khan University¹, Ministry of Gender and Family Promotion, Rwanda², Imbuto Foundation Rwanda³, Imbuto Foundation Rwanda⁴, UNICEF Rwanda⁵*

Few low- and middle-income countries have launched large-scale early child development (ECD) programmes. Features of successful large-scale programmes include government leadership, demand, and comprehensive services delivered with sufficient quality and duration to benefit young children. This multifaceted nature of ECD yields complexity when translating policy to practice as visible in Rwanda. Many Rwandan children are exposed to multiple risks to their development. Tackling these risks is a priority for the Government of Rwanda who is currently revising the National ECD Policy. We describe phase one of a research, policy and practice partnership with a goal to develop an evidence-based policy and an essential package of 'ECD and Family' services intended for scale in Rwanda. Traditional approaches to intervention research are often limited with respect to addressing challenges for taking interventions to scale. Implementation science seeks to promote the integration of research findings into policy and practice, and understand the behaviour of multiple stakeholders in the uptake, implementation and sustainability of interventions. Aligned with this framework, our formative research comprises multiple participatory methods to: (1) contextualize ECD curricula with respect to socio-cultural norms, alignment with policy, and complementarity with existing services; (2) harness community-demand for ECD services; (3) build national capacity; (4) strengthen partnerships; and (5) identify indicators that to support continuous programme quality improvements. We present an overview of the methods, a framework for analysis to inform effective scale-up with illustrative data and lessons learned from the partnership. Funding for this research has been provided by Ikea Foundation.

Psychomotor development up to 24 months: Measurement issues and sources of variability in an HIV-exposed population.

Patricia Kitsao-Wekulo¹, Penny Holding¹, & Christopher King², *Aga Khan University¹, Case Western Reserve University, USA²*

Introduction: Studies in Africa demonstrate an association between *in utero* exposure to HIV infection and children's developmental outcomes, even for uninfected children. The current study sought to investigate sources of variability in outcome for both HIV exposed and non-exposed infants. **Method:** The offspring of pregnant women enrolled into the study through one rural and one urban district hospital were followed up from birth to 24 months. Information on disease exposure *in utero* was obtained via histological tests at birth. Anthropometric measurements were taken. Using a locally developed and validated tool, the Kilifi Developmental Inventory (KDI), children's psychomotor skills were assessed at 6, 12, 18 and 24 months. Univariate and multivariate analyses were used to examine various associations. **Results:** Undernourished children in both groups scored consistently lower than their well-nourished counterparts at all ages. Significant gender differences were observed within the non-exposed group at 24 months. At 12, 18 and 24 months, both exposed and non-exposed rural children had significantly higher scores than urban children. Area of residence predicted outcome at 12, 18 and 24 months. Weight-for-height and weight-for-age predicted performance in the non-exposed group at 12 and 18 months, respectively. Gender was also associated with outcome within the non-exposed group at 24 months. **Conclusion:** The variability observed in KDI scores suggests that strategies to mitigate the effects of modifiable risk factors should consider different factors at each time point. The limited predictive power of some of the factors studied may point to ambiguity in scoring some of the KDI items.

*This study was completed when the first author was affiliated with the International Centre for Behavioural Studies, Kenya, and the University of KwaZulu-Natal, South Africa.

Child-to-Child: Renewing a practical, integrated rights based approach for participation in early childhood development.

Dr Tashmin Kassam Khamis¹, Dr Sadia Muzaffar Bhutta², *Networks of Quality Teaching and Learning, Aga Khan University & Faculty of Health Sciences, East Africa*¹, *Aga Khan University - Institute for Educational Development, Pakistan*²

Ten years before the adoption of the Convention on the Rights of the Child (CRC) in 1989, the Child-to-Child (CtC) approach was pioneering child-centred learning to empower young children to promote health and well-being. The Child-to-Child Trust currently showcases implementation of the approach in more than 80 countries through education, health promotion and community development programmes, including in Early Childhood Development (ECD) settings. A step-by-step educational methodology linking the child's living place with the learning place has been developed to put this action-oriented approach into practice. However, CtC has been a victim of its own success. Child-focused agencies see CtC as a methodology of the past, with buzz words such as 'child-centred programming' and 'child-centred community development' more fashionable replacements. Yet these very same development agencies (PLAN, SAVE, UNICEF) struggle with implementation strategies to actualizing children's rights. This paper will draw on interdisciplinary case studies depicting how the implementation of the CtC approach has led to the empowerment of young children through examples on children's participation for better health and education from settings in developing contexts. The paper will call for action the revival by practitioners and policy makers of this evidence based approach to tackling the challenges of 'how to implement' early childhood and development programmes.

Challenges of developmental assessment in local African contexts: the case of assessment instrument development for Zambian children.

Dabie Nabuzoka, *University of Zambia*

Literature on human development indicates great strides in knowledge about children's development resulting from many decades of research. However, much of this relates to, or is premised on, the perspective of the Western world, while there is relatively very little about the majority (so-called 'developing') world, and in particular, Africa. One explanation for this asymmetry is lack of instruments suitable for evaluating competencies and describing relevant

developmental trajectories in children in the developing world. The development of new, custom-tailored instruments valid in local contexts is a challenging task for many African countries without necessary expertise and access to resources.

Recognition of the need for psychologists in such countries to construct tools that will enable them to understand children better in local contexts has led to some efforts to develop locally validated instruments for assessing children's development. This paper will trace such efforts in one African country, Zambia, from the 1960s to date, highlighting both the achievements attained and the challenges faced in developing and making locally validated instruments the mainstream of local developmental assessment protocols. Implications will be drawn for developing expertise for developing locally relevant assessment instruments in African contexts, the application of locally generated tools and knowledge, and the contribution of such a knowledge base to understanding child development globally. The role of both local and internationally oriented academic institutions in such efforts will be highlighted with recommendations as to how research efforts can truly contribute to knowledge about children's development applicable to the majority of children worldwide.

