



A good start:
advances in early
childhood development



EARLY CHILDHOOD MATTERS



June 2015 / 124

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**Bernard
van Leer**
FOUNDATION

Early Childhood Matters is a journal about early childhood. It looks at specific issues regarding the development of young children, in particular from a psychosocial perspective. It is published twice per year by the Bernard van Leer Foundation. The views expressed in *Early Childhood Matters* are those of the authors and do not necessarily reflect those of the Bernard van Leer Foundation. Work featured is not necessarily funded by the Bernard van Leer Foundation.

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ISSN 1387-9553

Cover: Young African American father holding his baby girl.
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Early Childhood Matters is also published in Spanish: *Espacio para la Infancia* (ISSN 1566-6476). Both publications are available electronically on earlychildhoodmagazine.org and single hard copies can be requested free of charge.

Bernard van Leer Foundation
PO Box 82334
2508 EH The Hague, The Netherlands
Tel: +31 (0)70 331 2200
www.bernardvanleer.org
Series editor Teresa Moreno
Guest editor Joan Lombardi
Consultant editor Andrew Wright
Text edited by Margaret Mellor
Design Homemade Cookies (homemadecookies.nl)

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We now have increasing evidence that investing in young children and families can lead to better outcomes for the current and future generations. Photo • Courtesy Asociación Red Innova

A foundation for sustainable development: advancing towards a new era for young children and families

Joan Lombardi, Senior Advisor, Bernard van Leer Foundation

Nearly 50 years ago, in 1966, the Bernard van Leer Foundation funded its first major project aimed at enhancing the development of young children: the Project for Early Childhood Education (PECE), which was initiated in Jamaica. Funds were made available to the University of the West Indies to improve Basic Schools – nursery schools set up and run by the community (Bernard van Leer Foundation, 1999). It is also five decades this year since the United States first started its Head Start programme, with the aim of providing comprehensive services to support the development of young children living in poverty and engage and empower their families. In the intervening half-century, knowledge and understanding of the importance of the early years to long-term health, education and behaviour have grown dramatically. This issue of *Early Childhood Matters* celebrates the advances made over those past five decades, and calls for a new era, a global movement to bring services for young children and families to scale.

As the world moves beyond 2015, and towards implementation of the Sustainable Development Goals, what has become increasingly clear is the importance of early child development to the long-term success of families, communities, countries and a peaceful and sustainable world. It is estimated that that over 200 million children under 5 are not reaching their developmental potential based on indicators of poverty and early childhood stunting (Grantham-McGregor *et al.*, 2007). Growing up in poverty, in poor health, being exposed to family and environmental stress, exposure to violence and lack of early learning experiences, and other risk factors lead to social and economic consequences that stand in the way of achieving prosperity and economic development (Consultative Group on Early Childhood Care and Development and Development and Sustainable Development Solutions Network, 2014).

Yet there is another way. We now have increasing evidence that investing in young children and families can lead to better outcomes for the current and future generations. The series of articles presented in this

publication reflect the innovations that have emerged across the early years and demonstrate the need to continue to build capacity. It is only by building on the evidence and championing change that we can bring early childhood interventions to scale for all children and families, particularly those most vulnerable.

In the late 1950s and early 1960s, Bernard van Leer's son, Oscar, set out to shape the objectives of the Foundation that had been set up by his father. In 1963, while on his way to America, Oscar van Leer read an article by the New York developmental psychologist Martin Deutsch, Professor of Early Childhood Studies at the University of New York, who had been doing research on young children. His research, along with other studies, found that disadvantages afflicting many children from birth meant the waste of an enormous amount of talent (Bernard van Leer Foundation, 1999). However, early intervention could change this trajectory.

In many ways these early researchers, including those writing about early attachment and other developmental issues, were pioneers in what has become the early childhood movement.

In Section I of this issue

Given the subsequent advances in scientific understanding of early development, we start this issue with an article by Johanna Bick and Charles A. Nelson (pages 10–13) on what the latest brain research tells us about the effects of early adverse experiences. In this important article, the authors provide us with basic principles of **brain development** and explain why early experiences have such a powerful role in shaping the trajectory of development.

Building on a life course perspective, the next six articles underscore the importance and potential of intervening across the early years, as one developmental period builds on another. Two articles highlight the importance of the **first 1000 days**: on pages 14–18 Gary Darmstadt charts the progress and challenges in assuring healthy births and healthy babies and bridging survival and development, while on pages 19–27 Aisha Yousafzai and

Mandana Arabi focus on the importance of integrated comprehensive services.

Since we know that healthy and successful child development is influenced most directly by the family and the community, we turn next to three important examples of programmes from around the world. Sally Grantham-McGregor and Susan Walker discuss on pages 28–34 the landmark study of **home visiting** from Jamaica which has provided more than two decades of evidence documenting the long-term impact of early childhood services and is now being replicated in several countries. Deepa Grover and Bettina Schwethelm (pages 35–7) explore recent and innovative examples from Eastern Europe and Central Asia, while on pages 38–42 Jorge Luis Fernández and Norma Vidal are interviewed about exciting efforts to scale early childhood programmes in Peru.

Moving along the developmental continuum, the article on **pre-primary education** by Michelle J. Neuman and Kavita Hatipoğlu (pages 43–50) provides a timely update on the current status of this critical service around the world, documenting both progress and gaps.

While much of the developmental literature focuses on the role of the mother in the early years, Gary Barker’s article on **fatherhood** (pages 51–3) makes the strong case for the importance of men’s caregiving for young children and provides examples from the global MenCare Campaign. At the same time, no set of articles on child development would be complete without a focus on the current issues facing those children growing up in countries affected by armed conflict, as well as those facing children with developmental disabilities. On pages 54–8, the International Rescue Committee’s Katie Murphy, Sandra Maignant, Laura Boone and Sarah Smith explore the grim realities of the impact of war on children and the promise of **humanitarian intervention**. This is followed by an important article by Donald Wertlieb and Vibha Krishnamurthy (pages 59–64) which draws our attention to the critical need to focus on the **rights and needs of young children with disabilities** and the essential part that inclusive early childhood services can play in their lives.

In Section II of this issue

While underscoring the importance of continuity across the developmental period, the remaining articles speak to the issues that need to be addressed as we move forward to scale services and build capacity, including areas such as research and measurement, quality assurance, financing, and leadership development.

Two articles address the **research and measurement** issues. As described by Dominique McMahon and Karlee Silver on pages 70–73, on the research emerging from Saving Brains, Grand Challenges Canada will be instrumental in assuring evidence-based strategies to address the most pressing problems facing young children and families. On pages 74–7, Abbie Raikes, Tarun Dua and Pia Britto describe how measuring progress towards meeting goals and establishing indicators will benefit from measurement work launched across the UN agencies.

While access to services continues to be a major concern for children of all ages, and particularly for children growing up in poverty, the quality of services is critical. To underscore this point, the article by Dawn Tankersley, Tatjana Vonta and Mihaela Ionescu on quality early childhood settings (pages 78–81) reports on the growing consensus on how best to define quality and the importance of both universal values and cultural sensitivity.

Historically, early childhood has not received the resources necessary to meet demand or assure quality. The **financing** of early childhood services is only now beginning to receive the attention it deserves. An important innovation has been the establishment of the Early Learning Partnership, a new funding mechanism that is catalysing change. The contribution by Aashti Zaidi Hai from the Children’s Investment Fund Foundation (pages 82–5) documents the promise of this new resource.

In order to build public awareness and advocate for increased financing at the global, national or community level, we need to increase our numbers

in the early childhood community and include more people who can help us communicate the needs of young children. These **new voices** can include civic and religious leaders, law enforcement and the business community, among others. The example from Sara Watson at ReadyNation and Gideon Badagawa and Ruth Musoke at the Private Sector Foundation (pages 86–7) provides a glimpse into what is possible in reaching out to new champions.

With increased demand comes the need to **build capacity and leadership** within the field. Too often efforts to move from evidence to scale are challenged by capacity issues at all levels and the lack of recognition of the importance of the early childhood workforce. On pages 88–90, the article by Eduardo Queiroz and James Cairns provides an example of leadership development in Brazil. On pages 91–3 we hear from Kofi Marfo on the new Institute for Human Development which has emerged in Africa and the critical importance of respecting culture as we build the knowledge base. And on pages 94–6, Mark Elliott and Lynette Okengo of the World Forum Foundation’s Global Leaders for Young Children programme further explore the need to build capacity that cuts across research, policy and practice.

In the final article (pages 97–100), Mary Young brings us back to the future, reflecting once again on the **history of the early childhood field and challenging us to move forward** by starting early, assuring comprehensive services and expanding cross-sector planning and policies.

At the end of each section, you will also find example boxes briefly showcasing a selection of the other noteworthy work being done by a wide range of organisations with an interest in young children. Although in this issue of *Early Childhood Matters* our hope is to present as comprehensive as possible a picture of the current state of the field of child development, we are well aware that many more important advances are going on around the world than we able to do justice to in these pages.

We are in a very different place now than 50 years ago, when the Bernard van Leer Foundation first began to focus on young children – the evidence that we can make a difference continues to grow, new champions are emerging, and demand for services is increasing. Now is the time to build on our history, to continue to increase public awareness and to expand and improve services for children from before birth to age 5 and beyond, in communities around the world. It is our hope that this issue of *Early Childhood Matters* is a call to action on behalf of young children and their families, action that can lay a strong foundation for sustainable development. We look forward to celebrating a different world 50 years from now – a world where all children have an equal opportunity to grow up healthy, happy and successful.

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Section I

SUPPORTING CHILDREN AND FAMILIES RIGHT FROM THE START AND THROUGHOUT THE EARLY YEARS

Early adverse experiences: what does the latest brain research tell us?

Johanna Bick, Research Fellow, Boston Children's Hospital and Harvard Medical School, and Charles A. Nelson, Richard David Scott Chair in Pediatric Developmental Medicine, Boston Children's Hospital; Professor of Neuroscience and Education, Harvard Medical School and Harvard Graduate School of Education, USA

This article provides an overview of brain development. Starting with four basic principles, it goes on to explain why early experiences have such a powerful role in shaping developmental trajectories and draws attention to the deleterious impact of early adverse experiences on the developing brain. It concludes by discussing evidence suggesting the potential for recovery, both at the level of the brain and in behaviour, and implications for prevention and intervention.

Recent advances in neuroimaging have led to a more nuanced and richer understanding of how the brain develops, starting from the first weeks after conception and continuing until the last years of life. We also know more about how the brain functions and have identified various neural systems that support higher-level emotional, cognitive, and behavioural functioning.

Principle 1: Brain development is a protracted process

Brain development begins shortly after conception and does not reach full maturity until the third decade of life. The neural tube forms a few weeks after conception. Shortly thereafter, cells begin to form, proliferate, and finally migrate to designed locations, which eventually form the various regions of the brain. Once cells reach their final destination, they differentiate into fully functioning neurons and become specialised to their designated brain region. Dendrites, the fibre-like reception areas that support neuronal communication, begin to arborise, allowing nerve cells to communicate with each other. Around the 23rd week of gestation starts a massive overproduction of synapses, or neurochemical signalling points between neurons. This overabundance of synapses eventually becomes reduced through a process known as 'pruning', which is heavily based on input from the environment. Here, unused synapses are eliminated, allowing for a fine-tuning and specialisation of the brain. Myelination of axonal fibres is the last stage of brain development. As part of this process, fatty glial cells wrap around axons to insulate neurons, allowing for more efficient neuronal transmission and signalling. The timing of this process varies, with some areas (sensory and motor regions)

becoming fully myelinated in the first five years of life and others (frontal regions of the brain) reaching full myelination during early adulthood. For a more detailed review of the processes of brain development, see Tierney and Nelson (2009).

Principle 2: Brains develop within the context of experience

As discussed in the previous section, brain development occurs over decades of life through various stages that build on one another. While genetic forces drive initial stages of prenatal brain development, postnatal brain development occurs via a constant interaction between genes and the environment. Here, genes establish the basic 'blueprint' of development, setting the foundation and basic structural plan for the brain. However, the actual 'construction' of this plan depends heavily upon signals from the environment. Two of the most experience-dependent processes in the developing brain include the arborisation of dendrites and the pruning of synapses. The density of dendritic branches depends on the amount of and intensity of input from other neurons, with greater dendritic density occurring with greater use. Synaptic connections that are used more often become strengthened, whereas those that are unused are retracted (a phenomenon referred to as 'use it or lose it').

While the experience-based nature of brain development is advantageous from an evolutionary perspective, allowing for the brain to develop in the context of the surrounding environment, this degree of 'plasticity' comes at a cost if environmental exposures exceed that which brains are designed to handle. Exposures to extreme stress and/or early deprivation are examples of such adverse circumstances. We will discuss specific consequences of each of these atypical experiences in the sections that follow.

Principle 3: Brain development occurs in a hierarchical fashion

Each phase of brain development sets the stage for the subsequent phase; accordingly, more advanced systems depend on the more basic. Therefore, the development of the least complex systems (the brainstem) supports the more complex systems (the circuitry involved in

Figure 1 Periods of functional development

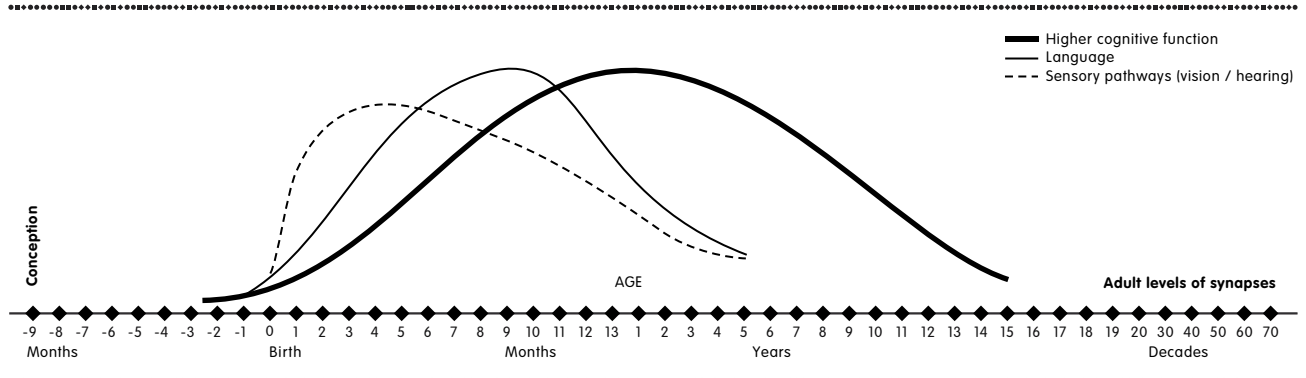


Image: Courtesy Center on the Developing Child at Harvard University. Data source: Nelson, C.A. (2000)

sensory and motor processing) and end with the most sophisticated (cortical and limbic functioning). This has critical implications for development: if adequate signals are not provided for the more basic systems, then the more complex systems, such as those that support emotion and cognitive control or language and memory, cannot develop to their full potential.

Principle 4: The first years of life mark an especially sensitive point in brain development.

Although the brain is moulded by experiences at all phases of life, the experiences during the first years of life have an especially powerful role in influencing the developing brain. Because brain regions vary in the maturation rates, they also vary in the point(s) at which they are maximally sensitive to the environment, or pass through 'sensitive periods'. Despite varying time courses, the majority of sensitive periods arise during early childhood, making the input received (or not received) during this stage in development critical for ongoing development.

Consequences of early life stress on the developing brain

Healthy brain development depends on expected input from the environment in order to reach its full genetic potential. For example, it is expected that human infants will have access to patterned light and a range of auditory cues, which support the development of visual and auditory systems. It is also expected that infants will have access to a responsive, stable caregiver, which supports the development of a number of systems, including emotional, cognitive, and physical growth. Species-atypical violations of these expected experiences have deleterious consequences for brain development.

One example involves exposure to chronic stress or excessively threatening stimuli, such as when children are reared in maltreating families or exposed to high

levels of violence. Prolonged exposure to threat is associated with the activation of the Hypothalamus Pituitary Adrenal (HPA) axis, a primary stress response system in the body. Animal work has shown that chronic exposure to glucocorticoids, the end product of the HPA axis, can have adverse effects on regions of the brain that support memory and learning (the hippocampus), and stress regulation, fear response, and detection of threat (the amygdala). Excessive glucocorticoid exposure has been associated with hyperactivation of the amygdala (Lee *et al.*, 1994; Hatalski *et al.*, 1998) and reduced dendritic spines and dendritic arborisation, resulting in eventual apoptosis of neurons in the hippocampus (Sapolsky, 1996; Kim and Yoon, 1998; Brunson *et al.*, 2001; Ivy *et al.*, 2010). Convergent findings in humans have also been observed in adults with histories of childhood maltreatment (for a review see Hart and Rubia (2012)) and there is some evidence that these neural changes can be observed during childhood (Mehta *et al.*, 2009; Tottenham *et al.*, 2010; McCrory *et al.*, 2013). Human research also suggests that extreme childhood stress leads to alterations in the structural and functional development of portions of the prefrontal cortex, a brain region that supports emotional and cognitive control (Hanson *et al.*, 2010; Edmiston *et al.*, 2011; De Brito *et al.*, 2013).

Psychosocial deprivation is a second form of adversity that can negatively interfere with brain development, especially when it occurs early in life. Childhood exposure to neglect is typically investigated with children reared by neglecting parents in family settings, or at a more extreme level in institutional rearing facilities. Under neglecting circumstances, the brain does not receive adequate environmental input to carry out the normal course of neurodevelopment. This results in an 'under-wired' or 'mis-wired' brain, which confers risk for a number of cognitive, emotional



Under neglecting circumstances, the brain does not receive adequate environmental input to carry out the normal course of neuro-development. Photo • Courtesy Michael Carrol

and behavioural problems that persist throughout development. Animal models have shown that exposure to chronically depriving or understimulating environments leads to decreased dendritic arborisation and spines in various regions of the cerebral cortex, and is also associated with global reductions in brain volume (Diamond *et al.*, 1966; Globus *et al.*, 1973; Bennett *et al.*, 1996). Parallel findings in humans have also been observed. For example, children reared in depriving circumstances show reductions in overall brain volume (Mehta *et al.*, 2009; Sheridan *et al.*, 2012) and reduced thickness in the cortex (McLaughlin *et al.*, 2014), which may signal atypical trajectories of experience-dependent synaptic pruning. White matter changes are also observed in children exposed to institutional rearing, both on a global level (Sheridan *et al.*, 2012) and in specific axonal bundles associated with emotional and cognitive

control (Eluvathingal *et al.*, 2006; Kumar *et al.*, 2014; Bick *et al.*, 2015), suggesting developmental delays in the degree to which neurons become myelinated across development.

Potential for recovery

On a more promising note, the high degree of neural plasticity early in life also allows the brain to be highly sensitive to positive or enriching environments. Therefore, removal from early adversity and entry into a therapeutic context can support recovery. This has been demonstrated on a cellular level in animal work. More complex environments have been shown to lead to more sophisticated dendritic branching and synaptic density in cortical areas (Altman and Das, 1964; Bennett *et al.*, 1964), and have also been associated with larger brain volumes (Rehkemper *et al.*, 1988). Human

work involving children removed from conditions of extreme neglect has shown similar findings; for example, institutionally reared children placed into enriching, responsive family settings show structural (Sheridan *et al.*, 2012; Bick *et al.*, 2015) and functional (Vanderwert *et al.*, 2010) improvements of the brain, and associated improvements in cognitive and emotional adjustment (Rutter, 1998; Nelson *et al.*, 2007). For many outcomes, the greatest improvements, both neurally and behaviourally, are typically observed for children who are removed from neglect and provided with enriching environments at the earliest ages (Vanderwert *et al.*, 2010; Rutter, 1998; Nelson *et al.*, 2007).

In summary, there is converging evidence across human and animal studies that early adverse exposure negatively interferes with the developing brain. While excessive exposure to stress may lead to neural alterations due to prolonged exposure to stress hormones, exposure to extreme deprivation may interfere with the brain's ability to reach its full developmental potential, due to insufficient input. Animal studies have been critical for understanding the consequences of these adverse experiences on a neuronal level. Human studies showing similar morphological and functional alterations have elucidated the consequences for emotional and cognitive functioning. Recent evidence points to the potential for recovery, both in terms of brain structure and function, in early intervention contexts. These studies reinforce the notion that prevention, and early intervention that occurs as early as possible, are likely to lead to the healthiest outcomes in the long term.

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Progress and challenges in ensuring healthy births and babies

Gary L. Darmstadt, Associate Dean for Maternal and Child Health and Professor, Department of Pediatrics, Stanford University School of Medicine, Stanford, CA, USA



As child mortality falls, attention is turning to how to better identify children at-risk for developmental delays and disabilities and how to optimise child development and long-term economic productivity potential. Photo • Courtesy Asociación Red Innova

Millennium Development Goals 4 and 5 have been remarkably effective in galvanising advocacy and action on maternal and under-5 mortality over the past 15 years. As the Sustainable Development Goals are introduced this September, what have we learned and what comes next to ensure healthy births and babies around the world? This article reviews some major global trends in newborn health and survival, and considers major priorities for investment and actions to address the unfinished agenda.

A healthy start to life sets the trajectory for future health and neurodevelopment, and ultimately for adult productivity and ability to contribute to poverty alleviation and economic growth. Since 1990 the global burden of under-5 child deaths has been cut approximately in half (UNICEF/United Nations Inter-agency Group for Child Mortality Estimation (UN IGME), 2014). Even better, the annual rate of reduction (ARR) in child deaths has accelerated in the past decade,

from 1.2% in 1990–1995 to 4% in 2005–2013, aided by the increased attention afforded through the Millennium Development Goals (MDGs), introduced in 2000, and movements such as the UN Secretary General’s Every Women Every Child initiative, launched in 2010.

As global child deaths come down, however, the proportion that occurs in settings of conflict and political instability is rising. Excluding India and China, nearly half of child deaths now occur in such settings. This ‘grand divergence’ – with settings of poor governance increasingly left behind – has serious global implications beyond health (such as security) and makes urgent the need to address inequalities and increase services in these challenging contexts (Wise and Darmstadt, in press).

Another worrying trend is that progress in reducing the annual 2.9 million neonatal deaths in the first 28 days after birth lags substantially behind that for children

older than one month (UNICEF/UN IGME, 2014). At present rates of decline, it is stunning to consider that it will take over a century for African newborn babies – and nearly that long for babies born today in South Asia – to have the same survival probability as those born in Europe or North America (Lawn *et al.*, 2014). What’s more, these timelines for sub-Saharan Africa and South Asia are more than three times slower than it took for a similar transition to occur in high-income industrialised countries several decades ago, despite the availability of many more interventions now than existed then. Surely inequality on such a grand scale demands more concerted action.

Uneven progress

Success in averting child deaths has been primarily in conditions such as measles, HIV, diarrhoea, pneumonia and malaria in children older than 1 month (Liu *et al.*, 2015). In contrast, the conditions with the slowest progress are largely those of newborns, reflecting in large part the increased investments that have been made in child health – for example through PEPFAR (the United States President’s Emergency Fund for AIDS Relief), GAVI (Global Alliance for Vaccines and Immunisation, the Vaccine Alliance), the Global Fund to fight AIDS, Tuberculosis and Malaria, Roll Back Malaria, President’s Malaria Initiative, etc. – over the past decade but which have largely neglected newborn conditions and have essentially forgotten stillbirths (Darmstadt *et al.*, 2014). Thus, the proportion of under-5 child deaths that occur in the neonatal period is rising, and is now at 44% globally and over 50% in five major World Health Organization regions (UNICEF/UN IGME, 2014). Moreover, among major killers of children, progress has been slowest for preterm birth and this past year, for the first time, preterm birth became the top cause of death in children before their fifth birthday (Liu *et al.*, 2015).

Stillbirths (defined by the WHO as ‘a baby born with no signs of life at or after 28 weeks’ gestation’) are particularly neglected on the global agenda. Interventions to prevent stillbirths are known, and many have collateral benefits for maternal and newborn health (Bhutta *et al.*, 2014). However, progress in

addressing stillbirths is almost flat – in high-mortality countries the ARR was only 0.6% from 2000 to 2009 – reflective of the nearly complete lack of political will, funding and programmes to address stillbirths, including 1.2 million that occur abruptly during childbirth largely due to lack of skilled assistance (Darmstadt *et al.*, 2014).

As child survival improves, the global population of adolescents grows (UNICEF, 2012), as does evidence for the importance of pre-conception nutrition for ensuring healthy pregnancies and healthy births. However, global attention to the identification of, and investments in effective platforms for reaching adolescents with services is lagging. Very recently, however, adolescent health has begun to appear on the global public health agenda, for example with the establishment of a *Lancet* Commission on Adolescent Health, and inclusion of adolescents in the new Every Women Every Child strategy 2.0, called the Global Strategy for Women’s, Children’s, and Adolescents’ Health .

In my view, there is an intervention ‘pile-up’, with ineffective introduction of interventions and implementation of programmes at scale (Darmstadt *et al.*, 2014). For example, whereas 16 proven interventions were identified in the 2005 *Lancet* Newborn Survival series (Darmstadt *et al.*, 2005), analyses for the Every Newborn *Lancet* series published in 2014 identified 59 pre-conception, antenatal, intrapartum, and postnatal interventions (Bhutta *et al.*, 2014). Tragically, however, coverage for many of the most effective interventions (such as newborn resuscitation) is unknown due to lack of global data, or has been stagnant (for example, Kangaroo Mother Care¹) (Darmstadt *et al.*, 2014; Bhutta *et al.*, 2014).

On a more positive note, another trend in child health is that as mortality rates have come down, the critical importance of actions to optimise child development has received increasing attention. It was only in 2014, however, that the first analysis of the global burden of disabilities stemming from early-life (newborn) conditions was published (Lawn *et al.*, 2013). The analysis

showed that in high-income countries, where neonatal mortality rates are low, disability rates are also relatively low due to the provision of good-quality advanced care for preterm and critically ill newborns. In low-income countries where mortality rates remain high, disability rates are also low, but for a very different reason: in these settings, infants at high risk for disabilities by and large do not survive. Perhaps most illuminating was the situation found in many middle-income countries. Here, where survival is improving but the quality of care is lagging – particularly more technically advanced care for very small and sick newborns – disability rates have risen over the past two decades and now are relatively high. Importantly, analyses suggest that improving the quality of care for mothers and infants who seek care in health facilities – addressing missed opportunities – could avert an estimated 2 million maternal and newborn deaths and stillbirths per year around the world (Lawn *et al.*, 2014). Arguably, ensuring quality of care in health facilities is one of the most important priorities of the decade ahead.

Perhaps the most important major global initiative of recent years for advancing newborn survival and health and for averting stillbirths is the Every Newborn Action Plan (ENAP), endorsed at the 2014 World Health Assembly by the 194 WHO member states. The ENAP (and associated *Lancet* Every Newborn Series) provides the first global goals for reductions in neonatal mortality and stillbirths, along with clear recommendations for what is needed to accelerate progress.

Unfinished agenda in assuring healthy babies

To accelerate progress, I would like to highlight four key elements, consistent with the ENAP:

- 1 improve care at birth and care for small and sick newborns
- 2 improve equity for maternal and newborn care
- 3 reach every woman and newborn and achieve impact at scale
- 4 politically prioritise healthy births and healthy babies in high-burden low- and middle-income countries and in marginalised populations within those countries.

Improve care at birth and care for small and sick newborns

An estimated 2.3 million maternal and newborn deaths and stillbirths occur in the approximately 48-hour period between onset of labour and the end of the birth day (Lawn *et al.*, 2014). Obstetric care during labour and delivery has the potential to avert 41% and 70% of all newborn deaths and stillbirths, respectively, and brings a quadruple return on investment by also preventing maternal deaths and preventing child neurodevelopmental delays due to adverse birth events (Bhutta *et al.*, 2014). In addition, care for small and sick newborns can avert 30% of all newborn deaths. Coverage for many of these interventions in low- and middle-income countries remains exceedingly low – for example just 11% for simple thermal care and less than 5% for Kangaroo Mother Care (Darmstadt *et al.*, 2014; Bhutta *et al.*, 2014) – and thus greater attention is needed to closing the evidence–practice gap. Greater investment is also needed in discovery of new preventive interventions for preterm birth, given major gaps in understanding of the mechanisms of preterm birth and thus lack of measures to prevent its occurrence.

Overall, nearly 3 million lives of women, newborns and stillbirths could be saved each year through high coverage of care around the time of birth and care of small and sick newborns at an additional running cost of only 1.15 dollars (US) per person in the 75 high-burden low- and middle-income countries (Bhutta *et al.*, 2014). Arguably, increased focus here has the greatest potential for accelerating progress in the coming decade.

Improve the quality and equity of maternal and newborn care

Quality improvement in maternal and newborn care provides substantial opportunity to improve the distribution, delivery and impact of interventions (Dickson *et al.*, 2014). Improving availability of and access to primary healthcare workers equipped with knowledge, competencies and essential commodities will be key for saving lives and optimising neurodevelopment. Improving gender equality and women’s empowerment, pre-conception nutrition, and the ability to plan one’s family are particularly important avenues for advancing maternal and newborn health and survival.

Several approaches to empowering women and girls are associated with improved maternal and newborn health outcomes, for example education, ensuring equitable access to household and community resources and decision-making authority, and physical safety (Gates, 2014). However, much remains to be learned about the mechanisms and pathways through which addressing gender inequalities and promoting women's and girls' empowerment enhances health and development outcomes.

In order to prevent deaths in small babies and optimise child development, greater attention needs to be paid to the nutritional care of adolescent girls and women in the pre-conception period and during pregnancy and lactation. An estimated 15 million babies are born preterm and over a quarter (27%) of all babies born (32 million) in low- and middle-income countries are small for gestational age (SGA) (Katz *et al.*, 2013). These conditions increase risk for mortality, especially when they occur simultaneously. Preterm and SGA babies are also at increased risk of poor growth – 20% of postnatal stunting and 30% of wasting are attributed to being born SGA – neurocognitive impairment, and adult-onset diabetes and cardiovascular diseases. Improved programmes for adolescent and pre-conception nutrition (such as folic acid supplementation) are urgently needed to address these challenges.

An estimated 222 million women and girls – 162 million of them in low- and middle-income countries – want but lack access to contraceptives, information and services, and are defined as having an unmet need for family planning (Singh and Darroch, 2012). Based on estimates for the year 2012, addressing unmet need for family planning in these countries with the use of modern contraceptives would avert 54 million unintended pregnancies, 26 million abortions, 79,000 maternal deaths, 600,000 neonatal deaths, and 500,000 post-neonatal infant deaths annually. Family planning programmes increase contraceptive use and reduce unintended and high-risk pregnancies such as those spaced too closely (Cleland *et al.*, 2012). Thus, family planning is a powerful approach for improving the

health of women and their newborns and children.

Recent commitments by donors, country governments, private sector and civil society at the London Summit on Family Planning to advance family planning in low- and middle-income countries provide a key opportunity to advance maternal and newborn health and survival.

As child mortality falls, attention is turning to how to better identify children at-risk for developmental delays and disabilities and how to optimise child development and long-term economic productivity potential. Several global initiatives are underway to validate measurements of child development; define effective interventions across relevant sectors, including health, nutrition, education, child protection and social protection; and identify delivery approaches to simultaneously achieve improved child survival and child development at large scale in countries.

Reach every woman and newborn and achieve impact at scale

Data are lacking on coverage of many interventions for averting newborn deaths and stillbirths (for example: clean delivery practices, newborn resuscitation, prevention and management of hypothermia, Kangaroo Mother Care, case management of neonatal infections) and on quality of care measures (Darmstadt *et al.*, 2014). Moreover, over one-third of babies in South Asia and sub-Saharan Africa never receive a birth certificate, most newborn deaths are never registered, and stillbirths are invisible in most countries (Lawn *et al.*, 2014). Improved vital registration, facility-based perinatal data systems, and household surveys including additional neonatal and stillbirth indicators, as well as improved metrics and tracking for neurodevelopmental impairment, are urgently needed.

Common principles which have emerged from analysis of country programmes which have been successful in achieving newborn health impact at scale include:

- promote strong national leadership and convening of stakeholders (from government, civil society, academia, the private sector) around newborn health
- engage with communities to understand the local social and cultural context, including community

- beliefs and practices, as well as local policies, health systems, partners, and evidence for what works
- design solutions in a participatory manner, addressing bottlenecks and missed opportunities, and integrating interventions into programmes for care across the continuum of reproductive, maternal and child health and nutrition
 - balance demand (for example behaviour change) and supply-side interventions (for example commodities)
 - link community and facility-based care
 - monitor progress and use data in real time to adapt and improve the process and coordination of implementation
 - spread solutions via networks and primary healthcare delivery channels
 - ensure accountability for results at all levels.
- (Darmstadt *et al.*, 2014).

Politically prioritise healthy births and healthy babies in low- and middle-income countries

To accelerate global progress, countries where the burden of neonatal morbidity and mortality and stillbirths are highest must prioritise newborn health within their budgets, policies and programmes. Major emphasis needs to be placed on ensuring that all groups working in these countries on women's and children's health and nutrition include the newborn within their programmes, and ensure that they reach the poorest and most marginalised groups.

Note

- 1 Kangaroo Mother Care is an approach to the care of preterm and/or low-birthweight infants in which mothers and families are the main providers of the biological (warmth and food, for example exclusive breastfeeding) and psycho-emotional needs (love, caring and comfort) needs of their newborn. The infant is held continuously in the kangaroo position, in direct skin-to-skin contact on the mother's chest.

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Bridging survival and development in the post-2015 agenda: partnerships in nutrition and early child development

Aisha K. Yousafzai, Associate Professor, Department of Paediatrics and Child Health, Aga Khan University, Pakistan, and Mandana Arabi, Director, Business Platform for Nutrition Research, Global Alliance for Improved Nutrition (GAIN), Washington DC, USA



The critical building blocks for children's early development are adequate and appropriate nutrition; stable, responsive, and nurturing environments with learning opportunities; and safe, supportive physical environments. Photo • Courtesy PEDS Trial/Aga Khan University

Inadequate nutrition and stimulation are key risk factors associated with poor development of children. This article first describes their prevalence and then explores the rationale for integrated and comprehensive approaches which combine interventions to mitigate these risks. It reviews the evidence that informs best practice in delivering integrated nutrition and stimulation interventions, and concludes with recommendations for practice, policy and research.

If children fail to get what they need – enough nutrition, nurturing, stimulation, and a sense of security – during the most critical years of early childhood, the impact on their lives and futures is enormous.

Anthony Lake (Executive Director, UNICEF) and Margaret Chan (Director-General, World Health Organization), 2014

As the period of the Millennium Development Goals (MDGs) draws to a close, we can reflect on the progress made for children and review the lessons learned to do better in the post-2015 era. Significant progress has been made for MDG 4 (reduce by two-thirds, between 1990 and 2015, the under-5 mortality rate): the number of child deaths has been reduced by half to approximately 6.3 million (Requejo and Bhutta, 2015). However, among those who survive, it is estimated that close to 200 million children fail to meet their developmental potential in their first five years, resulting in lower educational attainment, reduced economic productivity and poorer physical and mental health outcomes (Grantham-McGregor *et al.*, 2007).

The post-2015 agenda will focus on sustainable development, and will require healthy, productive, creative, confident and capable citizens (United Nations,

2014). Therefore, early childhood interventions cannot focus on survival alone, but must also support and promote development of young children. The critical building blocks for children's early development are adequate and appropriate nutrition; stable, responsive, and nurturing environments with learning opportunities; and safe, supportive physical environments. A bundle of nutrition, stimulation and care interventions is essential to help children get off to a good start, with the knowledge and competencies they need to compete in tomorrow's world.

Biological and psychosocial risks that affect children's early development include maternal, infant and young child malnutrition, intrauterine growth restriction, infections, lack of opportunities for learning and social interaction, exposure to environmental toxins, exposure to violence and maternal depression (Walker *et al.*, 2007, 2011a). Exposure to these risks in the early years compromises the quality of brain development, which is shaped by continuous interactions between genes, environment and experience, and leaves long-term impacts on health and learning (see pages 70–73). For many children growing up in disadvantaged contexts, risks tend to co-occur and accumulate, further compromising early brain development and fostering inequalities (Shonkoff and Garner, 2012). Among the most significant risks that affect children's early development are malnutrition and inadequate stimulation.

The global burden of malnutrition

Malnutrition, with a particular focus on the first 1000 days of life (conception to 2 years of age) is a risk factor for survival and development. The prevalence of overweight and obesity is increasing both for pregnant women and for children in the first five years of life with increased risks for maternal and infant mortality and morbidity, as well as poor health in later life. However, global attention is still focused on undernutrition, with widespread macronutrient and micronutrient deficiencies in low- and middle-income countries (LMICs). It is estimated that undernutrition encompassing fetal growth restrictions, suboptimal

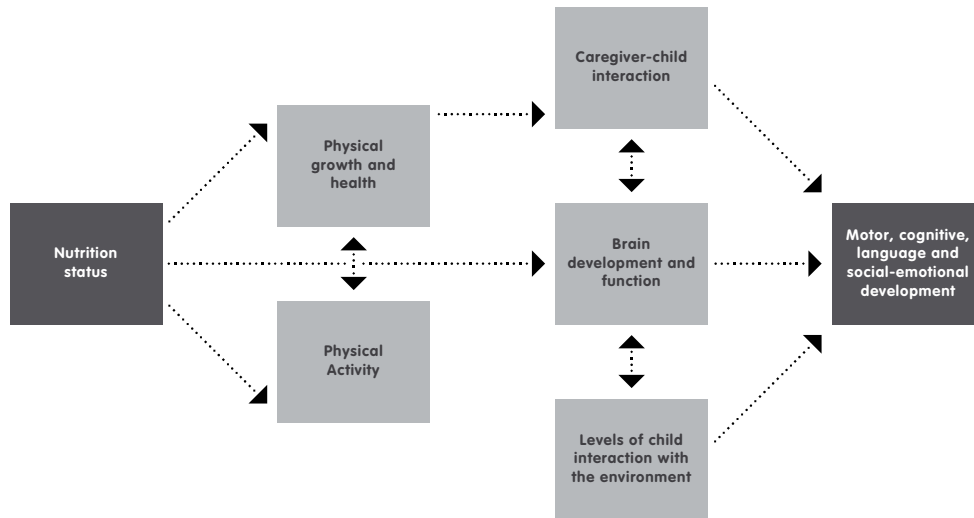
infant breastfeeding, stunting, wasting and micronutrient deficiencies account for 45% of child deaths annually.

Maternal undernutrition, defined as a body mass index less than 18.5 kg/m², affects more than 10% of women in Africa and Asia. Undernutrition is associated with an increased risk of maternal mortality and morbidity and, for the child, an increased risk of fetal growth restriction or infants who are small-for-gestational age (SGA). In 2010, it was estimated that 27% of all births in LMICs were born SGA, increasing risks for neurodevelopmental delays and an important contributor to childhood stunting (Black *et al.*, 2013). Micronutrient deficiencies, or 'hidden hunger', are still extremely widespread. In developing countries every second pregnant woman and about 40% of preschool children are estimated to be anaemic, in many instances due to iron deficiency (World Health Organization, 2015).

For young children, the most significant nutrition-related risk factor associated with poor developmental outcomes is stunting (low height-for-age, defined as more than two standard deviations below the median for the child's sex and age) (Grantham-McGregor *et al.*, 2007). The global prevalence of stunting in the first five years of life in 2011 was 25.7%, with a vast difference between high-income countries (7.2%) and LMICs (28%) (Black *et al.*, 2013). Stunted children are more likely to have impaired cognitive and executive functioning skills, poorer academic attainment and retention in school, and subsequent lower economic productivity (Grantham-McGregor *et al.*, 2007; Walker *et al.*, 2007, 2011a). More recent evidence suggests that stunting has an impact on two generations by also affecting the cognitive development of the offspring of persons with early stunting (Walker *et al.*, 2015).

In addition to exposure to early nutritional deficiencies and poor growth, suboptimal breastfeeding and feeding practices for infants and young children can further compromise children's nutritional well-being (Yousafzai *et al.*, 2013). A study of feeding practices in 28 countries in 2012 showed that only 25% of infants under 5 months

Figure 1 Hypothetical pathways showing how nutritional status might affect children’s development



Source: Prado and Dewey, 2014

of age were exclusively breastfed, and only half of those aged 6 to 8 months had received complementary foods the previous day. Median duration of breastfeeding was low even among countries with a high Human Development Index (Arabi *et al.*, 2012).

Figure 1 describes possible pathways showing how nutritional status might affect children’s development. One pathway is direct, suggesting some nutrients support the structure and functioning of regions of the brain responsible for learning. Alternatively, a child who is physically less healthy may explore their environment less or the caregiver may respond differently to a child who is physically unhealthy or small, reducing opportunities for the child’s social interaction and exploration of his or her environment (Prado and Dewey, 2014).

Inadequate stimulation

Along with nutrition, inadequate stimulation is another significant risk factor associated with poor early development. Stimulation is a process whereby an external object or event elicits a physiological or psychological response from a child. The promotion of

a child’s development does not depend on the provision of stimulation materials alone (such as the provision of toys), but also on the interaction of the child with the caregiver to promote learning opportunities and social interactions.

The ‘Early Child Development’ module of the UNICEF Multiple Indicator Cluster Surveys (MICS) is the only population household survey that collects information about a young child’s exposure to learning opportunities and social interactions. In Round 3 of the UNICEF MICS (2005–2006), the availability of three or more books in a household indicated inequalities between countries; for example, 97% of households in Ukraine reported owning three or more books for young children, while only 3% of households in the Lao People’s Democratic Republic owned a variety of children’s books. Inequalities were also seen within countries; for example, in the wealthiest 20% of households in the Lao People’s Democratic Republic, ownership of three or more children’s books was more than 10%. With respect to adult involvement in play and learning with young children, inequalities were observed between countries; for example, over a period of three days, 85% of mothers

studied in Trinidad and Tobago were involved in four or more play activities with their young children compared with only 5% of mothers in the Lao People's Democratic Republic, and again inequalities were also observed within countries between the richest and poorest populations (UNICEF, 2012).

Promoting adequate nutrition and opportunities for learning and social interactions is essential to support the healthy development of young children. There is a growing movement to promote partnerships between nutrition and early childhood development programmes in order to mitigate common risks for children's growth and development outcomes, promote common caregiving capacities to support children's growth and development, and more effectively utilise common programme resources. Interventions may be *child development specific* – directly reaching families and children (for example, parenting education and support or nutrition supplementation) – or they may be *child development sensitive*, which either mitigate threats or promote opportunities that benefit families and children indirectly (for example, social welfare programmes that enable families to invest more resources for their children). The partnerships between nutrition and early childhood development programmes might be integrated through a common delivery platform or they might be policies that ensure a comprehensive range of interventions reach the child and family.

Integrating nutrition into wider interventions

There are multiple reasons to integrate nutrition and early childhood development interventions. Synergies between the interventions can be organised at the level of the child, the family and the programme.

Synergies at the level of the child

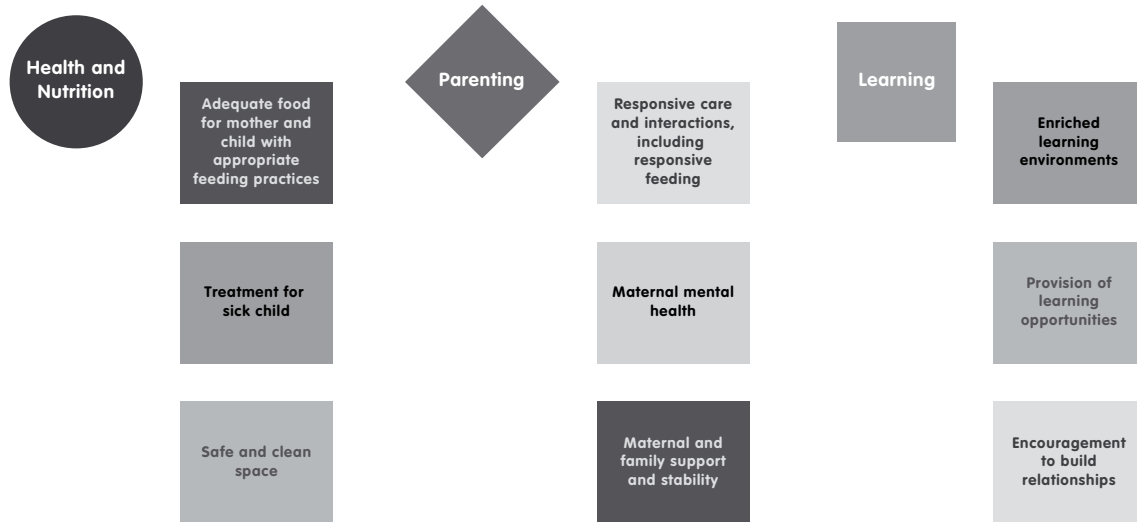
First, the promotion of children's growth and development shares a common window of opportunity in the first 2–3 years of life. Interventions to promote healthy growth and nutritional adequacy include appropriate feeding practices (such as breastfeeding promotion) and supplementation (such as distribution of micronutrients) and are focused on the first 1000 days

of life. This window of opportunity overlaps a period of rapid and sensitive brain development where protective interventions such as nutrition and the promotion of opportunities for learning and social interactions can effectively moderate the quality of early brain development (Black and Dewey, 2014).

Second, children's healthy growth and development require both nutritional adequacy and opportunities for learning and social interactions. The promotion of growth and nutritional well-being requires interventions to address the immediate and underlying causes of poor nutrition. Additionally, development gains require maternal and child nutritional deficiencies to be remedied. Therefore, an approach integrating nutrition with early childhood development benefits both growth and development outcomes, and there is also the potential for additive or synergistic (that is, the impact of a specific intervention is enhanced by the presence of a second intervention) benefits to maternal and child outcomes (Grantham-McGregor *et al.*, 2014).

Landmark research in Jamaica on stunted children who received either nutritional supplementation, stimulation (play), both interventions, or standard care found that each intervention had independent benefits to child development and nutritional supplementation also benefited child growth (Grantham-McGregor *et al.*, 1991). The Jamaican cohort was followed to adulthood, and by 22 years of age, the stimulation intervention also benefited educational attainment and behaviour; however, no long-term benefits were observed as a result of the nutritional supplementation (Walker *et al.*, 2011b). Research on integrated nutrition and stimulation interventions generally shows that the integrated approach can benefit multiple child outcomes, and that the addition of a stimulation intervention to nutrition services does not result in negative effects on the original service. Additive or synergistic benefits are less commonly observed; however, more research is needed to address this question (Grantham-McGregor *et al.*, 2014).

Figure 2 Parenting to promote health, nutrition and learning



Source: authors

Synergies at the level of the family

The provision of adequate nutrition and opportunities for learning and social interactions for the child is dependent upon the knowledge, skills and resources of the caregivers (Figure 2). Enhancing parenting capacities can potentially promote healthy child growth and development.

The enhancement of parenting capacity builds fundamental caregiving skills and provides support for the mental well-being of mothers and families. Sensitivity (the ability of the caregiver to observe and understand their child’s cues) and responsiveness (the ability of the caregiver to contingently and appropriately respond to their child’s cues) are interlinked fundamental parenting skills that support secure infant–caregiver attachment, relationships and care (Richter, 2004). Responsive caregiving behaviours are associated with benefits to children’s cognitive, language and social-emotional development (Eshel *et al.*, 2006); early literacy and pre-academic skills (Hirsch-

Pasek and Burchinal, 2006); decreased hospitalisations and ambulatory care visits and increased well-child visits (Holland *et al.*, 2012). Responsive feeding behaviours have been found to support self-feeding skills and maternal verbal responsiveness (Aboud *et al.*, 2009).

Parenting skills can be compromised by a lack of emotional availability on the part of mothers, which might impede maternal care for nutrition and development. Maternal depression is associated with low quality of stimulation in the home environment (Black *et al.*, 2007) and poor child growth (Patel *et al.*, 2004). Surkan and colleagues reported that, in selected studies in developing countries, if the infant population were not exposed to maternal depressive symptoms, 23–29% fewer children would be underweight or stunted (Surkan *et al.*, 2011). In Pakistan, interventions to reduce maternal distress reported a 60% reduced risk of cessation of exclusive breastfeeding in the first six months of an infant’s life (Sikander *et al.*, 2015). In other words, interventions that support the mental health

and well-being of the caregivers bring similar benefits holistically to their young children.

Synergies at the level of the programme

At the level of programmes there are advantages to integration, including access to child development and nutrition services through a common delivery platform, efficiencies in the cost of services, coordination of nutrition and child development messages and colocation of services that benefit families. However, integrated services require integrated planning, supervision and monitoring that can be challenging to service providers (DiGirolamo *et al.*, 2014). A summary of the advantages of integrated programming for nutrition and early child development interventions is shown in Box 1.

Effectiveness of integrated interventions

Recent meta-analyses reported that stimulation interventions had a medium-sized impact on child cognitive development outcomes, while nutrition interventions had only a small impact (Aboud and Yousafzai, 2015). Therefore, while adequate nutrition is critical for child growth and contributes to development, promoting nutrition is not on its own sufficient to promote child development.

A number of studies have investigated the outcomes of integrated nutrition and early childhood development interventions. Overall, the evidence suggests that this is likely to improve multiple outcomes for young children: the early childhood development components typically benefit children's development, while the nutrition component may benefit both development and nutrition-related outcomes (Grantham-McGregor *et al.*, 2014).

Integrated approaches typically use existing health service infrastructure; however, a range of delivery opportunities might be identified in different contexts for planning integrated strategies. Table 1 illustrates examples of programmes from Uganda, Colombia and Pakistan that have used different delivery platforms as opportunities to integrate nutrition and early childhood services. Child development and care benefits were observed in all three programmes.

Successful implementation requires attention to programme quality. Yousafzai and Aboud (2014) reviewed 31 integrated nutrition and child development interventions to identify features of their implementation that were likely to be associated with more or less effective integrated programmes. Key findings for best practice are summarised in Table 2.

Box 1 Reasons for integrating nutrition and early child development interventions

At the level of the child

- Common window of opportunity to intervene in the first 2–3 years of life.
- Opportunity to benefit multiple child outcomes.
- Potential for the combined benefits to child development and growth to equal the benefits from separate interventions.

At the level of the family

- Support and strengthening of caregiving capacities which benefit care for nutrition and development.

At the level of the programme

- Common delivery platform.
 - Potential resource and cost efficiencies.
 - Coordination of nutrition and child development messages.
 - Colocation of services benefiting families.
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Table 1 Case study examples of integrated approaches

Reference	Morris <i>et al.</i> , (2012)	Attanasio <i>et al.</i> , (2014)	Yousafzai <i>et al.</i> , (2014)
Country	Uganda (internally displaced population)	Colombia (rural)	Pakistan (rural)
Delivery platform	Emergency feeding centres	Conditional Cash Transfer Programme (<i>Familias en Acción</i>)	Community Health Service (Lady Health Worker Programme)
Delivery agent	Psychosocial Facilitator	Volunteer Mother Leaders	Community Lady Health Worker
Delivery strategy	Weekly group sessions and home visits over 6 weeks	Weekly home visits over 18 months	Monthly home visits and monthly group sessions over 24 months
Intervention	Stimulation and interaction integrated with emergency feeding programme	Stimulation and/or multiple micronutrients	Responsive stimulation and/or multiple micronutrients
Benefits	Benefits of stimulation and interaction to enriched learning environment, improved caregiver involvement in play and improved maternal mood	Benefits of stimulation to cognitive development and receptive language	Benefits of responsive stimulation to cognitive, language and motor development, caregiver involvement in play, mother-child interaction and enriched learning environment

Table 2 Effective features of integrated programmes

Implementation feature	Nutrition intervention	Stimulation intervention
Content	<ul style="list-style-type: none"> • Infant and young child feeding recommendations • Responsive feeding messages • Food fortification/supplementation supported by effective communication strategies 	<ul style="list-style-type: none"> • Structured curriculum • Low-cost materials (e.g. home-made toys, everyday household items, libraries) • Opportunities to enhance caregiver-child interaction
Number of messages	<ul style="list-style-type: none"> • 5–10 doable concrete messages 	
Dosage	<ul style="list-style-type: none"> • Home visits: at least fortnightly, lasting 30–60 minutes • Group sessions: range from high intensity for a short period (weekly for several weeks) or low intensity over a longer duration (e.g. monthly over three years). The former typically have higher compliance. Short programmes can be supplemented with subsequent booster sessions. • Clinic contacts: 5–10 minutes of additional time required for health worker to include new messages 	
Delivery strategy	<ul style="list-style-type: none"> • Responsive counselling • Opportunities for problem solving 	<ul style="list-style-type: none"> • Opportunities for caregivers and children to try activities together and receive feedback • Demonstrations • Use of materials (e.g. toys) • Opportunities for problem solving
Training and supervision	Focus on transfer of knowledge and skills, support basic training with refreshers, on-the-job coaching and supportive supervision strategies	

Source: Yousafzai and Aboud, 2014

Table 3 Linkages with child development sensitive programmes

Condition	Opportunity for programme linkages	Potential benefits
Food insecurity	Social welfare programme, young child lunch programmes, shared kitchen gardens	Nutritional adequacy within households, which also support early childhood development outcomes
Poverty	Conditional cash transfer programmes	Improved participation in child nutrition and development services, increased capacity to invest in children, and reduced stress and improved caregiver coping
Lack of family empowerment	Income-generating activities, adult literacy programmes	Improved capacity to earn and invest in children, enhanced capacity to make informed decisions about child health, growth and care
Lack of safe and clean space	Water, Sanitation and Hygiene (WASH) programmes	Reduced illnesses and improved nutritional adequacy and opportunities to explore the environment safely

The successful implementation of integrated interventions is dependent upon context. Programme coordination with interventions that are *child development sensitive* might identify strategies that mitigate threats or promote opportunities to benefit caregiving capacity and children's outcomes (Table 3).

Summary and recommendations

In 1999, the World Health Organization published *A Critical Link: Interventions for physical growth and psychological development*, which reviewed the approaches for integrating nutrition, stimulation and care (Pelto *et al.*, 1999). In the last 15 years, new studies have contributed to strengthening the evidence base for the efficacy of integrated interventions. As we approach the post-2015 sustainable development era, the partnership between nutrition and early childhood services is one that promotes a continuum of care from child survival to strengthening thriving. However, questions remain about how to optimise packages of care, strengthen the necessary coordination with a range of family and child interventions, and implement them effectively in programme settings at scale. Box 2 summarises recommendations for practice, policy and research.

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Box 2 Recommendations for practice, policy and research

Practice

- Design local integrated programmes based on evidence-based best practice and local context and relevance.
- Ensure families have access to knowledge, support and resources to apply caregiving skills for nutrition and child development.
- Build health worker competencies to deliver behavioural change interventions for care, feeding and stimulation.

Policy

- Identify opportunities to strengthen health and nutrition strategies with early child development.
- Ensure early child development programmes begin at birth and continue through early childhood.
- Incorporate early child development information in population-level surveys such as the census, Demographic and Health Surveys and UNICEF MICS.

Research

- Evaluate implementation of programmes to identify features that moderate successful outcomes.
- Evaluate costs of integrated programmes.
- Assess long-term impacts of integrated interventions on human capital formation.

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The Jamaican early childhood home visiting intervention

Sally Grantham-McGregor, Emeritus Professor of International Child Health, University College London, UK, and Susan Walker, Professor of Nutrition, University of the West Indies, Jamaica



Specific aims of the programme include improving mothers' self-esteem and enjoyment in bringing up their child and their knowledge of child development and child-rearing practices. Photo • Courtesy Jessie North

The Jamaican early childhood intervention has received considerable attention from child development experts, economists and policymakers interested in promoting the development of disadvantaged children aged under 4 years in middle- and low-income countries. This article outlines the intervention, reviews evidence of its effectiveness – with benefits to cognition found in 12 evaluations conducted in three countries – and discusses issues with adapting to new cultures and going to scale.

The development of the Jamaican early childhood home visiting intervention began in 1973. At the time, poor children in Kingston were generally developing well in the first year but showed dramatic declines thereafter (Grantham-McGregor and Back, 1971; Grantham-McGregor and Hawke, 1971). Meanwhile, the USA's Head

Start Program was showing encouraging benefits to educational attainment and social behaviour.

We decided to use home visiting rather than a centre-based intervention for several reasons: it was lower cost; centres were not readily available; it would facilitate social support for the mothers and targeting the developmental level of each child; play activities could be more readily linked to the mother's everyday activities; the most disadvantaged women often did not come to centres; and, most importantly, if we could improve mothers' childrearing practices the benefits for the child were more likely to be sustained and might spread to siblings.

In our first pilot study, children showed large improvements in developmental quotients compared with a control group after eight months (Grantham-

McGregor and Desai, 1975). However, the model was too expensive, involving visits by a nurse or a doctor and the use of bought toys, so the curriculum was modified to use home-made toys and be delivered by para-professionals. The next study was conducted with severely malnourished children in hospital; they were played with daily in hospital and then visited weekly for two years after discharge and twice-weekly for a third year. Compared with a matched control group, the children in the intervention group showed marked improvements in developmental quotients (Grantham-McGregor *et al.*, 1980). At 17 years of age, they still had higher IQs than the controls (Grantham-McGregor *et al.*, 1994).

Two more studies were conducted with children in a poor Kingston neighbourhood (Powell and Grantham-McGregor, 1989). We aimed to determine how the frequency of visiting was related to the benefits and whether para-professionals could deliver the intervention with the same benefits as professionals. They found that para-professionals were just as effective, and benefits for the children increased with the visit frequency. We also developed books to use in the intervention that were culturally appropriate, reflecting people and environments familiar to the children and containing only pictures because of the limited literacy of many mothers. Following these pilot studies para-professionals, home-made toys and our own books were used in all future studies.

Principles and curriculum

The philosophy behind the intervention is to support mothers to promote their children's development. Specific aims include improving mothers' self-esteem and enjoyment in bringing up their child and their knowledge of child development and child rearing practices. Encouraged maternal behaviours include: responsiveness to child's mood, vocalisations, actions and interests, mediating the environment for the child (drawing attention to, describing, labelling) and introducing new objects, sounds, activities and concepts, giving positive feedback, celebrating the child's achievements and showing love.