'CARE FOR DEVELOPMENT' appraisal tool (CDA) for assessing and monitoring child development during first three years': Development, reliability and validity of an indigenous tool.

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Developmental delays are a global concern, and almost 80% of these occur in the developing countries. This paper presents the development, reliability and validity of an indigenous tool "Care for Development, Appraisal Tool for Assessing and Monitoring Child Development during First Three years" (CDA tool). Age appropriate indicators for gross motor, fine motor, cognitive, language and social emotional developmental domains were selected from standardized measures of child development and adapted for cultural relevancy. Age standardized norms were developed on 1002 children. An inter rater reliability study, among an expert and trained Early Child Development Workers (ECDWs) independently assessing 277 children showed a highly positive correlation in the paired assessments for ECDWs versus expert ($r = .951$ to $.995$, $p < .001$) on all developmental domains of the tool. Validity study was conducted on 450 children, using Bayley Scale of Infant Development II (BSID-II) as gold standard. CDA tool was found to have a sensitivity of 61.8%

and specificity of 91.3% for gross and fine motor domains, while for language and cognitive domains sensitivity and specificity was 81% and 57.7% respectively compared with the BSID II Mental Scale tool. The CDA tool is a culturally relevant, simple, reliable and valid developmental assessment tool that has acceptable measurement properties and can be used in the field to screen child development and regular monitoring during the first three years.

Pedagogical value of play in early childhood education in pastoralist communities of Kenya.

John Teria Ng'asike, *Mount Kenya University*

In Kenya, early childhood development and education (ECDE) policy framework emphasizes play environment as the instructional methodology for holistic development of young children aged 0-6 years. In pursuance to this policy, Kenya institute of curriculum development (KICD) has developed guidelines for instruction in ECDE centers which teachers can interpret to fit the local socio cultural context of the children. However, in Kenya ECDE centers also referred to as pre-primary schools operate like extension of standard one classrooms. Interviews for class one admissions demand that children graduating from ECDE centers have mastery of alphabet letters and basic numeracy skills. This paper argues that play which children use naturally as a cultural activity for learning cultural knowledge can have a pedagogical value in early childhood education. Ethnographic studies carried out in Turkana pastoralist communities and other cultures of Africa affirm that children at play imitate complex adult roles and tasks of their culture, such as animal herding, household chores, farming, child care and others. Considering that much of African children education is based on Western cultures and being cognizant to the fact that young children need a learning environment that is child centered this study argues for the use of play as a pedagogy for early childhood education in rural pastoralist communities of Kenya. This is possible when ECDE environment promotes a social cultural context of the communities in which they operate. And where teachers value the role of play in supporting child centered learning.

Early years literacy development baseline indices for the 3 – 8 year olds in Southern Tanzania: What stakeholders need to know for the promotion of children's literacy experiences.

Jacob Marriote Ngwaru, *Aga Khan University - Institute for Educational Development, East Africa.*

Education empowers people and strengthens nations as it is a powerful 'equalizer', opening doors to all to lift themselves out of poverty. Meanwhile, the majority of young children in Sub-Saharan Africa are unable to readily access sustainable early literacy development and childhood care setting them on a path to lower achievement throughout life. Education has always been critical not only for the mitigation of the negative effects of poverty and the promotion of equitable opportunities but also to the world's attempt to attain the Millennium Development Goals (MDGs) by 2015. Literacy pedagogy has always been expected to play a particularly important role to ensure that all students benefit from learning in ways that allow them to participate fully in public, community and economic life. For these reasons, stakeholder awareness of the socio-economic risk-factors that undermine children's literacy development can lead to a shift of focus towards policies and literacy pedagogies that respond adequately to children's particular learning needs, experiences, and contexts. This presentation is based on a Literacy Development base-line study that established indices that can be used to inform national and local government strategies to minimize early childhood educational risk factors. Data was collected through questionnaire survey and vertical case studies to determine appropriate approaches to sustainable methodologies to adequately address the negative experiences of rural parents and their 3 to 8 year olds. Results indicated a variety of socio-emotional, cultural, civic and material challenges that needed serious consideration at all levels to foster sustainable educational transformation.

Influence of professional development on early childhood teachers' beliefs and practices about literacy development in Balochistan, Pakistan.

Almina Pardhan¹, Cassandra Fernandes-Faria¹, *Aga Khan University - Institute for Educational Development, Pakistan¹*

Understanding how teachers think about the process of early literacy development is under-researched in Pakistan. It remains a critical area to study to better understand the supports required in young children's early literacy acquisition at school. This study has, therefore, explored how teachers' beliefs about and practices to support early literacy development have

been transformed by participating in professional development courses with components on supporting early literacy development at a reputable higher education institution in Pakistan. Public sector early childhood teachers from the multilingual province of Balochistan, Pakistan who had no prior training in early childhood education were involved in the study. This paper presents findings from interview and classroom observation data of two teachers involved in teaching and providing mentorship support to their colleagues. Findings reveal tensions in shifting from traditional rote learning methods to an integrated approach in appropriate settings with material, a range of active learning experiences, and social support to effectively promote early literacy development. Research findings also show tensions in the teachers' beliefs and practices before and after their professional development training with supporting children's early literacy development in the classroom language which is not often the children's home language. Data also reflect tensions for the teachers in providing mentorship support to colleagues in helping students with early literacy development. Factors such as engrained perceptions, syllabus, resources, large class size, and limited classroom space have contributed to these tensions. The findings of this study have important implications for early childhood programs and policies.