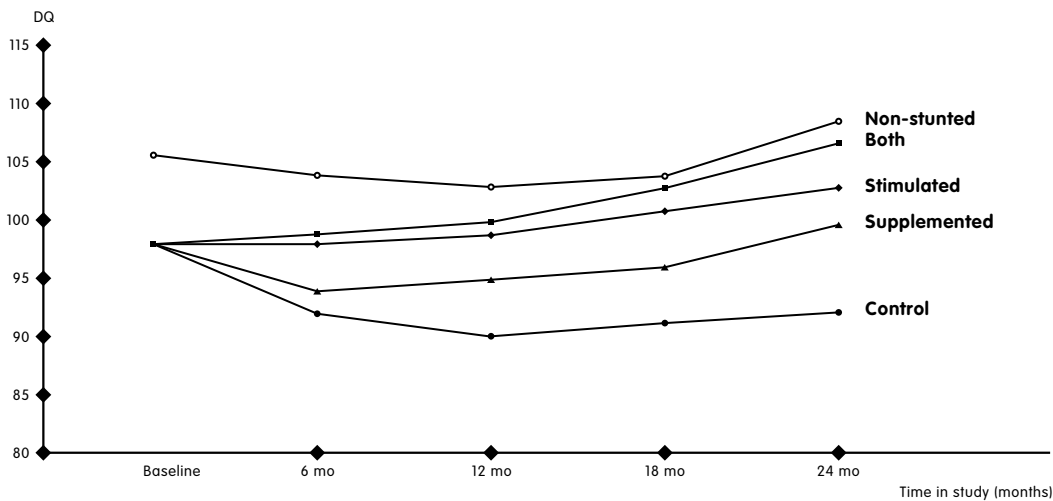
The methodology depends on developing a close relationship with the mother, to be able to motivate her. Training of community health workers included how to listen, ask mothers' opinions and give positive feedback. Teaching methods included observing what the child does, demonstrating and describing a new activity from the curriculum, helping the child to do it, allowing the child to practise and then do it alone, giving positive feedback and celebrating success. We also use and demonstrate 'scaffolding', ensuring that activities are not too easy or too difficult for the child (Vygotsky, 1978). The mother is encouraged to practise the activities and do them with her child in the following week.

All curriculum activities are arranged by week in order of difficulty and children usually move on to the next set of activities each week. The visitors are trained to adjust the position of each child on the curriculum if the general level is too difficult or easy. All activities and play materials were specially designed for the intervention, including blocks, dolls, sets of puzzles, sorting and classifying activities, and books. Many of the activities for under-2s were based on constructs assessed by Uzgiris and Hunt (1978), including object permanence, causation, vocal imitation, imitation of familiar and unfamiliar gestures and exploration of objects. Activities for older children were designed to facilitate the teaching of concepts included in Francis Palmer's concept curriculum (Palmer, 1971) including size, quantity, colour, shape, position, same/different, classification, etc. Activities were also included to facilitate the development of problem solving, attention and persistence, all part of task orientation, and language and general knowledge.

Evidence from Jamaica

The intervention has been rigorously evaluated with disadvantaged children in three countries, with consistent evidence of improving child development as well as some evidence of sustained benefits. In addition to the pilot studies, a further three randomised controlled trials (RCTs) were conducted in Kingston, Jamaica.

Figure 1 Mean developmental quotients (DQ) of stunted groups adjusted for initial age and score, compared with non-stunted group



Source: Grantham McGregor *et al.*, 1991

Stunted children

An RCT with 127 stunted children investigated whether nutritional supplementation had an independent effect on children’s development and whether adding stimulation increased the benefits (Grantham-McGregor *et al.*, 1991). There were four groups: supplementation, stimulation, both interventions and control. A comparison non-stunted group was also enrolled. Both nutritional supplementation and stimulation had independent benefits for children’s development, and the group with both interventions caught up with the non-stunted group after two years (Figure 1). However, follow-ups showed that the effects of supplementation were no longer apparent after 7 years (Grantham-McGregor *et al.*, 1997), whereas stimulation still showed wide-ranging benefits at the age of 22 years. As shown in Table 1, these included cognitive, social, educational and mental health benefits, and increased wages (Walker *et al.*, 2011; Gertler *et al.*, 2014). Interestingly, the benefits

were smallest at 7 years, indicating the importance of longer-term follow-up.

Low-birthweight full-term babies

In 1999 we began a trial with low-birthweight infants born at term to test whether mothers were particularly receptive to intervention in the first eight weeks post partum. The eight-week intervention focused on improving the mothers’ responsiveness to their infants, encouraging mothers to ‘converse’ with their infants, respond to their cues, show affection, and focus their attention on the environment. A few home-made toys were provided. Evaluation at 7 months showed benefits from intervention to infant problem-solving ability and behaviour (Meeks Gardner *et al.*, 2003). From 7 to 24 months the usual intervention was introduced but visit duration was reduced to 30 minutes. At 24 months there were significant cognitive and fine motor benefits (Walker *et al.*, 2004), though less comprehensive and of

smaller effect size than in previous studies. Follow-up at age 6 years showed benefits to performance IQ, visual-spatial memory and behavioural difficulties, suggesting that long-term benefits may occur following modest initial benefits (Walker *et al.*, 2010). A future check for longer-term benefits would be desirable.

Using primary healthcare

Another study evaluated whether the intervention could be delivered by the primary healthcare services using community health workers already employed in the clinics (Powell *et al.*, 2004). Clinics for undernourished children were randomised to stimulation or control and the workers in the intervention clinics were asked to visit a few children each. On average children were visited every 10 days for approximately 30 minutes. The children in the intervention showed marked benefits, but the research team provided supportive supervision, so the challenge remains how to make this supervision sustainable through the health service.

Bangladesh and Colombia

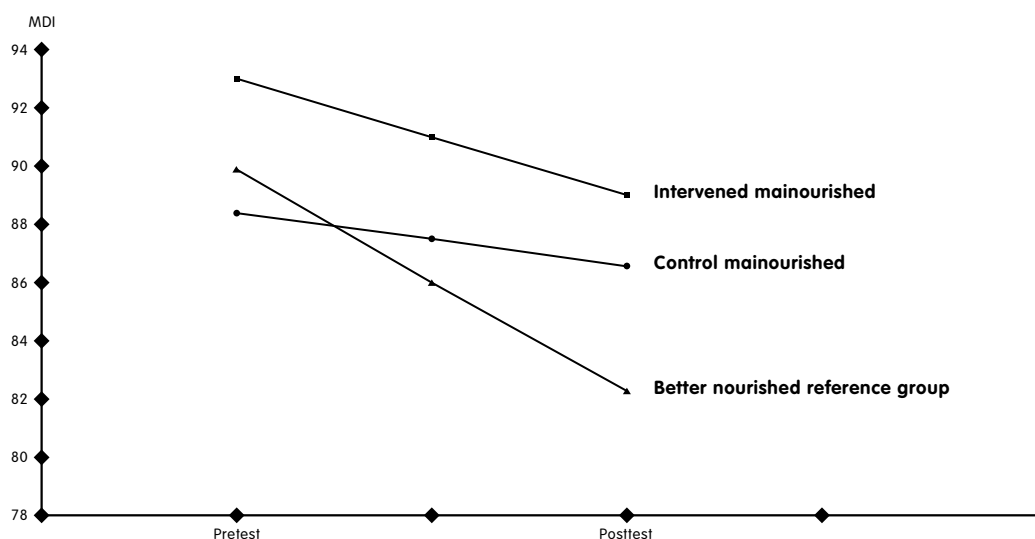
In Bangladesh four trials were conducted by researchers

at the International Centre for Diarrhoeal Disease Research, the first a cluster randomised trial with moderately underweight children who were attending nutrition centres (Hamadani *et al.*, 2006). Mothers and children were visited weekly or twice a week for 10 months by trained local village women, with the children showing moderate benefits to their mental development (see Figure 2).

In another trial severely malnourished children and their mothers were given two weeks of daily individual and group sessions in hospital, followed by 18 play sessions over six months after discharge, either in the hospital outpatients clinic or at home. The children in the intervention group showed moderate benefits on mental development compared with the controls.

In a subsequent study (Nahar *et al.*, 2012), severely malnourished children were randomised to four groups: stimulation, supplementation, control or both treatments. Stimulation benefited mental development but supplementation had no effect, probably because it was given for too short a time.

Figure 2 Effect of stimulation on mental development index (MDI) of malnourished Bangladeshi infants at home



Source: Hamadani *et al.*, 2006

In a fourth cluster randomised trial, villages were randomised to stimulation or control (Tofail *et al.*, 2013). Groups of iron-deficient anaemic and non-anaemic children were enrolled from each village. After nine months of weekly home visits the intervened non-anaemic group showed moderate improvements in mental development, whereas the iron-deficient group made only small, non-significant improvements. It may be that iron-deficient children need more time to improve.

In Colombia, a randomised trial was conducted by the Institute of Fiscal Studies (Attanasio *et al.*, 2014) using a cash transfer programme to identify participants and home visitors. This was a first step in going to scale, as the programme spread over 96 municipalities with 1420 children. The study looked at stimulation and multiple micronutrient supplementation, with supervisors meeting with the visitors once every nine weeks rather than weekly or fortnightly as in previous studies. The children in the intervention group showed a small cognitive benefit from stimulation compared to the control, with no effect from supplementation.

Adapting the intervention for different cultures

Beyond Bangladesh, adaptations of the intervention are at present being implemented in India, Brazil, Madagascar and Peru, and there are plans to begin trials in China and Zimbabwe.

Adapting the curriculum to a new culture requires working with local professionals with a knowledge of childrearing practices and beliefs. Small surveys and group discussions with mothers are needed to identify local songs, games and play materials to be incorporated into the curriculum. Pretend games may need adapting to local activities (such as going to field to work, spinning wool). The pilot work is particularly important where the professionals do not have a detailed knowledge of the conditions of the project families, who usually live in poor areas. The process of translating the curriculum can introduce errors and back translation is necessary.

The books and play materials also need adaptation. Pictures should be redrawn by local artists where necessary, to reflect local living conditions, vegetation, dress, ethnicity, family structure and so on. Suitable waste materials need to be identified to produce some of the toys used. As family structure varies among countries, members of extended families should be included in the visit when they are present.

The intervention depends on having visitors who are friendly towards and supportive of the mothers, and supervisors who have a similar approach to the visitors. In more hierarchical cultures the training of visitors and supervisors needs to be alert to the tendency to instruct and evaluate rather than help and support.

Challenges in going to scale

Scaling-up of parenting interventions is limited by the technical capacity of organisations to implement them. In an initiative funded by Grand Challenges Canada, an international collaboration of academics headed by the Jamaican group at the University of the West Indies is developing an innovative web-based package based on the home-visiting programme that provides necessary materials, training and technical support to address this gap.

Programme materials comprise films, curriculum, training manuals, toy-making manuals and a cultural adaptation guide. The films facilitate the training of home visitors by illustrating the key steps in a home visit and particular activities and techniques. Filming was conducted in Jamaica, Peru and Bangladesh and the films are available in English, Spanish, French and Bengali, with additional translations planned. The training manual for supervisors includes a suggested training schedule, objectives and activities for each session, and guides for using the films in the training sessions.

The curriculum is designed for use by community workers with primary education and gives activities and goals for each visit. A simpler, briefer version of the visit guides will also be designed which could be produced on cards or adapted for mobile phones. A comprehensive

Table 1 Long-term effects of psychosocial stimulation: follow-up of the Jamaica study from age 7 to 22 years

Age at follow-up (years)	Outcome		
	Cognition	Education	Behaviour
7–8 (Grantham-McGregor <i>et al.</i> , 1997)	Stimulation groups (and supplement-only group) had better scores than control group on 13–14 of 15 tests (sign test $p = 0.01$). Significant benefits for perceptual motor function.	No significant benefits for school achievement.	Not assessed.
11–12 (Walker <i>et al.</i> , 2000; Chang <i>et al.</i> , 2002)	Significant benefits from stimulation for IQ (effect size 0.52 SD), reasoning ability, and vocabulary compared with control group. No benefits for two other language tests and tests of memory and attention.	Suggestive of benefits for reading, spelling, and comprehension (all $p < 0.1$) but not mathematics.	No benefits for behaviour by teacher and parent reports.
17–18 (Walker <i>et al.</i> , 2005, 2006)	Significant benefits to IQ (effect size 0.51 SD), vocabulary and reasoning ability compared with no- stimulation groups (control and supplement only).	Significant benefits for reading and comprehension. No benefits for mathematics. Reduction in school dropout rate.	Significant reduction in symptoms of anxiety and depression, and higher self-esteem. No effect on antisocial behaviour. Fewer attention problems by parents' report and suggestive of reduced oppositional behaviour ($p = 0.1$).
22 (Walker <i>et al.</i> , 2011)*	Significant benefits to IQ (effect size 0.6 SD).	Significant benefits for reading, mathematics, general knowledge, highest grade level attained.	Significant reduction in depressive symptoms and social inhibition. No effect on anxiety. Reduction in violent behaviour.

Adapted from Walker *et al.*, 2011

* Follow-up at 22 years also demonstrated 25% increase in average monthly earnings (Gertler *et al.*, 2014).

communication and advocacy strategy will promote the availability of the programme as well as providing materials to advocate for increased investment in parenting interventions for children under 3 years. As part of the initial roll-out of the package we are working with several countries to better understand implementation processes and challenges, to inform the development of ongoing technical support.

The most serious challenge in going to scale has been that political or funding pressures often drive the organisers to reduce the inputs to an extent that may threaten the intervention's effectiveness. This includes reductions in the duration of the training, as well as the amount of supervision given to the visitors – both critical components. There may be a tension between the need to maintain the basic principles and constructs of the curriculum and the desire to change materials

and the approach to visits. If too much is changed, the effectiveness of the intervention may be lost.

Another common problem is high staff turnover, meaning that the people initially trained do not continue with the programme. Finally, the organisers often want to address several risks to child growth and development in the same intervention – but while integrating child development into health and nutrition services is potentially cost-effective, few such programmes have been evaluated at scale (Grantham-McGregor *et al.*, 2014) and more research is needed to understand the most efficient ways of integrating the components.

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Partnering with families: improving home visits in Europe and Central Asia

Deepa Grover, Senior Adviser, Early Childhood Development, and Bettina Schwethelm, Expert, Health and Early Childhood Development, UNICEF Regional Office for CEE/CIS, Geneva, Switzerland



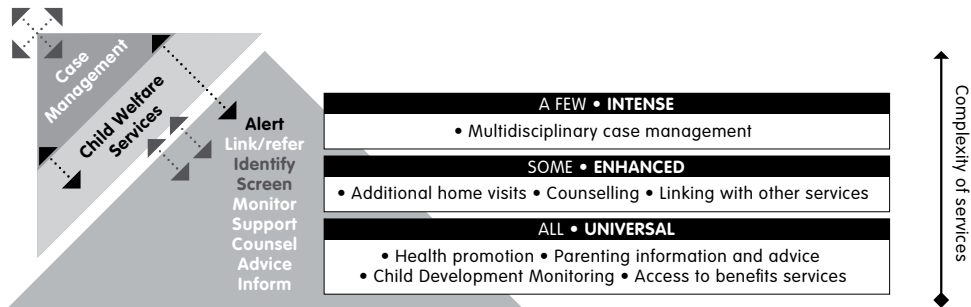
Rather than promoting the adoption of home visiting models from other countries, UNICEF is working to improve and build on existing home visiting services in CEE/CIS. Photo • Giacomo Pirozzi

While home visiting services exist in most of Central and Eastern Europe and the Commonwealth of Independent States (CEE/CIS)¹, there is considerable potential to enrich and improve their scope and effectiveness. This article describes how UNICEF is working to promote positive parenting skills and reduce equity gaps in the region by strengthening home visiting systems and building the capacity of the frontline workers who are in first and most frequent contact with pregnant women and families of young children.

CEE/CIS is a middle- and upper-income region where infant mortality rates have dropped significantly over recent decades. Yet overall child well-being remains poor. National household surveys, UNICEF and World Health Organization situational analyses and other sources of data show that CEE/CIS has:

- exceedingly low rates of exclusive and continuing breastfeeding and high rates of micronutrient deficiencies and stunting
- limited awareness in families of the critical importance of nurturing, responsive, stimulating care and safe home environments
- a high tolerance for and use of harsh discipline with young children
- high rates of accidents and unintentional and intentional injuries; injuries have become the primary cause of infant and child mortality and morbidity
- low preschool enrolment rates
- the highest rates of children under 3 in institutional care, the majority being children with disabilities or from poor and socially excluded families (Engle, 2009; UNICEF, 2012, 2014; Sethi *et al.*, 2013).

Figure 1 UNICEF Framework for home visiting



Source: UNICEF CEE/CIS

Most young children with developmental difficulties are not identified until preschool or school age, making it harder for them to develop their potential.

On the positive side, pregnant women and families of young children in CEE/CIS receive services from the health sector between conception and age 3, and home visiting services for families with young children continue to exist in most countries. (Home visiting services are a remnant of the former Soviet Union and former Yugoslavia safety net for families of young children.) UNICEF internal assessments indicate that home visiting staff – primarily nurses, but also family doctors, paediatricians and obstetricians – tend to be relatively stable and trusted by families and communities.

In general, existing services are primarily medical in scope, with a focus on physical health, nutrition and immunisation, and do not include essential information on child development, safety, and protection. Traditional top-down approaches do not engage families in a partnership to build capacity for positive and effective parenting. Home visiting services are not informed by the current evidence base on neuroscience and child development, and home visitor performance is primarily assessed by the number of visits rather than the outcomes for young children and their families. According to UNICEF findings, coordination and collaboration with other sectors is a critical constraint: referral systems and pathways either do not exist or are

not known and professionals do not always know or trust the services and providers from other sectors.

A framework for improvement

A regional conference on consensus building, organised in 2012 by UNICEF and attended by 17 multidisciplinary country delegations, led to the adoption of a universal, progressive approach to home visiting (Marmot *et al.*, 2010)² The UNICEF CEE/CIS Framework for home visiting (see Figure 1) promotes the delivery of a basic, universal package, with a limited number of visits to all pregnant women and families with young children. During these visits, the home visitor informs, advises, counsels, provides basic support, monitors child development and vaccinations, and in some countries screens for developmental delays. If young children or caregivers require additional services, they are referred to primary care providers, specialists, or to services in other sectors as appropriate. The role of the home visitor in the latter case would be to continue to support the family and advocate for its needs with service providers from other sectors.

Rather than promoting the adoption of research-based home visiting models from other countries, UNICEF is working to improve and build on existing home visiting services. This means working with existing resources, the current workforce (trainers, managers, home visitors) and adjusting to diverse government priorities and timelines. For example, some countries work in a targeted way with vulnerable sub-populations such

as Roma families; in some countries, home visiting is delivered by community nurses whose home visiting responsibilities often take second place to their clinical duties. The region's diversity in approaches requires individualised planning, supported by regionally shared standards and good practice examples.

As UNICEF is not a donor or implementing agency, domestic resources have had to be leveraged. In some cases, UNICEF has supported the development and implementation of demonstration models, but within or in close coordination with existing systems and available human resources. In other situations, the focus is on advocating for the importance of investing in early childhood health and development, developing the skills and capacities of human resources, and preparing tools and parenting materials to support the work of home visitors.

To help governments build systems that address the comprehensive needs of young children and their families, UNICEF has established a technical advisory group of international and regional experts in health (paediatrics, community nursing, health visiting, developmental paediatrics, mental health specialists, public health, and health systems), early childhood education, early intervention and rehabilitation, child protection, research methods, as well as in finance and management. The group meets annually with the UNICEF CEE/CIS Regional Office and Country Office Focal Points to prioritise issues to be addressed, advocate for home visiting in the region, exchange evidence and best practices and assist in the design, implementation and evaluation of home visiting activities.

A regional guidance package informs work with national stakeholders and provides managers, supervisors and home visitors with basic standards. In partnership with the International Step by Step Association, a prototype training package for home visitors has been drafted, with up-to-date technical content, audio-visual materials, job aids, information sheets for use with families, and exercises for reflection. This package prioritises topics not currently taught in

the region's medical schools and schools of nursing, such as bonding and attachment; playing and reading; common parenting issues; parental mental health and well-being; prevention of maltreatment and home safety; monitoring child development; early identification of children with developmental difficulties; communication skills to engage families; father involvement; how to work with other sectors; and how to address personal and societal stigma and discrimination.

Bosnia and Herzegovina is the first country in which the results of a demonstration model have been evaluated. The model integrates early child development and home visiting into primary health care services in one area of the country. Findings indicate that families in the intervention group had enhanced mother-child interactions, improved home environments, reduced parenting stress, better emotional wellbeing and better child development outcomes. Lessons learned from this evaluation are contributing to a better understanding of the importance of developing effective models and implementation standards in the region.

Notes

- 1 Countries in the region include: Albania, Armenia, Azerbaijan, Belarus, Bosnia and Herzegovina, Bulgaria, Croatia, Georgia, Kazakhstan, Kosovo (according to UNSCR1244), Kyrgyzstan, the former Yugoslav Republic of Macedonia, Moldova, Montenegro, Romania, Serbia, Tajikistan, Turkey, Turkmenistan, Ukraine, Uzbekistan.
- 2 This approach recognises that during the critical early years, all families can benefit from a universal basic package of services; however, some families need all the support they can get, either at critical points during the early years or over a longer time. While situations of social disadvantage clearly increase the need for supportive services, issues such as attachment problems, poor perinatal mental health, disability, and child maltreatment can be found in any population group and will require special services. Universal programmes reduce the stigma of targeted services and make it easier for professionals to identify need and for families to request specialist services.

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An interview with Jorge Luis Fernández and Norma Vidal

'Key success factors are joint management and intersectoral cooperation'



At the childcare centres, the children are looked after by '*madres cuidadoras*' ('*caregiving-mothers*'), other mothers who have been trained to care for children and work with them to stimulate their development. Photo • Courtesy *Cuna Más*

One of the first programmes announced by President Ollanta Humala's new government in 2011, *Cuna Más* – run by Peru's Ministry of Development and Social Inclusion (MIDIS) – aims to improve the cognitive, social, physical and emotional development of boys and girls under the age of 3 in areas of poverty.¹ The programme currently provides care for just over 100,000 children. Carlos Noriega, Press Officer at *Salgalú*,² conducted this interview on behalf of *Early Childhood Matters* with Norma Vidal, Deputy Minister for Social Benefits at MIDIS, and Jorge Luis Fernández, Director of *Cuna Más*.

Can you tell us about the most important aspects of the *Cuna Más* Programme?

Deputy Minister Norma Vidal (NV): It has an integrated, all-round approach to looking after children's cognitive development, as well as their physical, nutritional and emotional development. The crucial first stage in

someone's life involves the whole family and the wider community, which is why *Cuna Más* focuses not just on the child, but also on families.

Director of *Cuna Más*, Jorge Luis Fernández (JLF): It's essential that families are monitored and supported. *Cuna Más* has introduced a completely new service in rural areas, working alongside families. We know what goes on with children who attend a childcare centre, but the question is what happens when the children are at home? It's important that parents help to reinforce the work we do with the children, keep an eye on them, incorporate the habits their children are learning and, for example, encourage practices like hand washing to prevent diarrhoea, one of the factors that often lies behind childhood malnutrition.

What are the programme's targets?

JLF: Last year we provided care for around 109,000 children; this year our target is 143,000 and in 2016 we

aim to reach 173,000. Another of our objectives is to be present in all 25 regions throughout Peru; at the moment there is only one region where we don't operate. We're concentrating a great deal of effort on the Amazon regions, mainly in terms of family support.

How do you define and monitor the programme's quality?

NV: Measuring service quality is done by measuring user satisfaction, how the care we provide is perceived by parents, and also by seeing if children reach certain developmental milestones – cognitive, physical, nutritional and emotional. If we have children who reach the expected level of development, and if the users are satisfied, then we can say that we're fulfilling our remit by providing a quality service.

What is the intervention policy for the family support element of the programme?

NV: In the rural programme we're talking about very young children, from 6 months to 3 years old, who are still being looked after by their mothers and go out with them to wherever they happen to be working. The idea is not to remove the children from their mother's care but rather to work with the families, not just the mums, on issues like nutrition and bonding. We place a lot of emphasis on these children's diet and nutrition, the same as for the children who use the childcare service. We monitor their height and weight, so we can spot any risks and refer them to the medical service, as well as provide support for their families. The facilitators are assigned an average of 20 families to visit. We deliver this service to around 52,000 children.

How do the facilitators work with the families?

NV: Rather than give them a lecture, the facilitators observe the family dynamics and make suggestions. For example, we monitor children's diets and help families to understand how micronutrients prevent anaemia. Children's growth and skills development are also monitored, and we observe how the various members of the family relate to each other. A relationship is built up between the facilitators and the families.

How are the facilitators chosen, and what kind of training do they get?

JLF: The programme has locally elected management committees (a community body consisting of five members that plays a voluntary role in the management, provision and supervision of services, with the resources transferred to them by the programme), to carry out various functions including helping us to identify people with the profile we're looking for, in terms of age, skills and a set of minimum requirements, like being able to read and write so that they can receive and follow written instructions. They must have a basic knowledge of how to handle children and they must be able to deal with any emergencies.

Their preliminary training doesn't just involve getting information, they also have to do a series of activities. It lasts one month, but they also receive ongoing training too and regular visits and support from the programme's technical staff. Each region has its own central team with health, nutrition, learning and training specialists plus technical staff who go out into the field to provide support, help us to monitor the process and assist with skills training.

What happens when a facilitator sees that a child has some sort of problem, such as domestic abuse?

NV: We can't intervene directly, but a procedure has been set up to transfer the case immediately to the relevant organisation and then monitor it so that we know what happened.

What kind of role do fathers play in this programme?

NV: Fathers and mothers play an equally important role. We promote the idea that mothers and fathers complement each other, with neither one being dominant over the other and both sharing the responsibilities of family life. We try to work alongside both parents, not just the mothers, so they both know how their child should be developing.

JLF: Fathers often don't get involved with their children's upbringing due to cultural factors, though the level of involvement tends to vary by area. For example, in



From the left: Jorge Luis Fernández, Norma Vidal and Carlos Noriega, during the interview. Photo • Courtesy Cuna Más

the Amazon regions, the father's role of being a major socialising figure is perhaps more obvious than in the Andes or in coastal regions. We try to remove their fear of interacting with their children and make sure they play active roles.

Going back to the childcare centres component of the programme, how do they work?

JLF: The children are looked after by 'madres cuidadoras' ('caregiving-mothers'), other mothers who have been trained to care for children and work with them to stimulate their development.

There is one caregiving-mother for every four children aged up to 1 year and 2 months, and as they grow older this ratio changes to one caregiving-mother for every six children. We have about 54,000 children in this childcare service and around 9000 mothers acting as

carers. For every Management Committee there is a 'guide-mother' who oversees the process of training the caregiving-mothers and works alongside the families. Each guide-mother is responsible for between one and eight childcare centres (up to four, for children younger than 12 months), depending on the number of children.

Why the choice to focus on centre-based care when the Wawa Wasi programme, which Cuna Más replaced, was based in family homes?

JLF: It has mainly to do with providing better health and safety measures for children, in rooms adapted to the age and stage of development of each child. In centres we can provide toilets, kitchens and multipurpose rooms – top-quality infrastructure and facilities for children who come from poor areas, informed by all the best practice in what children should be receiving up to the age of 3 years.

In addition to the experience with Wawa Wasi, has Cuna Más been informed by experiences from other countries?

NV: Yes. When MIDIS was set up, we undertook an evidence-based reorganisation of social programmes. In the case of *Cuna Más*, that evidence was taken not only from *Wawa Wasi* but also from international experience, within and outside Latin America.

JLF: On the issue of family support, for example, we've learned from the approach used in Europe and in the USA, in terms of working together alongside other sectors, such as the health service. In the case of childcare provision, we've found similar experiences in Colombia and Chile, each one with its own individual set of features.

You've said that Cuna Más works with organisations in a number of sectors. How has intersectoral cooperation on childcare issues been developed and how does it work in practice?

NV: The fact that MIDIS can act as mediator and organiser, with an intersectoral intervention strategy in place, has been a great help in getting all the social programmes to connect around childhood issues. The *Incluir para crecer* (Include for Growth) social inclusion strategy that links social programmes is a very powerful tool and there are areas in which this works really well, but there is always a long list of things we can do. We've made a lot of progress in working together on issues such as finding out what happens with *Cuna Más* children who not only benefit from this service but are also covered by other social programmes, for example, with the health sector. Each programme has its own specific set of tasks, but if we're intervening in the same homes, our interventions must be well coordinated.

How much flexibility does Cuna Más have to enable it adapt to the country's varying circumstances?

NV: There is flexibility. The protocols allow the forms of intervention to be different and suited to the geographical area and cultural background where they are taking place.

JLF: We have basic guidelines that can be adapted to suit the particular circumstances in each area. For example,

the food provided for children in the childcare centres isn't the same across all locations, as we choose locally sourced ingredients and we take local cultural norms and customs into account when we plan meals.

We aim to reinforce local practices in each area to support children's development. We have a policy of adapting all our children's material to fit in with local culture. In rural areas, all interventions are done in the native languages. We start looking at the local practices in those areas and then try to use them to strengthen children's development. For both our services, childcare and family support, there are 'inter-learning' sessions, in which families get together to tell each other about their own experiences. We're very keen on this.

Over the last three years, has the programme undergone any changes or reforms?

NV: We have monitored the process of implementation to improve the programme. For example, we originally planned to make family support visits once a week in all cases, and for families in difficulties we are considering increasing the frequency. We have learned that their timing should depend on the area and the maturity of each particular family. The infrastructure models for the childcare centres have been gradually adapted to suit each region, and we have been increasingly diversifying provision.

JLF: Apart from adapting the programme to cater for cultural diversity, another example of change is the issue of networks to deal with any emergency situation that may arise with a child; these were set up a year ago.

What are the main obstacles for expanding the programme, to increase coverage without sacrificing the quality of the service?

NV: One issue we're looking at is how regional and local governments can play a more active role in implementing the service. Some are already providing premises or land but we want them to become more involved, and consider building these centres as part of their portfolio of investment projects. We want to have intervention models that can be taken on board and implemented by local or regional government.

What are the programme's main challenges?

JLE: Our main challenges include continuing to grow and get agents other than state organisations to take on responsibility for childcare. One thing we're interested in is what we're offering for children up to the age of 3; it shouldn't just be up to the State to take on the job, but all kinds of other stakeholders should get involved as well.

NV: The participation of local government in this programme is fundamentally important, and one big challenge is to get them to make a greater commitment. It's much easier to supervise service quality at local government level.

In a year's time there'll be a change of government. How can the sustainability of the programme be guaranteed, so that it isn't affected by political change?

NV: Programmes are living things and need to change, but that change should be based on evidence. We've made sure that there is plenty of evidence of how the *Cuna Más* programme has carried out its interventions. At the end of this government's term of office, the programme will undergo an impact assessment, which will enable the new government to make the right decisions about the programme – decisions based on hard evidence rather than on impressions.

What advice would you give to a country thinking of copying a programme like Cuna Más?

JLE: Key success factors are joint management and intersectoral cooperation, getting all stakeholders to start taking the issue of early childhood on board as a priority. Another is making sure the focus is on human rights.

NV: Different models for different regions is very important. Rather than treat all urban and rural areas the same, the emphasis should be on the particular dynamics of the various local communities. Emphasising joint management with local government participation is fundamental in this type of service.

Notes

- 1 For more information about *Cuna Más*, please visit: <http://www.cunamas.gob.pe/> (accessed May 2015).
- 2 Set up with funding from the Bernard van Leer Foundation, *Salgalú* organises national mobilisation for early childhood in Peru and provides citizens and government officials with the data and knowledge they need to take action. More information can be found at: <http://www.salgalu.tv/> (accessed May 2015).

Global gains and growing pains: pre-primary education around the world

Michelle J. Neuman, Program Director, and Kavita Hatipoğlu, Senior Program Associate, Results for Development Institute, Washington DC, USA



The diversity of delivery models makes ensuring quality and equity difficult but also presents an opportunity for creative responses.
Photo • Courtesy Jack Brockway/The Sabre Trust

With a view towards the post-2015 agenda, this article takes stock of the current accessibility of pre-primary education, the main forms of delivery, and the key challenges. It reviews current global trends and highlights lessons learned from country case studies, drawing on data from the UNESCO Institute of Statistics (UIS), the World Bank and other international agencies as well as innovative preschool programmes featured by the Center for Education Innovations².

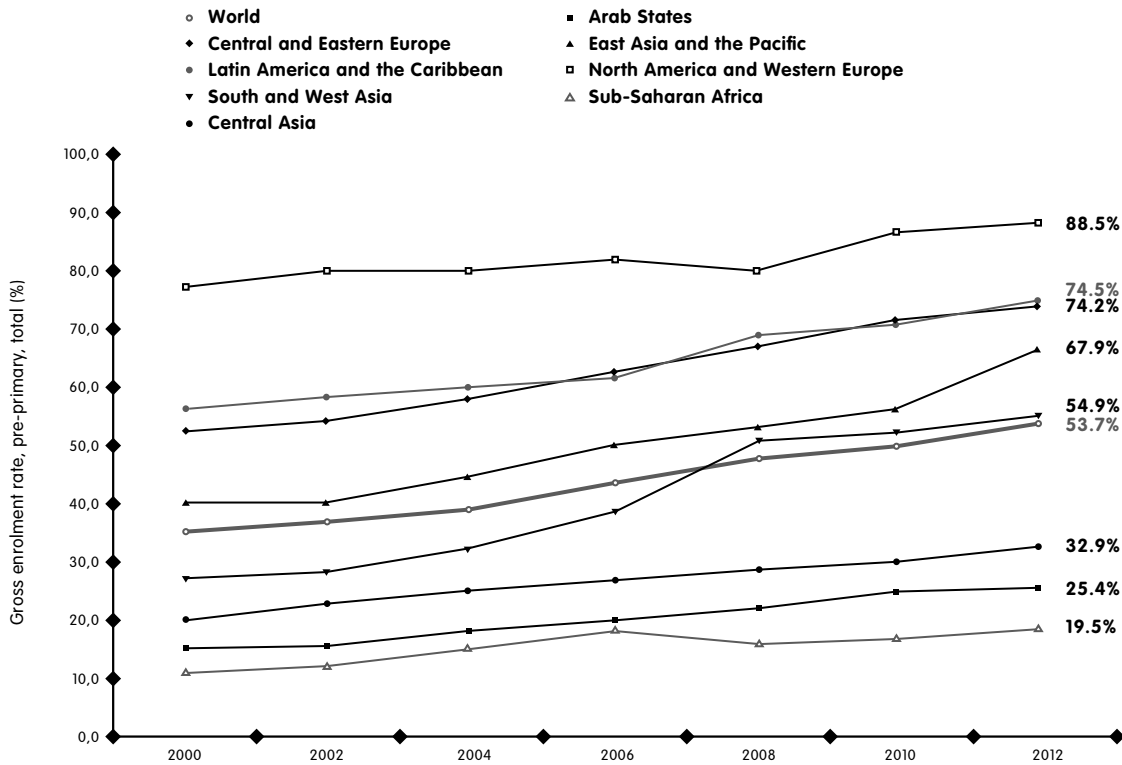
Pre-primary education³ (often referred to as ‘preschool’, ‘pre-kindergarten’, ‘Grade R’, or ‘zero class’) is gaining ground on the global agenda. While the Millennium Development Goals did not include any attention to education for children before the start of primary schooling, the proposed targets for both the Sustainable Development Goals (SDGs) and the post-2015 education

agenda offer greater concentration on early childhood development and specifically mention pre-primary education.⁴ At the country level, too, new policies and programmes are emerging that expand pre-primary education in the year or two prior to compulsory schooling, or efforts to improve quality of these services.

This increased focus is not surprising given the growing evidence from around the world on the benefits of participation in pre-primary education for children’s school readiness, transition to school, and performance in the early grades and beyond. In addition to the often-cited longitudinal studies from the USA and the UK (see Chambers *et al.*, 2010, and Yoshikawa *et al.*, 2013 for reviews), studies in low- and middle-income countries also demonstrate significant, positive effects:

- In Argentina, one year of pre-primary school led to an average increase of 8% in grade 3 language and

Figure 1 Global gains in pre-primary enrolment



Source: UNESCO Institute for Statistics (online)

mathematics scores, and had positive effects on non-cognitive behavioural skills (Berlinski *et al.*, 2009).

- In Bangladesh, children in a high-quality preschool programme outperformed a control group in verbal and non-verbal reasoning, as well as school readiness (Aboud, 2006).
- In Mozambique, in comparison to a control group, children at a rural preschool were 24% more likely to enrol in primary school and showed improved cognitive abilities, fine-motor skills, and behavioural outcomes (Martinez *et al.*, 2012).

In addition, recent data from the Program for International Student Assessment (PISA) show that 15-year-old students who participated in at least one year of pre-primary education outperformed those students who had not. This difference holds when taking into

consideration students' socio-economic status (OECD, 2014).

The rest of this article explores three challenges that need to be addressed. First, expansion of pre-primary has been uneven across regions and within countries, leading to inequities. Second, while there are diverse strategies to achieve quality in pre-primary provision, doing so at scale remains difficult. And finally, the early childhood workforce is key to improving both access and quality provision, but has received little attention from researchers or policymakers.

Patchy progress in increasing access

According to the latest Education for All (EFA) Global Monitoring Report (2015), enrolment in pre-primary education has increased by nearly two-thirds (to 180

million) over the past decade. Although it is encouraging to see that the gross enrolment rate⁵ increased from 32.8% in 1999 to 53.7% in 2012, only a small percentage of children (17%) in low-income countries had access in 2012 (see Figure 1). These statistics also mask wide regional disparities. Among low- and middle-income countries, the highest rates of participation are in Latin America and the Caribbean (LAC) (74.5%), while the lowest rates are in sub-Saharan Africa (19.5%). South and West Asia and East Asia and the Pacific have made the most progress in enrolling students in pre-primary in recent years (UNESCO Institute for Statistics Data Centre, online).

Country-level estimates also hide large discrepancies in coverage and access depending on location, which reinforces the indication that progress has not benefited all children equally. Many countries in East Asia and sub-Saharan Africa, for instance, experience large differences across wealth quintiles, between urban and rural areas, and between ethnic groups, with the most disadvantaged children least likely to receive a pre-primary education (UNICEF, 2012; EFA Global Monitoring Team, 2015).

Most countries spend less than 10% of their education budgets on the pre-primary years. In low-income countries, this share is typically even lower. As a result, and not surprisingly, households are expected to cover most of the costs associated with enrolment (EFA Global Monitoring Report Team, 2012). In many cases, the high fees for private programmes make pre-primary education beyond the reach of the poorest households (EFA Global Monitoring Team, 2011, 2014a, 2014b, 2015; UNICEF, 2012).

Globally, pre-primary education is delivered through a variety of public and private settings. These can include classrooms attached to primary schools, standalone centres run by non-governmental organisations (NGOs), or religious providers. The share of enrolment in private provision – including NGOs – rose from 28% to 31% from 1999 to 2012 (UNESCO, 2015), though the size of the private sector varies significantly by region. In the Arab

States and sub-Saharan Africa, the majority of pre-primary providers are in the private sector, while in the LAC region, Eastern Europe, and Central Asia, public provision dominates the space. Low-cost private schools are increasingly popular for pre-primary as well as primary in the urban areas (Bidwell and Watine, 2014). For example, recent formative studies in peri-urban centres in Ghana, Kenya, Nigeria and South Africa have shown a thriving pre-primary sector⁶, with enrolments ranging between 70% and 90%, and provision dominated by the private sector. While private sector growth can increase access in some situations, there are concerns that high fees, limited regulation of services, and lack of provision in rural and sparsely populated areas may exacerbate inequality in others (Woodhead and Streuli, 2013; EFA Global Monitoring Team, 2015).

Beyond efforts to boost access and enrolment, a focus on equity and ensuring quality services, especially for the most vulnerable, is also taking hold (UNICEF, 2015; see Case Study 1). There is a trend towards including at least one year of free pre-primary education as part of the formal education system in Europe, North America and Latin America, as well as in some countries in sub-Saharan Africa (for example, Grade R in South Africa, Kenya, Lesotho) to address these equity issues (Biersteker *et al.*, 2008); the most recent Global Monitoring Report recommends a year of compulsory pre-primary education (EFA Global Monitoring Team, 2015). Other countries have established efforts to improve quality for the most marginalised. Indonesia's Early Childhood Education and Development project established community-led playgroups for children aged 4 to 6 across nine high-need districts; the intervention helped improve school readiness and close the achievement gap between the richest and poorest children (Jung and Hasan, 2014). Whether delivered in schools or, less commonly, in community-based settings, efforts to promote compulsory pre-primary and additional services for vulnerable populations are intended to level the playing field before children begin primary schooling (see Case Studies 2 and 3).

While all regions have demonstrated progress, there is a

long way to go to achieving equitable preschool access for all. A recent literature review suggests that increasing pre-primary enrolment and early childhood services takes time and requires effective leadership, partnership between the public and private sectors, a focus on quality and staff development and participation from multiple sectors (Woodhead *et al.*, 2014).

Case Study 1: Addressing inequality in access to pre-primary in Laos

Laos (Lao People's Democratic Republic) is one of the most ethnically and linguistically diverse countries in East Asia. This diversity, however, is reflected in unequal access to pre-primary services for many groups.

- As few as 1% of children from the poorest households attend preschool, compared to nearly half of those from wealthier families.
- In 2011–2012, only 14.5% of 3 and 4 year olds attended kindergarten in the rural Salavan province, compared to 57.4% in the capital of Vientiane.
- 90% of all children enrolled in early childhood education services belong to the Lao-Tai ethnic group. Lao-Tai, however, comprises only 67% of the country's population.

In early 2014, the Lao Ministry of Education and Sports began a five-year Early Childhood Education Project with support from the World Bank to improve both access to and quality of pre-primary education in disadvantaged districts of the country. The project includes construction and infrastructure improvements, teacher training, and strengthening project management, monitoring and evaluation.

Sources: EFA Global Monitoring Team, 2011a; World Bank, 2013

Case Study 2: Making pre-primary education compulsory in Mexico

Mexico made pre-primary education compulsory with a constitutional amendment in 2002 and rolled out the expansion in stages, requiring all children aged 3 to 5 to attend by 2008. The law was supported strongly by the National Teacher's Union and requires parents to send

their children to either a public or private preschool, though the private sector is relatively small. While the federal government supervises preschool education, implementation is decentralised and ultimately the responsibility of individual states. Progress has been steady, but net enrolment rates are still lower for 3 year olds (around 40%), while 4 and 5 year olds both have net enrolment rates of 85% or above. Overall, Mexico has achieved a gross enrolment rate above 100% and gender parity in pre-primary education.

Gaps in quality, however, remain an ongoing challenge among the three different types of public preschools: general, indigenous, and community-run. The last two models generally have poorer infrastructure, fewer resources, and less-qualified teachers.

Sources: OECD, 2006; Pérez Martínez, 2010; Secretaría de Educación Pública, 2014; Sistema Nacional de Información Estadística Educativa (SNIEE), 2014; UNESCO Institute for Statistics, online

Enhancing quality in diverse settings

The greatest benefits from early childhood education accrue from quality provision (Aboud, 2006; Naudeau *et al.*, 2010 ; Rao *et al.*, 2012). Yet no single recipe for delivering quality pre-primary education exists – it can be compulsory or voluntary; public or private; or based in schools, centres, or homes. Programmes can be organised in different ways to provide safe and rich learning environments and meaningful interactions between adults and children. In situations where children suffer from poor health and nutrition, quality preschools need to support children's overall well-being and coordinate with relevant allied services, such as health, nutrition, and social protection.

The diversity of delivery models makes ensuring quality and equity difficult but also presents an opportunity for creative responses. Experiences in low- and middle-income countries suggest that quality services can be delivered as well in a well-resourced, permanent classroom as they can with materials developed from everyday objects, under a tree. Educational television

and radio programming have also demonstrated positive effects in Bangladesh, Turkey, and Zanzibar (Engle *et al.*, 2011; See Case Study 4). In East Africa, the Madrasa Early Childhood Programme⁷ community partnerships have led to positive impacts on child outcomes and process quality with very few formal resources (Malmberg *et al.*, 2011). The community commits to identifying a teacher and helping to build the facility, and provides learning materials from recycled or hand-made objects. Educators are trained in a child-centred methodology and receive ongoing technical support and mentoring from the central resource centres.

Other home and community-based preschool programmes have demonstrated positive effects for children's language, mathematical and reasoning skills (Engle *et al.*, 2011; Bernal and Fernandez, 2013). While small, the *Huellas de la Esperanza*⁷ programme in Colombia supports high-risk preschool and primary children through real-world, culturally appropriate activities that also engage their families and communities, such as the operation of an orchard, vegetable garden, and hen house. Not rooted in a single location, the mobile *ger kindergartens*⁷ in Mongolia follow the nomadic herder communities, setting up services in tents at each location during the warm season. While these promising examples support quality delivery on a small scale, more needs to be known about how to support quality services across pre-primary settings in a comprehensive, sustainable way.

Parent demand for preschool is strong even in low-resource contexts. Parents often view pre-primary as a foundation for later schooling and private services as offering better quality than public programmes (Bidwell and Watine, 2014). However, parent perception of quality is often characterised by a narrow view of school readiness, which focuses only on demonstrable academic skills (O'Gara, 2013). No matter the setting, continuity between preschool and primary school is important; however, the teaching methods and expectations of primary should not be 'pushed down' to pre-primary education (Woodhead and Moss, 2007; EFA Global Monitoring Report Team, 2012; O'Gara, 2013).

Case Study 3: Expanding Grade R in South Africa

For more than 20 years, South Africa has developed policies and programmes recognising the broader benefits of early childhood development for the population. In 2001, the Department of Basic Education established a 'Reception Year' education programme, or 'Grade R', for children aged 5 with the goal of achieving universal enrolment by 2014. Accredited Grade R programmes can be delivered within public primary schools, community-based early childhood development centres, or at independent private institutions.

By 2011, the nation had a 79% gross enrolment rate in Grade R, with 89% of public primary schools offering this reception year. Despite strong growth in access to and provision of Grade R, a recent study found that:

- Grade R did not have a significant effect on the learning outcomes of children from low-income quintiles, who are more likely to attend low-quality schools
- across all wealth quintiles, Grade R's overall impact on the effectiveness of future learning is equivalent to only 12 days of learning gains in mathematics and 50 days in the home language.

There is a need to focus on quality through adapted Grade R curricula and teacher training, in addition to greater investments targeting the schools and children with the greatest needs.

Sources: Biersteker, 2010; van der Berg, 2013

Supporting the workforce

Regardless of the setting in which pre-primary takes place, support for the early childhood workforce is essential. Studies demonstrate the importance of high-quality adult-child interactions to positive early childhood outcomes and the critical role of teacher training and support (EFA Global Monitoring Team, 2006, 2015; Mtahabwa and Rao, 2010; Hardman *et al.*, 2012). Yet there is often a disconnect between official standards and the level of education and training early childhood educators receive (World Bank, 2012).

Although pre-primary education is often integrated structurally with the primary school system, pre-primary teachers may not have access to the professional development activities within the schools. Moreover, many pre-primary programmes take place outside the formal education system and rely on community workers and volunteers with limited formal pre-service or in-service training (Hardman *et al.*, 2011; Jung and Hasan, 2014).

Despite the importance of quality educators for children's outcomes, very little is known about the credentials and training of the existing workforce in low- and middle-income countries. According to the UIS, in the 69 countries reporting data, more than two-thirds of pre-primary teachers are trained. This is encouraging but tells us little about the quality and relevance of the training (EFA Global Monitoring Report Team, 2012). Some concerns include the short duration of training (often only a few days) and focus on theory over practice. Another issue is that training requirements are often inconsistent across public and private provision and by geographical area. In rural and marginalised areas, children at the margins may be taught by those who are also at the margins of the profession. Given what we do know about the diverse profiles of those already working in the field, there is a need to develop a career lattice that allows for various points of entry and diverse in-service and upgrading opportunities.

As pre-primary programmes expand, and in some cases becomes compulsory, the supply of qualified pre-primary teachers will continue to be a major constraint to both access and quality. Increasing supply requires time and financial investment in professional development, training and credential opportunities. For example, achieving universal coverage of preschool in Colombia, as defined in their 2011 national early childhood development strategy, would require nearly ten times the number of currently qualified providers (Bernal, 2013). Rapid expansion without concomitant attention to staff training, ratios, group sizes, and working conditions will almost surely lead to a deterioration in quality (see Case Study 3, for example). Finally, the

poor pay and status of the early childhood profession is another barrier to attracting and retaining strong early childhood educators to the field (EFA Global Monitoring Team, 2015). Even in high-income countries, working with young children is poorly remunerated, including relative to primary school teachers, and high turnover affects the stability and quality of service provision (OECD, 2006).

There are promising examples of state and non-state initiatives to strengthen pre-service and in-service training of early childhood educators, including efforts to use technology, including radio instruction (see Case Study 4). Mentors and scripted lessons can also improve teacher skills, monitor performance, and provide regular feedback to teachers. A few innovative approaches include:

- The Hand in Hand⁷ train-the-trainer model in China reached nearly 10,000 educators, paediatricians and government staff within five years of operation. The programme uses QQ, a popular instant messaging service, to facilitate continued peer learning after the training.
- The Brighter Futures Programme⁷, working in close collaboration with the Ghana Educational Service, supports school infrastructure and teacher training for children in rural areas. Their comprehensive training includes a focus on activity-based lessons, local material development, formative child assessment, and parent engagement as well as providing continued monitoring and evaluation support.

However, we do not know much about the comparative effectiveness of these approaches, nor about what would be needed to scale them up to reach more children. Given the importance of the workforce issues and the limited information available in low-resource settings, additional research is urgently needed.

Case Study 4: Using technology to support the early childhood workforce

In Zanzibar, the Government is focusing on reducing the school entry age from 7 to 6 and providing two years of compulsory pre-primary education as part of the basic education system. The Radio Instruction to Strengthen Education (RISE) programme – a partnership between the Ministry of Education and Vocational Training, the Education Development Centre and communities – promotes quality learning in areas with a shortage of qualified teachers, preschools and learning materials.

Locally produced, 30-minute radio sessions guide untrained or undertrained preschool and early primary teachers with provided math, Kiswahili, English and life skills lessons for children in community-based settings or in regular primary schools (Christina and Morris, 2010). The programme increased access to early learning for more than 20,000 children in remote areas who otherwise probably would have waited until age 9 to enter school; access to preschool increased from 13.8% in 2006 to 34% in 2010.

An evaluation compared children aged 3–5 years in preschools with radio instruction versus standard preschools. Children in classes with radio instruction had significantly higher scores on all outcomes (Morris *et al.*, 2009). Radio has been implemented at scale in Bolivia, Honduras, Indonesia and El Salvador (Ho and Thukral, 2009).

Conclusion

Targeting these three challenges – addressing the inequitable access to preschool, scaling-up innovative approaches to quality, and strengthening the early childhood workforce – will take time as well as political and financial commitment. It also requires thinking creatively about staffing, delivery mode, partnerships between the public and private sectors, promoting promising innovations, and new ideas to spark collaboration and cross-country learning.

Notes

- 1 The authors would like to thank Kimberly Josephson and Fatine Guedira for their excellent research and editorial assistance in the preparation of this article.
- 2 More information about the Center for Education Innovations is available at: <http://educationinnovations.org/> (accessed April 2015).
- 3 This article uses the International Standard Classification of Education (ISCED) Level 0 definition of pre-primary education as programmes designed for children aged 3 years to the start of formal or compulsory primary education (ISCED 1). These pre-primary years often include play-based activities, facilitated by responsive interaction with peers and educators, that support the development of language, social, and logical skills. ISCED Level 0 also covers early childhood educational development programmes designed for children age 0 to 2 years (UNESCO Institute for Statistics, 2012).
- 4 SDG Target 4.2: 'by 2030 ensure that all girls and boys have access to quality early childhood development, care and pre-primary education so that they are ready for primary education'.
- 5 The gross enrolment rate is the total enrolment at a specific level of education, regardless of age (UNESCO, 2009).
- 6 Study was conducted by Innovations for Poverty Action (IPA); the four study sites included Ashaiman in Accra, Ghana, Soweto in Johannesburg, South Africa, Agege in Lagos, Nigeria, and Mukuru in Nairobi, Kenya (see Bidwell and Watine, 2014).
- 7 Information about the Madrasa Early Childhood Programme (MECP), *Huellas de la Esperanza*, Mongolia's mobile *ger* kindergartens, Hand in Hand, and the Brighter Future Programme is available on the 'Programs' pages of the Center for Education Innovations website at: <http://educationinnovations.org/programs> (accessed May 2015).

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Why men's caregiving matters for young children: lessons from the MenCare campaign

Gary Barker, Co-Chair, MenEngage Alliance and International Director, Promundo-US, Washington DC, USA



Fathers hold an important caregiving and developmental role, both directly for their children and indirectly as part of a caregiving 'team'.
Photo • Courtesy Pitt/MenCare campaign

After years of focusing overwhelmingly on the mother-child dyad, child development as a field has 'discovered' fathers. Gary Barker explains how the MenCare campaign is leading research into why and how to engage fathers, and advocating for changes in public policy and practice in the early childhood arena.

What role do fathers play in child development? Do children need them? Do fathers play a unique role in generating the conditions children need to grow and thrive? In recent years a number of major and

longitudinal studies have been conducted on the role of fathers, and they reached the overwhelming conclusion that fathers matter greatly for children, and that children matter greatly for fathers.

Specifically, research affirms that:

- 1 fathers matter for child development in more ways than we have historically considered, meaning they matter for diverse areas of a child's life, from emotional to intellectual
- 2 fathers matter over the life cycle of the child and adolescent, and not just in the early years of life

- 3 fathers matter differently for boys and girls in some settings
- 4 fathers hold an important caregiving and developmental role, both directly for their children and indirectly as part of a caregiving 'team'
- 5 men themselves change in diverse ways, biologically and psychologically, when they take on caregiving roles.

In short, fathers influence child development, and children influence fathers' development and life trajectory.

In spite of this spurt in research, the early child development field has been slow to turn these findings into programmes and policies, with some notable exceptions. A few important pioneer parent training programmes began to reach out to fathers, and a few countries – notably in Scandinavia – began to take fathers seriously in parental leave policies. But fathers were still usually an afterthought in the field of early child development.

Inspired by conclusions from a 2005 global summit on fatherhood, organised by the Fatherhood Institute and supported by the Bernard van Leer Foundation, Promundo and partner organisations launched the MenCare campaign in 2011. Its goal was to create a global advocacy platform and provide a resource base of evidence-based programming – programming that can and should be taken to scale.

Indeed, rather than a one-off intervention or pilot impact evaluation, the campaign set off with the goal of engaging the public sector. A cornerstone of the campaign has been carrying out targeted advocacy with ministries of health, ministries of education and ministries of child development on the need to involve fathers, and providing ready-to-implement programme tools to do so. These tools are collected in Program P ('P' for *paternidade*, *paternidad* and *paternité*), now used in more than ten countries and officially adopted by ministries of health or governments in Indonesia, Rwanda, Brazil, South Africa and elsewhere. The

programme includes activities and recommendations for training public sector staff who interact with families, recommendations for targeted policy advocacy, and parent and father training activities drawn from the 'best of' evidence-based parent training.

Lessons learned

One of the key lessons learned in the process has been the need to do the hands-on training and awareness building within the public sector. A study carried out by our partner NGO in Chile (CulturaSalud) found that healthcare and childcare sector workers who hold traditional views about gender (that women do the care work and men get in the way), are less likely to talk to men and include them, even when the father is there. Similarly, in Brazil, where the Ministry of Health created a 'prenatal men's health protocol' urging health workers across the country to include fathers in prenatal visits, we have supported the large-scale training of health workers. And the results are paying off: more men are coming to prenatal visits and are learning hands-on fathering skills. In short, one of our conclusions is that it matters both that we get the policies on the books but also that those individuals who implement the policies are taking seriously the need to engage fathers.

The other major and perhaps obvious conclusion is that we need not simply to train the public sector but also to change the structural conditions in men's and women's lives so that men do more of the hands-on caregiving.

To give an example of these household dynamics and the structural factors behind them, research finds that both mothers and fathers use corporal punishment against children, but data from multiple settings finds that mothers are more likely to use it. Part of this has to do with the fact that women do more of the care work – and thus are more likely to be in daily and constant contact with children. An impact evaluation of a parent training programme carried out by Promundo in Brazil found that while attitudes related to corporal punishment among mothers changed as a result of the intervention, mothers' rates of use of corporal punishment did not

decline. In qualitative interviews with the mothers, many noted that the lack of support in daily care work by male partners was a factor in their use of corporal punishment. In Brazil and many other settings, mothers, particularly in single-parent households, carry out the majority of caregiving and face economic hardship.

Other studies have found that mothers who have a good relationship with and receive support from biological fathers or other male caregivers, as well as other social networks, have less parental stress and are less likely to use corporal punishment. If we want to reduce household stress, reduce corporal punishment and promote men's involvement as caregivers, we must address the structural factors that too often disengage men from the care of children.

In sum, our evaluation of MenCare training to date confirms that:

- 1 we need to promote men's greater involvement as fathers to reduce the stress on mothers and female caregivers, and
- 2 that it matters how men act as fathers – and it particularly matters if they use violence against their children's mother and against children.

Our work is also informed by our household-level sample survey, research that has found clearly how men's involvement in positive ways as fathers is transmitted from one generation to the next. Boys who see their fathers or other men in the household carry out care work and domestic work, and interact with female partners in equitable ways, are more likely to do a greater share of the care work when they become adults and to be men who believe in and live gender equality. They are also more likely to have happy, fulfilled lives – as are their partners.

The way forward

It is with these findings that we are embarking on the next generation of MenCare advocacy, focusing on promoting equal, non-transferable and paid parental leave. Partners from nearly 30 countries where MenCare

activities are being carried out are jointly advocating for such leave. We argue that we need governments, employers and workplace policies to support the caregiving of both mothers and fathers, and that we need universal policies to do so.

In short, men's caregiving pays off. It creates equality and well-being in the short-term and it plants the seeds for equality in future generations of boys and girls. And promoting involved fatherhood isn't simply an issue of individual men doing more. Employment and livelihood policies, early childhood development programmes and social services have not caught up with the changes taking place in families around the world, thus making it difficult for men who do want to share caregiving more equally with their partners. The limited evidence suggests, nevertheless, that men may increasingly be realising the importance of their roles in their children's and partner's lives and taking on more caregiving activities. The change is happening. The MenCare partners seek to speed it up.

'In short, fathers influence child development, and children influence fathers' development and life trajectory.'

Parenting in times of war: supporting caregivers and children in crisis

Katie Murphy, Early Childhood Development Technical Advisor, New York, NY, USA; Sandra Maignant, Child Protection Technical Advisor, London; Laura Boone, Senior Child Protection Technical Advisor, London, UK; and Sarah Smith, Director of Child and Youth Protection and Development, New York, NY, USA; International Rescue Committee



The IRC has dedicated time and resources to the development of culturally adapted parenting programmes to respond to the needs of caregivers that have endured the trauma of war. Photo • Courtesy Maignant/ International Rescue Committee (IRC)

Humanitarian interventions to support and guide parents and caregivers in times of war can mitigate the negative effects of violence and chaos on children and promote their resilience and development. This article highlights recent findings from the International Rescue Committee's parenting programmes in Syria, underscoring the importance of such programmes not only in strengthening caregiving practices but also in addressing the psychological needs of parents.