A pilot home-visiting early childhood development service for young children and their families in Bosnia-Herzegovina: Sharing lessons for programme evaluation.

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Children's optimal development is hampered by multiple risks. Home visitation (HV) programmes are designed to support individual needs of families caring for young children. Several reviews on the effectiveness of HV have suggested modest effects on child and family outcomes. However, reviews have failed to identify programme features which moderate outcomes. Therefore, experts recommend including an evaluation of implementation of HV in order to improve quality of services. We describe an evaluation of a pilot HV programme in Bosnia and Herzegovina implemented through health centers to promote the health, development and protection of young children (pre-conception to 3 years of age). The goal of this evaluation was to make recommendations about improvements in HV prior to expansion of pilot services. The two aims were to

evaluate: (1) benefits of the pilot services on children's wellbeing and their care; and (2) implementation features that may hinder or facilitate access and participation of families with young children. The evaluation followed an intervention-comparison design employing quantitative and qualitative methods. The comparison was between 6 pilot health centers which were launched in the early phase of roll-out and 3 health centers which were recently established (< 6 months duration). A random sample of 200 children and families stratified by child age was identified for intervention and comparison groups. Preliminary findings indicate HV has a significant moderate effect on early child development and parenting related outcomes. Recommendations are made for programme expansion.

Research partnership for building capacity of assessors to conduct quality adaptation of early child development assessments: A case study from Haydom, Tanzania.

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Early child development assessments are usually developed in western contexts and have to be adapted for use elsewhere. Personnel with expertise in child development measures may not be available in all research settings in low- and middle-income countries. We describe a research partnership between two research sites, Haydom Lutheran Hospital, Tanzania and Aga Khan University (AKU), Pakistan for the adaptation of a battery of executive functioning (EF) tasks. A systematic procedure was followed ensuring partner involvement at each stage. First, selection and review of EF task for cultural and functional equivalence was done. The administration guidelines and scoring forms of the battery of the eleven EF tasks were reviewed and eight EF tasks were selected. Through mutual consensus, draft versions of tasks were created in English based on the changes suggested, and then translated to Swahili. Second, assessors were trained for task administration. Training included information on child development, principles of assessment of children and EF. Detailed reviews of items, protocols and instructions were also completed during training. This helped the assessors to identify further modifications to pictures or translations. Third, EF tasks were piloted over three rounds. A debriefing was conducted at the end of each round for review and agreeing further modifications. A battery of 5 EF tasks was finalized. Three tasks were dropped due to a lack of variation in scores. For study data collection, a plan was for distanced-based supervision and a technical support strategy was

prepared. A research partnership should include local capacity development.

Driving the use of data for decision-making to the community level - results of a field test of the Information for Action mobile phone application in Kenya.

Debjcet Sen¹, Dr. Alastair van Heerden², *Maternal & Child Health/Nutrition, PATH*¹, *Human Sciences Research Council (HSRC) of South Africa*²

In low-resource settings, community volunteers play a critical role in addressing gaps in the coverage of health services. However, they may not have the tools, support, and feedback required to carry out their functions. Most critically, there are generally no systems that enable them to convert collected data into actionable information that can be shared immediately with caregivers to improve the development and well-being of their children. Hence, community volunteers are often considered as data collectors, rather than frontline service providers. The Information for Action mobile phone application (“app”) was developed by the Human Sciences Research Council (HSRC) of South Africa to use data collected from households to provide useful, real-time decision support to caregivers and community volunteers. The app was field tested by PATH with a sample of ten community volunteers in Rarieda Subcounty in western Kenya. Prior to testing, the app was extensively adapted to the local context through consultation with government stakeholders. Community volunteers using the app were drawn from the Ministry of Health’s (MOH) Community Health Strategy and were trained and supervised by their usual supervisors. App usage analytics determined consistent and regular use over time. A qualitative endline assessment revealed: (1) broad acceptability of the app among volunteers, supervisors, and caregivers; (2) appreciation of the way in which training and implementation processes were well integrated into MOH structures; and (3) a general perception among caregivers of volunteers being more proactive and “sensitive,” as a result of the app facilitating dialogue during home visits.

A bird’s eye view: Identified gaps in the delivery of early child development programs and services in five east African countries.

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The Conrad N. Hilton Foundation committed in 2013 to a direct investment of ± US 30 million over a three year period with the aim of improving the lives of young children affected by HIV and AIDS. The Human Sciences Research Council (HSRC) was selected to develop a monitoring, evaluation and learning (MEL) platform for the Foundation’s strategic initiative on Children Affected by HIV and AIDS. From this privileged vantage point, several generic recurring challenges have been observed and noted. These include lack of follow up or mentoring after training, the use of current M&E data and improved support for front line community workers. We briefly present three projects and activities undertaken by the HSRC to better understand and address these critical challenges. First, results from the standardization of the Ages and Stages Questionnaire among 840 children aged between 2 months and 5 years in South Africa and Zambia, will be presented. Second, a brief overview of the Information for Action (IFA) app pilot among 10 community health workers in Western Kenya will be shared. Finally, a project currently underway within the CRS THRIVE initiative in Malawi will be introduced. Delayed or interrupted early development associated with impoverished nutritional, emotional and cognitive environments results in risks for ill health, diminished human capital and psychosocial maladjustment in adulthood. The work presented in this paper adds to a growing evidence base on how best to support programmes that seek to support optimal development among young children living in resourced constrained environments.

Development of online/blended learning course, “Inclusive education: Disability and gender issues.”