Harrowing accounts of the multidimensional effects of war on children point to the long-term impact of violence, displacement and terror, and the threat it poses to the future peace, prosperity and well-being of global society. In December 2014, an estimated 230 million children, or one in ten, were living in a country affected by armed conflict (UNICEF, 2014). At the start of the fifth brutal year of the Syrian conflict, an estimated 14 million children living in the region have been affected by conflicts in Syria and Iraq (UNICEF, 2015). Global

analyses of the geopolitical climate provide a pessimistic outlook for the years to come, as the World Economic Forum's Global Risks 2015 report ranked 'interstate conflict with regional consequences' as the most likely global risk for the period of 2015–2025 (World Economic Forum, 2015). Considering the scope and severity of global conflicts, there is an urgent need for evidence-based strategies to protect children and families from the traumatic impact of war and to reduce the intergenerational transmission of violence.

Children are particularly vulnerable to the negative effects of war, as exposure to violence, political instability, degraded infrastructure, displacement and fractured social systems are associated with high levels of post-traumatic stress disorder (PTSD), depression and anxiety disorders (Barbarin *et al.*, 2001; Attanayake *et al.*, 2009). Young children are also highly sensitive to ambient violence, and the trauma they endure when learning of a family member's violent experience or witnessing violence is analogous to the trauma of directly being victims (Barbarin *et al.*, 2001). Evidence indicates that parents and caregivers can help build children's resilience and support children's health and development through nurturing, responsive and consistent care (Shonkoff *et al.*, 2012; Masten and Monn, 2015). Yet for adults living in times of war, their ability to provide nurturing care is often hampered by their own experiences of trauma and adversity, which can result in an increased incidence of children's exposure to interfamilial conflict, violence or emotional neglect (Osofsky, 1999; Barbarin *et al.*, 2001; Galovski and Lyons, 2004; Betancourt, 2015).

War's effects on parents and children

The psychological and emotional well-being of caregivers serves as an important predictor for the physical, social and emotional health of war-affected children (Dybdahl, 2001). Beginning *in utero*, maternal stress and depression can affect the child's growth and development, and are associated with childhood undernutrition, stunting, and negative impacts on children's cognitive, physical and socio-emotional development (Thabet *et al.*, 2009; Feldman *et al.*, 2013). While the precise mechanisms that

link maternal distress and depression with children's developmental outcomes are the subject of ongoing investigation, evidence suggests that the cross-placental transmission of stress hormones causes a disruption in the development of the fetal prefrontal cortex and stress response system (Van den Bergh *et al.*, 2005). The mechanisms for the postnatal transmission of stress from caregiver to child are potentially linked to the manifestation of maladaptive caregiving practices, as high levels of anxiety, stress and depression are associated with unresponsive, neglectful or abusive caregiving practices, and can result in low levels of parent-child attachment (McMahon *et al.*, 2006; Field, 2010). In turn, the absence of consistent, nurturing care can have negative impacts on the child's epigenetic processes and neurological development with long-term implications for intellectual, physical and socio-emotional well-being (Belsky and de Haan, 2011; Shonkoff *et al.*, 2012).

Exposure to violence can have multiple deleterious effects on parenting, as it is associated with increased incidence of marital tensions, domestic violence, stress, depression, harsh discipline and punitive parenting styles (Dybdahl, 2001; Galovski and Lyons, 2004; Betancourt, 2015). A caregiver's response to violence is also associated with young children's behavioural adjustment. For instance, in South African families exposed to community violence, the mother's level of distress was significantly associated with 6-year-old children's symptoms of attention deficits, aggression, anxiety and depression (Barbarin *et al.*, 2001).

Identifying strategies to mitigate the negative effects of war on parenting has the potential to improve children's well-being and to strengthen children's resilience (Betancourt and Khan, 2008). A growing body of evidence of effective parenting interventions in low-resource contexts identifies key programme elements that are associated with increases in positive parenting practices, parental knowledge, parent-child attachment, and decreases in harsh physical and psychological discipline. These include:

- the use of adult learning strategies that draw on Bandura’s Social Learning Theory and employ active demonstrations, collaborative discussions, positive reinforcement, and home visits that engage caregivers and children in interactive activities
- comprehensive training of staff and para-professionals, using an evidenced-based curriculum
- programme content that recognises and builds on existing positive parenting practices
- community support systems to strengthen social cohesion

(Engle *et al.*, 2011; Mejia *et al.*, 2012; Aboud *et al.*, 2013; Yousafzai *et al.*, 2014).

For caregivers living in conflict and post-conflict settings, key programme elements also include trauma-focused psychosocial support for parents and caregivers, along with specific content that addresses daily stressors experienced by caregivers (Miller and Rasmussen, 2010; Betancourt, 2015), and content that aims to strengthen caregivers’ responses to children’s trauma, to aid recovery and healing.

Building on the insights generated through past decades of early childhood development and parenting research, the International Rescue Committee (IRC) has been working to reduce violence against children in the home and improve the developmental outcomes of children in crisis through parenting programmes since 2009. The IRC’s parenting programmes have expanded across eight countries and include workforce-strengthening initiatives in Tanzania designed to support a new cadre of trained social workers to facilitate parenting programmes at scale. The programmes typically include ten two-hour sessions for small groups of caregivers led by a pair of trained facilitators. The curriculum draws on evidence-based parenting programmes and is grounded in social learning theory, using demonstrations, positive reinforcement and coaching to develop and strengthen positive parenting practices. Randomised impact evaluations conducted with research partners from Duke University and the Harvard School of Public Health have demonstrated that the IRC’s parenting programmes confer significant benefits on the lives of post-conflict

and displaced families in Burundi, Liberia and on the Thai-Burmese border. For example, among the 270 families with children aged 3–7 years that participated in the Parents Make the Difference programme in Liberia, caregivers reported an average decrease of 56% in the use of harsh physical punishment and a 29% decrease in psychological punishment (Sim *et al.*, 2014). Significant improvements among participants were also detected in the quality of caregiver–child interactions and the use of positive behaviour management practices.

Guided by past experiences, and learning from the implementation and research of parenting programmes in post-conflict settings, the IRC has dedicated time and resources to the development of culturally adapted parenting programmes to respond to the needs of caregivers that have endured the trauma of war. Focusing on examples of the IRC’s parenting programmes in conflict settings, the following section provides a brief overview of key lessons from these programmes in the Syrian response region. While the preliminary findings that have emerged are not part of randomised controlled trials, they provide insights into the process of adapting and implementing family interventions in crisis contexts that may be used to inform future implementations of wartime parenting programmes.

Parenting programmes in Syria

During the IRC’s initial rapid assessment of protection needs in Iraq, Jordan, Lebanon, and Northern Syria in 2013, parents and caregivers reported high levels of stress. Focus group discussions with parents in northern Syria revealed that the parents felt that their heightened levels of stress led them to lose patience with their children, which resulted in a higher frequency of parents practising abusive and neglectful behaviours toward their children. As one parent shared, ‘because we are in a state of psychological distress, we beat our children. Before we didn’t, but now we do.’ Family visits conducted by the IRC child protection team underscored the high levels of stress experienced by children, not only resulting from the experience of crisis (loss of homes, friends, education, etc.), but also due to the

lack of parental support. These observations were confirmed in Lebanon by the results of the Strengths and Difficulties Questionnaire conducted with 226 randomly sampled children aged 3 to 17 from three of the Lebanese Governorates where the IRC operates that had enrolled in psychosocial support services; these results found 50% of the children to be at risk of developing mental health disorders, with significant long-term implications for children who do not receive treatment (IRC, 2015a).

Responding to the urgent need for psycho-social support services for caregivers and children, the IRC began implementing the Families Make the Difference parenting programme in the Syrian response region in 2014. The programme includes 10 culturally adapted sessions based on cognitive, developmental and behavioural theory that aim to strengthen caregivers' resilience and psycho-social well-being, and to encourage positive caregiving practices. The group-based programme targets caregivers of children aged 0 to 8 years and was adapted from the Parents Make the Difference programme, implemented in Liberia, to fit the cultural context of the Middle East. Additional sessions were developed to respond to caregivers' stress and to strengthen children's resilience in the midst of conflict and displacement.

Assessments were conducted before and after participation in the Families Make the Difference programme with a convenience sample of 74 female caregivers across three regions in Lebanon and 66 in two camps in northern Syria. These found that the majority of parents showed an improvement in caregiving practices. After participating in the ten sessions, caregivers reported significant increases in the use of positive coping strategies, such as setting aside time with children, processing feelings by writing or talking to other adults, or using coping strategies such as writing, exercising or deep breathing (an average increase of 55% in Lebanon and of 72% in Syria¹) (IRC, 2015a, 2015b). Using the child discipline module of UNICEF's Multiple Indicator Cluster Survey (MICS), significant decreases were also detected in the self-reported use of violent discipline, which is a sub-scale

that includes psychological punishment, physical punishment and severe physical punishment (a 37% decrease in Lebanon and a 72% decrease in Syria²). The programmes also found significant decreases in the prevalence of negative feelings, and increases in caregiver resilience. At the same time, the limitations of the study design, such as the lack of control groups and the use of self-report rather than more objective measures, restrict the ability to draw causal inferences regarding the effects of the programme; nonetheless, these preliminary findings point to the potential role of programmes that address parent's well-being by fostering positive support networks and strengthening caregiver skills.

While the parenting modules show promise as an effective strategy for strengthening caregiver skills and coping mechanisms, the results from the pre- and post-programme assessments on caregivers' psychological well-being and sense of parenting competence indicate that further efforts are needed to restore caregivers' sense of hopefulness and feelings of empowerment in providing for their children. As an example of one response to these observations, field staff offered doll-making workshops to teach caregivers techniques for creating dolls and toys using locally available resources. Such workshops offer additional opportunities for caregivers to build social cohesion and to help rekindle their feelings of personal agency in being able to provide their child with basic play materials.

Conclusion

As highlighted by decades of research from the fields of developmental psychology, epigenetics and neurology, nurturing, consistent and responsive care during early childhood is an essential human need that has significant implications for society's future health and well-being. Ensuring that young children receive sufficient care should therefore be an essential component of any humanitarian response. The work of the IRC and other organisations involved in parenting programmes has shown that parents and caregivers living in adversity are often struggling to provide support for their children, that they are interested

in participating in group-based and home visiting programmes, and that parenting programmes can offer a promising strategy towards improving caregiving practices. At the same time, practical experiences from programme implementation point to the important links between caregivers' psychological well-being, caregiving practices, and children's developmental outcomes in humanitarian settings, which are often not addressed in existing parenting programmes. While existing research on these associations provides a theoretical foundation for developing responsive programming to address the needs of parents and children in wartime, there is a dearth of rigorous studies from conflict settings to shed light on effective intervention strategies.

Focused investigations of the impact of violence and war-related stress on parenting behaviours and the implications for children's developmental outcomes could help shape humanitarian interventions seeking to tailor programmes to the needs of war-affected populations. Additionally, research on the effectiveness of contextually adapted behaviour change techniques, used in parenting interventions to increase responsive caregiving practices, reduce violence and promote children's resilience, would provide further guidance for the development of wartime parenting interventions. By increasing support for and attention to the issue of parenting in contexts of war, researchers, practitioners, donors, policymakers, communities, caregivers and children can work together to change the developmental trajectory of millions of children at risk of poor outcomes and improve the future health and well-being of war-torn communities.

Notes

- 1 On average, the reported use of the three types of coping strategies at baseline was 51% in Lebanon and 53% in Syria. After participation in the programme, the average use of the three types of coping strategies was 79% in Lebanon and 92% in Syria.
- 2 In Lebanon, the combined total of self-reported violent disciplinary techniques used by caregivers in the month before beginning the programme was 241, which dropped to 152 after the programme. In Syria, the combined total of violent disciplinary techniques used by caregivers in the month prior to participation was 239, and dropped to 67 after the programme. In both surveys, caregivers were permitted to identify more than one type of disciplinary technique used.

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Special needs, special rights: addressing young children with disabilities via inclusive early childhood development

Donald Wertlieb, President, Partnership for Early Childhood Development and Disability Rights (PECDDR), and Vibha Krishnamurthy, Executive Director, Ummeed Child Development Center, Mumbai, India



The community health worker, at each visit, works with the family, using a strengths-based approach to support families in promoting their child's development. Photo • Courtesy Pervez Daver/Ummeed Child Development Center

At the cutting edge of synergies in human rights and international development agendas are the special needs and rights of children with disabilities. Guided by the Convention on the Rights of the Child and the Convention on the Rights of Persons with Disabilities, the challenge is to construct an 'inclusive early childhood development' framework synthesising fragmented traditions in the fields of early childhood development and early childhood intervention. This article outlines the key considerations (Vargas-Baron and Janson, 2009; Engle *et al.*, 2011; Weigt, 2011; World Health Organization, 2012a,b; Consultative Group on Early Childhood Care and Development, 2012; Aber *et al.*, 2013; Institute of Medicine/National Research Council, 2014; Levy *et al.*, 2014; United Nations Sustainable Development Solutions Network, 2014; Woodhead, 2014).

Often, consideration of children with disabilities begins and ends with the quandaries of definition and measurement. What is a disability? Who qualifies as a 'child with a disability' or 'at-risk' for a disability? Are children with disabilities included among 'orphans and vulnerable children'? Children affected by AIDS/HIV? Malnourished, stunted, low-birthweight?

Disability is not only about illness, defect or impairment, but primarily about the mismatch between the child and the opportunities and obstacles presented by society for healthy development and well-being. A broad definition of disability, proposed by Halfon *et al.* (2012), is:

an environmentally contextualized health-related limitation in a child's existing or emergent capacity to perform developmentally appropriate activities and participate, as desired, in society.

How many children does this entail? At the launch of its *State of the World's Children* reports in 1980, UNICEF estimated the number at 150 million. In the 2013 report, the first to give priority voice to this significant minority of children, the figure was put at 93 million – with national estimates ranging from 3% to as high as 48% of the population of children. Refinements of definition, epidemiology and measurement remain crucial challenges, but need not stop progress towards including these children in global efforts to build healthy, prosperous societies.

Four transformative trends

Four related trends are propelling a science of developmental potential (Institute of Medicine/National Research Council, 2014) and applications in policies, programmes and services that enhance the well-being of all young children, including those with disabilities.

1 A growing number of young children are living with disabilities.

An unintended consequence of the successful drive to reduce infant mortality is that more babies are surviving with chronic illness and disability that compromises their capacity to reach their optimal development (Save the Children, 2012). Just as industrialised nations encountered this 'new morbidity' in the 20th century, developing countries now must nurture and protect more children with changing constellations of health needs (American Academy of Pediatrics, 2001). Still, the large non-governmental funding organisations that influence priorities for low- and middle-income country governments continue to focus on decreasing childhood mortality and disease eradication, with little attention to developmental outcomes of survivors (Scherzer et al., 2012).

2 A shift away from narrow biomedical models of health, development and disability toward comprehensive, multidimensional bio-psycho-socio-cultural models.

There is increasingly sophisticated understanding of early brain development and the lifelong health

impacts of toxic stress and adverse childhood experiences. We have learned that 'early childhood investments substantially boost adult health' (Campbell *et al.*, 2014, p. 1478), exposing the gross inequities associated with social determinants of health disparities. Infant mental health and neuroscience research now inform our understanding of how babies learn, supporting new models of intervention (Yurima and Charman, 2010). There is a growing literature on what helps to decrease toxicity and promote healthy development.

3 A shift from a narrow deficit-oriented medical model towards more holistic and ecological models that embrace strengths, protective and promotive factors – the child's, the family's, and the community's.

This includes a shift from a 'disease model' of disability to thinking of children with disability within a framework of functional limitations imposed by the environment (WHO, 2007). As a consequence, our interventions become less narrowly focused on diagnosis, exclusion and 'help' through compensatory and remedial efforts involving specialist 'support' in the 'mainstream'. Enablement, empowerment, advocacy, and self-advocacy join the array of intervention objectives.

Another consequence of the shift towards more multidisciplinary approaches is the challenge of advocating for the mainstreaming of disability across multiple disciplines and sectors (Levy *et al.*, 2014). For instance, the responsibility for early identification of young children with delays or disabilities may be spread across ministries of Women and Child Development, Health, Human Resources, Education or Social Protection. Over the last two decades there has been a move towards approaches that engage the family and the community, with growing evidence that community-based rehabilitation can be inclusive and sustainable. (WHO, 2010). Most recently, the early childhood space is expanding to include not just the traditional governmental and NGO players, but also private, business and corporate

partners – as explored on pages 86–7 of this issue (ReadyNation, 2015).

4 Rights-based frameworks are replacing charity-based approaches.

The Convention on the Rights of the Child (CRC) and the Convention on the Rights of Persons with Disabilities (CRPD) together have power and promise for young children with disabilities (Brown and Guralnick, 2012; Lansdown, 2012). Perhaps one of the most illuminating aspects of progress fuelled by rights-based action can be seen in the ongoing de-institutionalisation of children, many of them children with disabilities, around the world (Mulheir, 2012; Office of the High Commissioner for Human Rights, 2012).

Despite widespread acknowledgement of the special challenges of disability, gaps and omissions threaten the effectiveness of efforts to prioritise ‘inclusive early child development’ in the emergent post-2015 agenda. For example, children with disabilities merit less than a page of text in the 463-page *Education for All (EFA) Global Monitoring Report 2009* – although the report does recognise that ‘disability is a significant source of inequality and marginalization in education’ (p. 192). The report also laments that:

progress in recognizing disability as an area needing policy attention has been limited. Only ten of the twenty-eight education plans endorsed by the Fast Track Initiative between 2002 and 2006 included a strategy for children affected by disability. While 13 others mention disability, there is little detail of strategies for the inclusion of disabled children in education, and five make no mention at all.
(pp. 192–3)

The particular challenges and opportunities involved in addressing the needs and rights of young children with disabilities are well-articulated in recent publications (WHO, 2012a, 2012b; Denboba *et al.*, 2014; Howgego *et al.*, 2014; Woodhead, 2014). ‘Inclusive early childhood development’ is supported by ‘triple-twin-tracking’ – balancing universal with specialised services, balancing child-centred efforts with family-focused and

community-based efforts, and integrating specialised early childhood knowledge with broader developmental frameworks (Levy *et al.*, 2014).

Two examples of action

Two examples – one local, one global – illustrate promising ways forward in addressing the needs and rights of young children with disabilities. Feedback and mutual learning between such initiatives, a ‘glocalisation’ process elaborating good practice and evidence, reinforce the aforementioned transformative trends.

1 Ummeed Child Development Center

This is a nonprofit in Mumbai, India, set up in 2001 to provide services for children with developmental disabilities and their families. The WHO estimates that Mumbai has 650,000 children with developmental disabilities. Ummeed’s Early Childhood Development and Disability training programme, set up in 2008 with usaid funding, targets high-risk communities through community health workers, who are trained through four, four-day modules spread over a year. Each module addresses a specific objective: promoting early childhood development using a family-centred approach (WHO, 2012c); fostering development using the Guide for Monitoring Child Development (GMCD) tool (Ertem *et al.*, 2008); working with families of children with developmental delays or disabilities; and advocacy at a local level for families of children with disability. The programme is currently being implemented in three sites – one large urban slum, one rural and one semi-rural setting. To date, 60 community health workers have been trained.

The community health workers make home visits to every family with a child under three at least once a month. At each visit they work with the family, using a strengths-based approach to support families in promoting their child’s development, and monitoring the child’s development using the GMCD tool. When children are identified with developmental delays or with known risk factors (such as malnutrition or anaemia), the worker makes more frequent visits and facilitates referrals for specific concerns (for example, a hearing test for a child with suspected hearing loss).

While the focus is always on the development of the young child, the family-centred approach also enables the addressing of risk factors such as maternal depression and domestic violence, which can be referred to local NGOs. Community health workers talk about early childhood development and disability in a range of community activities such as self-help groups for women, activities for mothers at local government daycare, celebrations for festivals, immunisation camps and other situations that bring young families together. They work with others in the community to identify and advocate for local resources for children with disabilities and their families.

Early results are encouraging in terms of early identification of children with disabilities, community engagement in and community identification of local resources. There is potential for the programme to scale via the government system and be replicated in other low-resource settings; in 2014, the Government of India launched a new ambitious programme, the National Child Health Programme (RBSK), with a mandate to address childhood disability. And now with recognition and support from Grand Challenges Canada¹ this programme is strengthened by an innovative and vital North–South collaboration with global multisectoral partners.

2 The Global Partnership on Children with Disabilities

Founded in 2012 as a platform for advocacy and collective action, this growing multi-stakeholder coalition represents about 250 organisations, including international, national and local NGOs, disabled people’s organisations, academia, youth, governments and the private sector. Its mission – ‘to galvanize and coordinate global and national efforts towards inclusive development with a focus on children with disabilities’ – is guided by a human rights approach, drawn mostly from the CRC and CRPD.

As the partnership’s first wave of ‘task forces’ began work in education, nutrition, assistive technologies and humanitarian action², it became clear that the cross-cutting perspectives of ‘inclusive early childhood

development’ would enrich their deliberations and actions. The partnership’s secretariat asked a network of advocates and experts convened by the Partnership for Early Childhood Development and Disability Rights to function as an Early Childhood Development Task Force. This now consists of 125 volunteers affiliated with over 50 organisations and hailing from 28 countries across nine regions.

Over the past two years, the activities of the task force have included:

- (a) multidisciplinary and cross-sectoral teams responding to efforts in several nations to build more inclusive early childhood systems and interventions, replacing institutional care with comprehensive community-based services, enhancing primary health care with developmental paediatrics, and fostering rights-based transformations of human services. For instance, task force members are collaborating with UNICEF and government agencies to provide specialised foster care for infants with disabilities, who would previously have been institutionalised in detrimental ‘baby homes’.
- (b) designing, deploying and updating advocacy tools and documents such as *Including Children with Disabilities: The early childhood imperative* (UNESCO, 2009) and policy messages (EADSNE, N.D.).
- (c) securing a foothold for ‘inclusive early childhood development’ in broader advocacy and awareness initiatives of the Global Partnership, and
- (d) exploring synergies and collaborations among ‘inclusive early childhood development’ initiatives and the emergent field of global education diplomacy.

Ways forward and recommendations

Considering the trends and examples articulated above, we offer these recommendations for moving forward.

- We join Halfon *et al.* (2012) in calling for:
 - policy makers to strengthen existing data systems to advance understanding of the causes of childhood disabilities and guide the formulation of more strategic, responsive, and effective policies, programs, and interventions.*
 (p. 13)

Policy, research and children's well-being can and must be enhanced by designing and evaluating developmentally contextualised interventions (Wuermli *et al.*, 2015). Progress depends upon sustained and systematic attention to improved epidemiology and statistical designs (UNICEF, 2014a) as well as analysis and reform of diverse governance structures. (Britto *et al.*, 2014).

- We call on scientists and funders to reject the exclusion of disability matters from research. It is unfortunately and disappointingly common for even seminal articles in the field of early childhood to explicitly exclude children with specified forms of disability from consideration. While one might appreciate the limited and limiting scientific expediency of such a decision, one must also challenge the scientific community to better serve the needs and interests of all children, including those with disabilities.
- While we applaud the articulation of strong economic, scientific, social and rights-based advocacy tools by organisations such as UNICEF, we lament that at this crucial moment in identifying sustainable development targets, a key policy brief on young children would be promulgated without any mention of children with disabilities (UNICEF, 2014b). Moving forward we expect that greater priority and intentionality on inclusion will benefit *all* children (WHO, 2012b). Recognition of these gaps and omissions allows for cross-sectoral problem solving likely to enhance and even harmonise distinctive priorities in early child development, education, social protection, nutrition and health.
- With growing attention to new ways of investing in 'inclusive early childhood development,' such as social impact bonds and enhanced policy and governance (Gustafsson-Wright and Atinc, 2014), pushing cross-sectoral collaborative advantages to test and apply innovations must become a priority. We reinforce the message from Scherzer *et al.* (2012) to large funding organisations about the need to invest not just in child survival in low- and middle-income

countries, but in the developmental outcomes of children who survive.

Notes

- 1 Grand Challenges Canada gives details of this project online at: <http://www.grandchallenges.ca/grantee-stars/0727-03/#description> (accessed April 2015).
- 2 More information about the Global Partnership on Children with Disabilities and its task forces can be found at <http://www.gpcwd.org/early-childhood-development.html> (accessed April 2015).

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Supporting children and families right from the start and throughout the early years

Innovations and initiatives

The Partnership for Maternal, Newborn and Child Health

Given the influence of the early years on success in school and later life, early childhood development deserves to be at the heart of education and economic productivity agendas – but early childhood programmes cannot achieve their goals if confined to those sectors alone. The primary healthcare system plays a vital role in children’s early years and is often the gateway to early childhood services, while social protection, nutrition, water and sanitation are also all essential for improving outcomes.

As the world works to define the post-2015 development framework, a priority must be to end programme ‘silos’ and promote a more integrated approach to coordinated services, delivered through effective partnerships. A framework for integration of early childhood interventions must address the multiple social determinants that influence young children’s development, on multiple levels and with the help of multiple partners from different sectors. Multi-sector means working across the sectors of government (education, health, finance, etc.) and across the sectors of society (government, United Nations, civil society, private sector, etc.)

The Partnership for Maternal, Newborn and Child Health (PMNCH) has been working to build such partnerships since 2005. Hosted by the World Health Organization, PMNCH is an alliance of more than 680 organisations active in reproductive, maternal, newborn, adolescent and child health, including academic and research institutes, donors and foundations, healthcare professionals, multilateral organisations, NGOs and the private sector, as well as national governments. PMNCH is based on three priorities: knowledge, advocacy and accountability. Within a human rights approach, its mission is to support all partners and members to achieve better outcomes together for women, adolescents and children at national level than they could achieve individually, by promoting knowledge and information sharing, engaging in political and public advocacy, and upholding accountability for resources and results to build more resilient communities.

Through its innovative information-sharing platform and cutting-edge projects such as the Every Newborn Action Plan, PMNCH has been able to inspire national ownership and participation among multi-sector partnerships. Such platforms allow for more access to innovations, enhance policy solutions, empower local service delivery and create a framework for coordination of financing mechanisms for countries.

The Partnership’s accountability processes are designed to maintain quality standards and guide roles and responsibilities across sectors, to ensure that all partners deliver on the commitments they have made. Monitoring investments through a life cycle approach allows for more accountability and more systematic tracking of how financial commitments are allocated and disbursed. Due to the multiple delivery platforms, early childhood services require a high level of accountability to maintain quality.

Investing in human capital begins in building strong foundations from pre-conception through young adulthood. To strengthen alliances and expand the discourse about early childhood development beyond traditional education and economic empowerment narratives, partnerships are needed to share knowledge, advocacy and accountability tools in order to mitigate risks, and enhance development outcomes. PMNCH’s focus on the full spectrum of health of women, children and adolescents coincides with the windows of opportunities for early childhood development interventions that affect prenatal, newborn, child and adolescent health.

Future early childhood development programmes require a strong comprehensive approach, by sharing knowledge and advocating a unified message to common stakeholders in order to support effective policies and programme implementation in work at national level. Working with partners helps clarify the message as to what early childhood programmes can achieve and why investment in them is essential. It represents early childhood to stakeholders in its full essence, as a holistic solution. PMNCH plays a central role in facilitating joint action, by empowering constituencies to share strategies, align objectives and resources, and agree on interventions to achieve more together than they would individually.

Further information about the Partnership is available at: <http://www.who.int/pmnch/en/>

Birth registration

Globally, around 45% of the world's under-5s – some 290 million children – do not possess a birth certificate. Of them, around 230 million have never even had their births officially registered.

This matters because without a birth certificate it can be difficult to access public services such as health, education and social security. Being registered at birth can help to prevent child labour, early marriage and trafficking, and enable children who are separated from their parents during migration to be traced. Without the accurate demographic information that universal birth registration provides, governments also cannot adequately plan services for children.

Birth registration is almost universal in industrialised countries and the former Soviet states; in Latin America and the Caribbean, 92% of children are registered. In East Asia the figure drops to 79%, in South Asia 71%, and in sub-Saharan Africa only 41% of births are registered. Birth registration rates tend to be lowest among poorer households and also in rural areas, where getting to the nearest registration facility imposes high costs.

UNICEF is leading action to improve birth registration rates through policy reform, capacity building, awareness raising and community-based registration campaigns. Approaches include integrating birth registration with other services, such as health and education, and using SMS technology to develop online birth registration systems.

More information on the status and progress of birth registration worldwide is available from UNICEF at: <http://data.unicef.org/child-protection/birth-registration>

The 1,000 Days Partnership

The 1,000 Days Partnership was launched by the US and Irish Governments in 2010 to promote action and investment in maternal and young child nutrition, particularly during the critical 1000-day window that extends from a woman's early pregnancy to her child's second birthday. 1,000 Days serves as a hub for advocates, thought leaders, policymakers and a network of over 80 partners to coordinate and accelerate global efforts to combat malnutrition – a leading cause of death in children under the age of 5.

1,000 Days draws attention to powerful evidence showing that investments in nutrition during this 1000-day period can have a profound impact on a child's ability to grow, learn, and rise out of poverty and can shape a society's long-term health, stability and prosperity. Lack of adequate nutrition during the critical first 1000 days can stunt a child's growth and brain development, leaving them more vulnerable to death and disease and affecting their ability to learn. Research also shows that malnutrition during this period is a serious drain on a nation's economic productivity and development.