Dr. Kausar Waqar, *Human Development Programme of Aga Khan University, Pakistan*

Inclusive education is “The process of increasing participation of students in, and reducing their exclusion from, cultures, curricula and communities of schools”. It is a school improvement process, focusing on all children excluded for any reason. This course is developed in response to great need for awareness and education about issues of ‘including all children in educational process’ especially targeting the issues of disability and gender for providing equitable opportunities to all children. When markers of discrimination exist on their own, they marginalize children but when they intersect with each other they have a compounded effect. It is warranted that special efforts are made for including those marginalized. However teachers face a lot of problems in doing so during their practice. Their pedagogical knowledge needs to be enhanced to fulfill the rights of children. The course is designed to fulfill this gap. This course has been developed in an online/blended mode. It is a relatively new concept in educational practice. It integrates best pedagogical aspects of face-to-face and online learning, intending to mitigate challenges caused by completely eliminating in-person classroom contact. This course has been developed as a result of participation by the author in a university-wide Faculty Professional Development Program (FPDP), whose aim was to enable faculty members to design, teach and evaluate courses offered in a blended learning mode. Therefore it presents knowledge in an online mode addressing their needs in an in-service model.

Development of guide manual for early childhood development and care in emergencies.

Kausar Waqar, *Aga Khan University - Human Development Programme, Pakistan*

Pakistan boasts a varied geographical terrain making it prone to natural disasters and emergencies which have the potential to cause displacements of human settlements and significant negative impact on development, especially on vulnerable populations including young children. AKU-HDP is noted for its professional commitment to Early Childhood Development (ECD) principals. It has been involved in developing a circular model of intervention that bridged families, ECD workers, and teams of ECD professionals from beyond the local community. Inferring lessons learnt from organizations around the world including ours, it has been understood that the programs addressing the needs of early childhood

should be integrated with existing family support, health, nutrition, or educational systems. An effective way is providing training opportunities that use active strategies to demonstrate the desired approaches with diverse pedagogy and research based content. Training manuals are particularly useful in such situations. This manual has been developed with a strong focus on gender and inclusion issues and provides activities to develop skills in children for expression, attachment, trust and resilience. The Guide Manual contains guidelines for normal and emergency situation for children between the ages 0-8 years including pregnant mothers to ensure child’s holistic development. It ensures that support to major development domains is available to them during emergencies. Using the Qualitative paradigm, the development of the manual was approached through “Participatory” methods. Key phases included planning, need assessment, desk work and training of trainers.

Developing valid measures of parent-child relationships in Uganda, combining emic and etic constructs.

Flavia Zalwango¹, Godfrey Siu^{1,2}, Jonathan Levin¹, Janet Seeley^{1,3}, & Daniel Wight⁴, *MRC/UVRI Uganda Research Unit on AIDS¹, Child Health and Development Centre, Makerere University², London School of Hygiene and Tropical Medicine³, MRC/CSO Social and Public Health Sciences Unit, University of Glasgow⁴*

Background: In sub-Saharan Africa, specific processes within families that influence child development and health are not clearly understood. There is a need to develop valid parental and child self-report measures of key dimensions of parent-child relationships in order to investigate how they are related to child outcomes and evaluate parenting interventions robustly. **Methods:** Feasibility and cognitive testing of draft questionnaires was done with 10 parents and 10 children in Wakiso, Uganda, to check appropriateness, length, translation, and comprehension. We conducted a full scale pilot using a random sample of 100 parent-child dyads across two villages, checked for ceiling effects and response consistency and performed factor analyses. Feasibility and cognitive testing of new questions was done in another site with 10 parents and 10 children. The 2nd full scale piloting was done with a random sample of 100 parent-child dyads across two new villages. Data were analyzed using STATA and internal consistency and coherence of scales were assessed using Cronbach’s alpha and confirmatory factor analyses. **Results:** Emic constructs included material provision and respectability. New constructs included respect for parents, supporting children at school, and community parenting. Participants

described parenting as pertinent but challenging. Appropriate parenting roles and relationships were highly differentiated by the sex of parent and child. Parents desired better outcomes for the children. Conclusion: Although they found parenting challenging, caring for children was an important dimension of parent-child relationships. Parents wanted better outcomes for their children. Competitive parenting appears to be replacing a community parenting model.

The impact of preschool education on school readiness and first grade achievement in Afghanistan.

Shekufeh Zonji², Frances E. Aboud¹, *McGill University, Canada¹, Aga Khan Foundation, Afghanistan²*

Enrollment in Afghanistan's primary schools has increased but almost half of children still remain out of school. This research evaluated the impact of attending Aga Khan Foundation's preschools on children's preschool and first grade achievement in Baghlan and Bamyan provinces of Afghanistan. A post-only non-randomized design was used to compare 188 preschool children with 176 controls from neighbouring villages without preschools. Likewise, at the end of first grade, we compared 196 preschool graduates with 179 classmates who had never attended preschool. The children were individually tested on either a 35-item school readiness test (preschool-aged) or a 70-item test of literacy and math (first graders). Their mothers provided consent to participate and were interviewed on socioeconomic status, child's health, diet, and parental practices that support learning (e.g., providing play materials, telling stories, writing and counting with the child). Intervention and control groups' achievement was compared using an analysis of covariance. The preschool children performed significantly better than controls on the school readiness test ($F=284.88, p<0.0001$) with means of 27.3 versus 16.23, respectively, out of 35 (effect size $d = 1.82$). Additionally, first graders with preschool experience performed significantly better than control classmates on all five subtests, with the overall total score also being higher ($M = 34.83$ versus 23.25, respectively, $F=66.24, p<0.0001, d = 0.85$). Girls and boys performed similarly. Intervention mothers of both cohorts reported more support-for-learning practices than controls ($p<0.0001$). The program was found to have a successful impact on children's achievement, with room for improving literacy instruction.

Poster & Media Session Abstracts

Alphabetical by primary author's last name

Antecedents and consequences of parental satisfaction with the quality of pre-primary education in Kenya: A case of Bondo district, Siaya county.

Moses Omondi Abiero¹, Nyakwara Begi¹, *Kenyatta University*¹

Access to quality Early Childhood Education (ECE) has a profound effect on child development and later achievement in life (World Bank, 2006). However, for a long time researches have been concerned with measurement of the quality of ECE from an expert point of view (Omar et.al, 2009) with little efforts being given to comprehensive measurement of parental satisfaction with the quality of pre-primary education, documenting its antecedents and consequences and coming up with localized strategies to address the local issues affecting access to quality ECE. The present study therefore sought to investigate the antecedents and consequences of parental satisfaction with the quality of pre-primary education in Bondo District in Siaya County, Kenya. The study employed a mixture of descriptive survey and longitudinal research designs. Data was collected from parents, teachers and children of 30 ECD Centers through questionnaires, interview schedules, focused group discussion and observation methods and was analyzed qualitatively and quantitatively. The results showed that though parents were moderately satisfied with the quality of pre-primary education accessed by their children, their satisfaction was significantly influenced by type of school sponsorship, perceived value, income and education. It was also found that there was a significant relationship between parents' satisfaction with school enrolment, retention and transition. The study recommended that schools and districts to institute mechanisms to continuously monitor the level of parental satisfaction in ECE centers of parents and adopt ways of improving areas where there are dissatisfied to help in enhancing access, participation and transition rates in ECE sub-sector.

EFA promising practices in the Asia-Pacific Region: A case study of initiatives to accelerate progress in Bangladesh Pre-Primary Education (PPE) and School Learning Improvement Plan (SLIP).

Mahmuda Akhter, *Institute of Child & Human Development (ICHD), Bangladesh*

UNESCO Bangkok decided to commission five country case studies including Bangladesh from the Asia Pacific Region to gain in-depth understanding of successful and innovative initiatives that are critical in EFA acceleration in the region. It was decided to look into two recent initiatives of Government of Bangladesh and Development Partners. These initiatives are recognized as promising and, therefore, deserve to be pursued vigorously in the run-up to 2015 and beyond. Methods and techniques followed to prepare the case study were determined according to time and resources available. Study methods consisted of review and analysis of secondary sources complemented by limited field work; both of which provided qualitative and quantitative data. The system cannot achieve its goals with the current numbers of teachers, methods of their professional preparation and development and the level of salary and incentives. It must be an inclusive and responsive system, with special efforts to serve the highly deprived and poor groups and areas. New way of thinking about teachers and pedagogy is needed. The lessons from a look at PPE and SLIP initiatives and recommendations for further action are grouped under two categories – recommendations related to creating a favorable policy environment and specific recommendations to build on the gains from PPE and SLIP.

Beyond PMTCT: Early childhood development activities for mothers with HIV.

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Biomedical preventative approaches have improved health outcomes for HIV-infected mothers and their children; yet early child development (ECD) remains a critical gap in achieving optimal outcomes. THRIVE is an ECD project which is establishing ECD (play) spaces within health facilities to reach HIV-affected children. A qualitative midterm evaluation considered efficiency of the project design by asking “What are the positive and negative unintended consequences of integration of ECD

spaces with other health services?” Volunteers and ECD-space users identified many advantages to the co-location of ECD spaces within health facilities including: (1) increased attendance due to routine visits at the facility; (2) increased credibility of the ECD messages and volunteers; (3) efficiency of referrals between the ECD space and clinic; (4) increased effectiveness of medical services for children by adding play stimulation and making children comfortable in clinic setting; (5) opportunities for increased sustainability of ECD spaces and trained ECD staff. Disadvantages identified included: (1) Because ECD is a secondary reason for clinic attendance, motivation for participation in ECD activities can be low; (2) locating ECD spaces in the facility space presents a further disadvantage for households located at a distance from health services; (3) facilities can be crowded--lacking safe space for play and ECD education. While co-locating ECD spaces with health facilities can be considered a promising practice in closing the gap between HIV treatment and developmental vulnerabilities faced by HIV-affected children, this research presents lessons about making spaces safe while maximizing health and developmental outcomes.

A sustainable and scalable new business model for holistic ECD.

Afzal Habib¹, Sheela Bowler¹, & Sabrina Premji¹, *Kidogo*¹

Kidogo is a start-up social enterprise that provides high-quality, affordable early childhood care & education for less than \$1/day to families living in East Africa’s informal urban settlements. Through its growing network of early childhood centres, Kidogo is proving concept on a sustainable & scalable model for providing holistic ECD services to children under 5. The organizations “hub & spoke” business model combines the strength of best practice early childhood “hub” centres (owned & operated by Kidogo) with the reach of community-based childcare “spokes” run by local “mama-preneurs” through an innovative micro-franchising program. Since launching only 12 months ago, Kidogo has successfully launched two fully operational Early Childhood “Hub” Centres in Nairobi that are already serving over 75 children under 5 years of age. These hubs are designed to provide children all the building blocks they need in order to thrive during their early years including a safe & supportive physical environment, ECD trained local caregivers, a health & nutrition program, in addition to a customized early learning curriculum designed by Kenyan & global experts. In partnership with Grand Challenges Canada (GCC) and the Aga Khan University’s Institute for Human Development (AKU-IHD), Kidogo has recently begun a robust research project to evaluate the impact of the

organizations’ programs on child development, the early childhood caregiving environment & parental perceptions of. The poster presentation will give participants an opportunity to explore the Kidogo model and discuss the ongoing impact study in more detail.

Mapping opportunities for integrating ECD into MCH services in Mozambique.