1,000 Days promotes efforts to ensure that women get the right nutrition before and during their pregnancies, infants are optimally breastfed for the first six months, and young children get the right nutritious foods at the right time.

More information about the 1,000 Days Partnership is available at: <http://www.thousanddays.org>

The lottery of birth

In February 2015 Save The Children published a report, *Lottery of Birth*, revealing the extent to which a child's chances of surviving to the age of 5 depend on which region of a country they are born in, how wealthy their parents are, and their ethnic identity. The report analysed data from 87 low- and middle-income countries around the world.

In 78% of the countries studied, the gap in survival rates was found to be widening for at least one social or economic group. For example, in Indonesia the survival gap between children born into the poorest 40% of households and the wealthiest 10% doubled between 2002 and 2012; in Honduras and Niger, the gaps between the most and least developed regions likewise expanded significantly.

However, some countries – such as Rwanda and Malawi – have shown it is possible to make impressive progress in reducing inequalities in child mortality by targeting support at the most disadvantaged groups. The report calls for universal health care coverage more accountable governance, and improvements in statistics systems to enable better monitoring of progress for disadvantaged groups.

Further information and the full report are available at: <http://www.savethechildren.org.uk/resources/online-library/lottery-birth>

Young Lives

Set up just after the Millennium Development Goals were established, Young Lives is a longitudinal cohort study following the lives of 12,000 children growing up in poverty in Ethiopia, India, Peru and Vietnam, for a 15-year period. It aims to inform policy choices by providing insight into the processes that influence children's development, and by adding context and nuance that can often be masked in cross-sectional data and time-limited randomised controlled trials.

Earlier in 2015, Young Lives released its latest report, published by UNICEF, *How Inequalities Develop through Childhood*. The findings illustrate how the success of any particular intervention in health, education or child protection is bound up with the effectiveness of services in other sectors, emphasising the need for more inter-sectoral collaboration. And the report confirms the large extent to which household circumstances in a child's early years influence their later physical development, achievement and psychosocial well-being, showing the critical importance of early interventions.

However, the report also points out that children's life courses are dynamic, so alongside early intervention and anti-poverty efforts there is also scope to close gaps through later interventions, such as school-based nutrition programmes.

The report sheds light on the factors that influence whether a child continues with schooling, including pressure on older children to help look after younger siblings; the death or illness of a parent; poverty-related pressure to work, although work can also help children to learn marketable skills; perceptions of the likelihood that further education will subsequently help a child to get a better job; and reputational dangers for girls approaching marriageable age, who face sexual harassment at school or while travelling long distances to get there.

Further information and publications are available at: www.younglives.org.uk

Know Violence in Childhood

Know Violence in Childhood is a time-bound global learning initiative that aims to leverage credible global evidence to promote the prevention of violence in childhood as a global goal. The initiative will fill the gaps that exist in knowledge about strategies and solutions that can effectively contribute to preventing violence in childhood. Bringing together leaders from academia, practice, politics and policymaking, its three learning groups are analysing the drivers and consequences of violence in childhood across the settings of homes and families; schools and institutions of care and detention; and communities and public spaces, as well as identifying effective mechanisms and strategies that contribute to violence prevention that can be adapted to different contexts. The initiative will launch its flagship publication in 2016 and also communicate findings through diverse media.

Launched in November 2014 in New Delhi and backed by a wide range of funders, the initiative is managed by the Public Health Foundation of India and the Institute for Global Studies of the University of Delaware, USA.

More information about the initiative is available at: www.knowviolenceinchildhood.org

Section II

CAPACITY BUILDING CRITICAL TO SCALING

Saving Brains: innovation for impact

Dominique McMahon, Program Officer, and Karlee Silver, Vice-President, Programs, Grand Challenges Canada, Toronto, Canada



Success for Saving Brains over the next five years will be a collection of evidence-based models that are transitioning to scale and having measurable impact on child development. Photo • Courtesy Hanoi School of Public Health

Grand Challenges Canada – which is funded by the Government of Canada and supports bold ideas for big impact in global health – is four years into an initiative to identify and scale up the most effective ways of helping the world’s children to realise their full potential. This article previews research results which are due to be published in the coming year, and identifies some solutions already identified as holding promise.

Shortly after Grand Challenges Canada launched five years ago, we prioritised a small number of problems that seemed particularly well suited to the application of innovative ideas for transforming the health and well-being of societies. These problems included the fact that almost one-third of the world’s children are at risk of not reaching their full developmental potential, due to failure to nurture them and protect them from

adversity. The result is a devastating waste of human capital that leaves the next generation ill-equipped to solve the enormous challenges that lock individuals, communities and societies in poverty.

The Saving Brains challenge focuses on unleashing the power of scientific, technological, social and business innovation to transform how we nurture young children in the first 1000 days of life and to establish a strong foundation for their long-term health, productivity and participation in society. The Saving Brains portfolio currently contains over 70 innovations from low- and middle-income countries.

To start, we took advantage of significant past investments to better define the long-term impact of interventions delivered in the first 1000 days of a child’s life. We funded follow-on studies for 11 well-designed

trials of interventions that were shown to be effective in improving newborn health, nutrition, infection outcomes or nurturing. Across ten countries and over two and a half years, more than 44,000 children from these trials were tracked, re-enrolled and assessed. Each of the studies collected a set of core outcome metrics to capture key constructs of development: physical growth (height for age), cognition (general intelligence and executive functioning), language (literacy), socio-emotional development (behavioural and emotional problems) and academic attainment (years of schooling). In-depth cognitive assessments were conducted on 17,500 children and young people aged between 4 and 20 and 21,000 home environments were assessed across the study sites.

The following examples illustrate the types of results anticipated from these 11 studies, many of which are expected to be published later this year:

- 4 year olds in Pakistan who were part of the Pakistan Early Child Development Study (PEDS) (Yousafzai *et al.*, 2014) were followed up to assess whether the early stimulation and nutrition interventions delivered by health workers increased their readiness for school. An additional objective of the study was to determine whether the interventions had altered parental attitudes and behaviour towards preschool.
- 7 to 10 year olds in South Africa who were part of the Vertical Transmission Study, which showed that exclusive breastfeeding reduced the rates of mother-to-child transmission of HIV (Coovadia *et al.*, 2007), were followed up to determine the effect of breastfeeding and HIV exposure on development.
- In Tanzania, Bangladesh and Ghana, 8 to 14 year olds who were part of Study 13, a randomised controlled trial of community-based pre-referral treatment with rectal artesunate for suspected severe malaria (Gomes *et al.*, 2009), were followed up to assess the long-term effects on development and disability.
- 18 to 20 year olds in Colombia who were part of a randomised controlled trial of Kangaroo Mother Care for low-birthweight babies (Charpak *et al.*, 1997) were followed up to assess a range of outcomes including brain structure and function, school attendance, wage earnings and family dynamics.

The results of the 11 studies will enrich the evidence base of how early life experiences can establish a foundation that amplifies the effect of positive factors and mitigates the effects of negative ones as the brain and the child develop.

The economic burden

Next, we engaged two teams of economists to define the economic burden of the problem of children not fulfilling their development potential, based on existing data. By taking into account all the risks and protective factors for which sufficient data already existed, insights were gained into which countries bear the highest economic burden and which factors contribute most to it. The findings are expected to be published later this year. It is very exciting to see a global picture emerging of the economic burden resulting from 28 factors, and an interactive website is being developed that could ultimately model effects on child development and human capital in much the same way as the Lives Saved Tool¹ predicts intervention effects on infant and maternal mortality.

Some important findings have already emerged from the economic analyses. For example:

- It's 'better late than never' when it comes to good nutrition. Catch-up growth after 2 years of age was shown to have positive effects on maths and literacy scores at 8 years of age (Crookston *et al.*, 2013).
- Nutrition programmes produce clear financial returns. Nutritional interventions provide a return of between 3.6 and 48 times on investment, which is on a par with other public investments including education (Hoddinott *et al.*, 2013a).
- Poor growth in childhood affects prospects for adult income, marriage and family life. Stunting at age 2 is associated with less schooling, lower reading and nonverbal test scores, less favourable marriage partner characteristics, and increased probability of living in poverty (Hoddinott *et al.*, 2013b).
- Children from low-income homes face significant learning disadvantages by age 3. A study conducted across five Latin American countries (Schady *et al.*, 2014) has found that children from low-income

families show substantial gaps in cognitive skills by age 3, which in some cases continue and increase into school years, suggesting that learning disadvantages in poorer children are established early in life.

- Cognitive development suffers if children are left behind by both parents. Analysis of data collected from rural China, where over 61 million children are left behind by parents migrating for work, showed children left behind by both parents have reduced maths and language scores. Much smaller, insignificant impacts were observed for children who have a single parent absent (Zhang *et al.*, 2014).

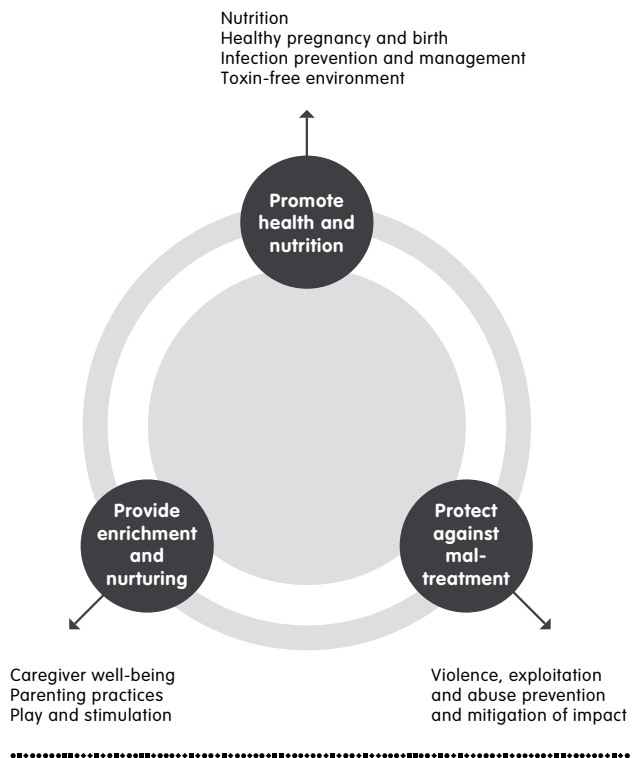
Towards solutions at scale

Saving Brains is now in a solutions-oriented phase where we are seeking innovative products, policies, services and implementation models that have the potential to promote and nurture healthy brain and child development at scale. We welcome bold ideas that promote health and nutrition, that provide nurturing and enriching environments, and that protect against child maltreatment (see Figure 1). The following are some examples:

- A team at the Institute of Nutrition of Central America and Panama (INCAP) is bringing to life a policy that rice, the staple crop in the region, must be fortified with folic acid, by incentivising rice millers in Nicaragua.
- Mobile Crèches is developing a social franchise model to leverage the resources of construction companies and local civil society organisations to scale early child development centres for the children of migrant construction workers in India.
- A team at the Hanoi School of Public Health is engaging fathers in parenting in Vietnam, where this is not the cultural norm.

Saving Brains innovators are taking on the dual challenge of meaningfully improving developmental outcomes for each child reached *and* increasing the number of children reached with their solutions. They are designing their innovations with scale and sustainability in mind; striving from the outset to understand who is going to pay for them and what they

Figure 1 Promoting and nurturing healthy brain and child development



are willing to pay, how much time is being asked of whom and whether they value what is offered enough to give that time. Only in this way will we move beyond pilot projects that impact hundreds of children and start addressing the hundreds of millions of children in need. We expect the portfolio of Saving Brains innovations to help us define what works for whom, how it is best delivered, and how much it costs, so that we can continue to innovate until every child has the opportunity to thrive.

Success for Saving Brains over the next five years will be a collection of evidence-based models that are transitioning to scale and having measurable impact on child development. With a growing Saving Brains partnership, including the Aga Khan Foundation Canada, Bernard van Leer Foundation, Bill & Melinda Gates Foundation, Maria Cecilia Souto Vidigal Foundation, Norlien Foundation, UBS Optimus Foundation and World Vision Canada, and with each

partner bringing its expertise and networks to bear, there is a higher likelihood that this impact will be achieved.

Every day that ends with the status quo unchanged means we are failing another set of children who could hold greater solutions to the world's problems than we can even imagine. Innovation is a means to introduce completely different ways of addressing the problem, and to increase the outcomes for every unit of resources invested. Saving Brains is a means to make tomorrow a brighter day than today.

Note

¹ Information about the Lives Saved Tool (LiST), software for predicting maternal and infant mortality, can be found at: <http://livessavedtool.org/> (accessed April 2015).

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Measuring early childhood development: priorities for post-2015

Abbie Raikes, independent consultant and Project Coordinator, Measuring Early Learning Quality and Outcomes, Omaha, NE, USA; Tarun Dua, Medical Officer, Department of Mental Health and Substance Abuse, World Health Organization, Geneva, Switzerland; Pia Rebello Britto, Senior Advisor on Early Childhood Development, UNICEF, New York, NY, USA¹



Only by measuring the development and learning, beyond access, of different groups of children will we be able to discern which policies, programmes and strategies are working, and why. Photo • Courtesy Asociación Red Innova

As the proposed Sustainable Development Goals include a target on early childhood development, the United Nations agencies are coordinating efforts to develop a shared measurement framework, from birth to 8 years of age, which cuts across sectors and can efficiently prioritise, validate and report on new indicators and measurement systems to improve policy implementation and programme effectiveness. This article makes the case that measurement of child outcomes is feasible at global and national levels. Further investments are required to expand global reporting and strengthen national capacities to implement measurements for young children's development and learning.

As the 15-year span of the Millennium Development Goals comes to a close, the international community is currently engaged in discussions to add detail to a post-

2015 agenda framed around 17 Sustainable Development Goals (SDGs) and their targets². For the first time in the history of global development, 'Early Childhood Development' is part of the UN Secretary-General's Synthesis Report, *The Road to Dignity by 2030* (2014). The report recognises the importance of early childhood as part of the transformative agenda. With respect to tracking progress, the early childhood part of the fourth SDG ('Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all'), articulated in Target 4.2, reads:

by 2030 ensure that all girls and boys have access to quality early childhood development, care and pre-primary education so that they are ready for primary education.

This recognition was further endorsed by the Incheon Declaration, adopted at the World Education Forum (held in Incheon, Korea, 19–21 May 2015)³ which was attended

by over 140 ministers of education and co-convened by six UN agencies.

This proposed target, and concomitant indicators, focus attention on measurement. How can we measure child outcomes, beyond access to services? What are the most relevant dimensions to capture whether a child is 'ready' for primary education? What determines if a given service is 'quality'? Credible measures which provide useful, reliable data are not only necessary to track progress towards achieving the goal, they are necessary to enable us to meet the goal. Only by measuring the development and learning, beyond access, of different groups of children will we be able to discern which policies, programmes and strategies are working, and why.

Innovations in measurement tools over the last decade have greatly improved the reliability of measurements of the development and learning of preschool-age children at the population level, for example, at global level, the Early Childhood Development Index of UNICEF's Multiple Indicator Cluster Surveys (MICSS)⁴. Several regional efforts have recently made progress in region-wide measurement of early childhood development and learning, notably the East Asia Pacific Child Development Scales; the Regional Project on Child Development Indicators (PRIDI), run by the Inter-American Development Bank; and UNICEF's West and Central Africa Regional Office (WCARO) prototype. Such regional efforts have successfully developed tools that are culturally appropriate across many countries. Several of them collect information using direct assessment and others are based on reports from teachers and parents. These global, regional and national efforts demonstrate that measuring child outcomes of learning and development is technically feasible with the potential of being a significant tracking mechanism to measure progress towards the SDGs.

Global, regional and national measurement efforts

The inclusion of early childhood development in the post-2015 agenda has led to a demand for globally comparable indicators on early childhood development

that can be implemented at national levels to monitor progress towards the target. Building on the past efforts, the Measuring Early Learning Quality and Outcomes project (MELQO) – convened by UNICEF, UNESCO, the World Bank and Brookings Institute – is now pulling together expertise on measurement from around the world to synthesise and integrate existing global and regional measures. For the most part, existing measures cover a similar range of skills, focusing holistically on child outcomes, including cognitive, language, pre-literacy, social/emotional and motor skills. The goal of MELQO is to produce feasible, efficient, accurate and technically sound approaches to the measurement of child development and learning and of the quality of children's learning environments, that can be adapted for use in low- and middle-income countries and produce data that can be compared at a global level.

Measurement of early childhood development towards the post-2015 target should focus on the following technical areas:

- **Ensuring that measures are reliable and reflect the holistic nature of development.** Child development is holistic by nature. It includes, but is not limited to, domains of cognitive, linguistic, social-emotional and physical development. It is imperative that standards of quality are met – inaccurate data are worse than no data at all. Establishing validity requires substantial investments in research and testing, and attention to the holistic nature of children's development. During these early years, development and learning have a symbiotic relationship, with learning informing development and vice versa. Additionally, different aspects of development build on each other – for example, children learn words by reading facial expressions. While rates of development, across these domains, are not necessarily linear, and children may experience spurts in one area while other areas progress more slowly, there should be overall progress over time.
- **Understanding what is universal and what is culturally contingent.** Years of research on children's development has given us a strong scientific

understanding that children’s development proceeds, overall, according to basic developmental processes that share some consistency from one place to the next. Within this overall consistency, however, are important variations reflecting cultural and contextual influences, because development is experience-dependent. Based on the quality of the environment, development can be greatly enhanced. This poses challenges for any attempt to measure learning and development. For example, when it comes to reaching for objects or walking, it seems that children develop in roughly similar ways across cultures and contexts; but the acquisition of early literacy skills, like naming letters and sounds, is likely to vary considerably from one place to the next. To be able to measure effectively how children are progressing across a variety of cultures and contexts, we need to deepen our understanding of these kind of differences and how to account for them.

- **Understanding when it matters that a child achieves a certain skill by a certain age.** If early literacy skills, for example, are acquired later in one culture than in another, we need to be able to tell whether or not this is something to be concerned about. Should we consider culturally appropriate interventions to encourage earlier acquisition of these skills? Or can we be confident that the literacy skills of children in the lagging culture will catch up in due course? We have more to discover here: only a few longitudinal studies have been conducted to date, so we know little about the long-term consequences of the age at which children acquire certain skills and competencies.
- **Understanding the contribution of environmental inequities.** Across all cultures and contexts, we know that the speed at which children acquire skills depends on factors such as the extent to which their parents or caregivers engage with them, whether they have books and toys to stimulate them, and their health and nutrition status. But we need a more nuanced understanding of the interplay of these factors to know what lessons to draw from data. If measurements tell us children attending a certain kind of preschool are not demonstrating the desired

skills or competencies, for example, is it because their preschool is not of sufficiently high quality? Or because of inadequacies in their diet? Or because local norms of parenting do not encourage play with infants? Only by understanding the root causes of differences – which can be achieved by analysing population data – will we be able to draw the right conclusions about what kind of interventions are needed.

- **Better alignment between global, regional and national measures.** While they are necessary to track global progress, though, global tools can never be the whole story. Therefore alignment will be created with regional and national measures. These can be tailored to cultural and contextual relevance and designed to inform about specific programmes and policies, are generally more likely to be perceived as relevant and useful for decision-making. The more local measures exist, the more potential there is to test new and innovative approaches. However, it takes significant resources and capacity to build and test new measures – even those based on a global core – and use the data in a systematic way. The early childhood community should coordinate to support investment in such efforts.
- **Seamless measurement across the early life course (birth to 8 years).** Current measures are designed for children between the ages of 3 and 7 years, but gaps which appear much earlier than this can be hard to close. Literacy, for example, is dependent on early language, so identifying early patterns in development should begin at birth. Work is now underway, led by the World Health Organization, to develop a measure of children’s development from birth to age 3, based on integration of existing measures. The project focuses on defining items for assessing the child’s environment as well as holistic measurement of developmental outcomes. Greater investment is needed to develop measures of children’s development and learning in their first three years that will align with the MELQO focus on 3–8 year olds. By putting these efforts together, the development continuum will be measured.

The renewed interest in early childhood development and measurement, more broadly, presents an excellent opportunity to ensure that young children's development and learning are measured at global, regional and national levels within the Sustainable Development Framework. As the technical feasibility of measuring child outcomes has been demonstrated, the next steps need to focus on strengthening the measurement systems and improving our capacity to use the data not only to track results but also to inform improvements in programmes and policies. Measurement of child outcomes of learning and development, in the global measurement framework, demonstrates a significant breakthrough in bridging the evidence and policy gap. This innovative work on measurement in the field of early childhood development has the unique distinction of bringing evidence to inform policy to improve the developmental potential of all young children born in the SDG era.

Notes

- 1 The authors alone are responsible for the views expressed in this article and they do not necessarily represent the decisions, policy or views of the World Health Organization and UNICEF.
- 2 The proposal for Sustainable Development Goals and their targets is presented in detail by the Open Working Group on the UN's Sustainable Development Knowledge Platform at: <https://sustainabledevelopment.un.org/sdgsproposal> (accessed May 2015).
- 3 Details of the Forum can be found on UNESCO's website at: <http://en.unesco.org/world-education-forum-2015/> (accessed May 2015).
- 4 The measurement of early childhood development outcomes by MICSS is described in 'ECD Monitoring' on the UNICEF website at: http://www.unicef.org/earlychildhood/index_69846.html (accessed May 2015).

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Quality in early childhood settings: universal values and cultural flexibility

Dawn Tankersley, Program Consultant (USA), Tatjana Vonta, Program Consultant (Slovenia), and Mihaela Ionescu, Program Director, International Step by Step Association (the Netherlands)

There is consensus that quality in early childhood settings and systems is essential to protect young children's rights, as outlined in the United Nations Convention on the Rights of the Child (CRC), and to promote their optimal development. But what does quality mean? This article discusses how to strike the right balance between universal values and the need to consider cultural contexts and involve local stakeholders when defining how quality can be measured.

Many organisations, governments and programme frameworks are involved in defining what quality means and providing instruments and indicators to measure it. While there are some points of agreement, quality is an elusive concept because it must address a large array of formal, informal and non-formal providers and provisions, types of services across different sectors, target audiences and stakeholders who all have different values, beliefs, needs and abilities. We need dialogue and negotiation to capture what quality means in these different contexts.

In 2014 in Leiden, Netherlands, a group of early childhood experts from different parts of the world met to discuss the challenges in reaching a universal definition of quality, and what aspects of quality can be measured and used to improve services for young children and their families.¹ The meeting was organised by UNICEF, UNESCO, the Bernard van Leer Foundation and the International Step by Step Association (ISSA), in partnership with the World Bank and the Brookings Institution.

Different kinds of early childhood services – centre-based, home-based, community-based, volunteer services, etc. – involve very different levels of professional preparation of providers. While in general there is a strong argument for linking higher levels of professional development of staff with higher-quality services, in many places in the world this may not be feasible. Standards that measure quality in centre-based early childhood provisions are not helpful in low-resourced countries where centre-based services may

not even be available. One of the challenges in defining quality in services is to develop standards and indicators that can apply to both higher- and lower-resourced countries and programmes, and to early childhood services in emergency response settings.

Any attempt to develop universal standards also needs to take into account that quality early childhood practice requires being culturally responsive. There has to be a balance between meaning and validity across cultures and sensitivity to different contexts and situations. Quality is not a static phenomenon, but an ongoing process that requires building shared values and meanings. The term 'quality' is itself a value-based and culturally based concept (UNICEF, 2012) that may be difficult to measure in the same way across contexts.

For early childhood development, quality at the system level also implies provisions that are integrated and aligned across different sectors, to provide services seamlessly and consistently during transitions for young children and to respond more effectively to social problems and the complex needs of families and communities (Geinger *et al.*, 2015). Measures of quality must take into account the multiple strengths and needs of young children, their families and their communities. Quality services are those that are 'child- and family-centred', not 'provider-centred'.

Points of convergence in defining quality

The purpose of defining quality is to better support children's well-being and healthy development. During the Leiden meeting, one point of convergence was that quality cannot be achieved without a 'radical and generous compliance with the CRC' by every person, entity, service, and government (Kernan, 2014). While recognising the importance of integrating local perspectives into how they are measured, there was also general agreement that some measurable 'core' elements of quality are consistent across settings. These included:

- the environment and the physical setting (including the level of infrastructure, safety, cleanliness, and contribution to enabling development and learning)
- the level of family and community engagement



In 2014, a group of early childhood experts met to discuss the challenges in reaching a universal definition of quality, and what aspects of quality can be measured and used to improve services for young children and their families. Photo • Courtesy Adrian Cerezo/University of Missouri, USA

- the quality of interactions between adults and children, between children, and between adults, including staff, supervisors, community and families
- personnel preparation and their well-being (including initial preparation, ongoing training and support, professional code of ethics)
- structural support (including monitoring and evaluation, financing and logistics)
- inclusiveness
- programme structure and curriculum
- health and hygiene (including mental health, physical health and nutrition).

It was also agreed that measuring quality requires training and participatory procedures, certification of assessors, a commitment to the provision of resources (human, time and financial) and intensive capacity building. There is a need to look at quality indicators in all the environments where young children participate, including non-formal settings, as well as being able

to gauge the quality of their lives and well-being in general.

Dialoguing about and negotiating quality

The meeting explored various approaches that have tried to measure quality more equitably and comprehensively through negotiation and dialogue about the concept. This was referred to as ‘ecological congruence’, in the sense that both the assessment of quality constructs and the interventions to address gaps in quality delivery need to be juxtaposed with local culture and custom, ensuring that the indicators are contextually relevant and sensitive to local culture, and capturing the socio-economic and linguistic contexts (Hayden, 2014). Among examples from participants are the following:

- Mexican organisation ACUDE (*Hacia una cultura democrática*) organised workshops in two communities in which those responsible for indigenous preschool education characterised the world in which they would like to live. Consistent with that definition,

they created their own general categories of quality, melding the local suggestions for indicators with those developed on a national scale through literature review and conversations with central authorities. This process demonstrated that dialogue and negotiation expanded the horizons of participants and began to create a common language and referents among different groups (Myers, 2014).

- International Child Development Initiatives (ICDI) use their instrument, the **ECD-QUAT**, internationally to discuss how a setting (non-formal, informal or formal) provides for child-friendliness, connectedness, sustainability, staffing and human resources, safety, health and protection, and child agency (ICDI, 2012). The instrument is jointly administered by staff and those familiar with the service, such as parents or community health workers. After considering all these items, together they decide on priorities for improvement, agree on a plan of action, a timeframe, who should be involved, and so on. This narrative process allows for inclusion of contextual variables, inputs from all stakeholders, images and sounds as well as events and processes that readily escape measuring such as values, visions and dreams. Importantly, it also allows space for uncertainties and even contradictions (Kernan, 2014).
- The ISSA **Principles of Quality Pedagogy** (ISSA, 2010) and ACEI's **Global Guidelines Assessment** instrument (ACEI, 2011) are examples of dialoguing with service providers using a strengths-based approach to professional development. Both are used as a basis to dialogue with practitioners about how child-centred, democratic, inclusive practices define quality through self-assessment or, in ISSA's case, social constructivist learning processes with mentors and in professional learning communities. In this case, practitioners choose areas of quality they would like to explore as a professional development activity. Practitioners in such participatory processes are more active in making decisions around their own professional development and assume greater responsibility for the quality of their own practice.
- The **Quality Rating and Improvement Systems** (QRIS) in the USA encourage each state to develop

its own dimensions of quality and the process for assessing them and providing outreach, support, financial incentives and consumer awareness (Mitchell, 2005). The World Bank's **SABER**

Framework (Neuman and Devercelli, 2013) encourages national governments to assess their policies on quality, in particular challenges linked to monitoring and enforcing standards.

- Examples of instruments adapted in a particular country through negotiations with stakeholders include the adaptation of the environment rating scale **ECERS-R** in Arabic-speaking countries and India; the adaptation of the **ISSA Principles of Quality Pedagogy** in Peru's *Cuna Más* programme, to reflect its needs, strengths and vision; and the use of UNICEF's (2009) **Child Friendly Schools** framework in Ghana.
- Save the Children's (2013) programme design and monitoring framework, **Quality Learning Environments** (QLE), is an example of an organisation supporting the development of quality early childhood systems in different countries where they are operating, by proposing validated tools for measuring quality and involving governmental stakeholders, partners and practitioners in the planning, data collection and analysis processes.

It was also noted that measurement scales by themselves do not give a full picture of whether quality exists; there is also a need for qualitative measurements, pedagogical documentation and/or case studies to fully understand the situation and include more voices. Participants suggested that it would be useful to establish a global network to provide information, technical assistance and support to stakeholders in measuring quality.

Finally, the meeting discussed how to measure the quality with which early childhood education services enable children to make connections with nature. There is growing appreciation of the importance of the natural and built environments in early childhood settings. Presentations discussed how to build and measure natural environments for young children and outlined creative approaches for low-resource settings.

Conclusion

Everyone agrees that access alone to early childhood services is not sufficient to assure children's rights, well-being, healthy development, and learning to their full potential; there must also be sufficient resources to assure that these services are of adequate quality. To expand our ability to recognise, measure and promote quality, we must be open to reflection and facilitate the participation of the communities who use the services and of those who provide them. We need to avoid limiting our understanding to universal standards alone, instead using universal values such as those embedded in the CRC as an anchor for dialogue around the cultural and contextual relevance of quality.

Note

1 Further information on the meeting in Leiden is available on the issa website at: <http://www.issa.nl/content/counting-quality-measuring-and-improving-quality-early-childhood-environments> (accessed April 2015).