Svetlana Karuskina-Drivdale, *PATH*

During the first two years of a child’s life, the health system offers the only opportunity to reach children and their caregivers with messages and practices promoting early childhood development (ECD). PATH undertook a formative assessment— observations of maternal and child health consultations and peer counseling sessions and interviews with health providers and caregivers—at three public health facilities in one district of Maputo Province, Mozambique to identify strategies to integrate ECD interventions into existing health services. Findings indicate opportunities for integration of ECD during waiting time (through morning talks, mother groups, and playboxes) and during consultations. Nurses know that checking and promoting child development is part of their work. However, due to time constraints, few nurses do this regularly. Props such as posters and simple toys and tutoring on integration of ECD into normal consultation routine seem to increase likelihood of ECD counseling. Knowledge on ECD is weak: most nurses are able to name only one milestone at a specific age and the concept of maternal depression is virtually unknown. Caregivers do not know that developmental milestones are meant to be tracked on a child’s health card and no cards were found to be tracking them. These findings will be used by PATH to further adapt the World Health Organization/UNICEF *Care for Child Development* package to build capacity of health providers in Mozambique and to provide a blueprint for systematic ECD integration into health facility services in six districts of Maputo Province in 2015–17.

The promise of preschool access: A gendered mapping across counties in Kenya.

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Early childhood care and education (ECCE) has been recognized for its contribution to life-long learning with recent work reframing ECCE for its own intrinsic value and as promoting readiness to learn. Uwezo has conducted annual household-based learning assessments since 2009 to determine Kenyan

children's enrollment, including at pre-school. The nation-wide surveys have investigated enrolment of children aged 3-5 years and preschool history of children in primary school. Analysis of Uwezo data shows that preschool enrollment has increased with over seven (7) percentage points over the last two years; however, this increase is unequal across Kenya. Sixty-five percent of children aged 3-5 years are now enrolled in preschool nationally whilst a fifth of those enrolled in primary school did not attend preschool. To inform policy and determine further areas of research, data of preschool enrollment are presented across the 47 counties of Kenya. The data indicate gender and geographical inequalities, glaring challenges to achievement of universal access.

Evaluation of national curriculum for early childhood education for building national cohesion: A case study from Pakistan.

Seema Zainulabdin Lasi¹, Dr. Ryan Stephen², *Aga Khan University, Pakistan*¹, *University of Ulster, United Kingdom*²

Children are more vulnerable to effects of violence during early years. Role of education has been to develop the whole child and to prepare children for real world. A sound curriculum addressing these needs is crucial. Children during early years are known to have evolving cognitive maturation, however, recent evidence shows that children can be taught self-regulation, empathy, resilience and conflicts resolution very effectively during this age. This research has attempted to evaluate the present state of National Curriculum of Early Childhood Education (NCECE) in Pakistan for its capacity to address Peace education - the contribution of curriculum towards building social cohesion in Pakistan. The findings of this research highlighted important aspects of NCECE with regards to Peace Education. No specific domains were found to address peace education. Substantial evidence was found according to which the core components of peace education were incorporated in social & moral and emotional domains. However, the social and emotional attributes covered by NCECE had a very limited scope for peace building as compared to High Scope, NIEER and Leah's classifications. The findings of this research calls for an urgent need to review and expand horizon of social, moral and emotional domains of NCECE to incorporate conflict resolution, self-regulation, emotional intelligence, empathy and resilience. The findings further reiterate the idiosyncrasies of contextualization and adaptability required for Social and emotional domain, as it is evolving at a much faster pace according to the changing needs of children and their environment.

Station Days: Bringing the clinic to the community and the community to the clinic.

Fidelis Muthoni, *CRS Kenya*

Introduction: An early childhood development (ECD) project adapted Station Days, a community event, for reaching HIV-affected caregivers of young children. Are Station Days a successful point of entry for caregivers affected by HIV to access ECD services? **Methods:** Quantitative results are available from monitoring data. A midterm evaluation conducted 24 key informant interviews and focus group discussions with three implementing partners. **Findings:** According to project monitoring data, 3,754 children under five and 3,296 caregivers received services during Station Days in 2014. All children received growth monitoring and disability screening; 3,267 children received de-worming medicine and Vitamin A, and 279 children received immunizations. Caregivers were referred for birth registration and enrollment in school; 3,189 caregivers participated in educational talks. 1,650 caregivers and 1,749 children received HIV counseling and testing; those who tested positive were linked to care and treatment services. 2,722 children and 89 caregivers were treated for common infections. Community health workers participated and received notice of referrals made to project beneficiaries. The project's midterm evaluation identified Station Days as a best practice because they "actively demonstrate holistic care, build community support for ECD, strengthen collaborations with partner organizations, engage beneficiaries and link them to the services they need." **Implications:** Station Days are a sustainable model for improving both the availability and the quality of service provision across key areas of child development. By engaging government services in the events, communities are brought back into clinic services and clinics are centrally accessible to the communities that they serve.

Cost effective and quality child care centre.

Asifa Nurani¹, Nafisa Shekhova¹, *AKF-East Africa*¹

In Kenya more than four million children under five are not achieving their full potential due to poverty, poor health and under-nutrition; they are also deprived of proper stimulation and learning opportunities.¹ Many of these children live in the informal settlements. Mothers residing in informal settlements seek employment outside their homes, often leaving their young children in low cost child care centres. The centres are poorly lit, cramped, unsafe, and lacking age-appropriate materials. The proprietors often have little or no training in childcare and lack the skills and means to address the children's basic needs. To address, these challenges in the informal settlement, the Aga Khan Foundation is testing an

innovative model of quality, cost-effective and contextually relevant childcare centres that have the potential to be taken to scale. The model is being tested in 18 existing centres in one of the Nairobi's non-formal settlements. The presentation will focus on providing the key challenges of child care services in the informal settlements and the Foundation's holistic approach to develop and implement a comprehensive and cost effective model of child care centre. The participants will also have the opportunity to learn and discuss with the presenters the key components of the approach and some of the lessons learned to date.

¹Kenya National Bureau of Statistics (KNBS) and ICF Macro. 2010. Kenya Demographic and Health Survey 2008-09. Calverton, Maryland: KNBS and ICF Macro)

Parental and community involvement of children's literacy development: Meeting the needs of vulnerable children.

Mary Oluga, *Aga Khan University - Institute for Educational Development, East Africa*

Early literacy development enables early learning experiences associated with academic achievement, higher graduation rates and enhanced productivity in adult life. Families and communities are significant in complementing the work of schools in enabling children to improve their educational achievements and acquiring the literacy skills they need in life. However, poverty and the scourge of HIV and AIDS have marginalised children and denied them opportunities of interacting with their surrounding and constructing meaning of their world. Children under challenging circumstances therefore, have very limited opportunities to developing their literacy skills, and especially now that conceptions of literacy are growing beyond the traditional print medium. This paper is informed by data from two studies; an ethnographic style approach on parental involvement for sustainable education in five schools each with two homes, and an action research intended for capacity building for officials of community based organisations providing support in children's literacy development. Both studies based in different regions of Tanzania, indicate that play, storytelling and domestic chores are appropriate and inclusive ways of initiating children into the social fabric of their contexts. The funds of indigenous knowledge from stories provide children with solutions to challenges in life. The study offers successful strategies of involving children in play and domestic chores, and enabling them to express what 'they would have otherwise not said' to anybody. When parents and caregivers are empowered for children's educational development, they can go beyond the challenges of poverty and low education to support them more effectively.

Assessment of depression and social support for mothers of young children: Contextual considerations for ECD programming.

Obias Opiyo, *CRS Kenya*

Introduction: The effects of maternal depression on a child are expressed through insecure attachment, poor self-control, internalizing and externalizing problems, and difficulties in cognitive functioning. An early childhood development (ECD) project for children affected by HIV designed holistic services for both the physical and mental wellbeing of caregivers for children under five. To inform project design, the first research question assessed the prevalence of depression among mothers with children under six months. **Methodology:** The Edinburgh Postnatal Depression Scale (EPDS) was used to screen 499 mothers of children below the age of 6 months enrolled in an ECD project in Nyanza Province, Kenya. The OSLO scale was also administered to assess social support. **Findings:** The mean Edinburgh Score of the 411 women was 12.8 (range=0-30); 68% scored 10 or above indicating a very high amount of possible depression. The mean OSLO scale score for this population was 8.2 (range=2-14); 68% of the women scored 8 or less on the OSLO scale indicating a high amount of lack of social support among this population. **Implications:** The prevalence of depression in women with young children is higher than the 18.3% reported in a 2010 systematic review (Sawyers 2010). Considering the long-ranging impact of maternal depression on the child and the proven negative impacts on antiretroviral treatment outcomes, mental health must be considered as part of holistic services for HIV-affected mothers. All women screened in this project are enrolled in support groups and economic strengthening activities.

Holistic preschool model – Madrasa Early Childhood Programme.

Najma Rashid¹, Drisa Matovu¹, *AKF-East Africa¹*

The Madrasa Early Childhood Development Programme (MECP) was established by the Aga Khan Foundation (AKF) in East Africa in the 1980s. The programme promotes quality, culturally relevant and pluralistic early childhood development with underprivileged communities at national and sub-national levels through locally registered Resource Centres in each country. To date, the Resource Centres have established more than 230 sustained community based preschools for children aged 3-6 benefiting over 90,000 children. Impact studies have shown children leaving the Madrasa preschools have a significant advantage over their peers in similar preschools. MECP model has not only been a successful and exemplary ECD programme, but it has also pioneered an approach to the holistic

development of the child which is fully contextualised within the cultural heritage and traditions of the communities in which it works. The programme has grown so that it benefits a wider number of people. MECP has built capacity of governments' personnel and other civil society organisations on ECD and contributed to the development of ECD policies and frameworks in the region. The programme has also provided technical support to Egypt, Afghanistan, Mozambique (AKF programmes). The presenters will provide an overview of the MECP model and the key elements of the model. These elements are integrated curriculum, community engagement and support, teacher professional development, school environment and school leadership and management. The presentation will also focus on what makes the model successful and cost effective and its impact on the overall children's development.

PATH's approach to integrating ECD into health systems.

Immaculate Salaon, *PATH*

The brain develops rapidly from conception to the first three years of life and this is a period when delays in physical growth, social and emotional connectivity, and intellectual development are often reversible. Children who are appropriately stimulated in their early years grow up to be healthier, more educated adults, with better socioeconomic outcomes. Since 2012, PATH has piloted an innovative model to integrate care and stimulation content into community- and facility-level health services delivered by governmental and nongovernmental service providers (e.g., community-based organizations) in Kenya and Mozambique. Using Essential Package with CHWs and CBOs, and Care for Child Development package (UNICEF/WHO) with health facility providers, PATH supported ECD integration into home visits, growth monitoring, MCH consultations, and HF play corners. A qualitative assessment highlighted changes in attitudes among caregivers and service providers around the importance of ECD for children 0–3 years, improved parenting practices, as well as acceptability of the use of the health system as a vehicle for ECD integration. PATH is scaling up its integrated ECD model (2014–2017) in Kenya and Mozambique by working with key health stakeholders to create centers of excellence with integrated ECD services at community and health facility level, as well as to inform and advocate with key decision-makers at national and subnational level for policies, guidelines, and tools for reaching the youngest children with integrated ECD interventions.

Expanding access to a proven early stimulation program through a web-based package and technical support.