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The Early Learning Partnership: catalysing opportunities for young children

Aashti Zaidi Hai, Manager, Education, Children's Investment Fund Foundation, London, UK



Seed funding from ELP enables World Bank country teams to stimulate or respond rapidly to countries' interests in designing, delivering or expanding early childhood initiatives. Photo • Courtesy Trevor Samson/World Bank

There is strong evidence for the cost-effectiveness and impact of investing in early childhood education to transform the life prospects for children. This article explores how the Children's Investment Fund Foundation has partnered with the World Bank to raise the profile of early learning on the international agenda.

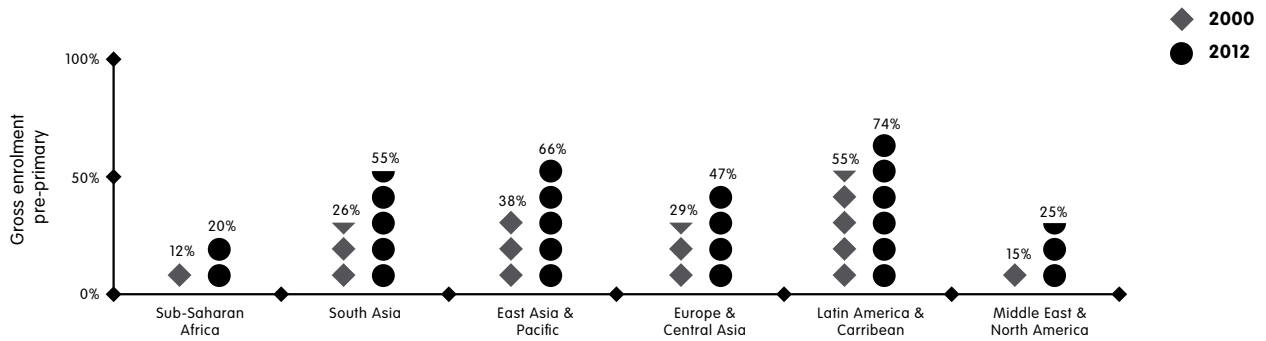
The first five years of life, during which a child's brain grows to 85% of its capacity, is when returns to investment in education are highest. Evidence shows that quality early childhood education is a cost-effective way to set children on a fundamentally improved trajectory of growth and opportunity. Foundational skills acquired early are a precondition for children's later success in school and for the rest of their lives.

Yet the early years are also the period when public investment is lowest. In particular, governments and

donors in developing countries invest little in early childhood education. Although we are witnessing growing demand for such services across Africa and South Asia, this demand has not been met by a concomitant emphasis on quality and equity, or an increase in public or donor expenditure. For example, in sub-Saharan Africa, less than 1% of public education expenditure – and less than 1% of aid to education – is allocated to early childhood.

In a bid to change this state of affairs, the Children's Investment Fund Foundation (CIFF) supported the World Bank in 2012 in launching the Early Learning Partnership (ELP). The World Bank prioritised early childhood development in their new 'Education Strategy 2020' under the tag line 'invest early'. It is increasingly supporting early childhood education, and early childhood development more broadly, in its country operations, both through specific projects and as

Figure 1 Increasing access to pre-primary school



Source: World Bank Edstats, online

components of broader projects in education, health and social protection.

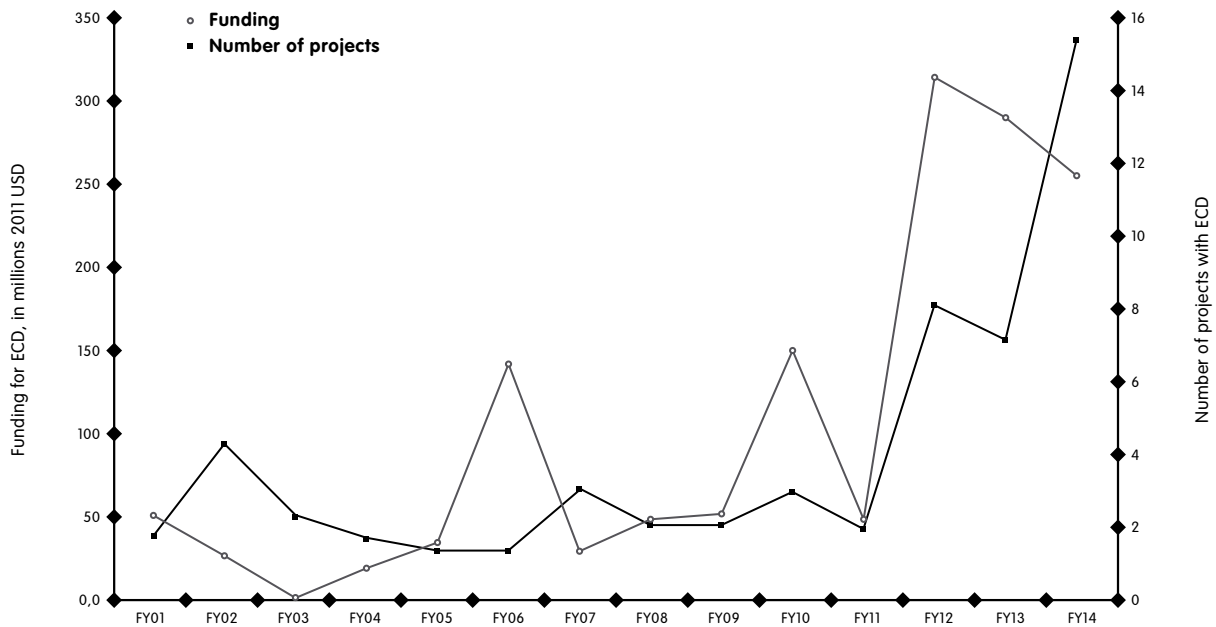
Initially the ELP was designed to provide targeted technical assistance and funding for early childhood education and development across Africa, but it has since expanded to a global focus. From 2012 to 2014, its aim was to catalyse change in countries to promote high-quality early learning opportunities. Strategic goals included: supporting governments to prioritise young children; accelerating the World Bank’s financial and operational commitment to early childhood development; promoting strong partnerships and innovative approaches; and raising the profile of early childhood on the global development agenda.

Catalytic seed funding from ELP enables World Bank country teams to raise the profile of young children. In education and other sectors, its seed funding enables World Bank country teams to stimulate or respond rapidly to countries’ interests in designing, delivering or expanding early childhood initiatives. Activities include project preparation for early learning operations financed by the World Bank, field testing innovative approaches, promotion of measurement (both of child outcomes and of the quality of education settings), development of new preschool teacher preparation programmes, and process and impact evaluation.

The Partnership has successfully prioritised early childhood across policymakers and funders. The initial contribution from CIFF of just over 2 million dollars (US) was associated with an increase in early learning activities in 14 countries estimated at an additional 43 million dollars in funding, and a growing pipeline of activities. During its first two years, the ELP provided targeted technical assistance and funding to support demand-driven early childhood development and early learning activities. The programme succeeded in growing the pipeline for early learning in the Africa region, forging linkages across sectors and with new partners, and raising the profile of early learning and development within the region and the Bank. The range of activities in the 14 countries included the following:

- When the ELP channelled 55,000 dollars of funding to Sierra Leone in 2012, donors were reluctant to fund the Government’s goal of implementing compulsory pre-primary education for children aged 3–5. With ELP support, the Government convened technical experts for a national meeting and provided input into an early childhood development sub-component of a Global Partnership for Education (GPE)-funded basic education project, developed with World Bank technical support. Sierra Leone has since approved training for 400 teachers and caregivers and is testing new early childhood development models in 50 classrooms with 1 million dollars of new GPE project funding.

Figure 2 Trends in early childhood development (ECD) in the Africa Human Development Portfolio at the World Bank



Source: World Bank Project Database

- The inclusion of early childhood development activities in Uganda’s GPE project design would not have been possible without the ELP grant of 40,000 dollars in 2012, which allowed the World Bank to place an early childhood specialist on the project preparation team. The GPE project will involve Uganda raising the qualification level of early years professionals.
- In Burkina Faso, 33,600 dollars of funding from the ELP supported the inclusion of early childhood development activities in a World Bank-financed secondary/tertiary education project, including teacher training and inclusion of early childhood as a topic within a secondary school life-skills course. The ELP’s work and the Government’s interest in improving quality outcomes in secondary/tertiary education led to a 2-million-dollar early childhood component being introduced into the larger International Development Association (IDA)² project in 2013, while a further 25 million dollars will be allocated to parenting education, attached to a conditional cash transfer programme.
- Prior to the receipt in 2012 of a 70,000-dollar ELP grant in Niger, a 70-million-dollar World Bank Social Protection project had integrated an existing parenting education model, developed by UNICEF, into its cash transfer programme. The ELP grant enabled the development of a technical guide that enhanced the content of UNICEF’s model, made it scalable and allowed for it to be tested. A 25,000-dollar top-up supported an implementation study of the model. So far 10,000 households are already in the programme, with a further 70,000 to join by the end of next year.

The Partnership was also a contributing factor in the sharp rise in World Bank finance for early childhood development in 2012 and 2013 (see Figure 2).

The ELP has worked with countries and partners to promote knowledge sharing and improve coordination

among partners working on early childhood development in Africa. A series of workshops, co-hosted with GPE, UNICEF and UNESCO, reached delegations from 20 countries in Africa and provided an opportunity to learn about country needs, shape the ELP work plan, promote cross-country knowledge sharing and bring in regional experts to work directly with countries. Additionally, the ELP team worked to align strategies with UNICEF regional teams in Africa and with GPE and UNESCO across the continent. Ongoing discussions with the Department for International Development in the United Kingdom and Germany's Federal Ministry for Economic Cooperation and Development (BMZ) yielded further opportunities for funding and collaboration.

CIFF and the World Bank have developed a strong and productive partnership. The World Bank has huge financial and technical resources, a large operational presence and strong political influence. They have global reach and the ability to partner with governments directly to work towards scaling up. This access to the broader World Bank policy and operational machinery and the ability to scale up early childhood education activities through the IDA, GPE and domestic funding makes them a valued partner for CIFF.

In 2014, CIFF made a founding pledge to an Early Learning Partnership Multi-donor Trust Fund which will allow the World Bank to respond to growing client demand to support early childhood development and learning. The Trust Fund will build on the successes of the first phase of ELP, and is designed to support early childhood development and learning globally, particularly in Africa and South Asia. CIFF has pledged 20 million dollars to finance the activities from 2015 to 2019. The fund will provide critically needed resources to advance the early childhood agenda and increase access to early learning around the world. CIFF and the World Bank invite other organisations to join the partnership to increase access to quality early learning and early childhood development.

For more information about the Early Learning Partnership, please contact Amanda Devercelli (ELP, Task Team Leader) at adevercelli@worldbank.org. To be added to the Early Learning Partnership's mailing list, please contact Alexandra Solano at asolanorocha@worldbank.org.

Notes

- 1 The Global Partnership for Education (GPE) is the only multilateral partnership focused on providing children with a quality education. Established in 2002, the GPE comprises about 60 developing countries, donor governments, international organisations, the private sector, teachers, and civil society/NGO groups.
- 2 The International Development Association (IDA) is the part of the World Bank that helps the world's 77 poorest countries, 39 of which are in Africa. The IDA lends money on concessional terms, charging little or no interest, with repayments extending over 25 to 38 years, including a 5- to 10-year grace period. The IDA also provides grants to countries at risk of debt distress.

How business leaders can support young children

Sara Watson, Director, ReadyNation, Washington DC, USA; Gideon Badagawa, Executive Director, and Ruth Musoke, Programmes Manager, Private Sector Foundation Uganda, Kampala, Uganda

There is growing interest among business leaders in evidence that skills required for workplace productivity are influenced by a child's early experiences. ReadyNation in the United States has made the highest-profile achievements to date in persuading business leaders to advocate for young children; and, as this article shows, other countries – such as Uganda – are also making impressive progress.

From Silicon Valley to the urban slums of Kampala, business leaders share similar concerns: where will we get good employees? Who will buy our products? Does the quality of life in our community support a thriving business sector? The answer to all of these questions lies in creating a productive citizenry, and business leaders are starting to realise that this process starts in the earliest years of life.

The combination of powerful new research on the developing brain and rigorous economic impact data – both skilfully communicated – is leading business leaders worldwide not only to understand the importance of early childhood programmes but to take action to support them. Current and former Fortune 500 CEOs are among the 1100 executives who belong to ReadyNation, a business membership organisation based in the United States that supports public and private investments in early childhood to improve the economy and workforce.¹ (With funding from the Bernard van Leer Foundation, ReadyNation is starting to work in other countries to help leaders build business champions for early childhood.)

Actions that business leaders can take generally fall into four categories:²

1 Educating key audiences

Business executives have the platform to be 'unexpected messengers' for early childhood, to characterise these services as a key business concern. Over 2013–2014, ReadyNation's members generated more than 400 media pieces, mostly about early childhood. In March 2015, ReadyNation released an open letter to the United Nations leadership signed by more than 50 executives

across several countries, asking that early childhood be a priority goal on the post-2015 Sustainable Development Goals agenda. ReadyNation will host the first-ever Global Business Summit on Early Childhood Investments on 1–2 October this year in New York City.

2 Influencing policy change

Changing the lives of entire generations of children will require public policies that direct funding streams to provide the research-backed supports young children need, including health, nutrition, parent supports and education. Business leaders are well positioned to convey the importance of effective public investments in early childhood to key decision makers. Since 2013–2014, ReadyNation's members have had more than 400 direct communications with state and federal policymakers, contributing to policy victories that resulted in more than 2 billion dollars (US) in new funds.

3 Supporting communities

While helping children has been a traditional philanthropic endeavour, companies around the world are now going far beyond casual donations in their corporate social responsibility activities. For example, companies such as Denmark-based LEGO and US-based PNC Financial Services Group have made early childhood a priority; global accounting firm KPMG's Family for Literacy programme has distributed more than two million free books through 90 offices worldwide; and over 200 construction firms have worked with Mobile Crèches to provide child care services to children living on the construction sites and slums of Delhi.³

4 Helping employees

Family-friendly workplace practices have been a prime support for young children and their working parents for decades. For example, in France, nearly 400 employers, representing over 10% of the French labour force, have signed the 'Charter of Parenthood in Corporations', pledging to educate managers and human resource staff to 'take better account of parenthood and create a favourable environment for employees with children', including support for child care. In Kenya, mobile network operator Safaricom supports working

mothers through initiatives such as a free on-site crèche with doctor, and arranging shiftwork to support breastfeeding.

The business voice in Uganda

Over the past two years, Private Sector Foundation Uganda (PSFU) has embarked on an initiative to turn its member companies and organisations into champions for young children, with funding from the Bernard van Leer Foundation and technical support from ReadyNation. PSFU is Uganda's apex body for the private sector, made up of 182 business associations, corporations and the major public sector agencies that support private sector growth.

PSFU's commitment to promoting the business case for private sector involvement in the well-being of young children in Uganda grew from its role as implementing agency in the Early Steps programme. Funded by the Bernard van Leer Foundation in the districts of Apac, Kumi and Nakapiripirit, the programme set out to strengthen village savings, support community child centres and reduce violence in children's lives – all of which together contribute towards building the human capital of the next generation of potential employees and customers for Ugandan businesses.

In October 2014, PSFU hosted a forum on early childhood for national business leaders – the first for Uganda and one of the first for Africa. The meeting, with support from ReadyNation, attracted over 300 participants and generated significant media coverage. At the meeting the Minister of Finance publicly stated that 'investing directly in families and children's well-being is both a social and a moral imperative as well as an economically sound investment strategy for the future.' In March 2015, following these activities as well as meetings between PSFU Executive Director Gideon Badagawa and decision-makers including the Finance Minister and Speaker of Parliament, the Minister of Education called for an early education class in every primary school – a major policy development.



'Investing directly in families and children's well-being is both a social and a moral imperative as well as an economically sound investment strategy for the future.' -Uganda Minister of Finance at Forum on Early Childhood for national business leaders.

Photo • Courtesy Private Sector Foundation Uganda

PSFU is inviting its members to sign up to be 'champions' for early childhood, and working on a range of ways in which business champions can support young children – not only through commitment to advocacy for public policies and budget allocation, but also in their corporate social responsibility activities and corporate policies. In January 2015, for example, PSFU's Family Day offered companies a new type of support – providing advice and hands-on activities to help parents learn the best ways to educate their young children.

Globally, we have only just begun to tap the potential of the business community to elevate the importance of the early years and start the world's children on the path to successful adulthood. Business executives by definition are busy people. It is challenging to find, recruit, prepare and support them to speak out. But it can be done. It is happening. And they are so valuable because early childhood is not their primary concern – so when they speak out, people listen. Their work will ensure that the world's children will become the productive adults and good citizens their countries need to thrive.

Notes

- 1 Information about the work of ReadyNation is available on their website, www.ReadyNation.org
- 2 These examples and many more are described in a new paper by ReadyNation, funded by the Bernard van Leer Foundation: *Business Leader Actions to Support Early Childhood: A global imperative, a local opportunity*, available online at: www.ReadyNation.org/international
- 3 More examples of early childhood initiatives that have significant business involvement are described at: www.ReadyNation.org/Ready2Go

Developing leadership for young children in Brazil

Eduardo Queiroz, CEO, Maria Cecilia Souto Vidigal Foundation, São Paulo, Brazil, and James Cairns, Director of International Programs, Center on the Developing Child at Harvard University, Cambridge, MA, USA

A collaboration led by the Maria Cecilia Souto Vidigal Foundation and the Harvard Center on the Developing Child has so far trained 125 Brazilian public leaders in translating scientific knowledge about early child development into effective programmes and policies. This article explores how the initiative works, and evidence of success so far in the action plans that participants are putting into place in various parts of Brazil.

As we look across the field of early childhood development from the perspective of civil society – including foundations, non-governmental organisations and academic institutions – the dominant pattern has been that of supporting individual projects or programmes that are trying to improve children’s outcomes in a range of developmental domains. Researchers develop individual interventions, NGOs implement projects in specific settings, and foundations tend to fund a portfolio of discrete projects (on occasion, foundations also get drawn in to try to implement large-scale programmes when governments are unable or unwilling to do so, but without government’s reach, capacity and mandate). All of these efforts, when done well, can have real impact on improving the developmental outcomes of a limited number of children.

If we are honest with ourselves, however, those of us who work in civil society organisations – a foundation and a university, in our specific case – know that we will never have the capacity on our own to achieve impact at scale to change the developmental pathway for the tens of millions of children across Brazil and the world who are at risk. Yet we continue to struggle to figure out how to build collaborations and deeper engagement with those who lead the institutions in society that have the potential to reach entire populations.

It was a shared desire to achieve greater impacts and an understanding of the need to catalyse broader engagement that brought together the Maria Cecilia Souto Vidigal Foundation, the Center on the Developing Child at Harvard University (HCDC), and three other



The ‘Executive Leadership Program in Early Childhood Development’ has been able to inspire, engage and equip public and private leaders from multiple sectors to advance important new early childhood development programmes. Photo • Courtesy Center on the Developing Child

leading partner organisations – the Medical School of the University of São Paulo, Insper (*Instituto de Ensino e Pesquisa*, Institute of Education and Research), and the David Rockefeller Center for Latin American Studies at Harvard (DRCLAS) – in 2011 to create a collaborative early childhood initiative in Brazil called *Núcleo Ciência Pela Infância* (NCPI, Science Centre for Childhood).

This initiative was an opportunity to test and adapt in Brazil some methods that HCDC had been using successfully in the United States to leverage the scientific knowledge base about early development to promote more effective early childhood development policies and programmes.

From the beginning the partners agreed that NCPI would not implement ‘projects’ in the traditional way – neither in research nor service delivery. Instead our core objectives would be to build an interdisciplinary scientific knowledge base about early development in Brazil; to translate and communicate the science to inform public policy; and to build the capacity of public leaders to use the science in shaping more effective programmes and policies. These objectives seemed to be where as partners we might achieve progress in a way that none of our organisations could do individually. Still, we knew we could not move this agenda alone and we needed to find ways to inspire, engage, and equip

leaders who shape policy agendas, mobilise and allocate resources, and guide public opinion, so that they could be champions for a stronger child development agenda across the country.

But how to do this? We were fortunate to have as a starting point a connection to Dr Mary Eming Young, former lead early childhood development expert at the World Bank who was advising HCDC, and to Dr Osmar Terra, former Secretary of Health in the state of Rio Grande do Sul and currently a Federal Deputy in the Brazilian Congress. They were both long-time leaders on child development and had been discussing the idea of a course for policymakers in early childhood development. We saw great potential for NCPI to serve as the ‘home’ for such a programme, and together we developed the ‘Executive Leadership Program in Early Childhood Development’ (ELP). From its inaugural session in March 2012, ELP quickly became one of the most important initiatives of NCPI, as it has been able to inspire, engage and equip public and private leaders from multiple sectors, levels of government, and regions of the country to advance important new early childhood development programmes.

From training to action

The programme provides a mix of knowledge, tools and practice as part of an intensive group experience that together we hoped would catalyse increased action on behalf of young children in Brazil. Each year 40–50 participants spend six days at Harvard University in an intensive, executive education-style session with specialists from all over the world on the science of child development, programme and policy effectiveness, scaling strategies, leadership skills and other topics.

In addition, each participant is part of a small group that is responsible for developing an early childhood development ‘action plan’ under the guidance of a ‘technical panel’ of Brazilian experts. After the initial week, the programme has a distance learning phase when the small groups continue to work on their action plans with support from a member of the technical panel. After roughly three months, the group reconvenes

for a three-day workshop in Brazil where each small group presents its action plan for review, critique and refinement. In recent years, this workshop has also included an ‘ELP Alumni’ session when participants from previous years are invited back to interact and share experiences with the current year’s cohort.

Over the past three years, we have had more than 125 Brazilian policymakers and public leaders participate in ELP. They range from members of the Federal Congress; federal, state and municipal secretaries and senior technical leadership in departments of health, education, social development, and justice; and leaders of child-focused civil society organisations. They have come from 21 of Brazil’s 27 states, represented more than eight political parties, and produced nearly 30 early childhood development action plans.

What has been truly remarkable is that most of these action plans are in some stage of implementation without any structured follow-up support from NCPI, either in terms of funding or technical assistance. Here are some highlights:

- Over the past three years, 27 members of the Federal House and Senate from multiple political parties have participated in the course. Together they have drafted legislation to create the first national policy framework on early childhood development that mandates government to create budgets and mechanisms to promote early childhood development. This ‘*Marco Legal da Primeira Infância*’ was passed by the Federal House in February 2015 and is awaiting action in the Senate.
- Two Federal Deputies who attended ELP in 2012 later became mayors in the cities of Boa Vista and Arapiraca. They made early childhood development a central platform for their campaigns and are now implementing municipal policies on this issue.
- First ladies from the cities of São Paulo and Fortaleza and the state of Pernambuco have used ELP to develop or improve city/state-wide early childhood initiatives that have been incorporated into the priority issue frameworks in their respective areas.
- Senior technical staff in the federal departments

responsible for implementing the presidential initiative on early childhood development, 'Brasil Carinhoso' ('Loving Brazil'), have been using their experience in ELP to refine and adapt that framework to ensure more scientific and effective implementation strategies.

Success factors

What are the factors that have made ELP successful?

We are still learning, but the following aspects seem to be important:

- The programme gives participants the chance to combine knowledge with practice – the curriculum offers information and tools that can help drive more effective early childhood development policies and programmes, and the small groups give the space for participants to put what they are learning into practice.
- Most participants have come to the course with a concrete challenge or mandate related to some aspect of early childhood development that they are trying to solve in the context of their professional roles. This has made the ELP experience directly relevant and has meant that they have both the responsibility and often the resources to implement the plans and ideas they have developed during the programme;
- The intensive group experience in a 'safe', non-public environment has fostered a new web of relationships and camaraderie among each year's cohort of participants that has carried on over time. They are often sounding boards, informal advisors, cheerleaders and confidants to each other, and we have found ways to connect them with other work taking place within NCPI that offers a platform to promote their projects and stature as leaders in early childhood development in Brazil.
- The participation and support of experienced and recognised local and international institutions in the field of early childhood development have provided ELP with strong credibility. As one example, in addition to the NCPI partners, the Bernard van Leer Foundation has sponsored leaders from its own Brazil programme partners to attend ELP, using the course to build capacity for its own priorities in the country.

We also see peer-to-peer influence, as ELP alumni encourage their colleagues to make stronger commitments to early childhood development. As one example, the success of the programme in Fortaleza, led by the first lady, has drawn the attention of the first lady of the state of Ceara (where Fortaleza is the state capital), who now wants to develop something similar to support other municipalities across the state to prioritise early childhood.

Brazil is a massive, diverse and complex country. Even this expanded group of 125 champions of early childhood development will not by itself transform the lives of all Brazilian children. But its members do sit in some of the most important institutions that influence what municipalities, states, and the federal government will or will not do for children and families. And their commitment and leadership are spreading.

The challenge remains whether this growing number of policies, programmes and other early childhood development initiatives will actually result in changing the developmental pathway of the children most at risk of poor outcomes. The NCPI partners are committed to following these efforts closely and facilitating ongoing feedback and evaluation to help determine which programmes are having the greatest impact.

'The courage to admit to the limits of our knowledge'

A conversation with Kofi Marfo



Part of the Institute for Human Development's unique role, as it seeks to address developmental issues of relevance to the Majority World, is adding value to existing knowledge on human development, not supplanting it. Photo • Angela Barrau Ernst/Bernard van Leer Foundation

Kofi Marfo is the Founding Director of the newly launched Institute for Human Development (IHD), based at the Aga Khan University (South-Central Asia, East Africa, and United Kingdom). The IHD aims to advance knowledge relevant for practice, policy, and professional development in low- and middle-income countries. In this article, Professor Marfo talks to *Early Childhood Matters* about his aspirations for the Institute and his assessment of the current state of knowledge about early childhood development in Africa.

Why did the Aga Khan University (AKU) launch the IHD?

The IHD is the culmination of a long-standing vision on the part of His Highness the Aga Khan, and succeeding generations of AKU's leadership, to establish an institute with international reach that would contribute uniquely to the building of strong foundations for the development and well-being of young children growing up in conditions of disadvantage in resource-limited regions of the world. In addition to advancing research that crosses disciplinary and methodological boundaries, the IHD will deliver courses, seminars,

workshops and conferences to build and strengthen professional competencies in the region.

In February 2015, we launched the Institute with an interdisciplinary conference in Nairobi under the theme 'Investing in Early Childhood Development for a Better Future'. The conference was attended by over 200 professionals from 22 countries, who were affiliated with governmental and non-governmental agencies, philanthropic organisations and universities. It featured internationally distinguished speakers from multiple fields in the biological, medical, social, behavioural, education and learning sciences, including applications of technology. The scientific content of the conference was crafted to make an explicit statement about the Institute's core valuing of the importance of harnessing richer knowledge at the interface of multiple disciplines to support context-relevant interventions.

Why is it important to have such an Institute physically located in a low- and middle-income region?

My conception of research is a basic one – research is problem solving, and problems are context-bound, in

the sense that circumstances dictate what is perceived as a problem. There are of course universal problems, the solutions to which might entail strategies and tools that defy variations in geographic or cultural context. However, many of the problems of human development, whether at the societal or individual level, are defined by local contexts and conditions. This is the sense in which it is problematic to take knowledge and practices created in one setting – which are often in response to the circumstances and resources of that setting – and apply them with minimal adaptation in another context with potentially different understandings, needs or resources. While a great deal of what is known and practised in any setting can have relevance elsewhere, the most meaningful and consequential solutions to the problems of human development are informed by close understandings of context. The Institute's location confers on it the imperative to be a catalyst for the attainment of a high quality of life and well-being in the day-to-day contexts of the Majority World.

As the late President Julius Nyerere of Tanzania said in 1966: 'We in poor societies can only justify expenditure on a university – of any type – if it promotes real development of our people.' To Nyerere, a university 'must put the emphasis of its work on subjects of immediate moment to the nation in which it exists' (Coleman and Court, 1993, p. 296). Part of IHD's unique role, as it seeks to address developmental issues of relevance to the Majority World, is adding value to existing knowledge on human development, not supplanting it. In so doing, it contributes to the advancement of a truly global science of human development informed by multiple conceptions, knowledge traditions and valued outcomes.

Does early childhood in Africa differ significantly from those that have been researched in North America and Western Europe?

Let me begin with an important caveat: aspects of what we consider today as a Western science of human development have been shaped by research conducted on children, families and communities on the African continent. Setting aside the question of how well researchers can take off their own cultural

blindness to document and interpret developmental phenomena within another cultural context validly, key theoretical frameworks within so-called mainstream developmental fields have emerged out of anthropological and developmental research conducted in Africa (see works by Super and Harkness, 1986; LeVine *et al.*, 1994; Weisner, 2002).

That said, we know much less about the eco-cultural conditions and dynamics of early human development in the Majority World. Indeed, with much of the foundational developmental research in the Euro-American context grounded in the socio-cultural norms of dominant classes, it is fair to question the applicability of that research to other sub-populations even within that geographic context. It is a stretch therefore to expect the body of knowledge emerging from that research to be inherently applicable in other eco-cultural contexts globally.

What does this perspective say to the large numbers of well-meaning development-aid professionals dedicating themselves to the improvement of life outcomes for children around the world? It is neither a call to reinvent the wheel nor a charge to wait till we have the 'right' kinds of evidence or programme models to guide necessary interventions. It is simply a call for the courage to admit to the limits of our knowledge and to interrogate our conceptions of the essential goodness of practices emanating from our own cultural backgrounds and experiences. If that courage positions us to consider appropriateness and relevance whenever we find ourselves implementing programmes and ideas demonstrated to be impactful in other parts of the world, we will have proved ourselves to be sensitive to contextual differences in the arenas of developmental practice.

Are there examples where you see Western-led agendas on early childhood failing to meet the needs of children in an African context?

Decades past the official end to the era of colonisation, schooling in the African context continues to be overly preoccupied with abstract, didactic learning and the ostensible preparation of children for future possibilities

in worlds away from home, while neglecting to build qualities and competencies that position children to do well and contribute to communal quality of life in the local context.

Like formal schools, early childhood programmes are replacing active, participatory learning with learning through didactic instruction, often around unfamiliar experiences and learning materials. In so doing, these programmes are breaching the natural continuity that must exist between young children's naturalistic, observational, participatory learning in home and community contexts and formal and more structured learning in school contexts.

So much of what we measure as outcomes is tied to schooling and individual cognitive and academic performance. Departures from some of the exogenous models and related conventional practices that are shaping early child development and educational programmes from the outside world may be necessary for so-called developing societies to grow contextually compatible models at home. Such models must, by necessity, be innovative, forward-looking and bold enough to move deliberately away from the culture of exclusive privileging of individual cognitive and academic outcomes over those emanating from collectively held social and moral values.

In an era of unprecedented social strife around the world, attaining and sustaining peace and harmony might depend largely on how well we nurture today's children into socially conscious and responsible young people. In addition to wanting to see our children become cognitively astute, linguistically proficient, and academically competent in such areas as reading, mathematics and science, we should also want to see them become passionate, caring, sensitive humans who are aware of the significance of the 'social good' and realise their own role in the enactment of that good.

Global advocacy for investments in the early years may be positioning the early childhood development movement to accomplish what schools have not been able to

accomplish in much of the Majority World:

- 1 making interventions contextually relevant and appropriate
- 2 opening the door for children to 'see themselves' in the processes and outcomes of programmes meant to nurture their development, and
- 3 expanding the range of valued outcomes beyond traditional school-related measures.

This is an important challenge for our times – a challenge that should trigger engagement among diverse stakeholders in a variety of directions: today's civil society and education thinkers debating and interrogating the place of social and moral values in early child development programming and in education at large; curriculum specialists and connoisseurs of pedagogy engaging in dialogue and translational work on how to cultivate these values in our children; measurement specialists pondering how best to measure the behavioural manifestations of these values, if they can indeed be cultivated, and so on.

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Building early childhood Global Leadership

Mark Elliott, Global Leaders Program Director, Washington DC, USA, and Lynette Okengo, Regional Coordinator, Global Leaders Africa Region, Nairobi, Kenya, World Forum Foundation

Strong leadership at all levels will help propel early childhood efforts forward. The Global Leaders for Young Children programme at the World Forum Foundation seeks to develop the next generation of early childhood leaders throughout the world. This programme serves as a model of expanding capacity for early childhood development, while building a cohesive community of international leadership to impact policy and practice worldwide.

Any country, any society, which does not care for its children is no nation at all ... We must move children to the centre of the world's agenda.

Nelson Mandela, Former President of the Republic of South Africa

Giovana Barbosa de Souza from Brazil, Sayeda Moubarak from Egypt and Aye Aye Yee from Myanmar all have something in common: they are all part of the World Forum Foundation's current class of Global Leaders for Young Children. Giovana, Sayeda and Aye Aye are joined by 41 other emerging early childhood leaders from 23 countries to engage in a two-year leadership development programme. Global leaders are selected from a range of backgrounds, including early childhood associations, government, academia and NGOs.¹

Global Leaders for Young Children is a project of the World Forum Foundation that inspires and empowers emerging leaders. Passionate early childhood professionals from all over the world gather to train and collaborate. Globally and locally, they become courageous, innovative advocates who stand up to bring about lasting change in the well-being of children and their families.

Since the project's inception in 2004, a total of 190 Global Leaders have participated, from 61 countries. The programme continues to identify and develop emerging leaders throughout the world and many graduates currently play major roles in shaping the early childhood policies and practices in their countries and regions. This programme serves as a model of what is needed in the international early childhood community and



Passionate early childhood professionals from all over the world gather to train and collaborate. They become courageous, innovative advocates who stand up to bring about lasting change in the well-being of children and their families. Photo • Courtesy World Forum Foundation

illustrates key strategies that can take early childhood efforts to a new level in the coming years.

Global leadership for young children

The critical nature of the early years was recognised when leaders of 164 nations met at the World Education Forum in 2000 in Dakar, Senegal, and signed on to a Framework of Action for achieving Education for All (EFA), aimed at meeting the basic education needs of all the world's citizens by 2015.

EFA Goal No. 1 is 'Expanding and improving comprehensive early childhood care and education, especially for the most vulnerable and disadvantaged children.' Despite all the emerging evidence from researchers and economists, and the dramatic pledges of world leaders, progress toward this goal remains slow. An Education for All Global Monitoring Report, *Expanding Equitable Early Childhood Care and Education is an Urgent Need* (UNESCO, 2012) concluded:

While the world has seen significant improvements in early childhood survival, health, and education over the last decades, the poorest and most vulnerable children are still falling far behind.

The World Forum Foundation believes that children need advocates at the grassroots level who can work effectively to promote the well-being of all in their nation. Those who participate as Global Leaders implement advocacy projects in their own countries and communities and also become integrated into networks of early childhood professionals.

Strengthening early childhood networks

A key strategy to successfully implement policy and strengthen practice is to build powerful country-level and regional early childhood networks. Strong networks provide a forum to share best practice, collaborate on initiatives, and strengthen professional development.

The Global Leaders for Young Children programme strengthens early childhood networks by encouraging its Global Leaders to become actively involved. Regional Global Leaders meetings are held in conjunction with regional network meetings. The current class of Global Leaders is strengthening country and regional efforts in the Americas, Asia-Pacific, Africa and Arab regions.

As emerging leaders receive training and support to implement advocacy projects, many become actively involved in early childhood development networks. After completing the Global Leaders programme, graduates have stepped into vital new leadership roles within regional and national networks.

The Africa Region of Global Leaders illustrates specific progress in establishing new networks that are making a difference for early childhood development efforts in their countries. Through the support of the Open Society Foundation and other partners, a cohort of 11 Global Leaders from Africa are actively engaged in the Global Leaders for Young Children programme. These 11 Global Leaders participated in World Forum Foundation meetings in May 2014 in San Juan, Puerto Rico, where they engaged with Global Leaders from other regions around the world in orientation, training, and networking. These emerging leaders in Africa are engaged with each other in the region in promoting early childhood development and are conducting

various advocacy projects in their countries and communities.

As part of their advocacy project, Global Leaders from Zimbabwe and Swaziland have established vibrant national early childhood development Networks. For example:

- Patrick Makokoro, a Global Leader from Zimbabwe, has been instrumental in the establishment of the Zimbabwe Network of Early Childhood Development Actors (ZINECDA). ZINECDA was established in 2011 as a network of five organisations and has been growing steadily with plans to have ten chapters, one in each of the ten political provinces of Zimbabwe.
- Global leaders Colani Magongo and Maserame Mtsahali from Swaziland have supported the establishment of the Swaziland Network of Early Childhood Development. The Minister of Education and Training, Phineas Magagula, officially launched the network in November 2014. The network currently has several technical working groups including education, health safety and sanitation, disabilities, child protection and legal protection, socio-economic security as well as children and nature environments.

Plans by the Global Leaders from Zambia are underway to establish an early childhood development network in that country. Other Global Leaders in Africa have also been very active in designing innovative early childhood programmes and new training approaches, as well as developing and distributing play and early learning materials to poor and vulnerable populations.

Strategies for success

Lessons learned from the Global Leaders for Young Children programme point to successful strategies and principles that build local and global leadership capacity to help implement critical early childhood development efforts. Some key strategies include:

- **Step Up and Out.** Give someone an important title, like 'Global Leader', and ask them to step out of their comfort zone and step up to do important work. Leaders rise to the occasion.

- **Diversity Builds Capacity.** Provide a structure for people to listen and learn from each other, especially when they come from different countries and cultures. It breaks down barriers and expands vision.
- **Think Globally, Act Locally.** Encourage people to read and learn about global issues, and then think globally as they work locally to implement new policy and practice. Their local work takes on new meaning.
- **Networks Build Momentum.** Create communities that share ideas, build each other up and collaborate. One person can make an incredible difference, but

when they are aligned with like-minded individuals, they can become a powerful force for good.

As countries around the world shift focus to align with the United Nations' Sustainable Development Goals, this is a critical time to ensure that early childhood development efforts are visible and aligned worldwide.

Note

¹ For more on the Global Leaders and how they are selected, visit the World Forum Foundation website at: <http://www.worldforumfoundation.org/working-groups/global-leaders-for-young-children/>

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Looking back to the future: early human development in 2030

Mary E Young, Director, Center for Child Development, China Development Research Foundation, Beijing, China



Policymakers and government leaders must come to appreciate that the need to invest in early childhood development is immediate and that the returns come in long-term, positive effects for children, families, societies and nations. Photo • Courtesy *Asociación Red Innova*

As the global community comes to the end of the Millennium Development Goals period and defines new aspirations for the next 15 years, we should recognise that how the world looks in 2030 will depend on what we do for the infants and young children of today. This article looks back on progress made in the field of early childhood over recent years, and identifies the priorities that should shape the agenda to 2030.

In developing countries, where 92% of the world's children live, one in 20 does not survive beyond the first 5 years (Wang *et al.*, 2014). By 2030, this proportion is expected to improve to one in 40 children (Gates and Gates, 2015). But while a larger number of children will survive, they will not have the opportunity to realise their full potential, owing to deprivations in early childhood. Currently, approximately 200 million children under the age of 5 are estimated to be at risk

of poor development due largely to poverty and under-nutrition. The actual number of at-risk children may be even higher (Engle *et al.*, 2007).

Poverty and other deprivations – such as violence and abuse, insufficient nurturing and care, and limited social interaction and stimulation – have devastating, lifelong effects on young children. Early neglect is particularly potent and is often manifested as a lack of attachment between child and parent or caregiver. In our ever-changing and increasingly mobile world, families are being torn apart by conflict, natural disasters, migration, and emigration – all of which take a toll on children's health and development, not only in the short term but also for life. One example is China which, over the past 30 years, has experienced the largest rural-to-urban migration in human history, resulting in 61 million children left behind in rural areas to be cared for by people other than their parents.

Assuring that all children can develop to their fullest potential is the challenge we face for human development in 2030. The costs of not taking action to mediate the risk factors for young children are huge. As underscored in a series of *The Lancet* in 2011, vulnerable and disadvantaged children who are deprived of early childhood interventions experience a loss of more than two grades in school and more than 30% of income as adults (Engle *et al.*, 2007, 2011).

Building on the early years

The Bernard van Leer Foundation has been a mainstay over the years in improving children's lives and development. From the 1960s through the 1980s, the Foundation encouraged community agents to take the initiative and support young children's development, on their own in their own communities. The Foundation nurtured local NGOs to help communities build their own early childhood development infrastructures, forge links among institutions and promote self-actualised development (Myers, 1992).

In 1977, PROMESA began in four small fishing communities in Colombia. Designed to improve the healthy development of young children in a home-based intervention, it was an innovative approach to meeting young children's needs for healthcare, childcare and education by training mothers to be parent educators and community leaders. Its success as an alternative to the existing centre-based early education model led to the Government's adoption and expansion of home-based childcare programmes. PROMESA was supported by the Bernard van Leer Foundation and others and was administered by an NGO, the *Fundación Centro Internacional de Educación y Desarrollo Humano* (CINDE, International Centre for Education and Human Development).

In the 1980s, in a similar fashion, the Bernard van Leer Foundation helped to pilot a network of non-formal nursery schools, as an outgrowth of the Harambee movement, rooted in and controlled by communities in Kenya. In this network, schools tested ways of improving early childhood development services. The findings were incorporated into the scaling-up of early

childhood services, financed by the World Bank, in Kenya in 2001.

The Foundation's focus on building sustainable, locally based programmes for mothers and children in communities yielded many insights on early childhood development which have been applied elsewhere. And these early initiatives by the Foundation and others concentrated national and international attention on early childhood. Large and powerful actors – multilateral, bilateral, and regional groups – now fill the stage and are taking action with well-conceived and well-constructed scripts.

The growth in research, public awareness and well-grounded practices of early childhood development over recent decades is very promising. In the past 15 years in particular, an explosion of evidence on the early years from neuroscience, economics, and social science research has converged to yield a deeper understanding of human development. We now have concrete evidence that the first 2000 days of life, before a child enters primary school, are critical and set a child's lifetime trajectories in health, learning, and behaviour. The evidence clearly shows that a baby's environment can modify his or her genetic blueprint and that epigenetic phenomena trigger trajectories. Prenatal stressors, mothers' and infants' nutrition, playtimes and interactions between a child and a parent or caregiver all contribute to the child's development.

The United Nations' launch of the Millennium Development Goals (MDGs) in 2000 accelerated the world's focus on children. Three MDGs (4, 5, and 6) were aimed at reducing child and maternal mortality and infectious diseases. The knowledge base underpinning the emphasis on child survival rested on public health measures such as nutrition, sanitation, immunisation, oral rehydration, micronutrient use, bed-nets and HIV prevention. Now we must widen our attention from children's survival to their full development, employing comprehensive, integrated approaches that engage all sectors – education, family and social protection, health and nutrition.

The world community has embraced the importance of investing in early childhood development as a priority to improve children's outcomes *and* to advance human development in societies. The calls for action come from different venues. The World Bank, the Inter-American Development Bank and the African Development Bank are highlighting early childhood programmes in their lending portfolios. UNICEF is focusing on health, nutrition, education and protection as basic rights of children. In its Education for All initiative, UNESCO is working in-country to advocate for young children, develop learning outcome measures and monitor programmes. The World Health Organization has established guidelines for delivering health services at each developmental phase of childhood, beginning during pregnancy. And the United Nations Development Programme's *2014 Human Development Report* focuses on life-cycle vulnerabilities beginning in infancy and the need to promote human capability and protect the most vulnerable.

In countries and regionally, governments and NGOs are partnering to scale-up successful early childhood development interventions. Examples include Chile's *Crece Contigo* ('Chile Grows with You'), Brazil's Better Early Child Development Program, Mexico's Centres of Childhood Development (*Centros de Desarrollo Infantil*, CENDI), Pakistan's Lady Health Visitors, and China's recently issued National Child Development Plan (for 2014-2020) for Poverty-Stricken Areas, which targets 40 million children in 680 counties (see page 102). In addition, South Africa's Brain Booster programme is improving young children's pre-literacy and numeracy, and the Step by Step programme, pioneered by the Open Society in 29 countries of the Commonwealth of Independent States (CIS), continues to make a difference.

From all these venues, the key messages are:

- Start at the beginning, in the early years of childhood. Integrate childcare, nurturance and stimulation with health, nutrition, and education services.
- Get ready for success. Ensure that all children have access to comprehensive community services before

they enter school, and begin with those who are most vulnerable and disadvantaged.

- Be inclusive. Incorporate early childhood into all national policies and plans across sectors.

Closing the gap

Despite the increased awareness globally of the importance of early childhood and the emergence of early childhood programmes in all regions, we still have much to do to close the gap between what we know and what we're doing. In developing countries, in particular, we need to harness the science of early childhood development and translate it into policies and large-scale programmes for young children.

One question we have to ask ourselves is, 'If investment in early childhood is so good, why isn't there more of it?' We have the knowledge and the data, but to really take off we need policies that will drive more resources, both public and private. The obstacles can be overcome with dedication and focus. Three obstacles, in particular, are inherent in early childhood interventions: the payoffs come later, not sooner; early childhood development is complex, with multiple dimensions; and changes begin in families and communities.

Policymakers and government leaders must come to appreciate that the need to invest in early childhood development is immediate and that the returns come in long-term, positive effects for children, families, societies and nations. Further, the complexity of early childhood development requires integrated approaches that encompass all levels and sectors of society. No single sector can solve the problem on its own and, as yet, there is no ministry of human development. And the necessary infrastructure for early childhood must be built from the bottom up, beginning with families in local communities, supported by a framework of national policy and a network of local, regional and national institutions.

Looking forward to 2030

Understanding that early childhood development is human development, we need to move away from

traditional ministerial silos in the public sector and embrace a trans-disciplinary platform focused on early human development. As we head toward 2030, action is needed on three fronts.

- 1 Continue vigorously to foster global understanding and awareness of early childhood development. Specifically:
 - Communicate the importance of healthy brain development in early childhood for overall health, well-being, and competence of populations. Spread this knowledge to parents and caregivers, policymakers, bankers, financiers and heads of state to increase demand for early childhood development interventions.
 - Promote a trans-disciplinary science of human development, involving all university disciplines, including the health sciences, economics and social sciences.
- 2 Expand children's access to early childhood programmes and ensure that they are of high quality. Specifically:
 - Strengthen early childhood development 'building blocks' through training and professional development of practitioners and advancing the ingredients of quality.
 - Identify what works and what does not work in early childhood interventions, to better design and scale-up successful, cost-effective options.
 - Engage the private sector in investing in young children.
 - Promote national decision-making that emphasises early childhood development as the first step in poverty reduction and human capital formation.
- 3 Assess outcomes in early childhood development. Specifically:
 - Design and use population measures to track children's development based on objective assessments of the state of children, not subjective appraisals of where a child should be on a milestone chart.
 - Encourage use of these data as evidence for making sound policy decisions and for aligning policies with programme evaluations.

- Seek to attain some level of universality, accountability and comparability of early childhood development measures within and among countries.

Our efforts must converge on these tasks so that we can speak in a common language globally about the trans-disciplinary dimensions of early human development and further enhance our knowledge of how to promote human development. Much of our know-how will come from lessons learned and best practices in countries that are already implementing coherent, comprehensive social policies incorporating early childhood development.

We need smart social policies and programmes for the malleable first years of childhood to improve the quality of parenting and the environments of all children and, especially, of those at greatest risk. Every child deserves a fair and equal chance to develop his or her full potential.

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Capacity building critical to scaling Innovations and initiatives

Forum on Investing in Young Children Globally

The Forum on Investing in Young Children Globally was set up in 2014 to marshal evidence from science and research around the world to encourage strategic investments in policies and practices that benefit young children and their families.

The Forum, which will run for three years, is organised by the Board on Children, Youth, and Families of the Institute of Medicine (IOM) and the National Research Council (NRC), in collaboration with the IOM's Board on Global Health. The IOM is an independent, non-profit organisation and part of the United States National Academy of Sciences. Forums convened by the IOM and NRC are not intended to provide recommendations, but to stimulate attention, build understandings and share knowledge.

The Forum organises discussion on how best to connect findings from science and economics to practices and policies, from local communities to national governments and research agendas. It crosses the areas of health, nutrition, education and social protection, support to parents and empowerment of women in areas such as reproductive health, livelihoods and access to quality child care and education. It aims to shape a global vision of healthy child development that crosses cultures, and to identify opportunities for inter-sectoral coordination.

Members of the Forum include representatives of private foundations, development banks, government, industry, professional societies, civil society and academia. In 2014, the Forum held workshops in Washington DC, New Delhi and São Paulo. Six further workshops are planned in 2015 and 2016.

Details of the Forum are available from the IOM at: <http://www.iom.edu/activities/children/investingyoungchildrenglobally.aspx>

OpenIDEO Zero to Five Challenge

OpenIDEO is an online platform that hosts 'design challenges' to which anyone can contribute ideas for solutions to a particular problem. In 2014 one of the challenges issued was: 'How might parents in low-income communities ensure that children thrive in their first five years?'

Winning ideas in an OpenIDEO challenge receive support from IDEO, a design company, to develop the idea further and seek funding. The top ideas on parenting were:

- integrating health insurance for families into existing agricultural cooperatives in the Eastern Congo, as a way to make basic healthcare more affordable
- the Embrace infant warmer, a product that makes it more practical for mothers of premature babies to keep them warm through skin-to-skin contact
- a 'First 48 Hours Kit' containing basic health and hygiene items such as blankets and disposable wipes, and information on breastfeeding and other parenting practices

- an intervention to make it more affordable for families to replace dirt floors in the home with concrete floors, reducing the spread of diarrhoea through soil-borne pathogens
- including mechanisms to screen mothers for postpartum depression in existing child immunisation programmes
- a community group model for paediatric care, working through existing social networks to spread information as an alternative to more expensive one-on-one consultations
- an intervention to spread awareness about how to prepare and combine affordable local foodstuffs to provide more healthy, nutritious food
- workshops for parents and children, at which parents learn about reproductive health and early development while children receive cognitive stimulation through games and exercises
- support groups for young mothers in vulnerable situations, providing information about early childhood and parenting and a forum for discussion
- an intervention to give parents ideas for using the packaging of their everyday purchases in play and educational activities with their children.

To find out more about the Zero to Five Challenge, visit: <https://openideo.com/blog/zero-to-five-challenge-announcing-our-top-ideas>

China's National Development Plan

In December 2014, the Chinese Government unveiled its National Development Plan for Children in Poverty-stricken Areas. It includes 22 separate policies that will reach around 40 million children, from birth to the completion of compulsory schooling, in 680 counties. The aim is to bring their overall development level up to the national average by 2020, with targets including a reduction of under-5 stunting to 10%, and reduction of infant mortality to 12 per 1000.

China's ongoing efforts to scale-up early childhood services have been based on experimenting with pilot initiatives, evaluating and translating into policy. Among approaches currently being piloted by the China Development Research Foundation – a national body established by the Government to conduct research and advise on policy – is a 'nutrition plus parenting' intervention, building on a model established in Jamaica.

More information is available from the China Development Research Foundation at: <http://www.cdrf.org.cn/plus/view.php?aid=1434>

PRIDI

An initiative of the Inter-American Development Bank, PRIDI (the Regional Project on Child Development Indicators) has gathered data on child development in four Latin American countries: Costa Rica, Nicaragua, Paraguay and Peru. Since 2009 PRIDI has been measuring a range of skills – cognitive, language and communication, socio-emotional, motor – in a study population of about 8000 children, at the same time recording information about their parents, home and community.

PRIDI fills a gap in internationally comparable, high-quality data about the impact of early childhood interventions outside of North America and Europe. All its results and data are made publicly available to researchers.

Among the findings are: evidence that inequality is discernable in children as young 24 months – the age at which PRIDI started to take measurements – and increases with age; by the age of 59 months – the oldest in the sample – some children are developmentally as much as 18 months ahead of their peers on criteria such as empathy, counting, and recognising basic shapes. The results suggest that a nurturing environment can mitigate the negative effects of lower levels of wealth.

More information about PRIDI is available from the Inter-American Development Bank (IDB) at: <http://www.iadb.org/en/topics/education/pridi/>

Mother tongue-based multilingual education

Around the world, tens of millions of children are growing up speaking a language that will not be used by their teachers when they begin formal education. In the Indian state of Odisha, for example, the official language is Odia, but over a fifth of the population belong to tribes who speak a wide variety of tribal languages.

There is growing evidence that children are more likely to succeed in school if their first experiences of classroom settings, in preschool or primary school, are conducted in the language with which they are already familiar from home. Then, through primary school, they can gradually be introduced to the language of their wider society.

The result is that parents from groups who speak marginalised languages are less likely to enrol their children in school – or, if they do, to be able to communicate with their children’s teachers and participate in their learning. Children from these groups are more likely to drop out or have to repeat grades. In Odisha, for example, the literacy rate among tribal populations is only 37%, compared to 63% for the state as a whole.

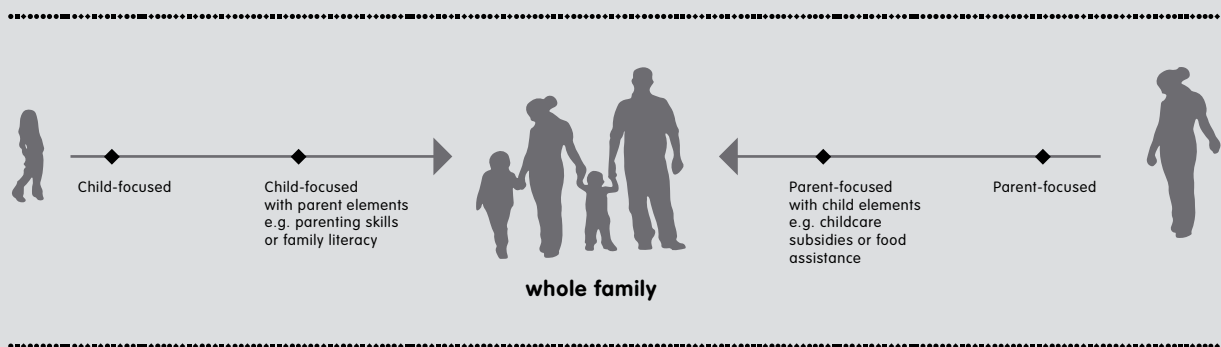
The Bernard van Leer Foundation’s work on mother tongue-based multilingual education in Odisha started in 2009 with demonstration projects and advocacy campaigns, and has contributed to changes in policy at state and national level. It is part of growing global interest in increasing knowledge about the changes that are needed to policies and practices, curricula and teacher training, to ease the transition to formal schooling for children who speak marginalised languages.

More information and resources on this subject are available from UNESCO at: <http://www.unesco.org/new/en/education/themes/strengthening-education-systems/languages-in-education/multilingual-education/>

The 'two-generation' approach

While services that support both children and parents are not a new idea, there has been renewed interest recently in making explicit the concept of a 'two-generation' approach. This is in response to new evidence from brain science about the links between children's development and parenting, and a growing sense that many services aimed primarily at either children or parents were missing opportunities to increase their impact by focusing on the whole family.

The Two-Generation Continuum



The hub of renewed interest in two-generation approaches is the Aspen Institute in Washington DC, which in 2010 founded the Ascend initiative with the support of a range of foundations. In January 2014, the publication *Gateways to Two Generations* explored three aspects of the approach, which it defines as a 'focus on creating opportunities for and addressing needs of both parents and children together':

- education, as parents' level of education strongly predicts how well their children will do in school
- economic support, as higher family income during early childhood can have lasting positive effects
- the importance of social capital, the network of people and institutions on which a family can rely.

Subsequent publications have expanded on the role of health and well-being as essential components of a family's economic security.

More information and publication downloads are available at: <http://ascend.aspeninstitute.org/pages/the-two-generation-approach>

Investing in a fair start for children

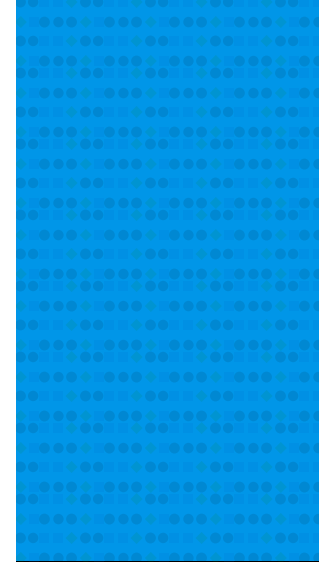
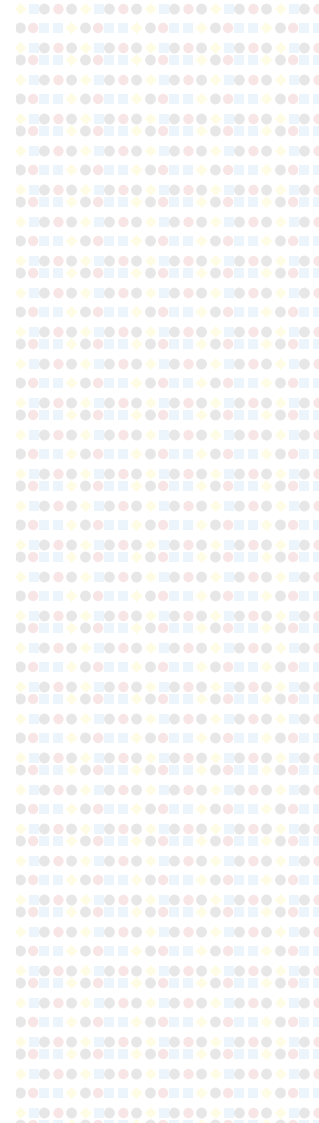
The Bernard van Leer Foundation is a private foundation that makes grants, shares knowledge and conducts advocacy to improve the situation of young children (age 0–8) who are growing up in socially and economically disadvantaged circumstances.

Bernard van Leer, a Dutch industrialist and philanthropist, established the Foundation with broad humanitarian goals in 1949. After Bernard's death in 1958, his son Oscar focused the Foundation's activities on giving children a fair start in life – not only for the sake of the children themselves, but also because it is crucial to building societies that are more peaceful, prosperous, cohesive and creative.

We made our first early childhood development grant in 1966, in Jamaica. Since then we have invested over half a billion dollars in more than 50 countries. Our legacy includes helping to start and grow some of the world's leading early childhood organisations and contributing to the development of public policies and models of service delivery that have reached national scale in countries as diverse as Jamaica, Colombia, Kenya, the Netherlands, Germany, Poland, Guatemala and Nicaragua.

Initially, our income came from the profits of the global packaging company built by Bernard van Leer, and we worked in countries where the company had factories. The company was sold in 1999, and an endowment was set up which now provides us with an annual operating budget of around 19 million euros.

Currently, the Foundation funds innovative projects in eight countries – Brazil, India, Israel, the Netherlands, Peru, Tanzania, Turkey and Uganda – chosen for their economic, geographical and cultural diversity. Our work in those countries informs our growing global programme of advocacy and knowledge development, through which we aim to increase interest and investment in young children and families around the world.



**Bernard
van Leer**
FOUNDATION