Joanne Smith¹, Christine Powell¹, Susan Chang¹, Sally McGregor¹, & Susan Walker¹, *Epidemiology Research Unit, Tropical Medicine Research Institute, University of the West Indies, Mona, Jamaica¹*

Objective: To promote an innovative web based intervention package based on our highly successful Jamaica home visit program. **Package:** This low cost intervention package is designed to be delivered by community workers and is aimed primarily at disadvantaged mothers and their young children in the home. The web-based intervention package has several components: (1) Curriculum – a step-by-step guide to goals and activities for children aged 6-48 months in weekly visits. (2) Training Manuals – utilized by supervisors to train the home visitors with interactive training methods. (3) Films – which illustrate the steps in a home visit, show examples of important techniques and the conduct of different activities. The films were produced in three countries illustrating the approach in rural and urban settings. (4) Cultural adaptation guide – to assist users in modifying materials to local contexts. (5) Toy Manual – with illustrations of toys from recyclable materials and how to make them. Web-based access to this proven program will be combined with online technical support. **Conclusion:** This innovation has the potential to transform the capacity of governments and agencies to implement programs for parents and children under 3 years and thereby achieve the critical need to ensure stimulating home environments, promote responsive parenting and enhance early learning.

Utilizing local funds of knowledge in early years care and education in Tanzania.

Shelina Walli, *Aga Khan University - Institute of Educational Development, East Africa*

In spite of the plea for more resources in the area of teaching and learning in early childhood education in Majority World contexts, the resources pupils and teachers possess and bring with them to the classroom are not considered (Hardman, Abd-Kadir & Tibuhinda, 2012; Hardman, Ackers, Abrishamian & O'Sullivan, 2011; Barrett, 2007; Gonzalez, Moll & Amanti, 2005). Teaching and learning when made contextually relevant can yield positive outcomes, however, these funds of knowledge are frequently overlooked (Hardman et al, 2012; Barret 2007; Hedges, 2012; Gonzalez, et al, 2005). Tanzania is moving in the direction of prioritizing early childhood education (World Bank 2012; UNICEF 2011). The present policy is to have a pre-primary classroom in every public primary school. In addition, certain

teacher preparation colleges have been identified to provide specific courses for early childhood teacher preparation and professional development. However, it is noted, local knowledge is often left out, or severely restricted from the resource dialogue, and is most times not considered part of the official curriculum. Therefore, professional development for teachers and tutors could be a vehicle for such concepts to be developed. This paper will discuss ways in which the concept of *funds of knowledge* can be incorporated both at classroom and teacher preparation levels in order to enhance teaching and learning experiences. This is done using the national curriculum of the country without compromising the policy or the administrative expectations.

Case study: Complimentary Early Childhood Development (ECD) services for reaching the hardest to reach children and their families with quality services in Nairobi and coast regions in Kenya.

Damaris K. Wambua¹, Regina Mwasambo¹,
*ChildFund Kenya*¹

The presentation focuses on ChildFund Kenya's partnership with communities to improved access to quality ECD services for children with emphasis on children affected by HIV and AIDS. With funding support from Conrad N. Hilton Foundation, ChildFund Kenya is implementing an ECD project which is focusing on the hardest-to-reach communities that have been affected by the HIV and AIDS pandemic in the informal settlements of Nairobi and Mombasa and the rural areas of Kilifi. ChildFund Kenya carried out a mapping exercise in selected project areas, with the purpose of identifying barriers/gaps in provision of ECD services and linking the hardest-to-reach children and families to ECD services by providing complementary ECD services that will promote optimal development of these children. The team used the Participatory Learning and Action approach in conducting the mapping exercise which include government, community leaders, community members and other players. The mapping exercise informed community discussions and an action plan to address child protection issues to improve access to ECD services for young children. It is expected that in the long run the ECD program will contribute to and ensure that young children affected by HIV and AIDs enjoy good relationships with responsive caregivers supported by effective programs staffed by Community Health Workers (CHWs) and Early Childhood Development (ECD) providers who are knowledgeable about supporting family relationships.

The design and formative evaluation of a parenting programme in Uganda for early prevention of gender-based violence.

Daniel Wight¹, Godfrey Siu², Flavia Zalwango³, Sarah Kasule⁴, Janet Seeley⁵, *MRC/CSO Social and Public Health Sciences Unit, University of Glasgow*¹, *Child Health and Development Centre, Makerere University, Kampala*², *MRC/UVRI Uganda Research Unit on AIDS, Entebbe*³, *Mothers' Union, Anglican Church of Uganda, Kampala*⁴

Our goal is to develop a community based parenting programme for the early prevention of gender based violence (GBV), by addressing causal factors originating in the early years: poor parental bonding and child attachment; harsh parenting; differential socialisation by gender and parental conflict.

Parenting for Good Behaviour and Respectability is being developed in three stages: 1) designing and drafting the programme; 2) formative evaluation with six groups in semi-rural Uganda; 3) large scale pilot with before and after outcome evaluation. We will present Stages 1 and 2, currently underway.

Underlying principles are to harness parents' existing motivation, skills and experience. Parents in East Africa are particularly concerned about children's good behaviour and respect. This programme emphasises that responsive, non-harsh parenting improves child development without undermining behaviour. The 21 sessions are facilitated by two local parents who receive 1-2 weeks' training. Beyond that the programme is voluntary. The first 10 sessions are for mothers and fathers separately. In sessions 11-21 the two sexes are encouraged to address conflicting gendered perceptions of parenting problems.

Contribution to knowledge, practice and policy: We will focus on findings of general relevance to early years interventions. There is widespread endorsement of the programme by village leaders and parents, with fathers especially keen to achieve children's good behaviour. Delivery through new, rather than pre-existing, groups is recommended to ensure good coverage. Challenges encountered include expectations of material incentives, the selections and training of facilitators, fidelity, timeframes, and language.

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